



# Planning Proposal Nelson Bay Town Centre

Revision 3 – 30 June 2020



**PORT STEPHENS**  
COUNCIL



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## FILE NUMBERS

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**Council:** 58-2018-24-1  
**Department:** To be provided at Gateway Determination.

## SUMMARY

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- Purpose**
- The purpose of this Planning Proposal is to amend various built form provisions within the *Port Stephens Local Environmental Plan 2013* (PSLEP) that apply to land within the Nelson Bay Town Centre and Foreshore (the Town Centre) to create opportunities for increased density and achieve the desired built form outcomes as set out in Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (the Delivery Program). A copy of the Delivery Program has been included as Appendix 1.
- The proposed changes are consistent with the Delivery Program, adopted by Council on 25 September 2018, and are necessary to complete Actions 1, 2 and 7.
- The Delivery Program seeks to provide built form controls to create opportunities for the activation of underdeveloped and underutilised sites in the Town Centre whilst maintaining quality public domain spaces and encouraging built forms that complement and enhance the character of the locality.
- Subject land:** Land in the Nelson Bay Town Centre as identified in the Site Identification Map at Appendix 2.
- Proponent:** Port Stephens Council
- Proposed changes:**
- Introduce Floor Space Ratio planning provisions and map;
  - Amendment to the Height of Building map;
  - Introduce Active Street Frontages planning provisions and map; and
  - Introduce minimum street frontage widths for sites in the Town Centre.

## BACKGROUND

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Nelson Bay is identified as a Strategic Centre in the Hunter Regional Plan 2036, with a number of directions referring to economic and tourism growth.

As the primary tourist centre of the Port Stephens Local Government Area and Service Centre of the Tomaree Peninsula, Nelson Bay contains considerable retail, commercial and service options; however the nearby Salamander Centre has become the focus for weekly retail shopping as well as being the location of a major library and community centre. This has resulted in a shift in Nelson Bay's retail floor space towards boutique and leisure based shopping, along with hospitality offerings such as cafes and dining options. Day-to-day and weekly household shopping has become a secondary focus of the Town Centre, however the recently opened Woolworths supermarket has increased this focus to some degree.

For tourists, Nelson Bay represents the entry point to the Port Stephens waterway and contains the highest concentration of short term accommodation and tourist facilities in the area. This

results in a high level of seasonal population variations, where low level activity on winter weekdays can contrast with large numbers of tourists visiting during the summer and Easter holidays and special event weekends.

As a tourism destination, Nelson Bay is in competition with other coastal centres in NSW and interstate, and increasingly overseas. To remain competitive in a market where decreasing transport costs make more distant destinations more accessible, Nelson Bay needs to be revitalised and provide a unique experience. The visual appearance and amenity of the Town Centre plays an important role in creating a unique, high quality and identifiable destination.

At the same time, Nelson Bay has a substantial residential population. Over the next 20 years, population and employment are expected to grow in the Tomaree Peninsula including Nelson Bay, which is a main service/tourist centre. Diversification of the economy beyond its high reliance on leisure based tourism will be important in providing for the resident population into the future. It is important that Nelson Bay offers a high amenity environment to residents in order to maintain its existing population and to attract new residents.

On 24 April 2012 Council adopted the Nelson Bay Town Centre and Foreshore Strategy 2012 (the 2012 Strategy), seeking to guide Nelson Bay towards becoming more attractive to tourists, the business community and residents. Since adoption however, there has been limited private investment in the town centre, despite this period being one of significant growth for the housing industry. A copy of the 2012 Strategy has been included as Appendix 3.

In response Council adopted the Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (the Delivery Program) on 25 September 2018. The Delivery Program sought to review the 2012 Strategy and investigate why this limited investment and economic development had occurred, and how the town centre can be revitalised.

The Delivery Program includes 33 actions to encourage public and private investment and improve the amenity and vibrancy of the town centre. This approach responds to the community's identification that a clear strategy already exists for Nelson Bay, however some revisions would be required to encourage more private investment, such as amendments to planning provisions (e.g. maximum building height limits and the introduction of floor to space ratios) and better quality public spaces.

Delivery of the Actions listed in the Delivery Program will improve the attractiveness of the Town Centre to both tourists and the resident population, re-establishing Nelson Bay as the Strategic Centre on the Tomaree Peninsula.

The community has been engaged throughout the process of reviewing the 2012 Strategy and developing the Delivery Program, including participation in online surveys, community drop-in sessions and stakeholder meetings. This proposal will deliver Actions 1, 2 and 7 of the Delivery Program.

## **SITE**

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The proposed amendments apply to land in the Town Centre which is consistent with the defined study area for the Delivery Program as shown in Figure 1 and the Site Identification Map at Appendix 2.

The boundaries of the Town Centre were expanded from the area defined in the 2012 Strategy under Action 9 of the Delivery Program. The resulting site encompasses the land zoned B2 Local Centre, most of the surrounding R3 Medium Density Residential zoned land and other key land identified through community consultation undertaken for the purposes of preparing the Delivery Program.



Figure 1 - Planning Proposal boundaries

## PART 1 – OBJECTIVE OF THE PLANNING PROPOSAL

The Planning Proposal seeks to use a number of development planning provisions to achieve the following outcomes in the Town Centre:

- To provide for a diverse and compatible mix of land uses supported by sound planning policy to deliver high quality development and urban design outcomes;
- To continue to facilitate economic growth that contributes to long-term and self-sufficient employment locally;
- To provide opportunity for housing choice and support services tailored to the needs of the community;
- To deliver outcomes of the Hunter Regional Plan to grow the Port Stephens economy and tourism; and
- To delivery Action 1, 2 and 7 of the Delivery Program.

## **PART 2 – EXPLANATION OF THE PROPOSED PLANNING PROVISIONS**

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The objectives of this planning proposal will be achieved by the following amendments to the *Port Stephens Local Environmental Plan 2013* (PSLEP):

### *Floor Space Ratio*

The Planning Proposal introduces floor space ratio (FSR) planning provisions in accordance with the adopted Delivery Program and for the purposes of controlling the bulk and scale of new development in the Town Centre.

The objectives of the new provisions are:

- to ensure that buildings are compatible with the bulk and scale of the desired future character of the locality;
- to provide a suitable balance between landscaping and built form; and
- to minimise the effects of bulk and scale of buildings.

The floor space ratio controls are consistent with the outcomes identified in the Delivery Program for lower density development in the central core of the town centre to retain a 'village atmosphere' and facilitate a more human scale better view sharing. This is also consistent with the analysis set out in the Nelson Bay Public Domain Plan which identifies the area of the town centre where pedestrians and visitors are spending time, meeting, gathering, and walking.

The proposed amendments will achieve higher densities on the edges of the central village precinct. This will assist in view sharing, whilst still achieving consolidated development in the town centre and increasing feasibility in the centre.

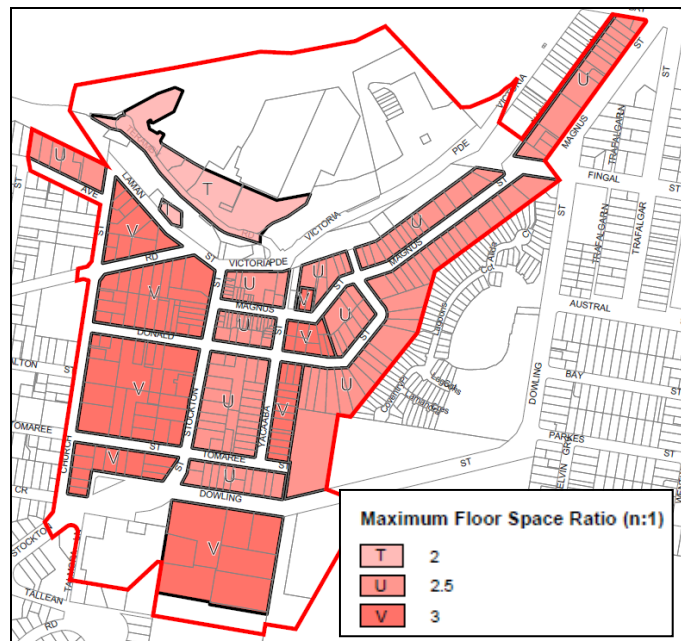
The proposed controls for both FSR and height have been tested on selected sites in accordance with the Apartment Design Guide for the State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development and as set out in the Frequently Asked Questions – Nelson Bay Revised Implementation and Delivery Program at Appendix 15.

Whilst retaining lower heights in these areas of the town centre will likely have a positive impact towards addressing overshadowing and solar access (particularly in relation to the streetscape and areas where pedestrians will be spending time in the town centre) these matters will also be addressed in the development control plan provisions that will encourage design excellence outlined in the Delivery Program (Action 11)(e.g. The proposed objectives for upper storey setbacks) and addressed in the assessment of new development applications.

In addition, new developments for residential flat buildings will be referred to an Independent Urban Design Panel for review in accordance with the Delivery Program (currently new developments are referred to the Newcastle City Urban Design Panel, however Port Stephens Council will establish a Panel as one of the actions associated with the Delivery Program (Action 3).

Other actions in the Delivery Program that will address design excellence and promote positive outcomes that will work in conjunction with the proposed planning provisions include removing the uncertainty of the development incentives in the 2012 Strategy (Action 10) and providing an urban design education program for Council staff (Action 4). A Floor Space Ratio Map and floor space ratio provisions are proposed in accordance with Figure 2 below and the relevant map included as part of Appendix 4.





**Figure 2 - Proposed Floor Space Ratio provisions**

### *Height of Buildings*

The Planning Proposal amends the existing Height of Buildings Map in accordance with the adopted Delivery Program and for the purposes of:

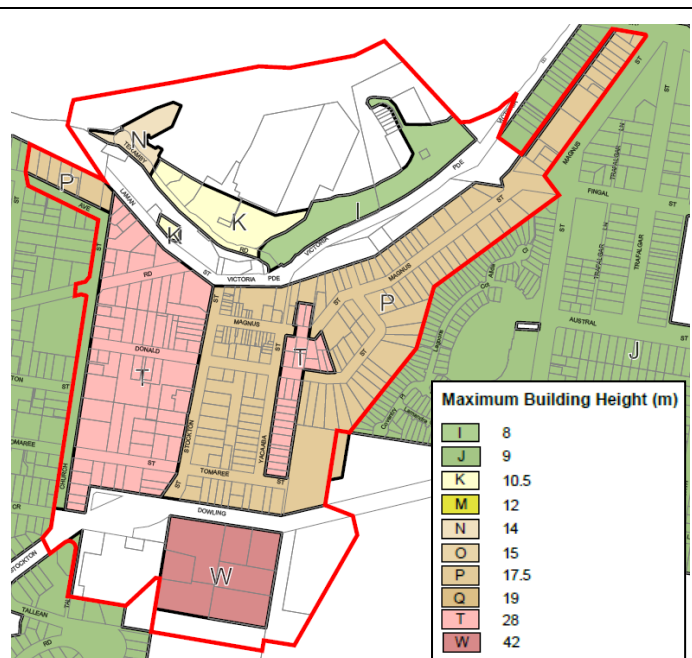
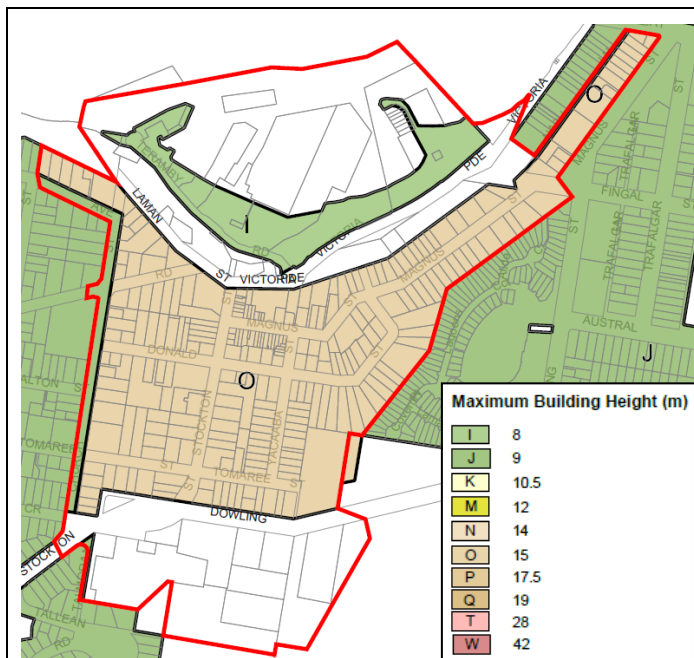
- Facilitating higher densities in the Town Centre to concentrate development rather than zoning further land for increased development;
- Increase the development feasibility of some sites in the Town Centre to attract investment and new development; and
- Retaining lower heights in the central core of the Town Centre to retain a village character in Nelson Bay and to promote view sharing.

The proposed amendments to building heights are also proposed to give effect to actions in the Hunter Regional Plan 2036 to create compact settlements that do not encroach onto sensitive land uses (Direction 21.4), and which require Council to 'investigate high density development that maintains and enhances the tourist, recreational and residential appeal of the centre' for Nelson Bay (p.65).

The proposed amendments are consistent with the outcomes identified in the Delivery Program to retain lower heights (17.5m / 5 storeys) in the central core of the town centre to retain a 'village atmosphere' and a more human scale in this precinct and to better facilitate view sharing. This is also consistent with the analysis set out in the Nelson Bay Public Domain Plan which identifies the area of the town centre where pedestrians and visitors are spending time, meeting, gathering, and walking.

The proposed amendments will achieve greater densities on the edges of the central village precinct, mirroring the topography of the town centre. This will assist in viewing sharing, whilst still achieving consolidated development in the town centre and increasing feasibility in the centre. This is also consistent with the objectives of the current Port Stephens Development Control Plan 2014 to ensure that buildings reinforce the natural amphitheatre landform of the town centre. Cross-sections of the town centre and foreshore demonstrating this landform have been included as Appendix 16.

The amendments to the existing Height of Buildings Map are proposed in accordance with Figure 4 below and the relevant map included as part of Appendix 4.



### Active Street Frontages

The Planning Proposal introduces provisions to require active street frontages along certain streets zoned B2 Local Centre in accordance with the adopted Delivery Program and for the purposes of providing people-orientated street frontages for new developments.

The objective of the new clause will be to promote uses that attract pedestrian traffic along certain ground floor street frontages in the Town Centre.

Active street frontages (where premises on the ground floor of a building facing the street are used for the purposes of business premises or retail premises) will be a requirement for new developments, including a change of use, along the parts of the streets in the commercial and retail parts of the Town Centre where the Delivery Program and Nelson Bay Public Domain Plan have identified key pedestrian linkages.

Active street frontages will not be required for any part of a building that is used for any of the following:

- entrances and lobbies (including as part of mixed use development);
- access for fire services; or
- vehicular access.

The active street frontage planning provisions will apply to land identified on an active street frontages map in accordance with Figure 5 below and the relevant map included as part of Appendix 4.

Wording of the proposed clause is anticipated to be consistent with the model provision prepared for the Standard Instrument, which has been updated to reflect local zoning and is shown below:

## 7.22 Active Street Frontages

- (1) The objective of this clause is to promote uses that attract pedestrian traffic along certain ground floor street frontages in Zone B2 Local Centre.
- (2) This clause applies to land identified as 'Active street frontage' on the Active Street Frontages Map.



- (3) Development consent must not be granted to the erection of a building, or a change of use of a building, on land to which this clause applies unless the consent authority is satisfied that the building will have an active street frontage after its erection or change of use.
- (4) Despite subclause (3), an active street frontage is not required for any part of a building that is used for any of the following:
  - (a) entrances and lobbies (including as part of mixed use development),
  - (b) access for fire services,
  - (c) vehicle access.
- (5) In this clause, a building has an **active street frontage** if all premises on the ground floor of the building facing the street are used for the purposes of business premises or retail premises.

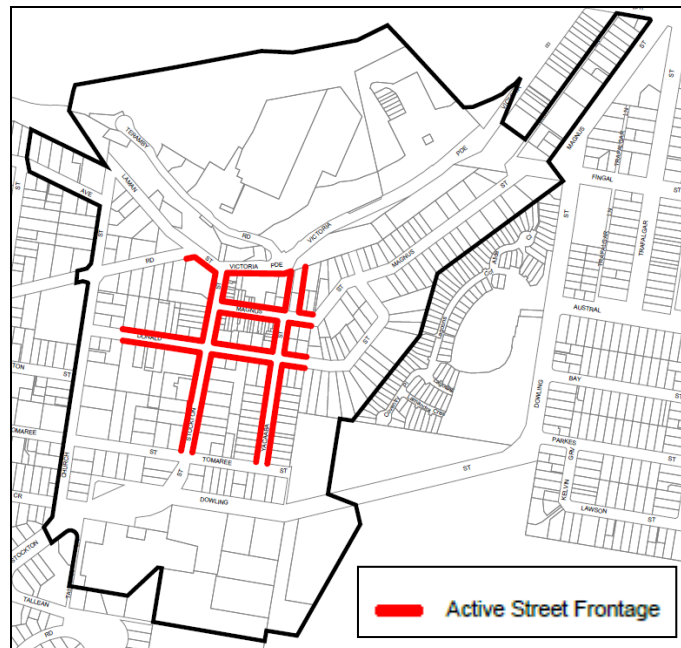


Figure 5 - Proposed Active Street Frontages

### *Minimum Building Street Frontage*

The Planning Proposal introduces a requirement for new development in the Town Centre to have a minimum primary street frontage.

The objectives of the new clause are:

- to ensure that, visually, buildings have appropriate overall horizontal proportion compared to their vertical proportions;
- to provide appropriate dimensions and spacing to ensure adequate privacy between any residential component and the adjoining land use;
- to provide appropriate dimensions for the design of car park levels and ensure access is reasonably spaced along roads and lanes;
- to encourage consolidation of lots to facilitate development of commercial office, business, residential and mixed use buildings provided for under the PSLEP.

The clause will apply to new development in the Town Centre on land zoned B2 Local Centre and R3 Medium Density Residential, involving the construction of a new building or alterations or additions to an existing building. The boundaries of the Town Centre are as specified in the

Delivery Program and will be identified on the Precinct Areas Map in the PSLEP, in accordance with Figure 6 below and the relevant map included as part of Appendix 4.

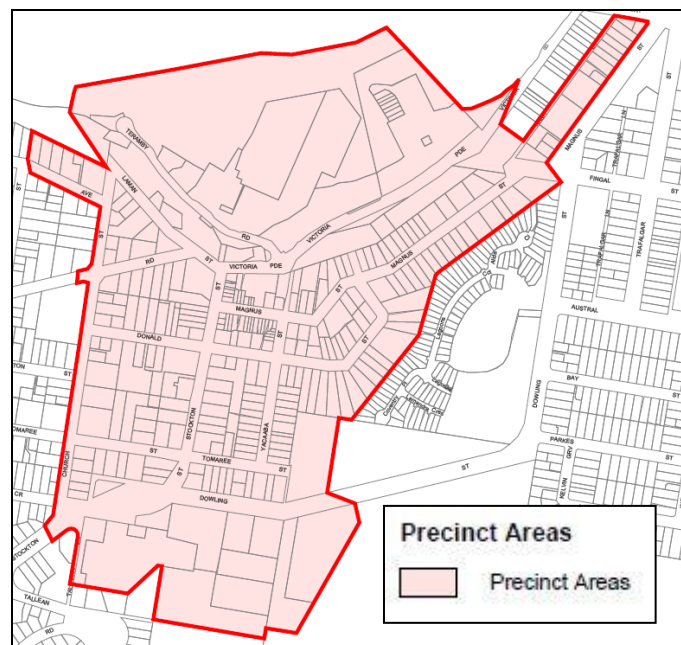
Where the clause applies, new development must have a minimum primary street frontage of 15 metres or more, unless the physical constraints of the land (or the adjoining land) make it not possible for a building to be erected to meet that minimum width and the development is otherwise consistent with the aims and objectives of PSLEP.

Providing a minimum primary street frontage will complement other development standards to ensure appropriate vertical to horizontal proportions of new buildings in the town centre as set out in the Delivery Program.

The proposed provisions is anticipated to result in a clause similar to the following:

### **7.23 Minimum street frontages for development in zones B2 and R3 in Nelson Bay Town Centre**

- (1) The objective of this clause is to ensure that, visually, buildings in the Nelson Bay Town Centre have an appropriate overall horizontal proportion compared to their vertical proportions.
- (2) Development consent must not be granted for the erection of a building in Zone B2 Local Centre and R3 Medium Density Residential in the Nelson Bay Precinct identified on the Precinct Areas Map if the land does not have a primary street frontage of at least 15 metres.
- (3) Despite subclause (2), the consent authority may grant consent for development referred to in that subclause if the consent authority is satisfied that—
  - (a) due to the physical constraints of the land or adjoining land, it is not possible for the erection of a building to be carried out on land with a primary street frontage of at least 15 metres, and
  - (b) the development is consistent with the aims and objectives of this Plan.



**Figure 6 - Proposed Nelson Bay Precinct**

## *Design Excellence*

The delivery program requires a range of actions related to design excellence, including:

- Constituting an urban design panel;
- Improving urban design analysis skills for development assessment staff; and
- Including controls in the DCP to require new development to demonstrate design excellence.

A wide range of Council staff attended urban design training in February 2019 where tools were provided on identifying and reinforcing elements of good urban design. This training demonstrated the link between good urban design and the enhancement of experience of a place, such as engendered by the objectives in documents such as the NSW Government Architect's Better Placed.

The Port Stephens Urban Design Panel (UDP) held its first meeting in December 2019, and meets regularly to provide independent urban design advice on a range of developments, including on the ability of development in Nelson Bay to meet design excellence controls.

The Delivery Program outlines the need for additional design excellence controls in the DCP to ensure development in Nelson Bay achieves built form of an appropriate quality. These controls will reinforce important elements of local character that are consistent with the future vision for Nelson Bay. These controls will also provide an appropriate benchmark for the UDP to consider development against.

The existing DCP includes a site specific chapter for Nelson Bay, where local character statements identify design excellence elements that new development should incorporate.

An amendment to the DCP has been prepared, to be exhibited concurrently with this proposal that reinforces the need for development to respond to the character statements. The amendment also includes new objectives adopted from the NSW Government Architect's Better Placed document, and outlines the role of the Urban Design Panel in providing independent advice on design excellence.

It is not proposed to add design excellence provisions to the Port Stephens Local Environmental Plan.

## **PART 3 – JUSTIFICATION FOR THE PLANNING PROPOSAL**

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### **SECTION A – Need for the Planning Proposal**

#### **1. Is the planning proposal a result of any strategic study or report?**

The Planning Proposal is the result of the strategic planning studies and reports that informed the 2012 Strategy and the studies and reports that updated that strategy as part of the adoption of the Delivery Program in 2018.

The studies and reports prepared for this purpose cover a range of matters including traffic and transport, car parking, public domain, and accessibility. Council also commissioned feasibility testing of selected residential sites in the town centre to examine the viability of various development heights and car parking configuration. This feasibility report was subsequently independently reviewed by a development economist. The feasibility analysis and third party review supports the building height planning provisions proposed in the Planning Proposal as outlined in the Delivery Program. A copy of the Feasibility Testing report is included as Appendix 6.

The Planning Proposal is necessary to give effect to the Delivery Program and relevant actions in the Hunter Regional Plan 2036.

The Delivery Program includes 3 Actions which identify necessary changes to PSLEP so as to achieve the objectives of the 2012 Strategy and the Delivery Program:

- Action 1 – Amend PSLEP to include a clause requiring activated street frontages.
- Action 2 – Amend PSLEP to include a clause requiring appropriate vertical to height proportions.
- Action 7 – Amend the PSLEP to include FSR requirements and to amend the existing Height of Buildings map.

The planning proposal will reinforce the destination as a regionally significant centre as identified in the Hunter Regional Plan 2036.

## **2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?**

This planning proposal is the only means to amend the Port Stephens Local Environmental Plan 2013 so as to provide certainty for the local community and landowners and deliver the outcomes of the Delivery Program.

Preparation of the Planning Proposal was endorsed by Council at its Ordinary Meeting on 25<sup>th</sup> September 2018. An excerpt of the meeting minutes is included as Appendix 7.

## **SECTION B – Relationship to Strategic Planning Framework**

### **3. Will the planning proposal give effect to the objectives and actions of the applicable regional, or district plan or strategy (including any exhibited draft plans or strategies)?**

#### Hunter Regional Plan

The Hunter Regional Plan (HRP) applies to the Port Stephens Local Government Area (LGA) and is an applicable consideration for this planning proposal. The relevant actions of the HRP have been considered in the table below:

Action	Description	Comments
6.3	Enable economic diversity and new tourism options that focus in reducing the seasonal nature of tourism and its effects on local economy.	Nelson Bay is subject to highly seasonal population variations, with many businesses experiencing large fluctuations in trade depending on the time of year. The planning proposal will provide increased opportunities for a more permanent resident population, and is anticipated to reduce the seasonality of commercial activity in the Town Centre. This will support local businesses and is anticipated to create demand for additional commercial and retail offerings, along with a corresponding increase in employment opportunities.
21.1	Promote development that respects the landscape attributes and the character of the metropolitan area, towns and villages.	The Nelson Bay Public Domain Plan has been prepared to deliver action 12 of the Delivery Program. The Public Domain Plan defines the desired character of public spaces in the Nelson Bay town centre and foreshore, reinforcing and building on the coastal elements found throughout

Action	Description	Comments
		the area. The planning proposal will complement the Public Domain Plan by providing appropriate planning provisions for new development outside of the public realm. The proposal introduces floor space ratio provisions, active street frontage requirements, and minimum building width provisions to respond to the desired built form character identified through public consultation for both the 2012 Strategy and the Delivery Program. The planning proposal responds to the topographical characteristics of the Town Centre (see Appendix 16).
21.4	Create a well-planned, functional and compact settlement pattern that responds to settlement planning principles and does not encroach on sensitive land uses, including land subject to hazards, on drinking water catchments or on areas with high environmental values.	The planning proposal will enable new development within the existing urban footprint, preserving the high environmental value of surrounding land. In conjunction with the Nelson Bay Public Domain Plan, the proposal will allow residents of new developments to experience functional movement through, and use of, the town centre. Residents within the town centre will be located within appropriate distances to commercial and retail premises so as to support a pedestrian environment, as envisaged in the Public Domain Plan.
21.6	Provide greater housing choice by delivering diverse housing, lot types and sizes, including small-lot housing in infill and greenfield locations.	The planning proposal will invigorate new development within the town centre, allowing for new diverse housing options to cater for the needs of the community. Recent development approvals granted within the town centre have shown diversity of dwelling size and configuration. It is anticipated that the proposal will enable similar developments throughout the town centre.
21.7	Promote new housing opportunities in urban areas to maximise the use of existing infrastructure.	Infill housing will be facilitated by the planning proposal, which will enable new development within the current urban footprint of the Nelson Bay town centre that utilises existing infrastructure. Concurrent delivery of works to address the outcomes of the Nelson Bay Public Domain Plan, Nelson Bay Independent Citizens Parking Panel report and Nelson Bay Traffic and Parking Study, will ensure that infrastructure continues to appropriately provide for the needs of the community.
23.1	Concentrate growth in strategic centres, local centres and urban renewal corridors to support economic and population growth and a mix of uses.	The planning proposal will enable new development within the town centre of Nelson Bay, which is identified under the HRP as a Strategic Centre. This will support economic growth as the demand for commercial and retail services increases.

Action	Description	Comments
23.2	Develop precinct plans for centres to take an integrated approach to transport, open space, urban form and liveable neighbourhoods, and investigate the capacity of centres to accommodate additional housing supply and diversity without compromising employment growth.	The Delivery Program and Public Domain Plan represents a precinct planning approach for Nelson Bay consistent with this action. This planning proposal constitutes the statutory process to address the urban form consideration for this action, and is being undertaken concurrently with a range of other Delivery Program actions such as the Nelson Bay Traffic and Parking Study, Nelson Bay Integrated Transport Plan, Independent Citizens Parking Panel, additional DCP controls for design excellence, Nelson Bay Public Domain Plan, review of the Nelson Bay Foreshore Plan of Management, review of facilities to support public events, extension of Yacaaba Street to Victoria Parade, and implementation of the Apex Park Masterplan. The planning proposal will specifically enable the redevelopment of sites within a Strategic Centre identified in the HRP. The planning proposal is supported by the range of actions listed above as part of a precinct planning approach.
LGA Narrative	Maintain Nelson Bay as one of the primary tourist centres for the region and a hub for the Tomaree Peninsula	The planning proposal will support new development in the town centre. Design excellence actions in the Delivery Program will ensure that new development stimulated by the planning proposal will enhance the public domain improvements delivered under the Nelson Bay Public Domain Plan. The parallel delivery of new development and public domain upgrades will revitalise the town centre, making it more attractive to residents, tourists and businesses. Revitalisation of, and expansion of businesses in, the town centre will reinforce Nelson Bay as a tourist centre and a hub for the Tomaree Peninsula.
LGA Narrative	Maintain retail and professional services for the surrounding communities.	The planning proposal is anticipated to facilitate new development that will provide residential opportunities in the town centre. This is anticipated to lead to an increase in economic activity, ultimately facilitating increased retail and commercial offerings. New developments are also expected to facilitate appropriate spaces for existing and new businesses in the town centre, supporting an expansion in retail and food and drink premises to cater for surrounding communities, as well as supporting the existing service based hub in the town centre. These active street frontages facilitated by the planning proposal will have a positive economic impact on

Action	Description	Comments
		the town centre.
LGA Narrative	Investigate opportunities for high-density development that maintains and enhances the tourist, recreational and residential appeal of the centre.	The planning proposal will facilitate new development within the town centre of Nelson Bay that will provide dwellings and tourist accommodation to support the needs of the local community and tourist industry. A range of building heights are proposed so as to maintain the village feel in the centre of the study area, whilst allowing for greater dwelling and tourist accommodation options in proximity to take advantage of new retail and commercial options. Concurrent works under the Nelson Bay Public Domain Plan and the Nelson Bay Integrated Transport Plan will ensure that an enhanced public realm experience will be available to residents and tourists, enhancing the appeal of the town centre.
LGA Narrative	Balance the mix of permanent residential and tourist accommodation to enhance the vibrancy of the centre and surrounds.	New development within the town centre will increase economic activity, drawing a greater variety of commercial and retail businesses, and making the town centre more attractive to the local community and tourists. Both dwellings and tourist and visitor accommodation are permissible in the town centre, with short term rental accommodation provisions in the <i>Port Stephens Local Environmental Plan 2013</i> providing flexibility in balancing the mix of permanent residential and tourist accommodation.

#### **4. Will the planning proposal give effect to a council's endorsed local strategic planning statement, or another endorsed local strategy or strategic plan?**

##### Integrated Strategic Plan (Port Stephens 2022)

The planning proposal is consistent with Port Stephens Community Strategic Plan as it will:

- Support sustainable business development in Port Stephens. (P1.1 – Strong Economy, vibrant local business, active investment)
- Support and deliver services that attract sustainable visitation to Port Stephens. (P1.2 – Strong Economy, vibrant local business, active investment)
- Provide land use plans, tools and advice that sustainably support the community. (P3.1 – Thriving and safe place to live)
- Enhance public safety, health and liveability through use of Council's regulatory controls and services. (P3.2 – Thriving and safe place to live)
- Support the amenity and identity of Port Stephens. (P3.3 – Thriving and safe place to live)

##### Port Stephens Planning Strategy (PSPS)

The PSPS identifies a significant projected increase in demand for housing and commercial/retail floor space in the Nelson Bay Town Centre to 2031. The Planning Proposal is consistent with the directions adopted by the PSPS to address this increased demand:

- A key element for the economic growth and revitalisation of Nelson Bay will be the likely need to intensify residential development in the Town Centre. Providing more diverse housing choice will assist in attracting permanent residents to the area, as well as supporting the Town Centre outside of the peak tourism season.
- There is insufficient capacity under current land use patterns to accommodate future demand resulting in a need for more intensive development of existing land.
- Development of the existing open car parks could provide additional car spaces, retail, commercial and residential usage and may also provide stimulus for rejuvenation elsewhere in the Town Centre.

#### Nelson Bay Town Centre and Foreshore Strategy 2012 and Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised delivery and implementation program 2018

The adoption of the Delivery Program on 25 September 2018 provided a clear nexus that prompted the preparation of this Planning Proposal. The relevant Actions contained within the Delivery Program were formed with the express undertaking to realise the objectives of the 2012 Strategy (as updated by the Delivery Program). Accordingly, the Planning Proposal is consistent with the 2012 Strategy.

#### Port Stephens Local Infrastructure Contributions Plans

The local infrastructure necessary to support the outcomes of the planning proposal was identified in the preparation of the Port Stephens Local Infrastructure Contributions Plans (LICs) in 2019. The works schedule to the LICs specifies the community and other infrastructure projects such as shared paths and town centre upgrades in the Nelson Bay Town Centre that will be funded by new development in the Town Centre and local catchment. The LICs were prepared based on population data and other projections that took into account the outcomes of the planning proposal. The details of the data and calculations used to determine infrastructure requirements are set out in the LICs. The LICs are published on Council's website:

<https://www.portstephens.nsw.gov.au/grow/development-controls-plans-and-strategies/local-infrastructure-contributions>.

### **5. Is the planning proposal consistent with applicable State Environmental Planning Policies?**

There are no existing or draft State Environmental Planning Policies that prohibit or restrict the proposed development as outlined in this planning proposal. An assessment of relevant State Environmental Planning Policies against the planning proposal is provided in Table 1 below.

<b>Table 1: Relevant State Environmental Planning Policies (SEPPs)</b>	
<b>SEPP</b>	<b>Consistency and Implications</b>
<b>SEPP No 44 Koala Habitat Protection</b>	<p>The Port Stephens Comprehensive Koala Plan of Management (CKPoM) has been prepared in accordance with Part 3 of SEPP 44, and is applicable in the Port Stephens Local Government Area. Schedule 2 of the CKPoM sets out the performance criteria for planning proposals, which have been addressed below.</p> <ol style="list-style-type: none"> <li><i>Not result in development within areas of preferred koala habitat;</i> The proposed amendments to PSLEP do not apply to and will not facilitate development in the portions of the site mapped as containing preferred koala habitat.</li> <li><i>Allow only for low impact development within areas of Supplementary Koala Habitat and Habitat Linking Areas;</i></li> </ol>



	<p>Whilst the proposed new and amended planning provisions do apply to portions of the site mapped as containing Supplementary Koala Habitat, it is noted that the relevant land does not contain any vegetation. Accordingly there are no anticipated impacts on areas of Supplementary Habitat or Habitat Linking Areas.</p> <p><i>c. Minimise the removal of any individual preferred koala food trees, where ever they occur on the site;</i></p> <p>The Planning Proposal will not enable or facilitate the removal of any vegetation.</p> <p><i>d. Not result in development which would sever koala movement across the site generally and for minimising the likelihood of impediments to safe/unrestricted koala movement.</i></p> <p>The Planning Proposal does not expand the boundaries of existing developed land and will not result in movement pathways for koalas being severed.</p> <p>The Planning Proposal is consistent with the CKPoM and therefore satisfies the provisions of this SEPP.</p>
<p><b>SEPP No 65 Design Quality of Residential Flat Development</b></p>	<p>Residential Flat Buildings are permissible with consent in the majority of the Town Centre and accordingly SEPP65 is a relevant consideration for this Planning Proposal. The Apartment Design Guidelines prepared under SEPP 65 include considerations for setting both height of building controls and floor space ratio controls, which have been addressed below.</p> <p><u>Height of Building Controls</u></p> <p>The proposed height of building provisions have been prepared with consideration to the necessary height allowance required per storey, so as to achieve an effective control on the number of storeys permitted within the different areas of the town centre. The resultant provisions include a variety of applicable maximum heights to take account of local topography and to maximise opportunities for view sharing and solar access. The height of building provisions have also been prepared in conjunction with relevant floor space ratios to maintain solar access, views and appropriate massing as observed from the public realm. The Planning Proposal is consistent with the considerations for setting height controls, contained within the Apartment Design Guidelines.</p> <p><u>Floor Space Ratio Controls</u></p> <p>A range of floor space ratio provisions have been proposed, giving consideration to the predominant existing lot dimensions of different parts of the Town Centre as well as the range of proposed building height provisions. This ensures that resultant buildings throughout the Town Centre will predominantly be capable of achieving the maximum gross floor area whilst not exceeding the building envelope set by existing setback controls and proposed height provisions. It is noted that a large portion of the Town Centre permits mixed use buildings. The proposed planning provisions relating to building width and active street frontages will provide appropriate controls to separately regulate the site coverage of commercial and residential portions of future developments. The Planning Proposal is consistent with the considerations for setting floor place ratio controls, contained within the Apartment Design Guidelines.</p>

	<p><u>Future Developments</u></p> <p>SEPP 65 also contains criteria for consideration for future development proposals; to achieve high quality built form outcomes. Future development applications will be assessed against these considerations on their merits.</p> <p>The planning proposal satisfies the provisions of this SEPP.</p>
<b>SEPP (Coastal Management) 2018</b>	<p>Part of the Town Centre is located within the Coastal Zone and so the provisions of this SEPP are an appropriate consideration for this Planning Proposal.</p> <p>The amendments to the PSLEP contained within the Planning Proposal relate to land in an urban context with an established street and pedestrian network. A variety of building height planning provisions have been proposed which decrease within foreshore areas so as to maintain visual amenity and scenic qualities of the coastal area.</p> <p>The proposed planning controls are also anticipated to revitalise the town centre and attract a greater population to enjoy the foreshore and coastal area, enforcing the aim of the SEPP to increase accessibility to and use of the coastal area.</p> <p>Given that the proposed controls relate to land which already contain improvements, the planning proposal is not likely to result in increased risk of coastal hazards.</p> <p>The planning proposal satisfies the provisions of this SEPP.</p>

## 6. Is the planning proposal consistent with applicable Ministerial Directions (s.9.1 directions)?

An assessment of relevant s.9.1 Ministerial Directions against the planning proposal is provided in Table 2 below.

<b>Table 2: Relevant s9.1 Ministerial Directions</b>	
<b>Ministerial Direction</b>	<b>Consistency and Implications</b>
<b>1. EMPLOYMENT AND RESOURCES</b>	
<b>1.1 Business and Industrial Zones</b>	<p>The Planning Proposal is consistent with the objective of supporting the viability of centres. It seeks to use a number of planning provisions to achieve better development outcomes, support opportunities for increased density and achieve the desired built form in the Town Centre.</p> <p>The planning proposal does not reduce the floor area for employment uses and related public services in business zones, rather it seeks to retain and increase the development potential of the areas and locations of existing business and commercial land use.</p> <p>The Planning Proposal is consistent with this direction.</p>
<b>2. ENVIRONMENT AND HERITAGE</b>	
<b>2.1 Environment Protection Zones</b>	<p>The Town Centre includes land zoned E3 Environmental Management and so this direction is a relevant consideration for this Planning Proposal.</p>

The land zoned E3 is occupied by Apex Park and the adjacent buildings comprising the Port Stephens Visitor Information Centre as shown in Figure 7 below.

The Planning Proposal does not include any amendments to the PSLEP provisions relating to the E3 zoned land, and will not reduce the environmental protection standards that apply to that land.

The Planning Proposal is consistent with this direction.

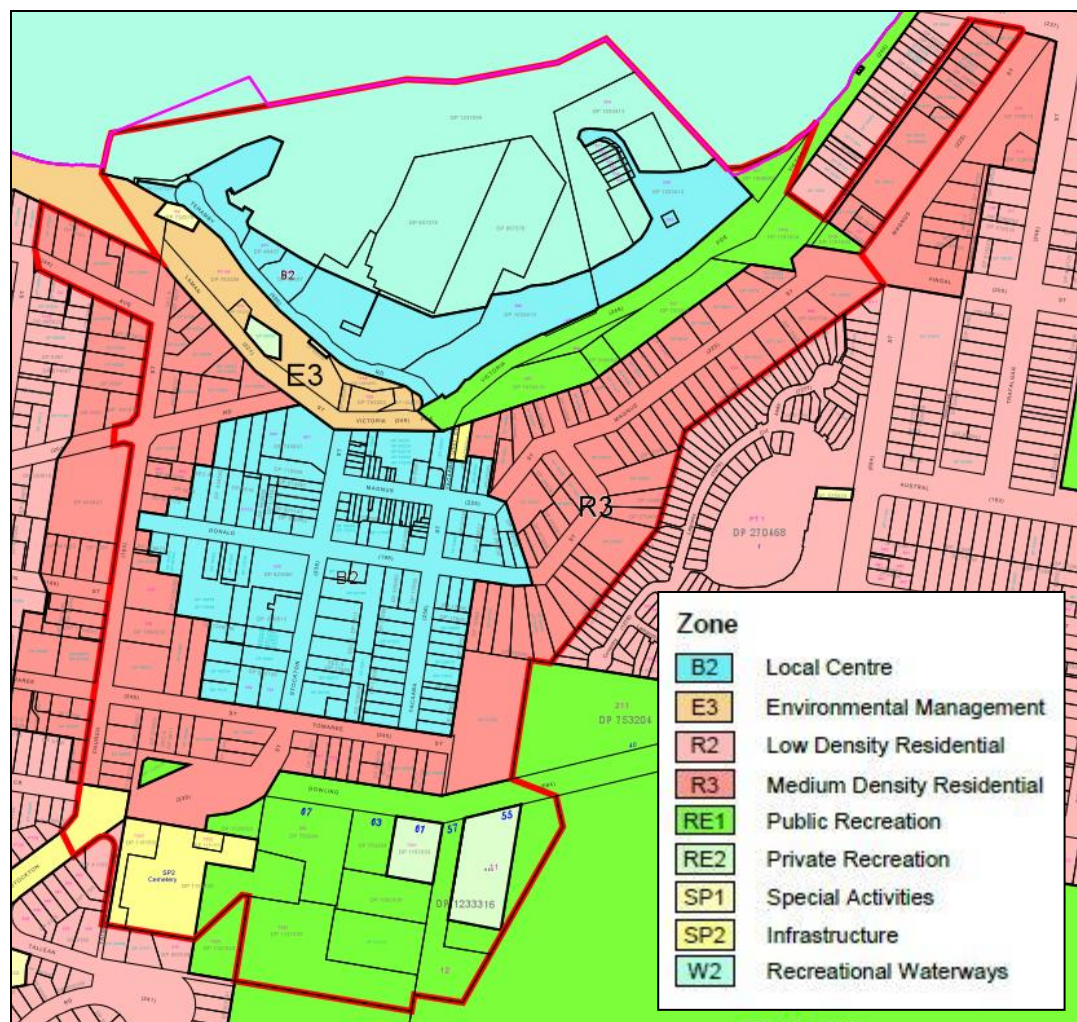


Figure 7 - Zoning Map

## 2.2 Coastal Management

The Port Stephens Local Environmental Plan includes existing provisions relating to the objects of the Coastal Management Act 2016 and related listed documents. This Planning Proposal will not affect these provisions, which will continue to operate in accordance with the objectives of this direction.

Further, the Planning Proposal has been prepared to address actions 1, 2 and 7 of the Delivery Program, which updated the 2012 Strategy. The 2012 Strategy gave consideration to, and was consistent with, this Ministerial direction.

The Planning Proposal will support the future vision of Nelson Bay of a vibrant coastal town centre. Engendered in this vision is more economically sustainable commercial activity in a strategic centre of importance to both local and surrounding residents, as well as a significant destination for tourists and visitors. A more vibrant centre will increase the use of and access to the coastal zone. In particular, this increased use and access will

capitalise on existing infrastructure and built environment, and represents a sustainable method of accessing the coastal zone. Proposed provisions for active street frontages and minimum land widths will increase the amenity of the town centre and provide a stock of adaptable building spaces to cater for the future needs of the community.

Nelson Bay Town Centre and Foreshore is not identified in a coastal management plan as being affected by coastal hazards, and does not include areas of coastal wetlands or littoral rainforest.

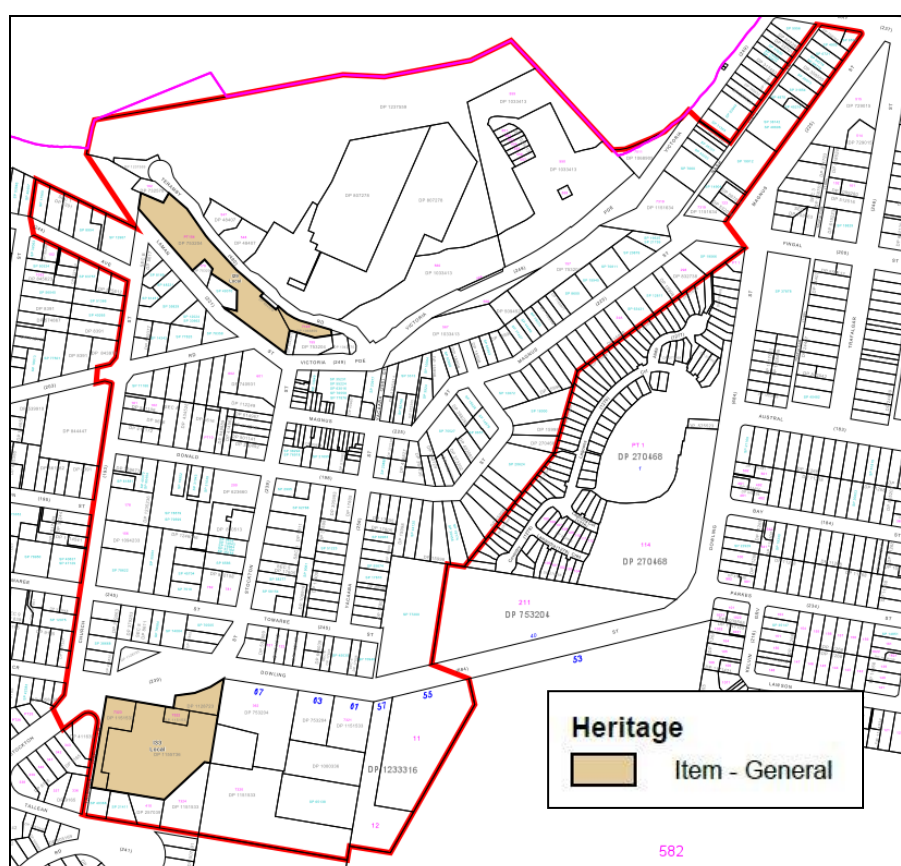
The Planning Proposal will amend provisions applicable to the existing urban footprint and will assist in defining the location and boundaries of the town centre, and will contribute to the revitalisation of an existing urban centre. Further, higher density development within the existing urban footprint will reinforce a compact settlement pattern.

The Planning Proposal is consistent with the objects of the *Coastal Management Act 2016*, the Coastal Management Manual and Toolkit, and the Coastal Design Guidelines, and is consistent with this direction.

## 2.3 Heritage Conservation

The Town Centre includes the Apex Park Group (Including cenotaph, the original town well, and the remains of the memorial steps) which is identified in PSLEP as an item of local significance. These heritage items are identified within the Apex Park Masterplan (included as Appendix 8) and are shown in Figure 7 below.

The Town Centre also includes the Nelson Bay Cemetery (shown in Figure 8 below), which is identified in the Port Stephens LEP 2013 as an item of local significance.



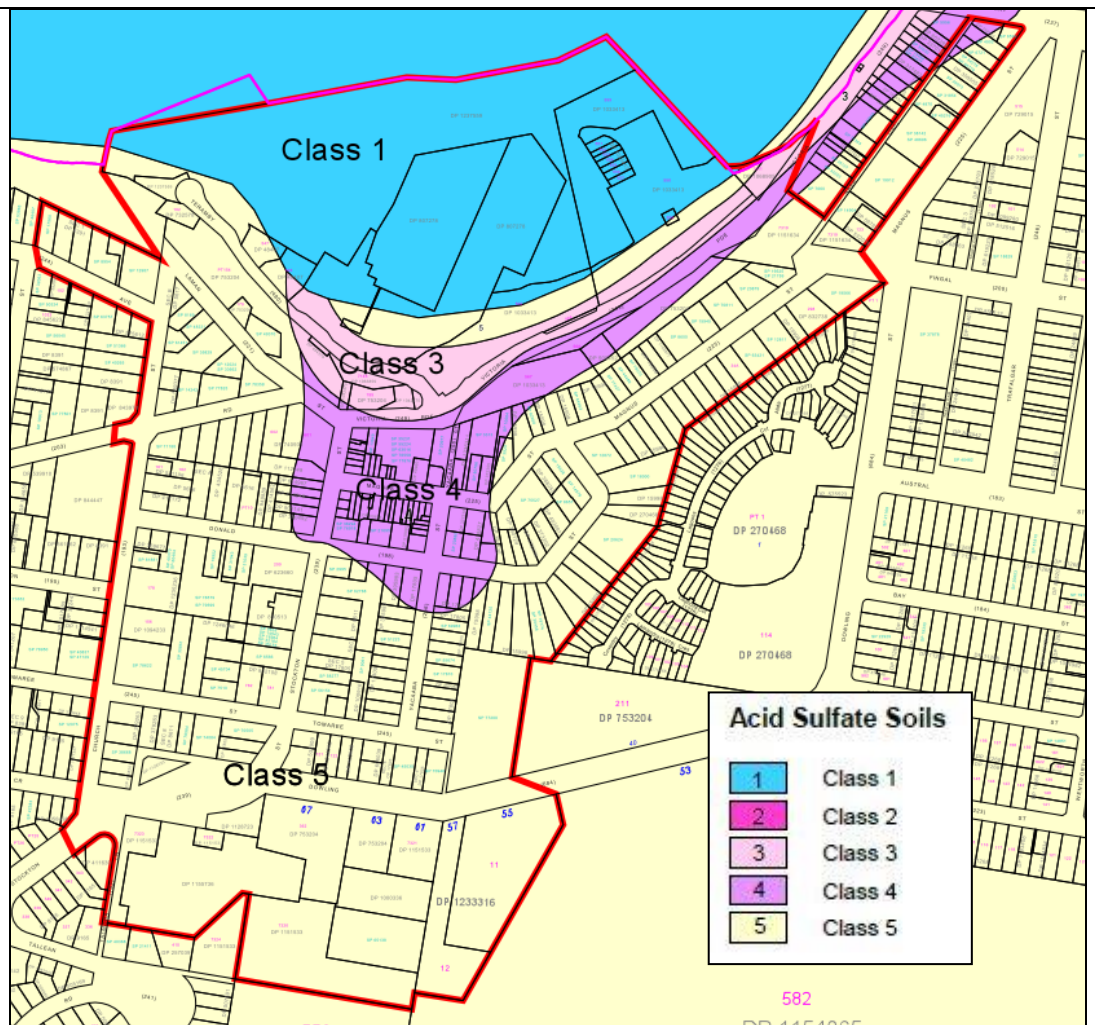
**Figure 8 - Heritage Conservation Items Map**

PSLEP already contains provisions that facilitate the conservation of these items, which will not be diminished by the proposed amendments. The

	<p>existing provisions are consistent with this direction and do not require modification.</p> <p>The Planning Proposal is consistent with this direction.</p>
<b>3. HOUSING, INFRASTRUCTURE AND URBAN DEVELOPMENT</b>	
<b>3.1 Residential Zones</b>	<p>This direction applies because the planning proposal affects residentially zoned land and land zoned B2 Local Centre where significant residential development is permitted.</p> <p>The planning proposal seeks to use a number of planning provisions to improve the viability of housing developments within the Town Centre, which will broaden the choice of building types and locations available in the housing market. In addition, the proposed provisions relate to the existing urban footprint of the Town Centre where developments can be serviced by existing infrastructure. This will reduce the demand to grow the urban footprint outside the Town Centre. Good design outcomes will be achieved as a consequence of the proposed planning provisions, which provide a framework for appropriate scaling and proportioning of buildings. It is also intended to supplement the provisions the subject of this Planning Proposal, with development controls that encourage appropriate setbacks and massing to ensure appropriate solar access, visual privacy and view sharing are considered when a development application is assessed. The development controls will be developed to deliver action 11 of the Delivery Program. The proposed amendments to the PSLEP do not include changes to land zoning or other provisions which would serve to reduce the permissible residential density of the land.</p> <p>The Planning Proposal is consistent with this direction.</p>
<b>3.3 Home Occupations</b>	<p>PSLEP includes Home Occupations as permissible without consent in both the R3 Medium Density Residential zone and B2 Local Centre zone where dwellings houses are permissible. The Planning Proposal will not amend this provision.</p> <p>The Planning Proposal is consistent with this direction.</p>
<b>3.4 Integrating Land Use and Transport</b>	<p>This direction applies because the Planning Proposal relates to land zoned for urban purposes.</p> <p>The proposed amendments to PSLEP will promote increased development density within the walking catchment of transport nodes (such as buses, taxi ranks and paths/cycleways and the like) in Nelson Bay. In addition, the proposed development controls will facilitate increased pedestrian access to the Town Centre where retail and service outlets are located, resulting in a reduced dependence on cars.</p> <p>In consideration of parking and transport matters in the Town Centre, Council commissioned a traffic and parking study which was completed in May 2013. A copy of the study is included at Appendix 9. The study undertook a review of the existing road and transport network and made recommendations to improve accessibility to the town centre and facilitate more efficient vehicle and pedestrian movement. In 2017 Council commissioned an update to the study to review more recent traffic and parking count data, and test the relevance of the recommendations. A copy of the study update is included as Appendix 10. The study update was</p>



	<p>identified in action 20 of the Delivery Program to develop solutions that improve wayfinding, traffic movement efficiency and car parking utilisation and turnover.</p> <p>Action 20 of the Delivery Program also requires the preparation of an integrated Transport Plan for Nelson Bay Town Centre that combines data contained within the updated traffic and parking study, the Pedestrian Access and Mobility Plan (included as Appendix 11), the Nelson Bay Public Domain Plan and the report of the Nelson Bay Citizens Parking Panel.</p> <p>The Nelson Bay Public Domain Plan has recently been exhibited and Council is currently considering the submissions received. The Public Domain Plan includes a signage and wayfinding strategy and provides specific design concepts which achieve outcomes of the updated traffic and parking study. The Public Domain Plan has been prepared with reference to Transport for NSW's Movement and Place Framework and identifies streets in the town centre where pedestrian movement will be prioritised as well as the streets that will be important corridors for public transport and cars, strengthens connections to parks and open spaces, and supports active movement via walking and cycling in and around the Town Centre. The Public Domain Plan delivers Action 12 of the Delivery Program and has been included as Appendix 12.</p> <p>Action 22 of the Delivery Program required the formation of an independent citizen's car parking panel, which was recently established. The panel prepared a report analysing the car parking needs of both the resident and tourist population, and making recommendations to Council on how car parking access and utilisation could be improved. A copy of the Nelson Bay Citizens Parking Panel Report has been included as Appendix 13.</p> <p>The above reports have been considered in the preparation of this Planning Proposal and support a revitalised and reinvigorated Town Centre.</p> <p>The Planning Proposal is consistent with this direction.</p>
<b>4. HAZARD AND RISK</b>	
<b>4.1 Acid Sulfate Soils</b>	<p>This direction applies as the site has been identified as potentially containing Class 1, 3, 4 and 5 acid sulfate soils, as shown in figure 9 below.</p> <p>PSLEP contains existing provisions to regulate works in acid sulfate soils, which are not proposed to be amended by this Planning Proposal. These provisions were developed in accordance with the Acid Sulfate Soils Guidelines referenced in this direction and satisfy the direction in this regard. In addition, the Planning Proposal does not propose an intensification of land uses on the site.</p> <p>The Planning Proposal is consistent with this direction.</p>



**Figure 9 - Acid Sulfate Soils Map**

### 4.3 Flood Prone Land

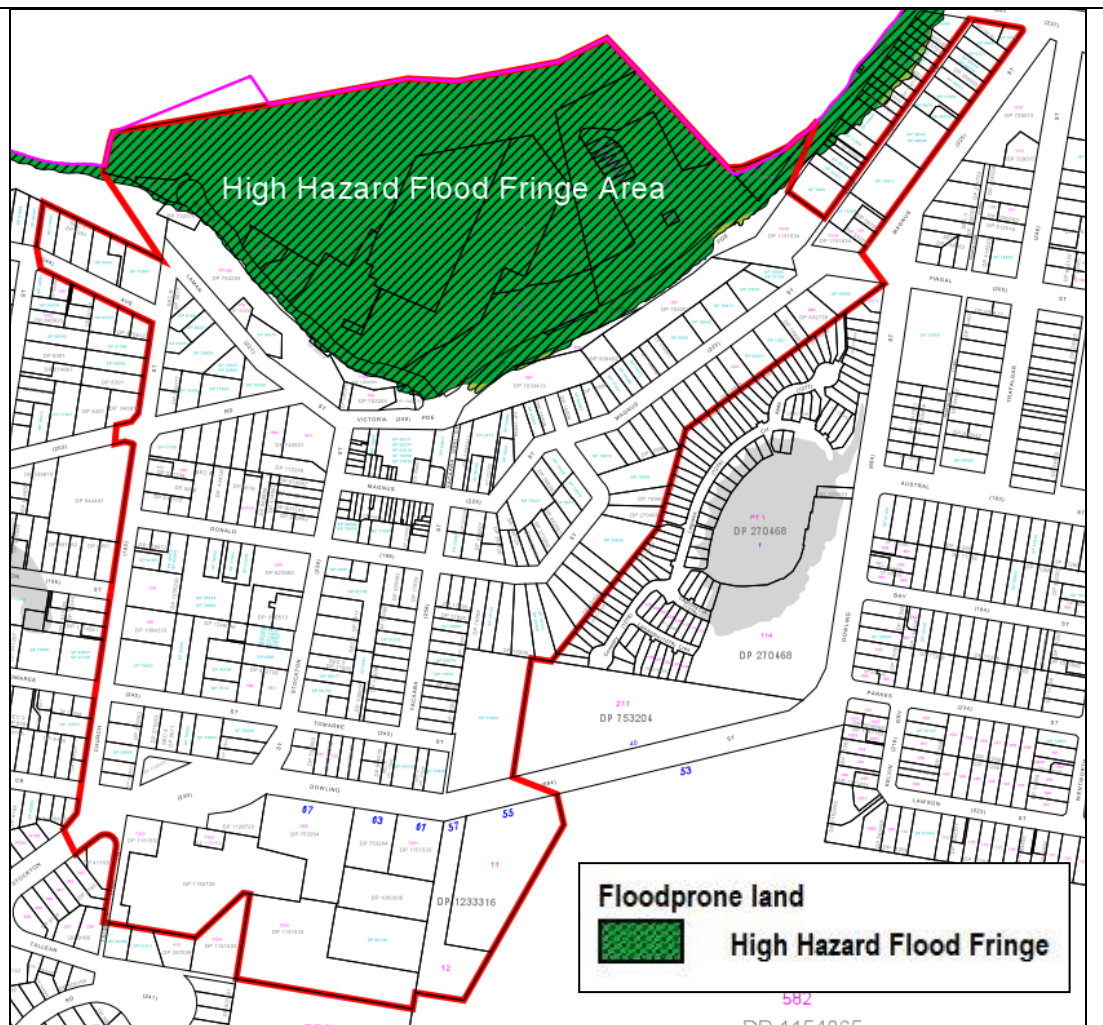
This direction applies as land located to the north of Teramby Road and Victoria Parade (Nelson Bay harbour and foreshore) is identified as high hazard flood fringe as shown in Figure 10 below.

The Planning Proposal includes an amendment to building heights permitted on a portion of the affected land which will permit an increase in the development of flood prone land. It is noted however that for the majority of affected land, either no building height increase is proposed, or the increase in permissible building height will allow for up to an additional 2.5m. Given that 2.5m of building height is generally not sufficient to contain an additional storey, this amendment is not considered to allow for a significant increase in development of the affected land.

The Planning Proposal will allow for up to 6m of additional building height on the remaining flood affected land. This increase is capable of containing two additional storeys compared to the current building height control. However the impacts of any flood experienced in the locality will be minimal given the small footprint of the land benefitting from this increase in building height. The increased development potential of this land is not a significant consideration with regard to flooding.

PSLEP contains existing provisions that give effect to and are consistent with the NSW Flood Prone Land Policy, which are not proposed to be amended.

The Planning Proposal is consistent with this direction.



**Figure 10 - Flood Prone Land Map**

#### **4.4 Planning for Bushfire Protection**

This direction applies as a portion of the subject land is identified as being bushfire prone land as shown in Figure 11 below.

The Planning Proposal relates to the existing urban footprint which contains features to reduce the impact of bushfire on developed land, such as access roads, a suitable water supply and asset protection zones.

Consultation with the Rural Fire Service will be required to ensure compliance with relevant bushfire planning provisions and to satisfy the requirements of this Direction. Consultation will be sought following a Gateway Determination.



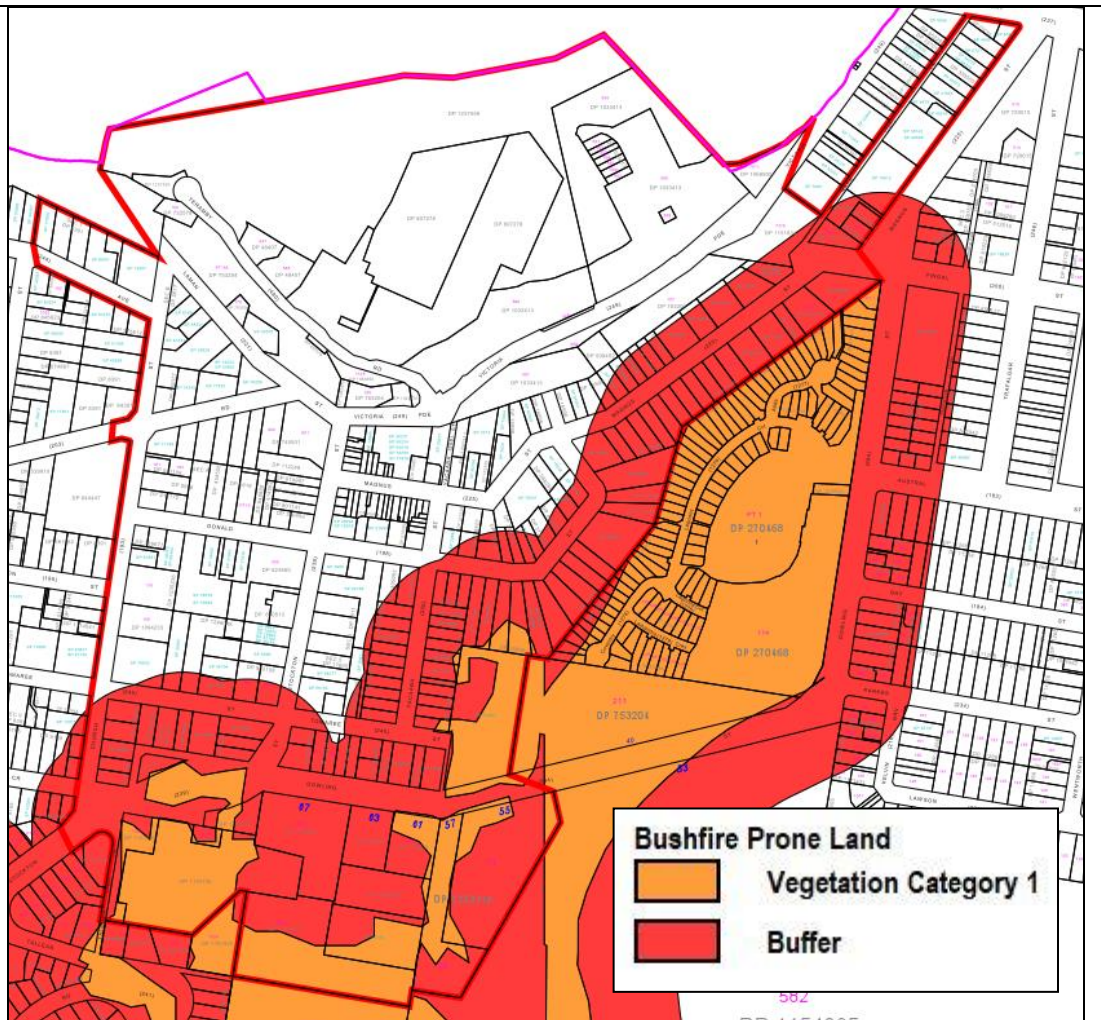


Figure 11 - Bushfire Prone Land Map

## 5. REGIONAL PLANNING

### 5.10 Implementation of Regional Plans

This direction applies as the site is located within the boundaries of the Hunter Regional Plan (HRP). As detailed under Section B(3) above, the planning proposal is consistent with the HRP as it will:

- Enable economic diversity and new tourism options that focus in reducing the seasonal nature of tourism and its effects on local economy.
- Create a well-planned, functional and compact settlement pattern that responds to settlement planning principles and does not encroach on sensitive land uses, including land subject to hazards, on drinking water catchments or on areas with high environmental values.
- Provide greater housing choice by delivering diverse housing, lot types and sizes, including small-lot housing in infill and greenfield locations.
- Promote new housing opportunities in urban areas to maximise the use of existing infrastructure.
- Concentrate growth in strategic centres, local centres and urban renewal corridors to support economic and population growth and a mix of uses.

The Planning Proposal is consistent with this direction.



<b>Direction 6.1 Local Plan Making</b>	<p>The Planning Proposal does not propose to include any new provisions requiring concurrence, consultation or referral of development applications to a Minister or public authority, and does not identify any development as designated development.</p> <p>The Planning Proposal is consistent with this direction.</p>
<b>Direction 6.2 Reserving Land for Public Purposes</b>	<p>The Planning Proposal does not include any provisions to create, alter or reduce existing zonings or reservations of land for a public purpose.</p> <p>The Planning Proposal is consistent with this direction.</p>

## SECTION C – Environmental, Social and Economic Impact

### 7. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

The proposed new and amended provisions in PSLEP relate to land within the existing developed urban footprint, which contains only minor areas of high environmental value – see Figure 12 below.

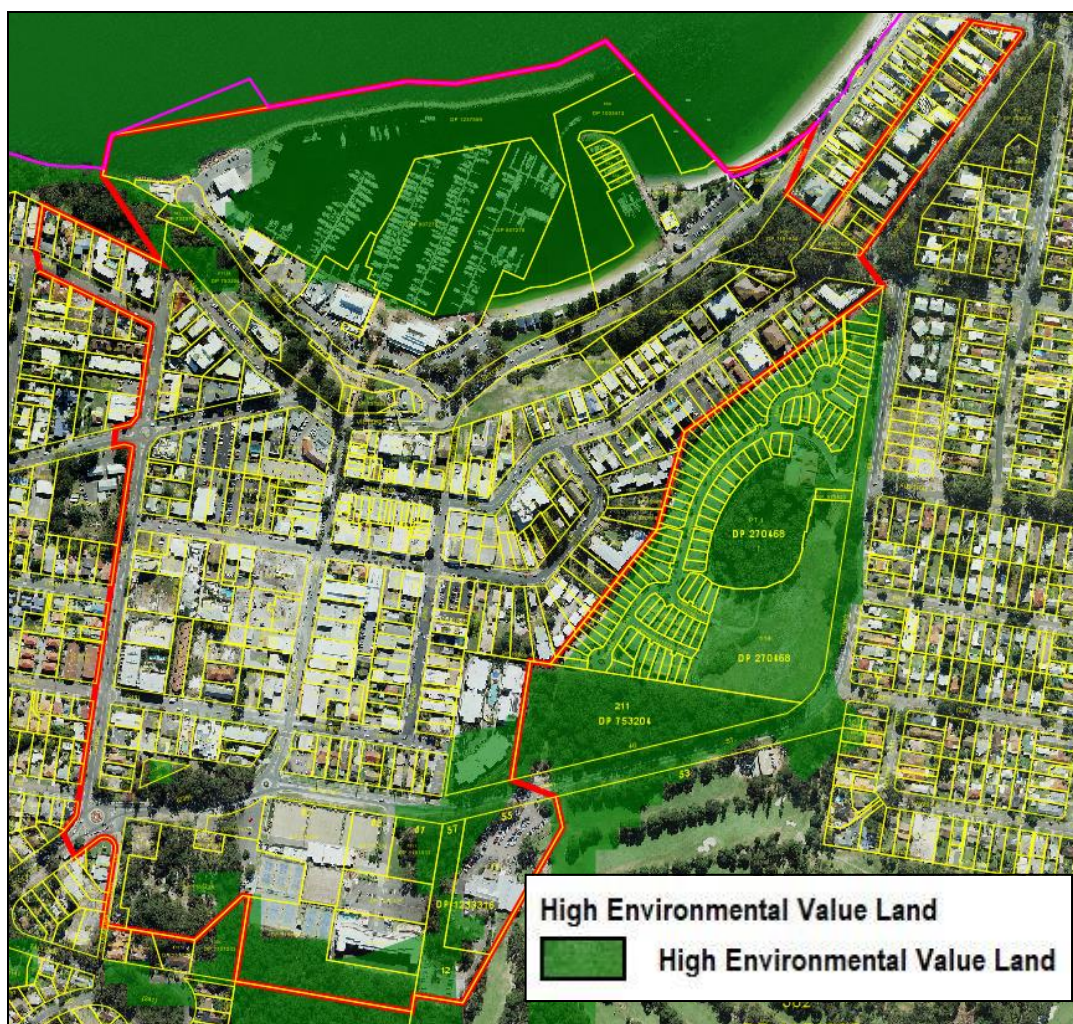


Figure 12 - High Environmental Value Map

The proposed provisions will not increase the likelihood of development in areas that contain critical habitat or threatened species, populations or their habitats. Future proposed developments

will continue to be assessed for ecological impact in accordance with the existing controls contained within PSLEP and the *Biodiversity Conservation Act 2016*.

The Planning Proposal is unlikely to adversely affect any critical habitat, threatened species, populations or their habitats.

#### **8. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?**

The proposed provisions will allow developments that would alter the local built environment. The package of proposed provisions will ensure that these changes result in appropriate future development in the town centre, with adequate building separation, proportions and massing. Further, proposed development controls will supplement the PSLEP provisions to improve aesthetics and building quality as viewed from the public realm. Further to this the Delivery Program includes Actions to establish an Independent Urban Design Panel (Action 3), provide Urban Design Training for Council staff (Action 4), and introduces a Clause 4.6 policy for assessment of exceptions to Development Standards (Action 8). Actions 4 and 8 have already been delivered, whilst Action 3 is currently being enacted. In conjunction with this Planning Proposal, these actions establish a design excellence framework for future development in the Town Centre. The Planning Proposal is considered to provide a positive environmental impact in this regard.

Given that the Planning Proposal relates to land within the existing urban footprint, there are no additional anticipated effects to the nature environment.

#### **9. Has the planning proposal adequately addressed any social and economic effects?**

The amendments seek to provide a balance between views, solar access, maintaining prevailing winds and managing the scale of development, without restricting appropriate new development that meets feasibility requirements of the development industry. The introduction of Floor Space Ratio, Active Street Frontages, and minimum vertical to horizontal building width provisions will provide for good design and achieve the desired built form in Nelson Bay. A high quality Town Centre environment will improve the liveability of Nelson Bay and provide for the retail and service based needs of the community. Revitalisation of the Town Centre will also improve the attractiveness of Nelson Bay as a tourism destination into the future.

Significant urban design analysis has been undertaken in Nelson Bay over a 30 year period. Consistently, this analysis has identified views to the surrounding water and verdant ridgelines as important characteristics of Nelson Bay to be preserved. The proposed building heights have been determined with consideration of the potential impacts of development both on view corridors and vistas. The proposed provisions also take into account the role of the built environment in framing important view corridors from key locations throughout the town centre (see Appendix 17 for this analysis).

The urban design analysis has identified locations where the built environment has the ability to impinge on view corridors and vistas, resulting in the introduction of building height limits to some currently unencumbered land, including community land at the southern end of the town centre. This planning proposal does not include actions to reclassify this community land, rather the proposal seeks to ensure these important views are preserved (see proposed height of building map in Appendix 4).

The Planning Proposal will increase the viability of new development within the Town Centre, providing housing opportunities and reducing the population seasonality that currently results from influxes of tourists to the area. New commercial opportunities will contribute to the creation of employment and job opportunities that improve the local economy, whilst additional housing options will increase accessibility to public transport and improve walkability within the Town Centre. The planning proposal will have positive social and economic effects by activating the

Town Centre, increasing employment opportunities and increasing the consistency of consumer activity.

The amendments to PSLEP are also supported by a number of other actions under the Delivery Program, which will improve traffic and movement efficiency, improve parking utilisation, provide for public domain upgrades, and improve the quality of buildings and developments within the Town Centre.

The local infrastructure necessary to support the outcomes of the planning proposal was identified in the preparation of the Port Stephens Local Infrastructure Contributions Plans (LICs) in 2019. Preparation of the LICs specifically considered the potential future growth in population and employment in the Nelson Bay Town Centre and Foreshore resulting from the proposed amendments to PSLEP, which has informed infrastructure upgrades detailed in the works schedule. The works schedule to the LICs specifies the community and other infrastructure projects such as shared paths and town centre upgrades in the Nelson Bay Town Centre that will be funded by new development in the Town Centre and local catchment. The LICs were prepared based on population data and other projections that took into account the outcomes of the planning proposal. The details of the data and calculations used to determine infrastructure requirements are set out in the LICs. The LICs are published on Council's website: <https://www.portstephens.nsw.gov.au/grow/development-controls-plans-and-strategies/local-infrastructure-contributions>.

This coordinated approach to improvement in Nelson Bay will ensure positive social and economic impacts.

## **SECTION D – State and Commonwealth Interests**

### **10. Is there adequate public infrastructure for the planning proposal?**

The Planning Proposal relates to land within the existing urban footprint which is currently serviced by reticulated water, sewer, electricity, telecommunications and public roads. Future developments may require upgrading of the respective distribution networks, which can be determined at the time of development assessment.

Early consultation with relevant service providers has determined that a precinct wide review of existing service provisions would allow for a systematic approach to any required upgrades, reducing ad-hoc solutions that only serve individual developments. Further consultation with service providers following issue of a Gateway determination will facilitate this process.

The Nelson Bay Traffic and Parking Study Update prepared in September 2017 (Appendix 10) has given specific consideration to the traffic and transport impact of development resulting from the current proposal. The study included a number of recommendations, including upgrades for pedestrian movement through the town centre. Many of these upgrades have also been identified in the Nelson Bay Public Domain Plan. A broad range of traffic and transport upgrades have been included in a works program adopted by Council on 12 May 2020 that will be funded by a smart parking scheme in Nelson Bay. In addition the LICs include a range of traffic, parking and town centre improvement works to ensure appropriate traffic and transport infrastructure is provided. This will be funded by developer contributions, including those paid by new development in the Nelson Bay town centre.

### **11. What are the views of the State and Commonwealth public authorities consulted in accordance with the gateway determination?**

Consultation with relevant government agencies has been undertaken as part of the preparation of the Delivery Program and more recently in the preparation of the Nelson Bay Public Domain Plan. The Planning Proposal has been prepared with reference to preliminary comments received from the NSW Department of Planning and Environment, Crown Lands and NSW Police.

Further consultation with relevant State and Commonwealth Agencies will be undertaken following a Gateway Determination.

## **PART 4 - MAPPING**

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The Planning Proposal will result in the following amendments to the maps included in PSLEP:

- Amend Height of Buildings Map HOB\_005D and replace with the Height of Buildings Map included in Appendix 4;
- Amend Additional Permitted Uses Map, Precinct Areas Map, Waste or Resource Facility Map CL1\_005 and replace with the Additional Permitted Uses Map, Precinct Areas Map, Waste or Resource Facility Map included in Appendix 4;
- Introduce the Floor Space Ratio Map FSR\_005D included in Appendix 4; and
- Introduce the Active Street Frontages Map ASF\_005D included in Appendix 4.

In addition to the above maps, the Planning Proposal is also supported by a Site Identification Map which has been included as Appendix 2. Copies of the existing PSLEP Maps to be replaced have also been included as Appendix 5.

## **PART 5 - COMMUNITY CONSULTATION**

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Consultation has been undertaken during preparation of the 2012 Strategy and more recently when developing the Delivery Program. The submissions received as a result of this process were incorporated into the outcomes and actions of the Delivery Program, including Actions 1, 2 and 7 which initiated this Planning Proposal.

Community and external stakeholder consultation has been ongoing since the preparation and exhibition of the initial Discussion Paper: Progress of the Nelson Bay Town Centre and Foreshore Strategy in the first half of 2017. This included community consultation initiatives such as:

- Surveys on Engagement HQ (an online consultation tool on Council's website);
- Letter drops to local businesses, special interest groups and other stakeholders; and
- Key stakeholder meetings, including with Tomaree Ratepayers and Residents Association (TRRA), Tomaree Business Chamber, local real estate agents, Destination Port Stephens, the Aboriginal Strategic Committee, the Nelson Bay Pop-Up Shop (Smart Art Program), the NSW Department of Planning and Environment and NSW Crown Lands.

A total of 82 individual and 67 survey submissions were made on the Discussion Paper that were considered in the preparation of the Delivery Program. This was previously reported to Council on 12 December 2017.

The draft Delivery Program was exhibited from 21 February 2018 to 4 April 2018.

A number of supporting documents were also exhibited with these documents, including an updated traffic and transport study, a report on the feasibility testing of residential development sites in Nelson Bay Town Centre, and an independent third party peer review of the feasibility testing.

The information was made publicly available on Council's website and Engagement HQ, notification letters were sent to businesses, key stakeholders and special interest groups, and public notices were published in the local newspaper. Social media promotions (Port Stephens Council website, Twitter, Facebook, LinkedIn) were conducted, and articles and interviews with the Mayor were published in the local newspaper.

More than 50 people attended a launch of the 'Nelson Bay Next' brand and over 30 people attended two 'Drop-In Sessions' held in Apex Park, Nelson Bay. Both events took place within the public exhibition period and the community could speak directly to Council Officers at the Drop-In Sessions. Councillors and Council Officers also spoke and answered questions at a TRRA meeting at the Nelson Bay Bowling Club within this period.

Following a review of the submissions received, the Delivery Program was reported to Council on 25 September 2018. A Community and Stakeholder Consultation Report was also submitted to Council, summarising the submissions received and staff responses to the matters raised. A copy of the Community and Stakeholder Consultation Report has been included as Appendix 14.

Additional community consultation will be undertaken following issue of a gateway determination.

## **PART 6 – PROJECT TIMELINE**

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The Planning Proposal is expected to be reported to Council following the completion of the public exhibition period.

The following timetable is proposed, subject to the requirements of the Gateway Determination:

	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>
<b><i>Gateway Determination</i></b>								
<b><i>Agency Consultation</i></b>								
<b><i>Public Exhibition</i></b>								
<b><i>Review of Submissions</i></b>								
<b><i>Council Report</i></b>								
<b><i>Parliamentary Counsel</i></b>								

**Appendix 1 – Progressing the Nelson Bay Town Centre and Foreshore Strategy:  
A revised implementation and Delivery Program 2018**

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## Progressing the Nelson Bay Town Centre & Foreshore Strategy:

A revised implementation and delivery program



## Abbreviations

ASF	Active Street Frontages
CP	Contributions Plan
DA	Development Application
Delivery Program	Progressing the Nelson Bay Town Centre and Foreshore Strategy – A Revised Implementation and Delivery Program
DCP	Port Stephens Development Control Plan 2014
FSR	Floor Space Ratio
HFSS	Heritage Floor Space Scheme
HoB	Height of Building
HVRF	Hunter Valley Research Foundation
LEP	Port Stephens Local Environmental Plan 2013
LGA	Local Government Area
LHUDA	Lower Hunter Urban Design Awards
PIA	Planning Institute of Australia
Paper	Progressing the Nelson Bay Town Centre and Foreshore Strategy – A Discussion Paper
PSC	Port Stephens Council
PSPS	Port Stephens Planning Strategy
RFB	Residential Flat Building
RT&H	Raymond Terrace and Heatherbrae Strategy
SAMP	Strategic Asset Management Plan
SEPP	State Environmental Planning Policy
SMART	Specific, Measurable, Achievable, Realistic and Time-Based
Strategy	Nelson Bay Town Centre and Foreshore Strategy
Survey	Survey of Stakeholders in the Nelson Bay Strategy for Port Stephens Council
UFM	Urban Feasibility Model
VPA	Voluntary Planning Agreement

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## Executive Summary

'Progressing the Nelson Bay Town Centre and Foreshore Strategy – A Revised Implementation and Delivery Program' (the Delivery Program) follows on from the public exhibition of the 'Discussion Paper – Progress of the Nelson Bay Town Centre and Foreshore Strategy' (the Paper) which sought to review the Nelson Bay Town Centre and Foreshore Strategy 2012 (the Strategy).

This work has primarily sought to understand why limited private investment and economic development had occurred in Nelson Bay town centre, despite the past decade being one of significant growth for the housing industry, and how the town centre can be revitalised.

Community consultation was undertaken on both the Paper and a draft Delivery Program in 2017 and 2018. The community has been highly engaged in the process of developing this Delivery Program, including participating in online surveys, community drop-in sessions and stakeholder meetings. A Consultation Summary Report, reporting on the exhibition of the draft Delivery Program, has been published separately. The community will continue to have opportunities to participate in the implementation of the Delivery Program.

The Delivery Program seeks to provide an implementation plan to replace the program that currently accompanies the Strategy. It sets a forward direction by listing over 30 recommendations to encourage public and private investment and improve the amenity and vibrancy of Nelson Bay town centre. The Implementation Plan lists the specifics critical to delivering on these recommendations (**ATTACHMENT 1**).

This approach responds to the community's identification that a clear strategy already exists for Nelson Bay town centre and that a just a few minor, yet significant, changes are required to encourage private investment, such as amendments to planning controls (e.g. maximum building height limits and the introduction of floor to space ratios) and better quality public spaces.

Council has already invested in some of the key actions in the Implementation Plan, including the extension of Yacaaba Street and the preparation of the Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan.

The Delivery Program aims to support efforts by all stakeholders to attract public and private investment to the Nelson Bay town centre and to inspire and excite businesses, investors, tourists and the community.

The Implementation Plan (**ATTACHMENT 1**) is summarised by the following table (**FIGURE 1**).

**FIGURE 1 – Summary of Implementation Plan**

Key:		
Short – 1 year following the adoption of the Strategy.		
Medium – 1-3 years following the adoption of the Strategy.		
Long – 3-5 years following the adoption of the Strategy.		
No	Action	Timing
<b>Design Excellence</b>		
1	LEP Clause for Activated Street Frontages	Short
2	LEP Clause for Appropriate Vertical to Horizontal Proportions	Short
3	An Independent Urban Design Panel	Short
4	Education Program on Urban Design	Short
5	Support for Awards that recognise Design Excellence	Short
6	Develop a 3D model of the Town Centre for assessments	Short
<b>Building Heights</b>		
7	LEP Clause for FSR and increase in HoB	Short
8	Adoption of LEP Clause 4.6 Policy	Short
9	Expansion of the Strategy Boundary to include ridgelines	Short
<b>Development Incentives</b>		
10	Reducing the uncertainty provided by development incentives	Short
11	DCP requirements to encourage design excellence	Medium
<b>Public Domain</b>		
12	Development of a Public Domain Plan	Medium
13	Utilise technology to activate the town centre and improve the resident and visitor experience	Short
14	Feasibility assessment for public Wi-Fi in town centre	Short
15	Removal the Stockton Street Stage	Medium
16	Review the Nelson Bay Foreshore Plan of Management (PoM)	Medium
17	Implement the Apex Park Masterplan	Long
18	Develop a toolkit for public events	Short
19	Audit facilities that are required to facilitate public events	Medium
<b>Transport and Parking</b>		
20	Update the Traffic and Transport Study and develop an Integrated Plan	Medium
21	Identification of future car parking options	Short
22	Formation of a Citizens Panel for short-term and long-term parking	Short
23	Extension of Yacaaba Street	Short
24	Undertake a capacity analysis of the Victoria Street Pedestrian Bridge	Medium
25	Review signage and parking metres on the Foreshore	Medium
26	Review road speed limits in the town centre	Medium
27	Design and fund intersection options based on Study	Medium
28	Implement the Pedestrian Access and Mobility Plan (PAMP)	Medium
<b>Implementation</b>		
29	Re-word the existing actions to be SMART	Short
30	Implementation Panel that meets regularly to discuss Strategy progress	Short
31	Review Infrastructure Funding	Medium
32	Include relevant infrastructure items in the Strategic Asset Management Plan	Short
33	Monitor, Report and Review the Strategy	Long

## Part One - The Review

### The Need for a Review

Since its adoption in 2012, the Nelson Bay Town Centre and Foreshore Strategy (the Strategy) has sought 'to guide Nelson Bay towards becoming more attractive to tourists, the business community and residents'. Unfortunately, six years on from its adoption, there has been limited private investment in the town centre and foreshore, despite this period being one of significant growth for the housing industry.

The transition of the *Port Stephens Local Environmental Plan 2013* (the LEP) – the legislative tool that details town planning regulations – into a standard instrument LEP has also meant that a number of the actions originally identified within the Strategy would not have achieved the same intent, if legislatively applied.

This comes from the recognition that LEP (Clause 4.6 – Variation of Development Standards) can be tailored to have the same effect as the previously proposed clauses relating to design excellence. These factors, in addition to the following shortcomings, led to the development of the 'Discussion Paper – Progress of the Nelson Bay Town Centre and Foreshore Strategy' (the Paper):

- Development standards, such as heights are not informed by development feasibility
- Limited local policy guidance on the variation of development standards
- Floor space incentives, despite Floor Space Ratios (FSR) not being included in the LEP
- A development contributions levy based on commercial development, despite the significant growth in commercial development being at the nearly centre of Salamander Bay
- Lack of detail relating to the type and structure of the proposed Independent Urban Design Panel
- The Strategy boundary not accounting for existing building height along dominant ridge-lines
- Revised development controls (for example, private open space) under *State Environmental Planning Policy No.65 – Design Quality of Residential Apartment Development*
- No clear reporting requirements against the identified actions

Further to this, the release of the Hunter Regional Plan on 14 October 2016 raised the importance of the Tomaree Peninsula for land-use planning in the Hunter by identifying Nelson Bay as a 'strategic centre'.

### Hunter Regional Plan 2036

The Hunter Regional Plan (the Plan) identifies the role that Nelson Bay will play over the next twenty years from the perspective of the State. The Plan makes the following mentions of Nelson Bay:

- Determine the potential to grow allied health services on land around hospitals and health services at Nelson Bay and other locations (p.29).
- Create a compact settlement. In locations with good access to public transport and services, it makes sense to identify new opportunities for redevelopment and renewal. Greater Newcastle, coastal areas, including Nelson Bay has potential for this type of development (p.54).
- Nelson Bay and Raymond Terrace are identified as 'strategic centres' (p.64).
- Priorities for the 'strategic centre' of Nelson Bay are as follows:
  - a. Maintain it as one of the primary tourist centers for the region and a hub of the Tomaree.



- b. Maintain retail and professional services for the surrounding communities.
- c. Investigate opportunities for high-density development that maintains and enhances the tourist, recreational and residential appeal of the centre.
- d. Balance the mix of permanent residential and tourist accommodation to enhance the vibrancy and appeal of the centre and surrounds.

From this, it can be seen that Nelson Bay is a primary tourist centre for the region. It has a role in facilitating higher density development, especially given its existing infrastructure and access to services.

These identified shortcomings of the existing Strategy and the updated State position provided by the Plan led to the development of the Discussion Paper – Progress of the Nelson Bay Town Centre and Foreshore Strategy (the Paper). The Paper was endorsed for public exhibition on 13 December 2016.

#### Discussion Paper – Progress of the Nelson Bay Town Centre and Foreshore Strategy (the Paper)

In developing the Paper, a focus was placed on understanding what actions had been implemented to date. It identified that five years on from the adoption of the Strategy, Council has:

- Developed five options for the extension of Yacaaba Street. The fifth option was endorsed by Council on 24 June 2014 and construction commenced in late 2017.
- Developed an Apex Park Masterplan, which was endorsed by Council on 8 December 2015.
- Developed a site specific chapter within the Port Stephens Development Control Plan 2014 for the Nelson Bay Town Centre and Foreshore, which was endorsed by Council on 14 July 2015.
- Applied for and were successful in receiving \$340,000 in 'black spot funding' for 2015/16 in relation to the road and associated pedestrian works on Victoria Parade.
- Identified and is currently leasing land for two temporary parking stations – one located on Yacaaba Street, and the other on Government Road. The closure of the top two levels of the Donald Street East multi-storey car park reduced parking capacity from 174 spaces to 60. However, the temporary stations provide 120 spaces.
- Facilitated the Woolworths Development, which has been a catalyst for economic activity in the town centre. This approval also resulted in an additional 137 public car spaces.
- Facilitated events, such as the Sacred Tree Markets, Tastes at the Bay and New Year's Eve.
- Council led 'Smart Arts' program led to Artisan Collective setting up on Magnus Street.
- Approved four applications in the study area, only the Golf Course has been constructed.

The last point about the number of approvals and only one enactment – which was an insurance case related to the Golf Course – identified the need for further investigation in order to understand why no private investment was taking place. This led to the engagement of a third-party who undertook feasibility testing for five residential development sites. This testing made the following market observations:

- Costs of an excavated basement carpark are approximately \$50,000 per single car bay and an above ground car park is approximately \$25,000.
- Construction costs significantly increase from a level of eight storeys (28m) due to the need for increased structural materials and regulations, such as fire sprinklers.
- Modest unit pricing (gross realisations) is achieved in the current market.
- A lack of foreshore (frontage) development sites where a high ratio of units has an ocean view and generate the highest prices, capital rates (\$/sqm of living area) and profit margin.

This testing was subsequently peer reviewed by a local third-party land-use economist who agreed that, whilst there are a number of factors to consider the existing strategy is unlikely to allow for any significant re-development in the existing market conditions and within any near future.

This lack of confidence in the town centre has led to limited new residential redevelopment and limited population growth. From a Council perspective, this means it has been unable to collect development contributions or new rates to fund the identified works. In turn, it has had to look towards other funding sources, such as a grant to fund the Tomaree 'Black Spot' Works and a \$1.5M loan for Yacaaba Street. From a community perspective, this leads to increased frustration due to the 'tired' public realm and limited convenience services.

These observations highlighted the fact that if redevelopment has not occurred in a relatively robust residential property market then the town centre may be waiting a few more property market cycles before it will likely see any significant change desired by the local community. This is why the Paper identified the need for changes.

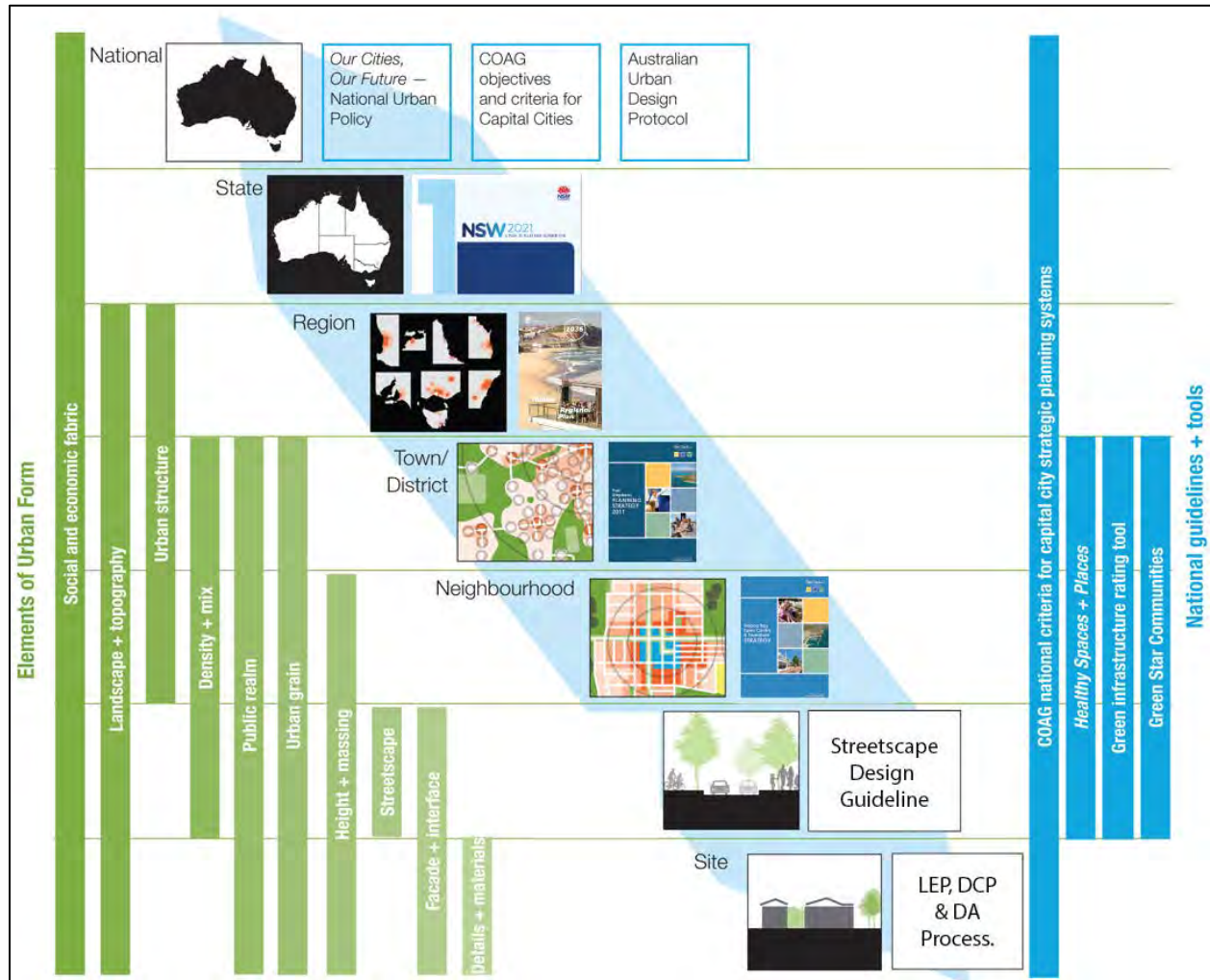
#### Document Hierarchy

The Nelson Bay Town Centre and Foreshore Strategy (the Strategy) provides further detail to the Port Stephens Planning Strategy, which implements the Hunter Regional Plan 2036.

This document represents the 'Progressing the Nelson Bay Town Centre and Foreshore Strategy – A revised Implementation and Delivery Program' (the Delivery Program). Its role is to update and set the implementation program for the Strategy. It replaces the 'Nelson Bay Town Centre & Foreshore Improvement Program' and overrides the Strategy where any inconsistencies may exist.

The Strategy Hierarchy is best summarised by the following illustration (**FIGURE 2**).

**FIGURE 2 – Strategy Hierarchy**



## **Part Two - The Way Forward**

### Improving the Strategy

Part Two outlines how the Strategy can be improved by addressing the following six key themes:

1. Design Excellence
2. Building Heights
3. Development Incentives
4. Public Domain
5. Traffic and Parking
6. Implementation and Case Management

The headings provided under each theme are as follows:

1. Description of the theme
2. A Review of the theme
3. Suggested changes listed in the Paper
4. Summary of feedback received
5. Recommendations

## 2.1 Design Excellence

### What is Design Excellence?

Design excellence is the recognition that building design should positively contribute to the overall quality of a town and to provide buildings that are appropriate to their context. In some circumstances, this contribution may be a landmark building, but more typically it is a well-designed building that fits into the street. The following figure identifies some elements relevant to achieving design excellence.

**FIGURE 3 – Illustration of Design Excellence**



Key features of this example of design excellence include:

- Appropriate block width, which then allows for side setbacks that cater for light infiltration and deep soil landscaping which softens the overall appearance of built-form.
- Entrances to the building are at the same level as the street to allow for easy access.
- An identifiable pedestrian entry makes it easy for visitors and emergency services to locate.
- Building height should provide due consideration to human scale. That is, five storeys is between 15-20m building height, which is a 1:1 ratio with a street width of 20m.
- The consistent building setback for the first three storeys, and a further setback for the fourth storey, reduces the overall bulk and scale of the development.
- The front setback is utilised for landscaping that softens the overall built form.
- Front balconies provide passive surveillance to the streetscape. At the same time, privacy screens block direct overlooking into those private living spaces from public spaces.

- Materials and colours of the driveway are consistent and are at grade with the public footpath, which makes it more easily accessible and usable for wheelchairs, mobility scooters, bikes, etc.
- The transparent garaged door reduces the 'blank wall' appearance that is typical of garage doors.
- A wider single driveway allows for safe ingress and egress, while not reducing kerbside parking or creating increased conflict points that comes from allowing two access points.
- Kerbside parking is clearly marked to ensure the driveway is not blocked by parked cars.
- The colour scheme is drawn from the existing colours of neighbouring buildings.
- Orientation of windows allow for maximum solar exposure and ventilation.
- Services (e.g. power) are placed underground or screened (e.g. A/C Units).
- Design of the building reflects its use.

While it is recognised that not all development has the privilege of a flat site, particularly in Nelson Bay, the principles of good urban design can still be applied. These principles can be grouped under the headings of context, built form, density, sustainability, landscape, amenity, safety, housing diversity and aesthetics. These principles result in buildings that are more livable and in turn more valuable.

#### A Review of Design Excellence

A review of current built form in the town centre, including development undertaken since the Strategy and LEP have been in place identified that these design elements are not demonstrated on a regular basis. The development that was reviewed resulted in the following observations:

- Narrow lot width (less than 15m) and lot length (less than 30m) results in tall skinny structures
- Monotone colours and consistent materials result in a lack of visual interest.
- Minimal side setbacks remove opportunities for landscaping and light penetration. They also reduce the potential privacy of buildings on neighbouring lots.
- Consistent square pocket windows reduce opportunities for passive surveillance.
- Lack of landscaping or opportunities for landscaping hardens the appearance of the structure.
- No footpath to the front door reinforces the dominance of motor vehicles.
- Roof-top balcony to extremity of side boundaries creates potential for overlooking.
- Pitched roof is in contrast to the overall structure and neighbouring unit buildings.
- Service entries next to the main entry door reduce overall aesthetics and amenity.

From this, it can be seen that the current planning regulations may not be producing the most desirable urban design outcomes. A table summarising the development controls that apply to development defined as a residential flat building and commercial premises was developed to inform this Paper.

This table identifies that detailed guidance is provided to common elements, such as heights, setbacks and protection of view corridors. However, shortfalls are identified in the identification of activated street frontages, minimum horizontal to vertical proportions and encouraging design excellence. From this, a number of ideas to improve the design excellence of development were identified.

#### Suggestions for a better Strategy detailed in the Paper

- Amending the LEP to ensure identified streets provided activated street frontages
- Amending the LEP to ensure appropriate vertical to horizontal proportions
- An independent external urban design panel to encourage design excellence
- Education program for urban design
- Support for awards that recognise design excellence



### Summary of feedback received on design excellence

Submissions in favour of promoting design excellence supported the ideal, but at the same time recognised that it was very subjective. The submissions supported Council continuing to encourage development that exhibits design excellence. This can be achieved through the existing framework (e.g. Apartment Design Guide) and driven by the market demands of purchasers.

### Recommendations

#### 1. LEP Clause for Activated Street Frontages

It is recommended that a Planning Proposal be prepared to insert an activated street frontages clause and accompanying map into the LEP.

This clause will seek to provide activation to those identified streets in order to achieve good design outcomes. The Nelson Bay Woolworths is an example of a building that provides an activated street frontage.

Good urban design features for the Nelson Bay Woolworths (**FIGURE 4**) are identified as follows:

- Central location in the town centre supports existing specialty shops.
- Clear identifiable entry point on the street corner encourages pedestrian activity.
- Pedestrian crossing provides direct access from different sides of the street.
- Lack of internal shops means specialty stores are not taken away from the streetscape.
- Underground parking means floor level space is not given to parking.
- Underground services clean up aesthetics and provides spaces for landscaping.
- Continual awning coverage provides protection from elements, such as rain and sun.
- Rear separate loading bays reduce potential conflict with pedestrians and cars.

An activated street frontage requirement will mean all new developments will have to ensure the ground floor premises facing the street are to be used for the purposes of business premises or retail premises. This could include amusement centres, community facilities, educational establishments, entertainment facilities, function centres, information and education facilities, medical centres, public administration buildings, or indoor recreation facilities. This will create a lively centre with an amenable and pedestrian-focused public domain, activated by building uses that engage with the street.

#### 2. LEP Clause for Appropriate Vertical to Horizontal Proportions

It is recommended that a Planning Proposal be prepared to insert an appropriate vertical to horizontal proportions clause and accompanying map into the LEP.

This clause will apply to those lots within the town centre with a width less than 15m and a length less than 30m, which is identified by (**FIGURE 5**). This clause will seek to ensure the consolidation of narrow and short lots and in turn avoid the high and narrow lots that have been considered undesirable, but are currently encouraged by the controls contained in the LEP.

### 3. An Independent Urban Design Panel

It is recommended that Council commence the process to establish a local Independent Urban Design Panel in accordance with the Apartment Design Guide. The Panel can be referred development applications not just in Nelson Bay, but across the LGA. It may also may also provide advice on development control plan amendments or other projects where expert input can improve design outcomes.

**FIGURE 4 – Illustration of the Nelson Bay Woolworths**



The Strategy suggested that large developments should be considered by an urban design panel in order to facilitate improved development outcomes. The role of an urban design panel is to provide independent expert advice on development that is lodged with Council. *SEPP No 65 – Design Quality of Residential Apartment Development* details how these panels are formed.

Council does not currently have an urban design panel, but currently utilises panels from other Local Government Areas. It is proposed that the following development be referred to this Panel:

- Residential flat buildings
- Seniors housing
- Industry, storage facilities and warehouses over 2,000sqm

- Commercial premises over 2,000sqm
- Development in the strategic centres that seek to vary development standards
- Hospitals, schools or places of public worship

The above is generally consistent with that of Newcastle City Council. A review of past development application data evidences that a total of seven applications would be referred per year. This would mean an addition \$3,000 in fees for the applicant and an additional estimated 30 days for the application to be processed by Council.

#### 4. Education Program on Urban Design

It is recommended that an education program on urban design be scoped and funded for Council Officers.

Continued education and learning is critical for all those involved in assessments will improve design outcomes. An annual internal education program has been scoped and will commence once the Delivery program is adopted. Education will focus on the revised *SEPP No.65 – Apartment Design Guideline* and the role of urban design in contributing to the creation of great places (i.e. place making).

#### 5. Recognising and celebrating Design Excellence

It is recommended that Council actively recognise and support design excellence in and around Nelson Bay Town Centre.

Initiatives like the Lower Hunter Urban Design Awards (LHUDA) is a good example of a local initiative that seeks to recognise design excellence. The Paper listed the developments that have been recognised.

From this, it was clear that over the twenty-five years that Council have been involved in the awards, the only developments on the Tomaree Peninsula that have been recognised are two single detached residences at Soldiers Point.

Recognising and celebrating design excellence can be effective in prioritising and raising the profile of good design outcomes throughout the town centre.

#### 6. Develop a 3D digital model of the town centre

It is recommended that Council commission a digital 3D model of the existing town centre using digital aerial mapping for use by assessment staff.

The tool will be able to be used by assessment staff to support better decision making. Where possible, imagery in appropriate formats provided by applicants will be able to be inserted in the model to enable better assessments of bulk and scale, overshadowing and other impacts. Applicants may be required to supply data and updates to the model in accordance with specifications in the development control plan, assessment guidelines, or as part of requirements for referrals to the Urban Design Panel.



**FIGURE 5 – Identification of Activated Street Frontages and Lots less than 15m by 30m**



## 2.2 Building Heights

### What is Building Height?

Height limits are important because they help shape the character of an area. For example, in areas where only dwelling houses are permitted, lower maximum building heights are applied. By comparison, in areas where residential flat buildings (i.e. units) are permitted and great density is expected, taller building height limits apply.

Building heights influence the visual and physical experience of place and can reinforce the character of an area or express community aspirations for an area's future character.

The maximum Height of Building (HoB) is listed as a development standard under the LEP. This development standard assists in shaping desired character (i.e. urban form, protection of identified view corridors, human scale, the pedestrian experience, over-shadowing and property values). HoB is also a key input that restricts floor space and in turn development feasibility.

### A Review of Building Height

A review of the existing building heights has reinforced that the five storey limit has applied over the past few decades. This can be seen to be reflective of the HoB limit contained within the LEP, which is based on the recommendations within the PSC 1984, 'Tall Building Study' and reinforced through the more recent Strategy.

Despite this, there are a number of existing structures/approvals that exceed this height limit, being:

- 71 Victoria Parade, Nelson Bay (Commercial & Residential) – 6 Storey/21m
- 5B Talleen Road, Nelson Bay (The Landmark) – 8 Storey/28m
- 14 Magnus Street, Nelson Bay (Residential) – 6 Storey/21m
- 11-13 Church Street, Nelson Bay (Residential) – 8 Storey/32m
- 29-45 Magnus Street, Nelson Bay (Marina Resort) – 6 Storey/22m

The identification of these approvals has highlighted the significant development that has taken place along the two ridgelines that Magnus Street and Thurlow Avenue. It also identifies the need to provide some guidance around the use of the LEP (clause 4.6 - Exception to development standards), which allows development to provide justification for the variation of a development standard, such as HoB, through the DA process.

These guidelines should assist in providing greater transparency and community participation in their development given that the existing development standards were developed following extensive consultation at the strategic planning phase. At the same time, the revision and subsequent expansion of the Strategy Boundary (**FIGURE 6**) will capture development that has already taken place along the ridgelines and can be seen to be within a walkable distance (i.e. 400m) and cyclable distance (i.e. 800m) of the town centre.

In order to provide a more detailed understanding as to why there has not been any significant residential unit development in the past ten years (**FIGURE 7**), Council engaged a consultant to undertake an independent feasibility appraisal. The appraisal used 5 (17.5m), 8 (25m), 11 (32.5m), 14 (40m) and 17 (47.5m) HoB scenarios for the five sites identified by (**FIGURE 8**). They are identified as:

- Site 1 - 49, 51, 51A & 51B Stockton Street, Nelson Bay;
- Site 2 - 11, 13 & 15 Church Street, Nelson Bay;



**FIGURE 6 – Extension of the Strategy Boundary**



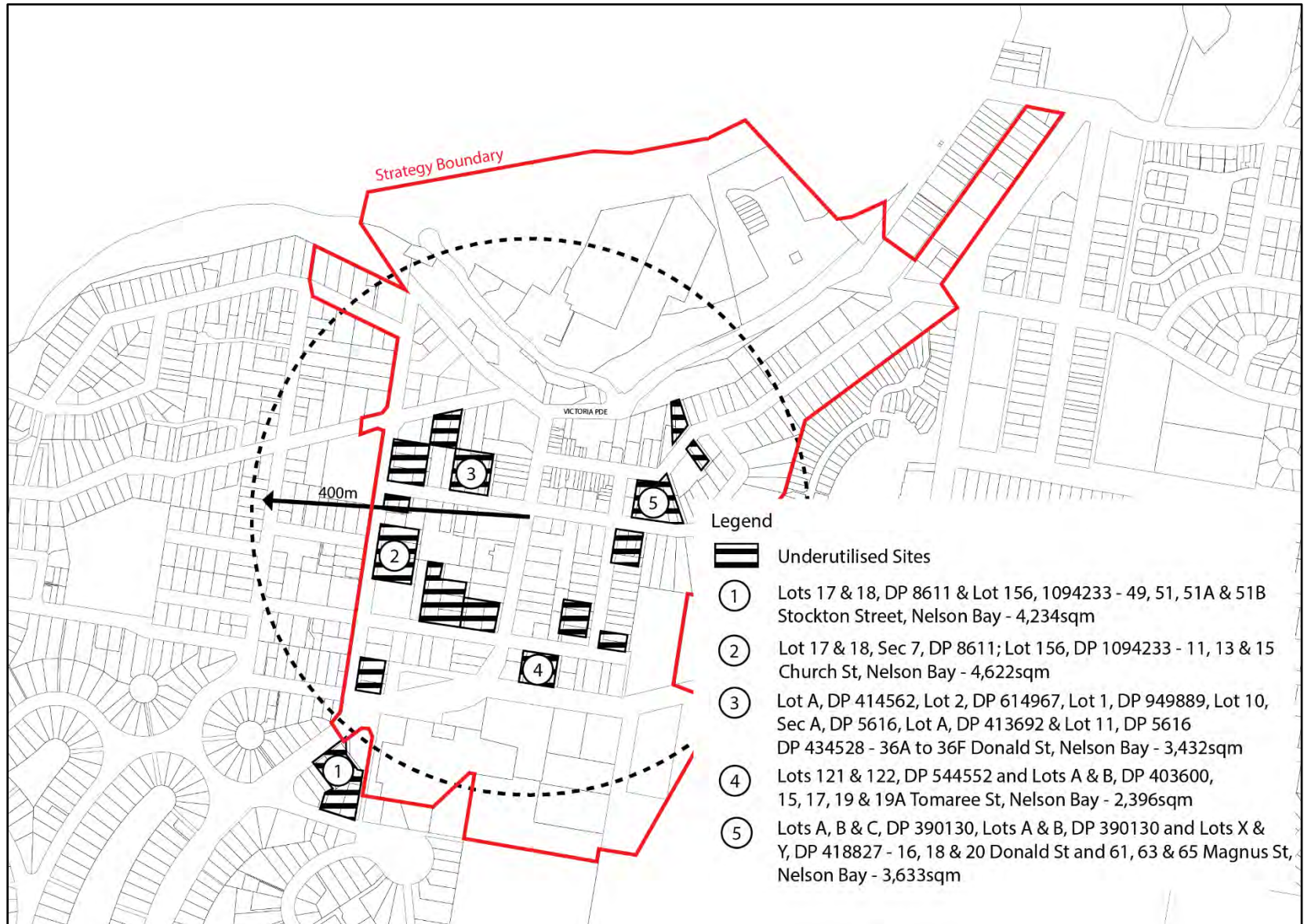


**FIGURE 7 – Development Consents and Unacted Approvals (1996-2006)**





**FIGURE 8 – Five Sites Identified for Feasibility Testing**



- Site 3 - 36A to 36F Donald Street, Nelson Bay;
- Site 4 - 15, 17, 19 & 19A Tomaree Street, Nelson Bay; and
- Site 5 - 16, 18 & 20 Donald Street, Nelson Bay.

The methodology utilised for the feasibility assessment was based on the Urban Feasibility Model (UFM) developed by the NSW Department of Planning and Environment. The independent feasibility assessment made a number of market observations and sought to identify whether a developer would be able to achieve a viable 20% profit margin in the current property market. A particular emphasis was placed on varying the development height and Floor Space Ratios (FSR), as these standards significantly influence bulk and scale.

The Feasibility Appraisal makes a number of key market observations, including:

- Costs of an excavated basement carpark are approximately \$50,000 per single car bay and an above ground car park is approximately \$25,000.
- Construction costs significantly increase from a level of eight storeys (28m) due to the need for increased structural materials and regulations, such as fire sprinklers.
- Modest unit pricing (gross realisations) is achieved in the current market.
- A lack of foreshore (frontage) development sites where a high ratio of units has an ocean view and generate the highest prices, capital rates (\$/sqm of living area) and profit margin.

The following table (**FIGURE 9**) identifies at what point a 20% viable profit margin for a typical developer is achieved and therefore may provide enough certainty to take the invest.

**FIGURE 9 - Table summarising what conditions provide for a viable profit margin**

Variable	Site 1	Site 2	Site 3	Site 4	Site 5
Height	5 Storeys - 42 Units	8 Storeys - 51 Units	8 Storeys - 42 Units	8 Storeys - 60 Units	The cost of replacing 140 public car spaces renders the development unfeasible.
Parking	Above Ground	Below Ground	Above Ground	Below Ground	
Development Profit	\$4,026,073	\$4,161,053	\$5,017,193	\$4,533,311	
Development Margin	24.39%	18.80%	24.62%	17.22%	
Internal Rate of Return	21.70%	21.40%	38.77%	20.03%	
Performance Ranking	Viable	Viable	Viable	Viable	
Residual Land Value	\$1,588,727	\$1,905,415	\$2,200,584	\$2,196,599	

While the above table summaries what conditions provide for a viable profit margin the varying margins for each site is best illustrated by the line graph provided as (**FIGURE 10**).

What these results indicate is that the feasibility of development is dependent on the individual characteristics of each site. There is a high emphasis placed on the need to achieve water views as sale prices significantly increase as a result, which translates into increased height in order to achieve this goal.

**FIGURE 10– Line graph illustrating the varying profit margins**



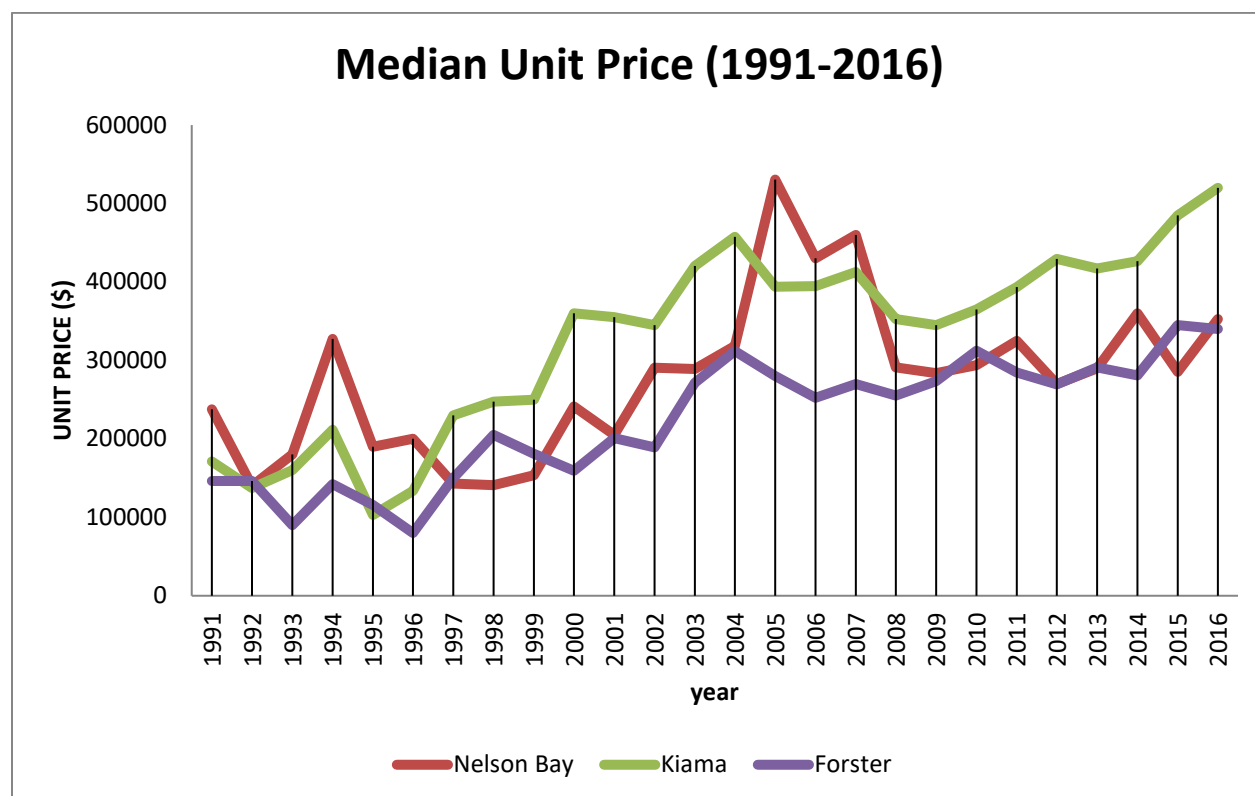
The cost of below ground parking means that above ground parking is favored. However, above ground parking is often undesirable as it limits the potential for activated street frontages within commercial centres and places parking at the same level of neighbouring residential buildings.

It is also well known that the residential unit market in Nelson Bay has been static and has actually declined over the past ten years. This is due to a number of defaults and abandoned development sites stalling development activity and causing poor developer sentiment. From the feasibility analysis, it is clear that current conditions are not allowing for re-development. This is despite significant growth in the housing industry over recent years. These observations have not only been made by the Independent Feasibility Report, but are reinforced by the third party peer review by local economists located within Nelson Bay.

The graph on the following page (**FIGURE 11**) illustrates is that Nelson Bay experienced significant growth from 2000 to 2005, but this then dropped significantly. The market has still not recovered from that high in 2005 and the resultant property market conditions have not allowed for feasible redevelopment to occur over the past ten years, so the question is, what should be done with this information?

It is our belief that quality residential unit stock is required in order to provide confidence in the market and what is required to make development feasible is water views. At the same time, maximum height requirements must ensure that they do not come at the price of significant over-shadowing, loss of human scale and blocking of views. In response, the following changes were suggested in the Paper.

**FIGURE 11– Line graph illustrating similar property markets**



Suggestions for a better Strategy detailed in the Paper

- Revising height limits and introducing a Floor Space Ratio (FSR) into the LEP.
- Adoption of LEP Clause 4.6 Policy
- Expansion of the strategy boundary to include ridgelines

Summary of feedback received on building heights

The majority of submissions received addressed building heights. Some were in support for a height increase from the current height limits in the town centre, but the vast majority were against an increase in height. Some of those opposed believed that five storeys were required in order to protect the existing coastal village character. Other submissions supported a moderate increase in height (7 or 8 storeys) and some submissions supported increasing heights and density in the town centre subject to maintaining amenity and view sharing. Some of these issues have also been addressed in the discussion on proposed development controls and development incentives.

It should be noted that, when the development application for an eight storey apartment building at 11-13 Church Street was considered by Council on 11 April 2017, the application received 75 submissions and a petition containing 145 signatures in support of this development. Only two submissions objected. This is an indication of support for increased heights where good design outcomes can be achieved.

## Recommendations

### 7. LEP Clause for Floor Space Ratios (FSR) and increase in Height of Building (HoB)

It is recommended that the maximum height of building and FSR be in accordance with the following table (**FIGURE 12**), which is illustrated by (**FIGURE 13**).

**FIGURE 12– Proposed HoB and FSR**

No.	Existing HoB	Strategy HoB	Proposed HoB	Strategy FSR	Existing FSR	Proposed FSR
A	2 Storey (8m)	Not in Strategy	2 Storey (8m) (No change)	Not in Strategy	No FSR	No FSR (No change)
B	2 Storey (8m)	3 Storey (10.5m)	3 Storey (10.5m)	2.5:1	No FSR	2.0:1
C	2 Storey (8m)	4 Storey (14m)	4 Storey (14m)	2.5:1	No FSR	2.0:1
D	5 Storey (15m)	7 Storey (24.5m)	8 Storey (28m)	2.5:1	No FSR	3.0:1
E	5 Storey (15m)	7 Storey (24.5m)	5 Storey (17.5m)	2.5:1	No FSR	2.5:1
F	No HOB	9 Storey (31.5m)	12 Storey (42m)	2.5:1	No FSR	3.0:1
G	5 Storey (15m)	Not in Strategy	5 Storey (17.5m)	Not in Strategy	No FSR	2.5:1

Note: The Strategy (and this Delivery Program) makes allowance for a minimum 3.5 metres per storey.

The approach outlined by these figures is based on the following:

- The Hunter Regional Plan 2036 identifies the need to ‘investigate high density development that maintains and enhances the tourist, recreational and residential appeal of the centre’ for Nelson Bay (p. 64). This approach is further supported by the Port Stephens Planning Strategy 2011, which identifies that the intensification of existing development is more suited than zoning further lands (p.20).
- The Tomaree Peninsula is surrounded by national parks, which contain federally listed endangered species, such as the koala. As a result, outwards expansion is constrained. A town centre is the most appropriate location for density to cater for population growth. Without this, Council will continue to see rezoning proposals on the periphery.
- The Survey has identified that the Resident Owners, Resident Renters, Absentee Landlords and Businesses did not reach mean agreement about the numerical maximum height of building limit. However, they did reach mean agreement that building heights should follow the natural slope of the land (p. vii).
- The Paper identified that the town centre and foreshore has not seen any significant residential development since 2006, despite a number of development consents being



issued. An extensive feasibility analysis, which was then peer reviewed identified that a minimum of eight storeys was required to provide confidence for investment.

- The development application for an eight storey apartment building at 11-13 Church Street was considered by Council on 11 April 2017, and received 75 submissions and a petition containing 145 signatures in support of this development. Only two submissions objected to the development application. This is an indication of support for increased heights where good design outcomes can be achieved.
- A number of existing buildings and approved development consents already exceed the existing five storey maximum height of building limit, being:
  - 71 Victoria Parade, Nelson Bay (Commercial & Residential) – 6 Storey/21m
  - 5B Talleen Road, Nelson Bay (The Landmark) – 8 Storey/28m
  - 14 Magnus Street, Nelson Bay (Residential) – 6 Storey/21m
  - 11-13 Church Street, Nelson Bay (Residential) – 8 Storey/32m
  - 29-45 Magnus Street, Nelson Bay (Marina Resort) – 6 Storey/22m
- The overall bulk and scale of development will not just be determined by height, but the introduction of FSRs that are likely to result in site coverage that is no greater than 38% (HillPDA, 2017, p. 47). This means that developers have the confidence to invest, while providing the majority of the site as open space and landscaping. FSR controls will also limit the bulk and scale of development.
- Retaining lower heights (17.5m / 5 storeys) in the central core of the study area will assist in retaining a 'village atmosphere' in this precinct and better facilitate view sharing. This proposal is in response to submissions received that expressed concerns about the quality of the public domain and pedestrian experiences in this area as well as submissions that valued view sharing. In addition, parts of the core of the town centre are highly fragmented and, without consolidation of multiple lots, are unlikely to be able to be developed to 8 storeys given the proposed FSR controls. Therefore, raising height limits in this part of the town centre may not have an impact on the feasibility of development to the same extent as in other parts of the centre and may not have the same impact on driving economic investment in Nelson Bay.

FIGURE 13– Illustration of proposed HoB and FSR



## 8. Adoption of LEP Clause 4.6 Policy

It is recommended that the Clause 4.6 Policy be adopted by Council.

Clause 4.6 of the LEP is a mandatory clause that all local councils must include in their LEPs. The content and operation of Clause 4.6 cannot be amended or varied, however a local policy can guide Council in the application of the clause and the processes that apply.

The NSW Government, 2011, 'Varying Development Standards: A Guide' discusses the cumulative effects of varying development standards. For example, the variation of 7m (46%) for the approved development at 29-45 Magnus Street, Nelson Bay (Marina Resort) set the precedent for similar variations that have now occurred at the DA stage.

At the same time, the ability to vary development standards allows individual proposals to be judged on their own merit. This is important given the sometimes broad brush approach that can occur when developing a new comprehensive LEP across an entire Local Government Area.

A draft Clause 4.6 Policy was developed and placed on public exhibition with the Delivery Program. The Policy seeks to provide greater transparency, community participation and more robust assessments when a variation to a development standard is proposed. This is understood to be the first of its kind in NSW. It accepts that this clause is a part of our planning system and presents an innovative solution to mitigate perceived impacts.

Following exhibition the Policy has been amended to be strengthened, and it now provides that all applications that seek to vary development standards by more than 10% are required to be determined by the full Council.

## 9. Expansion of the strategy boundary to include ridgelines

It is recommended that the Strategy Boundary be amended in accordance with **(FIGURE 6)**.

The existing Strategy Boundary focused on the commercial area of the town centre. It did not recognise the significant development that has taken place along the dominant ridgelines of Magnus Street and Thurlow Avenue. The existing development along these ridgelines is reflective of the desire to obtain views of Port Stephens, while still being within walking and cycling distance of the services that the town centre provides.

The expansion of the Strategy Boundary can be seen to be reflective of the existing maximum building height of 15m, which is distinctively different from the maximum building height of 9m that is applied to the majority of zoned land across the Tomaree Peninsula.

## 2.3 Development Incentives

The Strategy proposes that a variation of up to an additional two storeys (7m) and an additional Floor Space Ratio (FSR) of up to 0.5:1 (2.5:1) for all sites in the town centre if a DA exhibited outstanding design excellence and demonstrated a strategic public benefit (p.65).

Additionally, the Strategy proposed a FSR incentive of an additional 0.5:1 (3.0:1) for the following sites:

1. Seabreeze/Nelson Towers/Donald Street West Car Park Site
2. Coles Supermarket Site
3. Donald Street East Car Park Site
4. Fisherman's Co-Operative Site

### What is the purpose of development incentives?

Public Policy can usually achieve outcomes through one or a combination of the following avenues:

1. Education
2. Regulation
3. Financial Expenditure

Council encourages design excellence through education and by its continued commitment to the Lower Hunter Urban Design Awards (LHUDA). It encourages the protection of view corridors through regulation by setting a HoB limit and at the same time encourages redevelopment through investment in the public domain, such as footpaths and trees.

While the above avenues seek to encourage desired outcomes that have been agreed by the community, the generic regulatory development controls (i.e. HoB) do not take into account the individual circumstances of each site.

For example, the incentive to re-develop a site that contains a heritage listed building accumulates as land value and building maintenance increase over time. In recognition that heritage is a variable that contributes to a desired urban character, development incentives, such as the City of Sydney – Heritage Floor Space Scheme (HFSS) provides landowners who are responsible for the building maintenance with floor space credits. These credits can then be sold to other sites seeking to exceed the height limit.

Examples of current local development incentives within Port Stephens include:

1. D11 – Raymond Terrace Centre is a specific part of the Port Stephens Development Control Plan 2014. This Part provides a 100% reduction in on-site parking requirements in order to encourage redevelopment along King Street.
2. Clause 4.1D – Minimum Lot Sizes for Certain Split Zones, which is a clause under the LEP seeks to allow for the subdivision of an undersized lot of environmental or agricultural significance and provide it with a subsequent dwelling entitlement due to the understanding that the presence of a dwelling leads to more active land management.

### A Review of Development Incentives

The only development that has taken place in the town centre in the past ten years is the Woolworths on the corner of Donald and Stockton Streets. The Strategy identified incentives for this site and the developer did not draw upon them. This is likely to be a reflection of the increased construction costs that come from additional storeys versus the known market return as identified in the feasibility analysis.

Unfortunately, Nelson Bay's position within the Hunter Region's hierarchy of centres also means that it may not be of a size where it is likely to receive buildings that are of architectural significance and therefore incentives that seek to achieve this are misplaced. Buildings of architectural significance can be seen to take place where multi-national corporations may be located; those of civic importance or where residents are willing to pay a premium to purchase an apartment. Examples include:

1. University of Newcastle, City Campus - \$95M
2. State of Law Courts, Hunter Street Civic, ten courts and two tribunal rooms - \$94M
3. Icon Central Apartments, Hunter Street Civic, 262 Apartments - \$150M
4. Arena Apartments, Watt Street, Newcastle East - \$100M

These examples are all taken from the Regional City of Newcastle, which operates and is recognised as a city that provides higher order services, such as health, law and financial. Nelson Bay plays a far different role in relation to these services. Its major industry is tourism and in turn the most significant development that can be seen to have taken place on the Tomaree includes:

1. Mantra Apartments, Tomaree Street, 161 residential units
2. Nelson Bay Bowling and Recreation Club, Dowling Street
3. Shoal Bay Resort and Spa, Shoal Bay
4. Birubi Point Surf Lifesaving Club, Birubi

Given that Nelson Bay is unlikely to attract buildings that are of a size and scale to display architectural significance, it is proposed that the additional height and FSR be included as part of the development standards for each site. This is given that they have already set an expectation for the market and the feasibility analysis has indicated the need for a minimum of eight storeys to see redevelopment occur.

#### Suggestions for a better Strategy detailed in the Paper

The Paper made the following suggested changes to improve the Strategy:

- Reduce the uncertainty that is provided through development incentives
- Public goods, such as parking are provided by those who use it
- Review of Development controls contained within the LEP and DCP

#### Summary of feedback received on development incentives

The discussion of this topic was understandably integrated with other themes, such as design excellence and building height. Most of the discussion around this theme also focused on the use of LEP (Clause 4.6 – Variation of Development Standards). Some submissions would not accept that this Clause was a part of the Standard Instrument LEP and Council could not remove or vary its application and use. It can only seek to provide further guidance in relation to its use, which is provided through the Clause 4.6 Policy.

#### Recommendations

10. Reducing the uncertainty that is provided by development incentives.

It is recommended that the development incentives discussed in the Strategy are removed and that HoB and FSR are inserted into the LEP in accordance with **(FIGURE 13)**.



These development incentives no longer form part of the Strategy. Any variation to modify a development standard will be assessed in accordance with LEP (Clause 4.6 – Variation of Development Standards) and the associated Policy.

#### 11. DCP requirements to encourage design excellence

It is recommended that the DCP be amended to address the identified shortcomings.

The Port Stephens LEP and DCP were reviewed when Council transitioned to the Standard Instrument template in 2014. A Housekeeping LEP was endorsed by Council on 1 August and a Housekeeping DCP was also endorsed by Council for public exhibition on 24 October 2017.

Further recommendations to change the LEP to improve design outcomes have been discussed under Part 2.1 – Design Excellence. The shortcomings of the DCP have been identified as:

- Building depth
- Building separation
- Street setbacks, including upper storey set backs
- Side and rear setbacks
- Orientation
- Public Domain interface
- Communal and public open space
- Urban Design Panel

It is recommended that new development controls should also establish objectives for upper storey setbacks and floor plates which enhance the public domain and pedestrian experience by preserving daylight access to the street level and creating a comfortable street environment, and can achieve improved view sharing and visual privacy objectives. This will also address some of the concerns expressed in submissions in relation to view corridors and view sharing as a result of increased building heights.

A review of existing development controls for residential flat buildings and commercial buildings has been undertaken. This review will inform future DCP amendments and placed on public exhibition.



## 2.4 Public Domain

### What is Public Domain?

The public domain includes the natural and built environment used by the general public on a day-to-day basis, such as streets, plazas, parks and public infrastructure.

The objective of public domain is to create public spaces that people can enjoy. Quality public domain is created through the application of tested urban design principles, such as street to height ratios, block size or consistent streetscape materials. Investment in the public domain is generally understood as the most significant contribution that Government can make towards providing business confidence and in turn encouraging investment. It is a fundamental approach to economic development in urban spaces.

### A Review of Public Domain

A review of the existing public domain in the town centre and foreshore identified the following:

- Inconsistent pathway widths and materials
- Missing pathway connections
- Poor legibility resulting from poor signage and way finding tools
- An inconsistent approach to street tree plantings and landscaping
- Pedestrian barriers and incomplete street linkages

The Strategy identified a number of actions to address these shortcomings, such as the development of a public domain plan or a street tree masterplan. However these actions were never undertaken at the time.

Quality public spaces are also essential considerations when planning for increased density in town centres. Council has been successful in obtaining a grant to fund the preparation of a Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan. Identifying funding streams for this infrastructure will be necessary to ensure these plans can be delivered. Private investment in the town centre can provide public benefits by funding public domain works through developer contributions.

### Suggestions for a better Strategy detailed in the Paper

- Development of a Streetscape Design Guide for the Nelson Bay Town Centre
- Detail provided to public domain works, costings and priorities
- Revision of the Development Contributions Plan for the Nelson Bay Catchment

### Summary of feedback on public domain

There was clear consensus that public domain mattered. Improving the public domain experience can benefit both residents, businesses and visitors to Nelson Bay. Some submissions expressed a desire to plan a public domain that expressed the unique coastal village and 'natural amphitheatre' character of Nelson Bay.

### Recommendations

#### 12. Development of a Public Domain Plan

It is recommended that a Public Domain Plan be developed.

The Paper identified the need to develop a Streetscape Design Guideline that would provide a similar level of detail as the City of Ipswich, 2013, 'Ipswich Streetscape Design Guideline – A guide for Council, Developers and the Community'. Rather than just develop this Guideline, the Public Domain Plan will address three matters relating to aspects of the public domain that were identified in the Strategy, being: 1) Streetscape; 2) Wayfinding; and 3) Street Trees.

This action has already commenced and the draft Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan will be placed on exhibition following the adoption of the Delivery Program.

13. Consider utilising technology to activate the town centre and public domain

It is recommended that Council incorporate 'Smart City' initiatives and utilise technology when planning for the public domain and to improve the resident and visitor experience.

This could include investing in 'Smart Parking' initiatives (vehicle sensors or smart phone apps) and an interactive digital platform that integrates maps, websites, digital wayfinding signage and destination information for Nelson Bay.

14. Feasibility assessment for public Wi-Fi in the town centre

It is recommended that a feasibility assessment be undertaken for public Wi-Fi. Public Wi-fi and digitisation of the town centre can help support the visitor economy and also encourage people to stay longer in public spaces.

On 13 June 2017, Council agreed to investigate the feasibility of public Wi-Fi for the Nelson Bay and Raymond Terrace town centres. The indicative pricing for implementation, associated risks and ongoing management costs for public Wi-Fi services in these town centres was reported to Council on 12 December 2017. The report recommended Council apply for relevant grant funding opportunities to support the implementation of a public Wi-Fi service in Port Stephens. These opportunities will continue to be pursued.

15. Remove the Stockton Street Stage

It is recommended that the Stockton Street Stage be removed.

16. Review the Nelson Bay Foreshore Plan of Management

It is recommended that the Nelson Bay Foreshore Plan of Management (PoM) be reviewed with consideration provided to the updated actions of the Strategy and this Delivery Program.

The Department of Lands (former title), 2008, 'Nelson Bay Foreshore Plan of Management' was developed in 2008 in coordination with Port Stephens Council. This PoM anticipated the impending Strategy, but was unable to achieve any integration because the PoM was finalised before the Strategy was completed. The next review of this PoM should take into consideration the updated actions of the Strategy and Delivery Program.

17. Implement the Apex Park Masterplan

Identify funding sources to implement the adopted Apex Park Masterplan.

On 8 December 2015, Council endorsed the Masterplan for Apex Park (**FIGURE 14**). The Plan identifies a number of proposed changes for the park that seek to increase its attractiveness and usability. Provided that open space is a category for which development contributions can be levied under the *Environmental Planning and Assessment Act 1979*, this could be a source of funding identified through the site specific Development Contributions Chapter for the Tomaree Peninsula.

18. Develop a toolkit for public events to encourage the activation of the town centre.

It is recommended that a toolkit and a framework for traffic management plans for small, medium and large events be developed. This toolkit will include preferences for way finding, crowd control, traffic control, car parking and shuttle services, if required.

19. Audit facilities that are required to facilitate public events

It is recommended that an audit of existing event facilities (i.e. public toilets and power outlets) be undertaken to understand the capacity of certain public spaces (e.g. Nelson Bay Foreshore) to host public events. This process will identify the infrastructure required to host larger events.

FIGURE 14– Apex Park Masterplan



## 2.5 Transport and Parking

### What is Transport and Parking?

Transport and parking includes the ability for us to get from one destination to another. This may be by walking, cycling, public transport or the private motor vehicle. Due to the dispersed settlement pattern of Port Stephens, there is a reliance on the private motor vehicle to provide this transportation. In turn, there must be adequate space for parking at these destinations.

### A Review of Transport and Parking

The GHD, 2012, 'Nelson Bay Town Centre Transport and Parking Study' (the Study) identified 300 off-street parking spaces in the town centre managed by Council and 800 managed by private landowners.

The key locations for public parking are provided by the following table.

**FIGURE 15 – Public Parking Locations**

Car Park	Spaces	Average Use	Peak Use
Donald St East (Levels 2 & 3)	142	45%	73%
Donald St East (Ground Level)	90	-	-
Donald St West	93	86%	100%
Corner of Donald & Yacaaba St	60	-	-
Government Road	61	-	-
Note: Deficit of 21 spaces following the closure of Donald St East (Levels 2 & 3)			
Nelson Bay Foreshore	197	-	-
Woolworths	184	-	-
On-Street Parking (Magnus, Donald, Stockton & Yacaaba)	174	-	-
TOTAL	1,1001	-	-

This Study identified that off-street parking and on-street parking is operating under capacity during events and on every weekday (p.45). The Study discussed how increasing parking availability can be used as a tool to stimulate activity in centres by improving access to facilities and services. However, widespread car park construction can be costly, add to congestion on the road network and may be to the detriment of nearby centres. Therefore, a common resource effective approach is to increase the availability of parking spaces by encouraging greater turnover.

This could be achieved by limiting the duration of parking (i.e. 1-2 hours) or by charging a time-based fee, usually via parking metres (p.9). In the longer term, the Strategy also identifies the desire to provide long-term parking in the town centre. The long term strategy could be achieved through the redevelopment of the Donald Street Car Park Site or the development of a satellite parking location. The benefit of a site on the periphery of the town centre is that it would reduce town centre traffic, encourage walkability and be a more cost-effective as land on the periphery would have a reduced value compared to land in the centre.

### Summary of feedback received on traffic and parking

A number of submissions raised traffic and parking issues. Some submitters questioned whether a parking problem existed, while others went straight to solutions, such as the need to further explore satellite parking options or parking stickers to be provided to residents and business owners if further time-limited parking was to be introduced.

The submissions on these issues also support the proposed updating of the GHD, 2012, 'Nelson Bay Traffic and Parking Study'.

Following the exhibition of the Paper in 2017, traffic and parking counts were completed during the April School Holidays, Easter Weekend and during typical weekdays in July/August 2017. The counts identified that parking operates under capacity during a typical weekday and that capacity is reached during peaks.

An illustration of average public parking utilisation rates is provided by **(FIGURES 16 & 17)**. **FIGURE 18** shows daily off and on-street parking utilisation rates for both peak and weekday periods.

### Suggestions for a better Strategy detailed in the Paper

The Paper made the following suggested changes to improve the Strategy:

- Identification of future satellite parking locations
- Explore user-pays approaches to the provision of parking
- Encourage private enterprise to provide parking on Council land

### Recommendations

#### 20. Update the Traffic and Transport Study and develop an Integrated Transport Plan for Nelson Bay.

The Traffic and Transport Study was updated following the exhibition period for the Paper (GHD, September 2017, 'Nelson Bay Traffic and Parking Study Update'). The outcomes of this update have informed some of the recommendations in this Delivery Program.

However, it has become apparent that a precinct wide integrated transport plan is required. An integrated plan would be a holistic strategy which considers how pedestrian access, cycle-ways, public transport movements, private coaches and private vehicles interrelate and impact our experience of the town centre and surrounds.

#### 21. Identification of future public car parking options

Explore short and long-term public car parking options including potential parking locations in and around the town centre for council to consider as a possible solution to alleviating on-street parking. On 26 June 2018, Council resolved to prepare a report into the feasibility of building a multi storey public car park within the Nelson Bay CBD which will be considered as part of the long term solutions.

#### 22. Formation of a Citizens Panel to discuss short-term and long-term parking

In considering the new data and the submissions on traffic and parking, there is an obvious lack of consensus on parking and a Citizens Panel is proposed in order to explore the issues in further detail. A Citizens Panel is a concept often used by local governments whereby a group of



randomly selected members of the community consider an issue and provide recommendations to Council. It is a concept designed to both inform the community and arrive at a shared set of actions and recommendations.

The Panel will consider all traffic and parking data, the associated funding options and discuss short and long term options. An option may involve exploring suitable car parking sites on the periphery of the town centre, reviewing existing timed parking arrangements or possible options to redevelop existing parking sites. The Panel will consider facts and data, receive presentations from traffic and financial experts, debate the data, and present an informed recommendation to Council.

#### 23. Extension of Yacaaba Street

Five options for the extension of Yacaaba Street were developed and placed on public exhibition in 2013. The fifth option (**FIGURE 19**) was endorsed by Council on 24 June 2014 and construction commenced in late 2017. Construction was completed and the street officially opened in July 2018.

#### 24. Undertake a capacity analysis of the Tomaree Street Pedestrian Bridge

The completion of the Yacaaba Street Extension will provide an alternative access point to the Foreshore from the Town Centre at ground level. This provides the opportunity to undertake an analysis of the existing pedestrian bridge in terms of its preferred usability and asset life.

#### 25. Review of parking signage and meters on the Foreshore

#### 26. Review road speed limits in the town centre

Speed limits in Nelson Bay are ultimately the responsibility of the Roads and Maritime Services (RMS) however Council can co-ordinate with the Local Traffic Committee to review speed limits and can advocate for changes following the review.

Changing speed limits may also be investigated in conjunction with works identified in the Public Domain Plan and could be informed by the Transport for NSW Movement and Place Framework.

#### 27. Design and fund intersection options

The updated traffic and transport study identified two intersections that were experiencing significant delays under 2017 peak conditions, being the intersections of Church Street and Stockton Street with Donald Street. It is suggested that funds be sought to design these intersection upgrades, which will then allow funding opportunities to be sought.

#### 28. Implement the Pedestrian Access and Mobility Plan (PAMP)

Identify funding sources to implement this existing plan that seeks to create more pedestrian friendly and mobile urban environments (e.g. pedestrian refuges at key intersections).

**FIGURE 16 –Average Public Parking Utilisation Rates for the Town Centre** (Source: GHD, September 2017, ‘Nelson Bay Traffic and Parking Study Update’)





**FIGURE 17 –Average Public Parking Utilisation Rates for the Foreshore** (Source: GHD, September 2017, ‘Nelson Bay Traffic and Parking Study Update’)





**FIGURE 18 - Daily Off and On-Street Parking Utilisation Rates** (Source: GHD, September 2017, 'Nelson Bay Traffic and Parking Study Update')



Note: Utilisation is based on parking occupancy surveys undertaken every hour between 09:00 to 16:00 during Easter Weekend in 2017; and from 09:00 to 15:00 on the typical weekday.

[illegible]



## 2.6 Implementation and Delivery Program

### What is Implementation and Delivery?

Implementation is the carrying out of the endorsed actions in a plan or strategy.

In 2012, the Nelson Bay Town Centre and Foreshore Improvement Program (the Program) in the Strategy listed the major projects that were understood to be necessary to achieve the Strategy's objectives, being:

- A public domain strategy for Nelson Bay. The strategy seeks to improve streetscapes, better define view corridors, improve pedestrian connectivity and create a strong pedestrian 'spine' along Stockton Street to the waterfront.
- A design brief for Apex Park and the wider green link area between the Town Centre and Foreshore. Apex Park has evolved over time and as a result has lost an overall structure. Many facilities in the Park, such as the War Memorial, are functionally compromised as a result. Tree plantings have grown and obscured important view corridors to the water.
- Upgrading wayfinding through improved signage and interpretative material is very important to improving the visitor's experience in Nelson Bay and to bring the Town Centre and the waterfront closer together.
- Initiatives to reinforce the Character Areas identified in this Strategy.
- The Foreshore redevelopment.
- Public art, tree planting brief, lighting strategy, street furniture and signage.
- Key staging considerations.
- Implementation responsibilities (pp. 7-8).

However, no detailed plan as to how these actions were to be achieved was identified. Five years on from the adoption of the Strategy, Council has:

- Developed five options for the extension of Yacaaba Street. The fifth option was endorsed by Council on 24 June 2014 and construction was finalised in July 2018.
- Developed an Apex Park Masterplan, which was endorsed by Council on 8 December 2015.
- Developed a site specific chapter within the Port Stephens Development Control Plan 2014 for the Nelson Bay Town Centre and Foreshore, which was endorsed by Council on 14 July 2015.
- Applied for and were successful in receiving \$340,000 in 'black spot funding' for 2015/16 in relation to the road and associated pedestrian works on Victoria Parade.
- Identified and is currently leasing land for two temporary parking stations – one located on Yacaaba Street, and the other on Government Road. The closure of the top two levels of the Donald Street East multi-storey car park reduced parking capacity from 174 spaces to 60. However, the temporary stations provide 120 spaces.
- Facilitated the Woolworths Development, which has been a catalyst for economic activity in the town centre. This approval also resulted in an additional 130 public car spaces.
- Facilitated events, such as the Sacred Tree Markets, Tastes at the Bay and New Year's Eve.
- Council let 'Smart Arts' program led to Artisan Collective setting up on Magnus Street.
- Approved four applications in the study area, only the Golf Course has been constructed.

### Suggestions for a better Strategy detailed in the Paper

The Paper made the following suggested changes to improve the Strategy:

- The Strategy actions have been reviewed, but need to be further broken down to be Specific, Measurable, Accurate, Realistic and Time-Based (SMART).
- Implementation Panel to meet on a regular basis.

### Summary of feedback received on implementation

Some submissions described how Council had failed to implement and promote the Strategy, while other submitters noted that the works completed to date, such as the Yacaaba Street Extension, sent a positive message to the business community. There was clear support for the general objectives of the existing Strategy and support for a renewed effort towards delivery.

### Recommendations

#### 29. Re-word the existing actions to be SMART

A SMART implementation plan and those actions contained within is one that is:

- Specific – Not loose or ambiguous or unconnected
- Measurable – Contains measures that can be addressed, determined and reported
- Achievable – Can be responded to by personnel (acted on) and implemented
- Realistic – Reasonable and can be qualified
- Time-based – Set to a timeframe for completion/achievement

An Implementation Plan that is SMART has now been developed (**ATTACHMENT 1**).

This Plan is the performance management tool for supporting the Strategy. The implementation plan is the, 'what that needs doing', by when and by how much to achieve the objectives.

The Improvement Program that accompanied the Strategy prepared in 2012 did not identify critical factors in project management, such as timing, deliverables and resourcing. Hence, why there is clear confusion in the community about what the strategy set out to achieve and by what dates. The revised actions have been made clearer by adopting the SMART structure, which is an approach that is common practice in carbon reduction reporting.

The Implementation Plan is also transparent in acknowledging some of the barriers for delivery including funding options and where responsibilities may be shared with other government agencies. In particular delivery of some items may be reliant on funding from development contributions which are only collected when growth occurs in the town centre. There can be a clear connection between achieving development feasibility and attracting investment and delivering town centre improvements.

#### 30. Implementation Panel to meet on a regular basis

During the development of the Strategy, a stakeholder forum met regularly to discuss issues related to the Strategy and to provide feedback to Council staff as the final Strategy was developed. Further to this, an innovative program of involving local school students in developing

a vision of a future Nelson Bay helped to ensure that the views of younger people (who will inherit the outcomes of the Strategy) were considered (PSC, 2012, p.5).

Similar to the approach taken for strategies such as the Raymond Terrace & Heatherbrae Strategy and the Medowie Planning Strategy, it is recommended that an ongoing implementation panel be formed to overlook the progress of this Delivery Program. The panel would meet on a regular basis to oversee how Council is tracking against the implementation plan and provide input where actions identify the need for community involvement. The Panel would also be in a position to feedback to the community on the progress of the Program.

The Implementation Panel will be established on adoption of the Delivery Program by Council.

### 31. Review Infrastructure Funding

Funding will be required to complete a range of works identified in the Implementation Plan. The list of works will become more extensive once other actions listed in the Implementation Plan have been completed (e.g. Public Domain Plan). To date, funding is required for:

**FIGURE 20 – Identified projects and relevant estimated costings**

No	Item	Cost
1	Apex Park Masterplan	\$1.2M
2	Removal the Stockton Street Stage	\$400,000
3	Develop of an Integrated Transport Plan for Nelson Bay	\$50,000
4	Replace the Donald Street East Multi-Storey Car Park	\$5-7M
5	Design Church St and Stockton St with Donald St Intersection Upgrades	\$100,000
6	Implement the Pedestrian Access and Mobility Plan (PAMP)	\$500,000
7	Implement the Pathways Plan	\$500,000

The funding options that are available to Council include:

- General revenue – Council could fund works through its general revenue. However, as identified in the Paper, funds are limited at \$7M per year from rates, fees and charges and this amount needs to be distributed across the whole Local Government Area.

General revenue can also be combined with other sources of funding (e.g. grants and developer contributions) to deliver on the Strategic Asset Management Plan 2018-2028 (SAMP). The SAMP identifies fully funded projects for 2018 through to 2030 and also lists of unfunded works that can be constructed should funds become available via grants or other means (Capital Works Plan Plus).

- Special rate levies – Council is currently seeking a Special Rate Variation, which, if successful, may fund some of the town centre improvements identified in the Implementation Plan. This source of funding could be used to either undertake the development of new infrastructure as funds are received or to forward fund items in the SAMP.

The Nelson Bay Town Improvement Special Rate was previously levied on business located in the Nelson Bay Town Centre and raised approximately \$70,000 per annum to repay an internal loan for footpath paving and drainage works carried out in 2000/2001.

\$70,000 per annum would raise \$700,000 over ten years. This funding source could be supplemented with other sources, such as grants or development contributions.

- Loans – Council could borrow funds for the required infrastructure and require the source of repayments to be from General Revenue. This approach means that items are removed from future budgets as the revenue that would have been spent on those items is used to service interest repayments. \$6M was recently borrowed to fund a number of projects, including \$1.5M for the Yacaaba Street Extension
- User fees and charges – The common user fees and charges for Local Government relate to parking. Time limited parking would encourage behaviour that would also assist with identified traffic and parking congestion during peak periods.
- Contributions, grants and subsidies – Government funding opportunities in the form of grants become available from time to time. For example, \$340,000 was provided through the Federal Government 'Black Spot' Program for those Victoria Parade Pedestrian Works and \$70,000 has been received in grant funding to prepare the Nelson Bay Town Centre Public Domain Plan. Grant applications are more likely to be successful if an adopted strategy is in place and a complimentary funding source has been identified to match grant funding.
- Development contributions – Development contributions can be levied under the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Contributions can be levied for residential developments where a clear nexus exists for the infrastructure listed in Councils development contributions plan. Alternatively, contributions can be levied for commercial or industrial development as a percentage of the development cost. No clear nexus is required for the latter option.

The Paper identified applying an additional levy of \$1,000 on all residential development, which would provide \$113,000 annually. A clear nexus could exist for this levy to implement the Apex Park Masterplan. It is suggested that the levy for the Tomaree be reviewed once the Public Domain Plan is completed.

- Conditions of development consent – Where consent is required to undertake development the consent authority may be able to attribute the need for infrastructure as a direct result of that development, such as an intersection upgrade. This would be in addition to development contributions levied under the EP&A Act.

These funding opportunities should be further reviewed once the Public Domain Plan is complete and the scope of works under that Plan can be costed.

### 32. Include relevant infrastructure items in Council's Strategic Asset Management Plan

Relevant infrastructure identified in the Delivery Program and associated plans, such as the Public Domain Plan, will be included in Council's Strategic Asset Management Plan (SAMP).

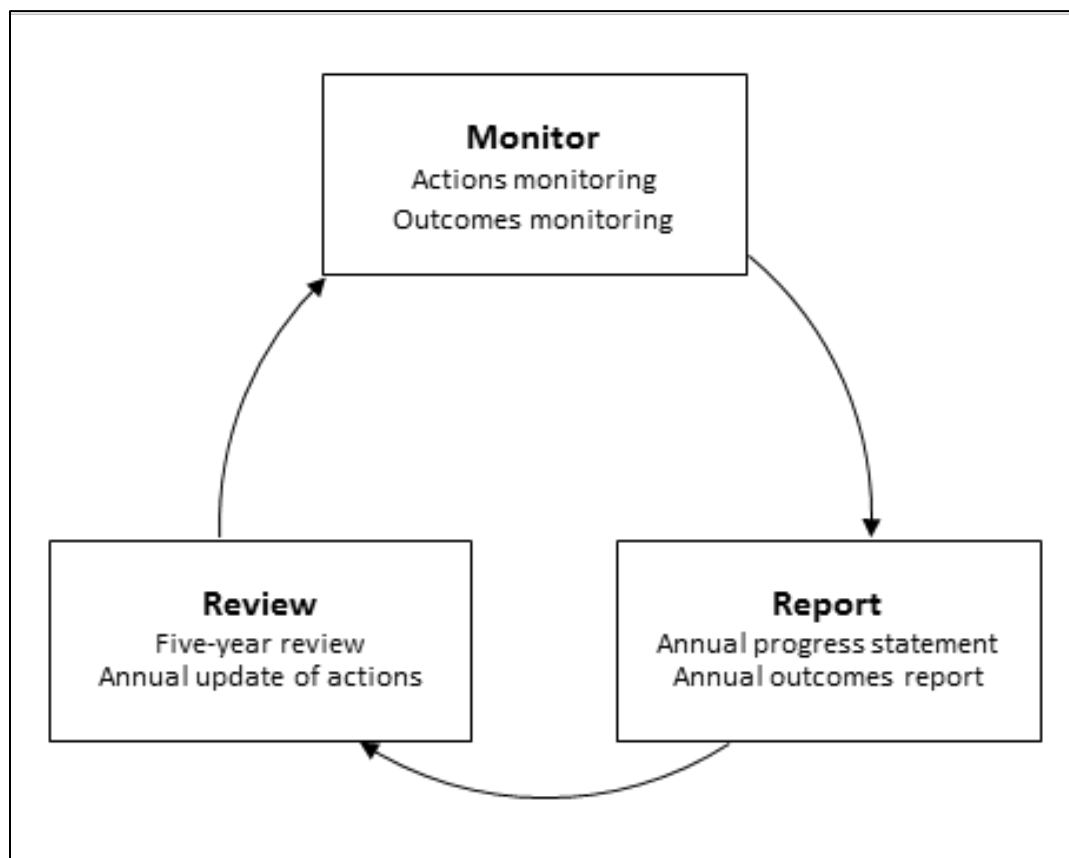
The SAMP provides a framework to manage current and future Council assets so that infrastructure can be effectively delivered to the community. Legislation requires that the SAMP is prepared for a minimum 10 year period and that it is reviewed and rolled over annually. Amendments to the SAMP are required to be adopted by Council and Council regularly reports on service delivery and other measures as part of the integrated planning and reporting framework.

### 33. Monitor, Report and Review the Strategy

It is recommended that the Strategy and associated Delivery Program be monitored through the regular Implementation Panel Meetings. An annual report will be provided to Council on the progress and these documents will be reviewed more comprehensively every five years.

This process will provide transparent information to the community about implementation progress and ensure the Plan is updated regularly. The monitoring, reporting and review cycle is summarised by **(FIGURE 21)**.

**FIGURE 21 – Monitoring, Reporting and Review Cycle**





## References

- Australian Government, 2016, 'Tourism Forecasts - Tourism Research Australia'
- Destination Port Stephens, 2015, 'Visitor Economy Monitor'
- Department of Lands, 2008, 'Foreshore Plan of Management'
- GHD, September 2017, 'Nelson Bay Traffic and Parking Study Update'
- GHD, 23 May 2013, 'Nelson Bay Town Centre Transport and Parking Study'
- HVRF, 2012, 'Survey of Stakeholders in the Nelson Bay Draft Strategy for Port Stephens Council'
- Port Stephens Council, February 2008, 'Nelson Bay Foreshore - Plan of Management'
- Port Stephens Council, 2012, 'Nelson Bay Town Centre & Foreshore Strategy'
- Port Stephens Council, 2012, 'Nelson Bay Town Centre & Foreshore - Improvement Plan'
- Port Stephens Council, 2011, 'Port Stephens Planning Strategy'
- Port Stephens Council, 1984, 'Tall Building Study'
- Port Stephens Council, 2011, 'Port Stephens Planning Strategy'
- RemPlan, 2016, 'Population, Demographic and Housing Report: Port Stephens LGA'
- NSW Government, 2011, 'Varying Development Standards: A Guide'

## Attachment 1 – Implementation Plan

The following Implementation Plan will be provided with actual dates for the identified timeframes, once the adoption date of the Delivery Program is known.

<p>Key:</p> <p>Short – approximately 1 year following the adoption of the Delivery Program.  Medium – approximately 1-3 years following the adoption of the Delivery Program.  Long – approximately 3-5 years following the adoption of the Delivery Program.</p>							
No	Summary	Specific	Measurable	Achievable	Realistic	Time	Council's role
Design Excellence							
1	LEP Clause for Activated Street Frontages	<ul style="list-style-type: none"> <li>A Planning Proposal that lists the Activated Street Frontages Clause and provides an accompanying map is to be reported to Council for endorsement following the exhibition of the Delivery Program.</li> <li>The Planning Proposal is to be adopted following the issue of a Gateway Determination and exhibition. This is expected to be completed within 12 months following issue of the Gateway Determination.</li> </ul>	<ul style="list-style-type: none"> <li>An amendment to the LEP is gazette following the Gateway Determination and exhibition. This is expected to be completed within 12 months following issue of the Gateway Determination.</li> <li>The success of the amendments will be identified through an audit of development applications twelve months following the adoption of the LEP gazette. The audit will be consistent with the procedures for reporting clause 4.6 variations set out in the Clause 4.6 - Exceptions to Development Standards Policy. This audit will identify opportunities for improvement.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for this Planning Proposal will be listed on the Strategic Planning work program and reported to the Implementation Panel.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic justification for the proposed LEP Clauses is provided by the Strategy and Delivery Program.</li> <li>The NSW Department of Planning and Environment identifies 12 months as a target timeframe for minor LEP amendments.</li> </ul>	Short	Responsible
2	LEP Clause for Appropriate Vertical to Horizontal Proportions					Short	Responsible
3	An Independent Urban Design Panel	<ul style="list-style-type: none"> <li>An Independent Design Panel is to be established in accordance with the procedure set-out by <i>SEPP No 65 – Design Quality of Residential Flat Buildings</i> and the associated Apartment Design Guide.</li> <li>The Panel will be in place and will be referred Development Applications 12 months following the adoption of this Delivery Program.</li> </ul>	<ul style="list-style-type: none"> <li>The success of this Design Panel will be determined by an independent survey of stakeholders (i.e. Applicant, Council Officers, Councillors and those who made submissions to a DA) twelve months following the introduction of the Panel.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for this action will be listed on the Strategic Planning work program and reported to the Implementation Panel. The key tasks are: <ol style="list-style-type: none"> <li>Determine scope of Panel</li> <li>Seek nominations for panel members.</li> <li>Report to Council for appointment.</li> <li>Administer the Panel.</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>The framework for this action is provided by the State Government and has been followed by a number of NSW Councils.</li> <li>This is a process that developers and other communities are familiar with in other Local Government Areas.</li> </ul>	Short	Responsible
4	Education Program on Urban Design for Council staff	<ul style="list-style-type: none"> <li>A detailed scope for an Urban Design Training Program is to be prepared and supported by the Implementation Panel at its first meeting. It is envisioned that the training will involve sessions for staff that do not otherwise hold urban design qualifications.</li> <li>The training will then take place on an annual basis.</li> </ul>	<ul style="list-style-type: none"> <li>The success of the training will be determined by a survey taken of participants after the training has been completed.</li> <li>The feedback from this training will identify opportunities for improving the training in subsequent years.</li> </ul>	<ul style="list-style-type: none"> <li>Existing budget that has been set aside for training will be drawn upon to fund an urban design professional to facilitate this Program.</li> <li>The detailed scope for this training has been prepared and is ready to be presented to the first meeting of the Implementation Panel.</li> </ul>	<ul style="list-style-type: none"> <li>This education program is based on a tried and tested training program that received a Planning Institute of Australia Award. In turn, an established format exists, which we can be followed to efficient results.</li> </ul>	Short	Responsible
5	Support for Awards that recognise Design Excellence	<ul style="list-style-type: none"> <li>Provide support and financial contributions to industry awards for urban design in the Hunter region.</li> </ul>	<ul style="list-style-type: none"> <li>Financial assistance for local industry awards for urban design can be assigned in annual budgets.</li> </ul>	<ul style="list-style-type: none"> <li>Financial assistance can be made available if an appropriate industry awards program is established.</li> </ul>	<ul style="list-style-type: none"> <li>The amount of assistance may vary according to other Council financial commitments.</li> </ul>	Medium	Advocate + Supporter
6	Develop a 3D model of the Town Centre for assessment staff to utilise	<ul style="list-style-type: none"> <li>Commission a digital 3D model of the existing town centre using digital aerial mapping.</li> </ul>	<ul style="list-style-type: none"> <li>The tool will be able to be used by assessment staff to support decision making. Imagery in appropriate formats</li> </ul>	<ul style="list-style-type: none"> <li>Council has costed the project and has available funds to build the base model. Applicants may be required</li> </ul>	<ul style="list-style-type: none"> <li>Developing the base model is within budget and achievable.</li> </ul>	Short	Responsible

<p>Key:</p> <p>Short – approximately 1 year following the adoption of the Delivery Program.  Medium – approximately 1-3 years following the adoption of the Delivery Program.  Long – approximately 3-5 years following the adoption of the Delivery Program.</p>							
No	Summary	Specific	Measurable	Achievable	Realistic	Time	Council's role
			provided by applicants for proposed developments will be able to be inserted in the model. The development control plan, assessment guidelines, or requirements for referrals to the Urban Design Panel may include these specifications.	to supply data and updates to the model in accordance with specifications in the development control plan, assessment guidelines, or as part of requirements for referrals to the Urban Design Panel. <ul style="list-style-type: none"> <li>Using the tool for assessments may depend on the quality and format of information provided by applicants.</li> </ul>			
<b>Building Heights</b>							
7	LEP Clause for FSR and increase in HoB	<ul style="list-style-type: none"> <li>A Planning Proposal that lists the FSR clause, increase in HoB and provides accompanying maps is to be reported to Council for endorsement following the exhibition of the Delivery Program.</li> <li>This is expected to be completed within 12 months following issue of the Gateway Determination.</li> </ul>	<ul style="list-style-type: none"> <li>An amendment to the LEP is gazetted following the Gateway Determination and exhibition. This is expected to be completed within 12 months following issue of the Gateway Determination.</li> <li>The success of the amendments will be identified through an audit of development applications twelve months following the adoption of the LEP gazette. The audit will be consistent with the procedures for reporting clause 4.6 variations set out in the Clause 4.6 - Exceptions to Development Standards Policy. This audit will identify opportunities for improvement.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for this Planning Proposal will be listed on the project officers work program.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic justification for the proposed LEP Clauses is provided by the Strategy and Delivery Program.</li> <li>The NSW Department of Planning and Environment identifies 12 months as a target timeframe for minor LEP amendments.</li> </ul>	Short	Responsible
8	Adoption of LEP Clause 4.6 Policy	<ul style="list-style-type: none"> <li>A Clause 4.6 Policy has been prepared and will be reported to Council for adoption along the Delivery Program.</li> <li>This policy will apply across the Port Stephens Local Government Area (LGA)</li> <li>The Policy seeks to provide greater transparency, community participation and more robust assessments when a variation to a development standard is proposed.</li> </ul>	<ul style="list-style-type: none"> <li>A draft of the Policy was exhibited with the draft Delivery Program. Council sought feedback from the NSW Department of Planning and Environment during this period. Submissions received on the draft Policy will be reported to Council with Delivery Program.</li> <li>Once adopted, Council's Policy Review Process will apply, and the Policy will be subject to periodic review.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for the Policy will be listed on the project officers work program.</li> <li>The process for developing and reviewing a Policy is mapped as a key Council process.</li> </ul>	<ul style="list-style-type: none"> <li>The Policy has been drafted based on internal and external advice. It is considered to be leading practice in NSW and will now follow the Policy Review Process.</li> </ul>	Short	Responsible
9	Expansion of the Strategy Boundary to include ridgelines	<ul style="list-style-type: none"> <li>The boundaries of the proposed Strategy Boundary expansion are identified by <b>(FIGURE 6)</b>.</li> <li>The need to expand the Strategy Boundary was identified by the Discussion Paper.</li> </ul>	<ul style="list-style-type: none"> <li>Under the Document Hierarchy part of this document, it discusses how the Delivery Program overrides any inconsistencies with the Strategy. Therefore the adoption of the Delivery Program by Council will override the Strategy Boundary contained in the Strategy.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for getting this Delivery Program adopted will be listed on the project officers work program.</li> </ul>	<ul style="list-style-type: none"> <li>The new boundary has been identified and is identified in this document. This identification has no significant policy implications. It is merely a reflection of existing development along those dominant ridgelines.</li> </ul>	Short	Responsible
<b>Development Incentives</b>							
10	Reducing the uncertainty provided by development incentives	<ul style="list-style-type: none"> <li>The development incentives that were discussed and mapped in the</li> </ul>	<ul style="list-style-type: none"> <li>Under the Document Hierarchy part of this document, it discusses how the</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for getting this Delivery Program adopted will be</li> </ul>	<ul style="list-style-type: none"> <li>The development incentives are not legislatively in place and in turn</li> </ul>	Short	Responsible

<p>Key:</p> <p>Short – approximately 1 year following the adoption of the Delivery Program.</p> <p>Medium – approximately 1-3 years following the adoption of the Delivery Program.</p> <p>Long – approximately 3-5 years following the adoption of the Delivery Program.</p>							
No	Summary	Specific	Measurable	Achievable	Realistic	Time	Council's role
		Strategy were never incorporated into the <i>Port Stephens Local Environmental Plan 2013</i> and in turn they have no legislative effect.	Delivery Program overrides any inconsistencies with the Strategy. Therefore when this Delivery Program is adopted by Council it will override the development incentives contained in the Strategy.	listed on the project officer's work program.	Council's policy position on this matter will be updated following the adoption of this Delivery Program.		
11	DCP requirements encourage design excellence	<ul style="list-style-type: none"> <li>An amendment to the Port Stephens Development Control Plan 2014 be drafted and reported to Council for exhibition. This allows for the Draft Plan to be prepared for exhibition and reported to Council within the twelve months identified.</li> <li>The amendment will support development controls that establish objectives for upper storey setbacks and floor plates to enhance the public domain and pedestrian experience by preserving daylight access to the street level and creating a comfortable street environment, and to achieve view sharing and visual privacy objectives for residential flat buildings.</li> </ul>	<ul style="list-style-type: none"> <li>The amendment for the Nelson Bay town centre and foreshore is prepared within twelve months following the adoption of the Delivery Program.</li> <li>The success of this amendment will be identified through an internal audit of development applications twelve months following the adoption of this DCP Amendment. This audit will identify opportunities for improvement.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for this DCP Amendment will be listed on the project officer's work program.</li> <li>A DCP Amendment of this detail is considered to be similar to a Planning Proposal defined as minor, which are estimated to take 50 hours of a project officer's time under the Fees and Charges Schedule.</li> </ul>	<ul style="list-style-type: none"> <li>It is realistic to expect that this DCP Amendment will be adopted in this timeframe. The gaps and opportunities for improvement have already been identified.</li> <li>In order to ensure the DCP Amendment is robust, the proposed amendment can be referred to the urban design panel to provide input.</li> </ul>	Medium	Responsible
Public Domain							
12	Development of a Public Domain Plan	<ul style="list-style-type: none"> <li>Prepare a Public Domain Plan that addresses the following:               <ol style="list-style-type: none"> <li>Streetscape Design Guide</li> <li>Wayfinding and Signage</li> <li>Street Tree Masterplan</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>A draft of the Public Domain is adopted by Council within one year of the Delivery Program being adopted.</li> <li>Action 31 related to the review of infrastructure funding is set to be completed following the development of the Nelson Bay Public Domain Plan.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for getting this Plan adopted will be listed on the project officer's work program.</li> <li>The Plan is estimated to be in the vicinity of \$140,000 to develop. Council obtained a grant in 2017 to fund 50% of the project.</li> </ul>	<ul style="list-style-type: none"> <li>The scope of this Plan will be based on known examples, such as the Ipswich Streetscape Design Guideline and other award winning street tree masterplans and wayfinding strategies.</li> </ul>	Short	Responsible
13	Consider utilising technology wherever possible to activate the town centre and resolve traffic, parking and wayfinding issues.	<ul style="list-style-type: none"> <li>Incorporate 'Smart City' initiatives that utilise technology such as a 'Smart Parking' app, digital signage, wherever possible when planning for the activation of the town centre.</li> </ul>	<ul style="list-style-type: none"> <li>This action is linked to the delivery of other relevant actions, for example it includes considering 'Smart City' initiatives in the preparation of the Nelson Bay Public Domain Plan and developing wayfinding signage, or when considering options for future carparking.</li> </ul>	<ul style="list-style-type: none"> <li>This action is linked to the delivery of related actions.</li> </ul>	<ul style="list-style-type: none"> <li>Considering utilising technology wherever possible is a realistic action, however the implementation of Smart City initiatives may be contingent on funding. Grant funding may become available for certain initiatives.</li> </ul>	Short	Responsible
14	Feasibility assessment for public Wi-Fi in town centre	<ul style="list-style-type: none"> <li>A Report to Council on the feasibility of public Wi-Fi in the town centre will be provided twelve months following the adoption of the Delivery Program.</li> </ul>	<ul style="list-style-type: none"> <li>This action has been completed and a feasibility report on public Wi-Fi in the town centre was provided to Council on 12 December 2017, including indicative pricing for implementation, associated risks and ongoing management costs.</li> <li>Council agreed to pursue grant funding opportunities to support the</li> </ul>	<ul style="list-style-type: none"> <li>This action has been completed.</li> </ul>	<ul style="list-style-type: none"> <li>This action has been completed.</li> </ul>	Short	Responsible

<p>Key:</p> <p>Short – approximately 1 year following the adoption of the Delivery Program.</p> <p>Medium – approximately 1-3 years following the adoption of the Delivery Program.</p> <p>Long – approximately 3-5 years following the adoption of the Delivery Program.</p>							
No	Summary	Specific	Measurable	Achievable	Realistic	Time	Council's role
			implementation of a public Wi-Fi service in Port Stephens.				
15	Remove the Stockton Street Stage	<ul style="list-style-type: none"> <li>Removal of the Stockton Street Stage, including associated works related to shade structures, road/pavement drainage and adjacent pedestrian access.</li> </ul>	<ul style="list-style-type: none"> <li>Removal within 3 years following the adoption of the Delivery Program, dependent on funding.</li> </ul>	<ul style="list-style-type: none"> <li>An estimated budget of \$400,000 has been identified for this project. The works may also be a project to be funded as part of implementing the Nelson Bay Public Domain Plan.</li> </ul>	<ul style="list-style-type: none"> <li>This involves the deconstruction of the existing stage and associated works to the public domain.</li> </ul>	Medium	Responsible
16	Review the Nelson Bay Foreshore Plan of Management	<ul style="list-style-type: none"> <li>An updated Plan of Management (PoM) three years on from the adoption of the Delivery Program.</li> </ul>	<ul style="list-style-type: none"> <li>The existing 20 year leases over the Foreshore Crown Lands are due to expire in 2022. It is therefore critical, that an updated PoM be developed to guide the expectations for future leasing.</li> <li>Project scoping should be completed 12 months following the adoption of the Delivery Program.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for getting this Plan adopted will be listed on the project officer's work program.</li> <li>This project will involve more detailed scoping given that it will involve a number of internal and external stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>The process for preparing a PoM is well-established. A number of guidelines and examples exist that could be followed.</li> </ul>	Medium	Responsible
17	Implement the Apex Park Masterplan	<ul style="list-style-type: none"> <li>Implementation of the Apex Park Masterplan which was endorsed by Council on 8 December 2015.</li> </ul>	<ul style="list-style-type: none"> <li>The timing of this implementation is dependent on the identification of funding opportunities.</li> <li>The action relating to funding opportunities is set to be completed following the development of the Nelson Bay Public Domain Plan.</li> </ul>	<ul style="list-style-type: none"> <li>An adopted Masterplan exists and will be integrated with the Nelson Bay Public Domain Plan to be prepared under this Plan. Identifying a funding source remains a potential barrier to implementation.</li> </ul>	<ul style="list-style-type: none"> <li>If funding cannot be identified or sourced, then the Masterplan could be broken down into more defined stages. These more defined stages may open up further grant opportunities.</li> </ul>	Long	Responsible
18	Develop a toolkit for public events	<ul style="list-style-type: none"> <li>The development of a toolkit for public events, which discusses way finding, crowd control, traffic control, car parking and shuttle services, if required.</li> </ul>	<ul style="list-style-type: none"> <li>This toolkit will be developed twelve months following the adoption of the Delivery Program.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for this toolkit will sit with the Economic Development and Tourism Unit, but will be provided with inputs from other internal and external stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>The process for developing a toolkit is straightforward.</li> </ul>	Short	Responsible
19	Audit facilities that are required to facilitate public events	<ul style="list-style-type: none"> <li>Audit of existing public infrastructure, such as public toilets or power sockets.</li> </ul>	<ul style="list-style-type: none"> <li>The audit will take place within three years of the adoption of the Delivery Program and inform an update to the projects and costings table (<b>FIGURE 19</b>).</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for this audit with the Economic Development and Tourism Unit, but the action will require inputs from other internal and external stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>The process for undertaking an audit and then speaking to event organisers about their needs is a straightforward process.</li> <li>Once the audit is complete, it will need to be discussed what items should be prioritised and funded.</li> </ul>	Medium	Responsible
Transport and Parking							
20	Update the Traffic and Transport Study and develop an Integrated Transport Plan for Nelson Bay Town Centre	<ul style="list-style-type: none"> <li>The Traffic and Transport Study has been updated and the findings are discussed in this Delivery Program.</li> <li>An Integrated Transport Plan will be developed three years following the adoption of this Delivery Program.</li> <li>The Plan will draw together outcomes from the Pedestrian Access and Mobility Plan (PAMP), the Nelson bay Public Domain Plan, and the recommendations from the Citizens Panel on parking (see action below) and will consider future</li> </ul>	<ul style="list-style-type: none"> <li>Adoption of an Integrated Transport Plan three to five years following the adoption of the Delivery Program.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for getting this Plan adopted will be listed on the project officer's work program.</li> </ul>	<ul style="list-style-type: none"> <li>The development of an Integrated Transport Plans is a common approach to identifying how pedestrian access, cycle-ways, public transport movements, private coaches and private vehicles interrelate and potential solutions.</li> </ul>	Long	Responsible







<p>Key:</p> <p>Short – approximately 1 year following the adoption of the Delivery Program.</p> <p>Medium – approximately 1-3 years following the adoption of the Delivery Program.</p> <p>Long – approximately 3-5 years following the adoption of the Delivery Program.</p>							
No	Summary	Specific	Measurable	Achievable	Realistic	Time	Council's role
		<p>infrastructure projects, such as the Fingal Bay Bypass.</p> <ul style="list-style-type: none"> <li>The Plan may be linked to actions in the Nelson Bay Public Domain Plan, the PAMP or recommendations from the Citizens Panel on Parking.</li> </ul>					
21	Identification of future car parking options	<ul style="list-style-type: none"> <li>Long and short term car parking options will be identified, which could include: <ul style="list-style-type: none"> <li>Multi and at-grade car parks</li> <li>Satellite parking locations</li> <li>'Smart Parking' tech</li> <li>Parking meters and restricted parking</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The options will be presented to the Citizens Panel for consideration (see action below).</li> </ul>	<ul style="list-style-type: none"> <li>A desktop analysis of the options will be undertaken prior to presentation to the Citizens Panel.</li> </ul>	<ul style="list-style-type: none"> <li>The desktop exercise has already been completed and will be discussed with the Citizens Panel.</li> <li>Constraints relating to land ownership, cost, biodiversity, drainage and availability may render some options unfeasible.</li> </ul>	Short	Responsible
22	Formation of a Citizens Panel to discuss parking	<ul style="list-style-type: none"> <li>A Citizens Panel will be formed twelve months following the adoption of the Delivery Program.</li> <li>The Panel will give an objective community perspective on what can be done to ease the pressure on parking during peak periods and make recommendations to Council.</li> <li>Members to the Panel will be randomly selected and membership will include a diverse cross section of the community.</li> </ul>	<ul style="list-style-type: none"> <li>The success of the Panel will be measured by whether they provide a recommendation to Council within twelve months of the adoption of the Delivery Program.</li> <li>The success of the Panel will be measured by undertaking a survey twelve months following the recommendation to Council about whether an increased knowledge and ownership of the outcomes has been achieved.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for getting this Plan adopted will be listed on the project officer's work program.</li> </ul>	<ul style="list-style-type: none"> <li>The key challenge for this format is whether those randomly selected members of the community are willing to volunteer their time to this issue.</li> <li>This format has been tried and tested across the world and in other Local Government Areas.</li> </ul>	Short	Responsible
23	Extension of Yacaaba Street	<ul style="list-style-type: none"> <li>Completion of the Yacaaba Street Extension in accordance with the design endorsed by Council 24 June 2014.</li> </ul>	<ul style="list-style-type: none"> <li>The success of the extension will be measured by undertaking pedestrian counts within the town centre and foreshore once the extension is complete.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for completing the construction project is with the Facilities and Services Group and the contractors who were successful in being awarded the project.</li> </ul>	<ul style="list-style-type: none"> <li>Road construction is common practice. The plan for the project has taken into account risks and appropriate mitigation measures.</li> </ul>	Short	Responsible
24	Undertake a capacity analysis of the Pedestrian Bridge	<ul style="list-style-type: none"> <li>A capacity analysis completed three years following the adoption of the Delivery Program by Council.</li> <li>This action may be addressed as part of the preparation of the draft Nelson Bay Public Domain Plan, or the actions arising from that Plan.</li> </ul>	<ul style="list-style-type: none"> <li>The capacity analysis will be completed using pedestrian counts and through measuring the asset life of the materials that make-up the bridge.</li> <li>These data will inform the Integrated Transport Plan in relation to pedestrian movements.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for getting this Plan adopted will be listed on the project officer's work program.</li> </ul>	<ul style="list-style-type: none"> <li>This should take place following the completion of the Yacaaba Street extension and during peak periods to fully understand the pedestrian environment.</li> </ul>	Medium	Responsible
25	Review signage and parking meters on the Foreshore	<ul style="list-style-type: none"> <li>A review of signage will be incorporated within the draft Nelson Bay Public Domain Plan and in the review of the Foreshore Plan of Management.</li> <li>The Citizens Panel on Parking will consider parking meters as part of preparing recommendations to Council on the matter of transport and parking.</li> </ul>	<ul style="list-style-type: none"> <li>This action will take place three years from the adoption of the Delivery Program.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for getting this Plan adopted will be listed on the project officer's work program.</li> </ul>	<ul style="list-style-type: none"> <li>A wayfinding consultant has been engaged as part of the preparation of the draft Nelson Bay Public Domain Plan.</li> <li>Council staff and other experts will present information on parking meters and options to the Citizens Panel on Parking for consideration.</li> </ul>	Medium	Responsible

<p>Key:</p> <p>Short – approximately 1 year following the adoption of the Delivery Program.</p> <p>Medium – approximately 1-3 years following the adoption of the Delivery Program.</p> <p>Long – approximately 3-5 years following the adoption of the Delivery Program.</p>							
No	Summary	Specific	Measurable	Achievable	Realistic	Time	Council's role
26	Review road speed limits in the town centre	<ul style="list-style-type: none"> <li>In coordination with the Roads and Maritime Services and the community identify speed limit reductions in the town centre to encourage a pedestrian friendly environment.</li> <li>This action may be addressed as part of the preparation of the draft Nelson Bay Public Domain Plan, or the actions arising from that Plan.</li> </ul>	<ul style="list-style-type: none"> <li>This action will take place three years from the adoption of the Delivery Program.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for getting this Plan adopted will be listed on the project officer's work program.</li> </ul>	<ul style="list-style-type: none"> <li>A review of speed limits in the town centre is a realistic action for Council, however changes to speed limits are ultimately the responsibility of RMS, not Council. Council can advocate for changes following the review.</li> <li>Implementation of changed speed limits would require accompanying traffic calming works which would be funding dependent.</li> </ul>	Medium	Responsible
27	Design and fund intersection options based on Study	<ul style="list-style-type: none"> <li>Provide more detailed designs and costings for the upgrades of intersections identified in the Transport and Parking Study.</li> </ul>	<ul style="list-style-type: none"> <li>This action will take place three years from the adoption of the Delivery Program.</li> </ul>	<ul style="list-style-type: none"> <li>This action will require identification of funding. See action listed below in relation to identification of infrastructure funding sources.</li> </ul>	<ul style="list-style-type: none"> <li>The implementation of this action will be funding dependent. Infrastructure funding can be made available from a variety of sources.</li> </ul>	Medium	Responsible
28	Implement the Pedestrian Access and Mobility Plan (PAMP)	<ul style="list-style-type: none"> <li>Implement the PAMP.</li> <li>This action may be addressed as part of the preparation of the draft Nelson Bay Public Domain Plan, or the actions arising from that Plan.</li> </ul>	<ul style="list-style-type: none"> <li>This action will take place three years from the adoption of the Delivery Program.</li> <li>Full implementation will require significant funding. Higher order priority works within the PAMP have been identified and will be actioned as funding allows.</li> </ul>	<ul style="list-style-type: none"> <li>This action will require identification of funding. See action listed below in relation to identification of infrastructure funding sources.</li> </ul>	<ul style="list-style-type: none"> <li>The implementation of this action will be funding dependent. Infrastructure funding can be made available from a variety of sources.</li> </ul>	Medium	Responsible
Implementation							
29	Re-word the existing actions to be SMART	<ul style="list-style-type: none"> <li>This Implementation Pan details how the proposed actions have been broken down into a SMART format.</li> </ul>	<ul style="list-style-type: none"> <li>This Implementation Plan forms part of the Delivery Program that will be reported to Council.</li> <li>The Implementation Plan was exhibited with the draft Delivery Plan seeking feedback.</li> </ul>	<ul style="list-style-type: none"> <li>This action has been achieved. As the actions progress through implementation, the details of this table will be updated. This table will provide a clear framework for discussion at Implementation Panel Meetings.</li> </ul>	<ul style="list-style-type: none"> <li>This action has been achieved.</li> </ul>	Short	Responsible
30	Implementation Panel that meets regularly to monitor the progress of the actions in the Delivery Program	<ul style="list-style-type: none"> <li>This Implementation Panel will meet twice a year (or at regular intervals to be determined by the Panel) to monitor the progress of this Delivery Program.</li> </ul>	<ul style="list-style-type: none"> <li>The success of this Panel will be measured by whether the meetings take place and the monitoring and progress of the actions.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility of organising the agenda and minutes for this Panel will be listed on the project officer's work program.</li> <li>The frequency of these meetings could increase or decrease based on the progress of actions.</li> </ul>	<ul style="list-style-type: none"> <li>This action is similar to other Panels set up for Raymond Terrace and Medowie, and the terms of reference are consistent.</li> <li>The success of the Panel depends on adequate monitoring and reporting of the Strategy actions and the actions of the Panel in responding when delays are identified.</li> </ul>	Short	Responsible
31	Review Infrastructure Funding	<ul style="list-style-type: none"> <li>Funding streams for all of the works and associated costs will require resolution and a report to Council on the appropriate funding mechanisms (including developer contributions). This may result in amendments to Council's existing adopted plans</li> </ul>	<ul style="list-style-type: none"> <li>The Implementation Panel will monitor this action, which may include amendments to the development control plan, new grant funding applications, or amendments to Council's Strategic Asset Management Plan.</li> </ul>	<ul style="list-style-type: none"> <li>Infrastructure funding can be made available from a variety of sources. The processes for securing some funding sources are clearly outlined (developer contributions and amendments to the Strategic Asset Management Plan) and may include</li> </ul>	<ul style="list-style-type: none"> <li>Council has a good understanding of the different funding avenues that are available to fund infrastructure. However, we first must develop a more detailed infrastructure list and associated costings to determine</li> </ul>	Medium	Responsible

<p>Key:</p> <p>Short – approximately 1 year following the adoption of the Delivery Program.</p> <p>Medium – approximately 1-3 years following the adoption of the Delivery Program.</p> <p>Long – approximately 3-5 years following the adoption of the Delivery Program.</p>							
No	Summary	Specific	Measurable	Achievable	Realistic	Time	Council's role
		<p>including the adopted developer contributions plans, and the Strategic Asset Management Plan which will require public exhibition and adoption by Council.</p> <ul style="list-style-type: none"> <li>Following the adoption of the Public Domain Plan, the projects and costings table (<b>FIGURE 19</b>) are to be revised, and the most appropriate funding streams for the infrastructure identified.</li> <li>Funding options will also be identified related to other actions in this Delivery Program including smart city initiatives, car parking options, the Integrated Transport Plan, and implementing the Apex Park Masterplan.</li> </ul>		community consultation and Council resolution.	priorities and what funding sources are most appropriate.		
32	Include relevant infrastructure items in the Strategic Asset Management Plan	<ul style="list-style-type: none"> <li>Include the relevant infrastructure identified in Delivery Program and associated plans, such as the Public Domain Plan, in Council's Strategic Asset Management Plan (SAMP).</li> <li>The SAMP provides a framework to manage current and future Council assets so that infrastructure can be effectively delivered to the community.</li> </ul>	<ul style="list-style-type: none"> <li>Amendments to the SAMP are required to be adopted by Council and Council regularly reports on service delivery and other measures as part of the integrated planning and reporting framework.</li> </ul>	<ul style="list-style-type: none"> <li>Legislation requires that the SAMP is for a minimum 10 year period and that it is reviewed and rolled over annually.</li> </ul>	<ul style="list-style-type: none"> <li>Council can update the SAMP as part of the annual review.</li> </ul>	Short	Responsible
33	Monitor, Report and Review the Delivery Program	<ul style="list-style-type: none"> <li>The Implementation Panel meets regularly to monitor the progress of these actions.</li> <li>A Report to Council that summaries progress on implementation is to be provided annually.</li> <li>The Delivery Program (and Strategy) is reviewed every five years.</li> </ul>	<ul style="list-style-type: none"> <li>Discussions that take place at regular meetings of the Implementation Panel will provide data to feed into the annual report.</li> <li>The success of the Delivery Program and associated Implementation Panel will be detailed in the annual report.</li> <li>The findings of these annual reports will feed into the five year review.</li> </ul>	<ul style="list-style-type: none"> <li>The responsibility for organising the agenda and minutes for this Panel will be listed on the project officer's work program.</li> </ul>	<ul style="list-style-type: none"> <li>Council regularly reviews and reports on a number of plans, policies and strategies.</li> <li>The success of the Panel in monitoring the implementation of the Delivery Program depends on how well the Delivery Program actions have been drafted and the availability of members of the community from diverse backgrounds to provide input.</li> </ul>	Long	Responsible



PORT STEPHENS  
COUNCIL

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## **Appendix 2 – Site Identification Map**

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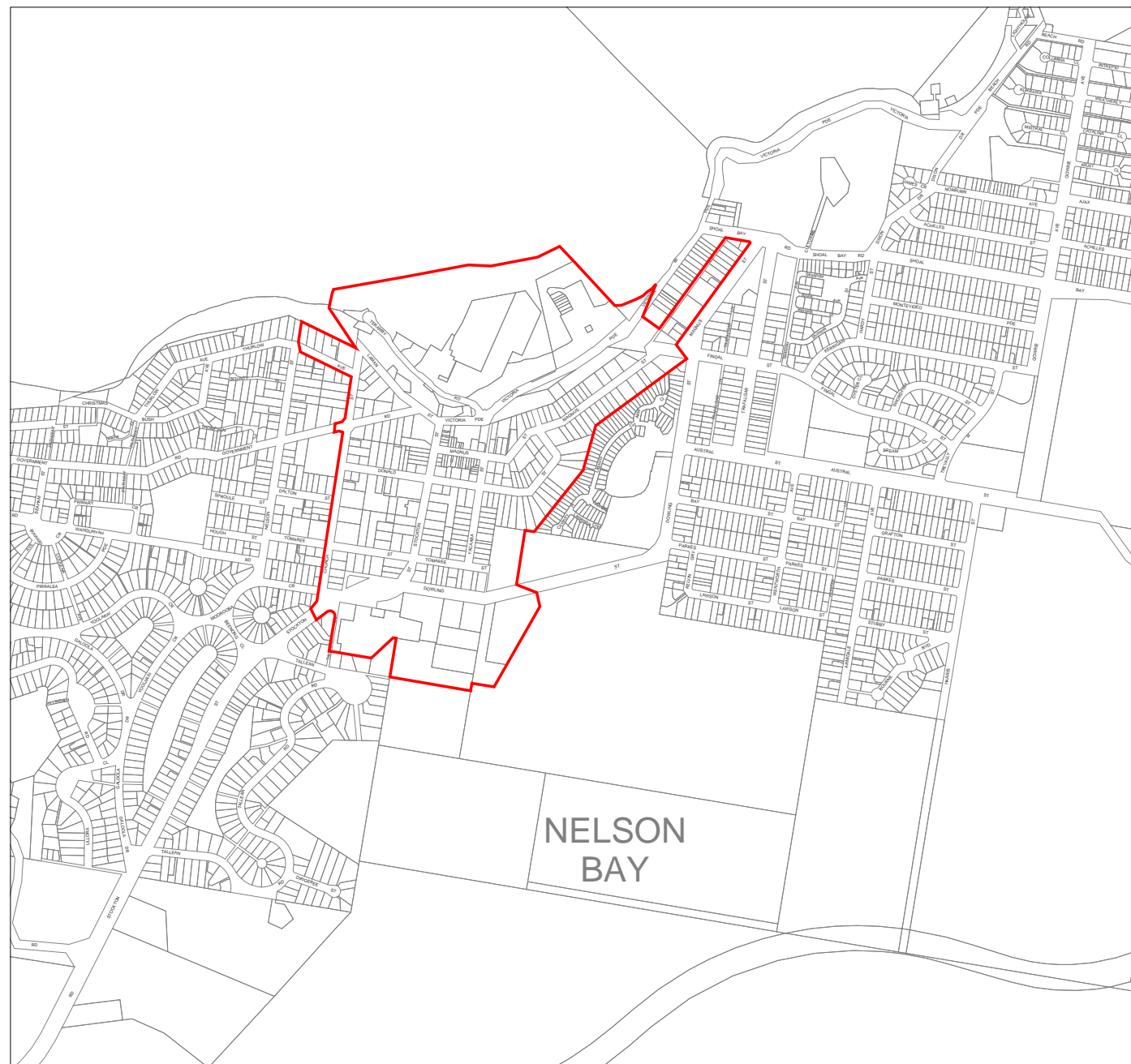


# Port Stephens Local Environmental Plan 2013

## Site Identification Map

### Cadastre

-  Cadastre 17/04/2019 © Spatial Services
-  Subject Site



Projection GDA 1994  
MGA Zone 56

0 750  
metres

Scale 1: 15,000 @ A4

Planning Proposal - Nelson Bay CBD  
Site ID Map

## **Appendix 3 – Nelson Bay Town Centre and Foreshore Strategy 2012**

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# Nelson Bay Town Centre & Foreshore STRATEGY





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# 1.0 Executive Summary

## Background

Nelson Bay is the primary tourist and service centre of the Tomaree Peninsula and of Port Stephens Local Government Area. Nelson Bay contains a considerable amount of retail and commercial floorspace; however the nearby Salamander Centre has become the focus for weekly retail shopping as well as being the location of a major library and community centre. As a result, Nelson Bay's retail floorspace is refocusing around leisure shopping and hospitality, such as cafes, with a secondary focus on day-to-day and weekly household and personal needs.

Nelson Bay is the entry point to the Port Stephens waterway for many tourists, and contains the highest concentration of tourist facilities in the area. The Town experiences high seasonal variations in tourism. The low level of activity on winter weekdays contrasts with the large numbers of tourists visiting during the summer and Easter holidays and special event weekends.

Nelson Bay is in competition with coastal centres elsewhere in NSW, Australia and increasingly overseas. In order for Nelson Bay to remain competitive it needs to rejuvenate its suite of tourism products and to provide a unique destination. The visual appearance and amenity of the Town Centre and Foreshore are important elements in providing a unique high quality destination. Diversification of the economy beyond its high reliance on leisure based tourism is also important.

At the same time, Nelson Bay has a substantial residential population. It is important that Nelson Bay offers a high amenity environment to residents in order to maintain its existing population and to attract new residents. Many new residents are former tourists attracted to the relaxed coastal lifestyle of the area.

Over the next 20 years, population and employment are expected to grow in the Tomaree Peninsula including Nelson Bay, which is a main service/tourist centre.

## Aim of the Strategy

Nelson Bay Strategy aims to guide Nelson Bay towards becoming more attractive to tourists, the business community and residents. The Nelson Bay Strategy is largely directed towards physical form, such as building design, street landscaping and transportation networks. It is complemented by a range of other strategies.

A planning strategy for Nelson Bay is required to:

- Stimulate and diversify jobs growth
- Provide guidelines for the design of new buildings and development
- Ensure adequate roads, parking, pedestrian facilities and storm water drainage
- Ensure Nelson Bay is an attractive place to live, work, visit and shop
- Manage and develop Nelson Bay as a tourism centre
- Improve the relationship between the Nelson Bay Town Centre and the Nelson Bay Foreshore
- Facilitate a distinctive town centre character
- Preserve the natural environment, which is critical to Nelson Bay's economy and liveability.



The Strategy document provides a multidisciplinary analysis that results in a vision for change and details the key initiatives and strategies that will guide the Town Centre and Foreshore.

The Strategy not only recommends planning controls for future developments and guidance for the revitalisation of the public domain, it also identifies the critical stages and considerations in delivering the Strategy's vision.

## Structure of the Strategy

Section 1 of the Strategy provides a discussion as to why the Strategy was prepared, the context in terms of locality and the consultation process involved in the preparation of the Strategy.

Section 2 reviews the relevant planning framework documents and provides the statutory context for the Strategy in terms of planning considerations.

Section 3 demonstrates the analysis work conducted, including the:

- Nelson Bay social context including the towns heritage and history
- Locality's population and projections
- Key issues affecting the local economy
- Existing conditions and considerations within the Study Area – the natural environment, traffic and car parking
- Public domain analysis
- View analysis
- Development opportunities analysis

Section 4 builds on the analysis discussed within Section Three by refining and clarifying the guiding principles that were adopted by Council in 2010 to guide the Strategy. The Section provides a discussion on the key challenges and options in addressing the principles before moving onto the final recommendations.

Section 5 is focused on the implementation of the recommendations and provides a discussion on key issues including financial opportunities available in implementing the Strategy, and the critical design and delivery stages.

## Community consultation

The development of a strategy for Nelson Bay has been an extensive process over several years, and has involved considerable community consultation. A range of studies have been undertaken which have provided substantial background information upon which to base the Strategy.

Late last year a stakeholder's forum was established. The stakeholder's forum has met regularly to discuss issues related to the Strategy and to provide feedback to Council officers as the final Strategy is developed.

An innovative program of involving local school students in developing a vision of a future Nelson Bay has helped ensure that the views of younger people (who will inherit the outcomes of the Strategy) has been considered.

The Hunter Valley Research Foundation has also undertaken an independent survey of residents, visitor and business views on aspects of the Strategy.



## Basis for the Strategy

The outcomes of the Nelson Bay Town Centre and Foreshore Strategy have been informed by:

- Analysis of local and NSW government policy and relevant strategic documents
- A review of strategic work conducted throughout the draft strategy process including work previously conducted by consultants
- Analysis of such matters as urban design, traffic and car parking, economic development and building development standards and controls.

Because traffic and car parking is a major issue in Nelson Bay, GHD was engaged to review traffic and car parking in the Town Centre and Foreshore, and to provide recommendations for addressing the issues they identified.

Council officers have comprehensively reviewed the studies that have been undertaken, the comments made by Council in 2011 on the draft Strategy, workshop outcomes, and submissions received during the exhibition of the draft Strategy in 2009. They have also undertaken detailed site inspections.

The outcome is a Strategy which is more finely tuned to Nelson Bay's circumstances than the previous draft. It also has a greater focus on improving the overall ambience and functionality of the Town Centre through such measures as new street tree planting, improved signage, improving access to parking and a better pedestrian network. It also provides incentives and flexibility to encourage incoming investment.

## Analysis and Recommendations

Analysis of the Town Centre revealed that it has several distinct subareas deserving of special development controls and public domain treatments in order to enhance their character.

The commercial zoned area of Nelson Bay is too large for a centre with a relatively limited catchment. As a result, activity tends to become dispersed and a sense of focus is lost, with a negative impact on business viability. By developing the character and function of specific areas it is possible to focus activity and to overcome the problems of dispersion.

Magnus Street, the northern end of Stockton Street and parts of Donald Street contain many small shops, boutique retail and cafes and need to be further developed in a way that builds on its "village" character.

A number of larger sized sites and existing premises exist in the area to the south and west of the "village". This area offers the potential to provide more flexibility for new development within a number of Nelson Bay specific urban design controls.

The treatment of the public domain is critical to achieving a quality result in Nelson Bay and attracting more residents, tourists and businesses. The public domain strongly influences how people feel and experience the town, and ties the elements of the town together.

In relation to building heights, it is critical that the wooded ridge and headlands that surround the Bay be visible and not eclipsed by buildings. A maximum of five storeys is proposed throughout the Town Centre with the exception of the area south of the Bowling Club (7 storeys) and the Marina area (3 storeys), and Fishermen's Co-op site (4 storeys). It is recommended buildings on sites with a street frontage of less than 20 metres be limited to 3 storeys in order to maintain an acceptable scale and proportion of the buildings.

A requirement for active street frontages and for buildings to be built to the street boundaries is proposed to be applied selectively to certain streets.

The Strategy provides greater flexibility for new development than the draft Strategy. It also includes incentives that improve the development yield of sites in return for higher quality design and benefits to the public realm (see below).



Key recommendations of this Strategy include new development controls that will be implemented through a proposed new Nelson Bay Town Centre locality chapter in the Port Stephens Development Control Plan (DCP), recommendations for additional clauses to be included in the Port Stephens Local Environment Plan 2000 (and subsequently the Port Stephens Local Environmental Plan 2012 (Standard Instrument Comprehensive City Wide LEP), and a document titled the Nelson Bay Implementation Program.

## Design Excellence and Variations to Development Standards

All development is required to exhibit design excellence.

Should a development exhibit outstanding design excellence, and provide a strategic public benefit (e.g. a significant public domain improvement or a conference centre facility) it may qualify for up to an additional 2 storeys and an additional 0.5:1 floor space ratio above the 2.0:1 floor space ratio that would apply to the Town Centre. The exception to this variation to development standard is the Foreshore area where a maximum of 3 storeys is recommended.

Where appropriate, an Urban Design Advisory Panel will provide advice to Council on the urban design merits of a specific proposal.

Developments on identified "opportunity" sites may qualify for a further additional 0.5:1 FSR (i.e. maximum of up to 3.0:1), but only if they meet the foregoing criteria.

The Opportunity Sites are the Fishermen's Co-op, Sea Breeze Hotel, Nelson Resort and adjacent sites together with the Council car park in Donald Street west, the Council car park and adjacent sites in Donald Street east, and the "Coles" site at the intersection of Donald and Stockton Streets. (see the map in the Strategy for details)

It is proposed that State Environmental Planning Policy 65 - (SEPP) Design Quality of Residential Flat Development considerations be applied to holiday accommodation (other than hotels, motels, bed and breakfasts and the like) in order to ensure they can be reasonably adapted to permanent residential accommodation when desired. This will also improve their external appearance and relationship to adjoining sites, and better "share of the benefits" of such an outstanding location.

## Implementation Program

The Nelson Bay Implementation Program clearly sets out the vision for the major projects necessary to achieve the Strategy's objectives in this regard, including:

- The basis for a public domain strategy for Nelson Bay. This strategy seeks to improve streetscapes, better define view corridors, improve pedestrian connectivity, and create a strong pedestrian "spine" along Stockton Street to the waterfront
- A design brief for Apex Park and the wider green link area between the Town Centre and Foreshore. Apex Park has evolved over time and as a result has lost an overall structure. Many facilities in the Park, such as the War Memorial, are functionally compromised as a result. Tree plantings have grown and obscured important view corridors to the water
- Upgrading wayfinding through improved signage and interpretive material is very important to improving the visitor's experience of Nelson Bay and to bring the Town Centre and the waterfront closer together
- Initiatives to reinforce the Character Areas identified in this Strategy
- The Foreshore redevelopment
- Public art, tree planting brief, lighting strategy, street furniture, and signage
- Key staging considerations





- Implementation responsibilities.

## Resourcing the Improvement Program

It is proposed to develop a Development Contributions Section 94 Plan to assist in the implementation of the Nelson Bay Improvement Program. In addition, the Nelson Bay Improvement Program would be implemented over time as Council priorities permit, through the reshaping of works that would be carried out in any case, through grant opportunities, and through other funding mechanisms discussed in the Strategy. Developments may seek to implement aspects of the Nelson Bay Improvement Program in order to deliver a “strategic public benefit” as a requirement for being able to achieve additional development yield on their site.



## 2.0 Aim of the Strategy

Nelson Bay Strategy aims to guide Nelson Bay towards becoming more attractive to tourists, the business community and residents. The Nelson Bay Strategy is largely directed towards physical form, such as building design, street landscaping and transportation networks. It is complemented by a range of other strategies.

A planning strategy for Nelson Bay is required to:

- Stimulate and diversify jobs growth
- Provide guidelines for the design of new buildings and development
- Ensure adequate roads, parking, and pedestrian facilities
- Ensure Nelson Bay is an attractive place to live, work, visit and shop
- Manage and develop Nelson Bay as a tourism centre
- Improve the relationship between the Nelson Bay Town Centre and the Nelson Bay Foreshore
- Facilitate a distinctive town centre character
- Preserve the natural environment, which is critical to Nelson Bay's economy and liveability.

The Strategy document provides a multidisciplinary analysis that results in a vision for change and details the key initiatives and strategies that will guide the Town Centre and Foreshore.

The Strategy not only recommends planning controls for future developments and guidance for the revitalisation of the public domain, it also identifies the critical stages and considerations in delivering the Strategy's vision.



## 3.0 Document Structure

**Section One** provides a discussion as to why the Strategy was prepared, the local context in terms of locality and the consultation process involved in the preparation of the Strategy.

**Section Two** reviews relevant planning documents and provides the statutory context for the strategy in terms of planning considerations.

**Section Three** demonstrates the analysis work conducted, including the:

- Nelson Bay social context including the towns heritage and history
- Local demographics
- Key issues affecting the local economy
- Existing conditions and considerations within the Study Area – such as the natural environment, traffic and car parking
- Public domain analysis
- View analysis
- Development opportunities analysis

**Section Four** builds on the analysis work discussed within Section Three by identifying the guiding principles to guide the Strategy adopted by Council in 2010. The Chapter provides a discussion of the key challenges to address the principles before moving onto the final recommendations.

**Section Five** is focused on the implementation of the recommendations and provides a discussion on key issues including: financial opportunities available in implementing the Strategy, and the critical design and delivery stages.

Key recommendations of this Strategy include new development controls that will be implemented through a proposed new Nelson Bay Town Centre locality chapter in the Port Stephens Development Control Plan (DCP), recommendations for additional clauses to be included in the Port Stephens Local Environmental Plan 2000 (and subsequently the Port Stephens Local Environmental Plan 2011 (Standard Instrument Comprehensive LEP), and a document titled the Nelson Bay Implementation Program. Figure 1 illustrates the documents to be produced to deliver the Strategy objectives.

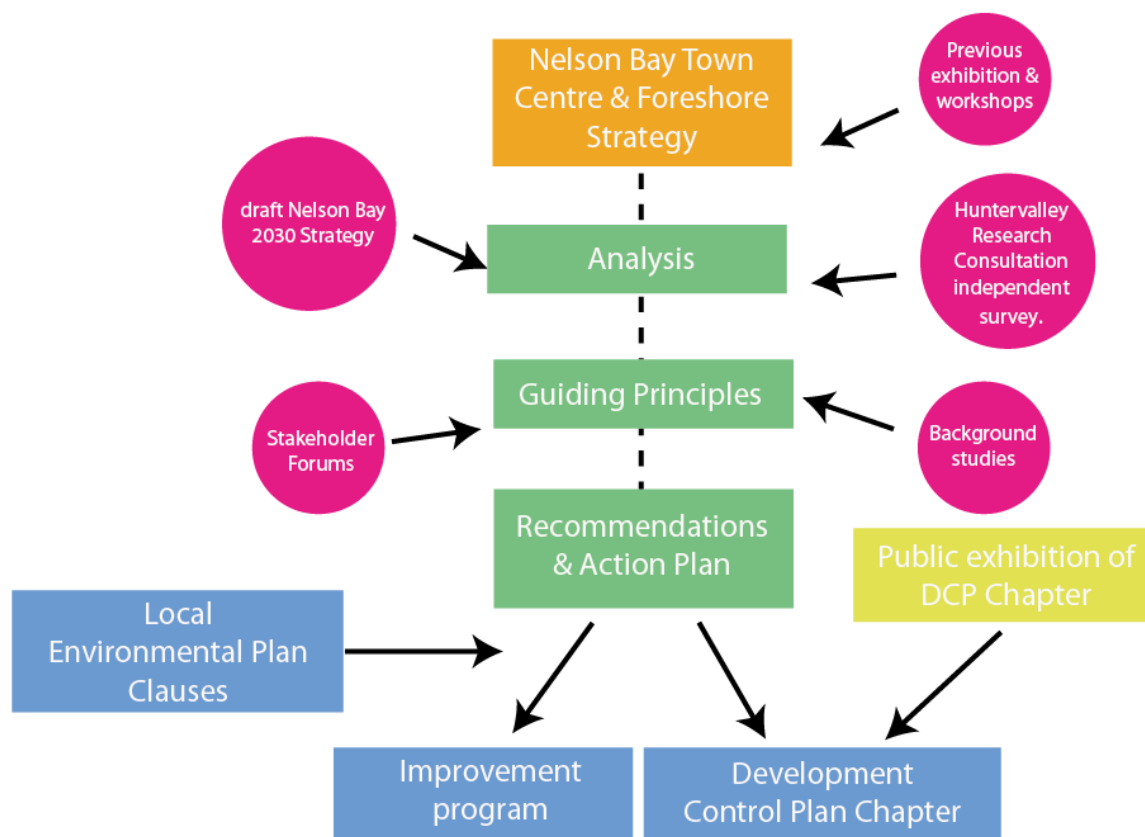


**Figure 1:** Documents prepared to implement the Strategy objectives.

## 4.0 Background of the Study

### Community Engagement

The development of a Strategy for Nelson Bay has entailed an extensive process over several years, and has involved considerable community consultation. This Section provides details of the consultation undertaken and brief details of the studies that provide much of the basis of the Strategy. **Figure 2** summarises the community consultation process.



**Figure 2: Process and public participation.**

### Draft Nelson Bay 2030 Strategy

In 2007 Port Stephens Council undertook a comprehensive study of the Nelson Bay Town Centre. The purpose of the study was to plan for the town's development over the next 20-30 years and identify the town's future desired character. A series of community consultation sessions was held to identify issues and opportunities. The draft Strategy was exhibited in September 2008.

### Draft Design Code and Background Report

Following the exhibition of the draft Nelson Bay 2030 Strategy, the submissions received were evaluated. Community feedback predominantly related to the future desired character of Nelson Bay, urban design issues including building heights and streetscapes, the relationship of the Town to the Foreshore, traffic management (including the need for a bypass), and pedestrian/traffic flow within the Town including



across Victoria Parade. Given the responses mostly related to urban design issues, specialist urban design guidance was obtained to provide further guidance.

The urban design guidance was provided in the form of a Background Report and draft Design Code which concluded that the future of Nelson Bay relies on the Town and Foreshore being better connected. The Report stated that the following issues need to be addressed to achieve this connection and deliver a town that has greater economic activity and tourist visitation:

- The lack of investment attraction and the sustainability of the Nelson Bay economy in the future
- Lack of critical mass of facilities at the waterfront to generate pedestrian activity and inspire the journey from the Town Centre
- Lack of connection between functions carried out in the Town and on the waterfront – people do different things at the waterfront to the Town Centre
- The open space between the Town and waterfront – while attractive, it separates the two places and reduces the desire to travel between them
- Orientation of waterfront buildings – the buildings back on to the Town Centre
- The behaviour of traffic and the design of street interfaces – there is a need to slow traffic before reaching such important streets as Stockton Street and Victoria Parade.

Consequently, the resultant draft Design Code and Background Report not only embraced the Town Centre, but also included the Nelson Bay Foreshore which had not been included in the previously exhibited draft Strategy.

The draft Code and Background Report was placed on exhibition and a consultation workshop was held on 12 March 2010. A key issue arising from the consultation was the concern that the Foreshore controls had not been included as part of the draft Strategy.

Given that the scope of the revised draft Nelson Bay 2030 Strategy had been broadened to include such matters as the Foreshore, it was decided that a set of principles needed to be identified to provide an underpinning and reference point for a review of the Strategy. These were developed through community feedback and a workshop involving Council staff and Councillors. The aim of the principles was to direct the planning process and support the integration of the Town Centre and Foreshore planning processes in order to achieve a set of desired outcomes and parameters.

In 2011 additional studies were conducted by Council to inform the revision of the draft Strategy including a land economics feasibility review, and a Traffic and Car Parking Study (prepared by GHD). During late 2011 and 2012 a regular stakeholders forum was established which has discussed and advised on various aspects related to the finalisation of the Strategy.

## The Foreshore Plan of Management

During this period the Department of Lands (now titled the Land and Property Management Authority (LPMA)) consulted with Council and the community to develop a plan to revitalise the Nelson Bay Foreshore. A Plan of Management for the Foreshore was jointly developed by the Department and Council in 2008. Expressions of Interest for the lease and redevelopment opportunity of the Foreshore area was called by the Department of Lands and closed in July 2008. Ardent Leisure was subsequently appointed by LPMA as the preferred partner. A Concept Plan for the redevelopment of the Foreshore area was placed on public exhibition by the LPMA during March/April 2011. The planning principles prepared by Council and the Foreshore Plan of Management assisted in guiding the Concept Plan.

Council and the LPMA have endeavoured to co-ordinate the planning process and outcomes of the overall Nelson Bay Strategy with the LPMA's Foreshore responsibilities. The Concept Plan has not been finalised because it was to be considered for approval under Part 3A of the Environmental Planning and Assessment Act. Part 3A no longer operates, and the LPMA are considering the best option for progressing the Concept Plan.





## Stakeholder Forums

Stakeholder forums have been conducted regularly throughout the evolution of the Strategy. These forums have been conducted to address views towards the Strategy and to provide Council with an opportunity to engage with the community on various issues. Key participants during this process include:

- The Land & Property Management Authority (LPMA)
- Tomaree Residents and Rates Payers Association
- Eco network
- Ardent Leisure
- Residents Panel
- The Nelson Bay Chamber of Commerce
- Port Stephens Tourism
- Local real estate agents and business owners

## Hunter Valley Research Foundation Independent Survey

Council engaged the Hunter Valley Research Foundation (HVRF) in 2011 to conduct an independent survey of views on the draft Strategy. HVRF carried out two surveys in January 2012, one that sought comments from approximately 400 people, including owner residents, renter residents, business owners and absentee landlords, with the second seeking feedback from approximately 100 visitors/tourists. The survey was carried out in a way that delivered a statistically valid indication of community views.

Those surveyed were asked to give their response according to a five point scale of agreement and disagreement, and provision was also made for some open ended questions.

There was consensus and strong support for the objectives and most of the specific proposals in the draft Strategy.

The characteristic of Nelson Bay most liked by community respondents was its sense of place/atmosphere and lifestyle, followed by waterways/waterfront. Visitors most liked the marina, beaches, restaurants and cafes and the Foreshore. Parking costs and supply was the major dislike of visitors. There was agreement that the appearance of Nelson Bay needed to be improved.

There was a high level of community agreement on:

- Redeveloping carparks to increase car parking
- Better connecting and signposting roads
- No blank walls
- Upper levels being setback
- Maintaining clear views of the ridgeline
- Having flexible accommodation (conversion of holiday units to permanent residences)
- Limiting the Town Centre to 5 storeys in height
- Not allowing buildings taller than 5 story on the edge of the Town Centre even if their extra height will not block views



- More trees and plantings
- Building to the boundaries
- New buildings on the Foreshore limited to 3 storeys
- The Foreshore should be architecturally co-ordinated with the Town Centre
- Improving the pedestrian route through Apex Park
- Public places should express local history
- A low number agreed that a road bypass of the Town Centre was unnecessary.

There was lesser agreement between business and residents on allowing taller buildings on the town edge and in the area near the Fishermen's Co-op, that road redevelopment will not improve traffic flow, and the need for an upmarket hotel.

Visitors felt that the marina area and low townscape should be maintained, and that the atmosphere of the town, small size and access to water make it more appealing than other tourist destinations.

### 'The Pitch'

Local young people's views were sought through a project involving local high schools; Tomaree High and St Phillips Christian College. They were invited to participate in a 'Gruen Transfer' style presentation on their vision for the Town Centre and Foreshore. The presentations were based on the student's view and comments relating to information within the draft Strategy.

The presentations assisted Council in recognising the need for infrastructure and facilities for all age groups, including areas for young people to meet and facilities to provide entertainment for both local children and teenagers and to also attract a greater market of tourists with children of all ages. Both presentations also focused on the importance of Apex Park being attractive and functional and the improvements that should be made.

The students highlighted the lack of recreational opportunities and attractions for those in the late teens and early adulthood.



Figure 3: Tomaree High School year 11 geography students, winners of the 'Pitch'

## 5.0 Introduction

### The Study Area

The Study Area for this Strategy is shown in Figure 4 and includes the Nelson Bay Town Centre, Apex Park, and Foreshore Area. The Study Area (east to west) is defined by the boundary of the commercial zoned land within the Town Centre, by the LPMA land management units to the north, and by the edge of development (being just South of the Nelson Bay Bowling Club and Landmark development) to the south.

The Town Centre serves neighbouring communities as a local retail, business and recreation area. It is a popular tourist destination and meeting point due to the many tourist charter boats and related activities being located within the Foreshore area.

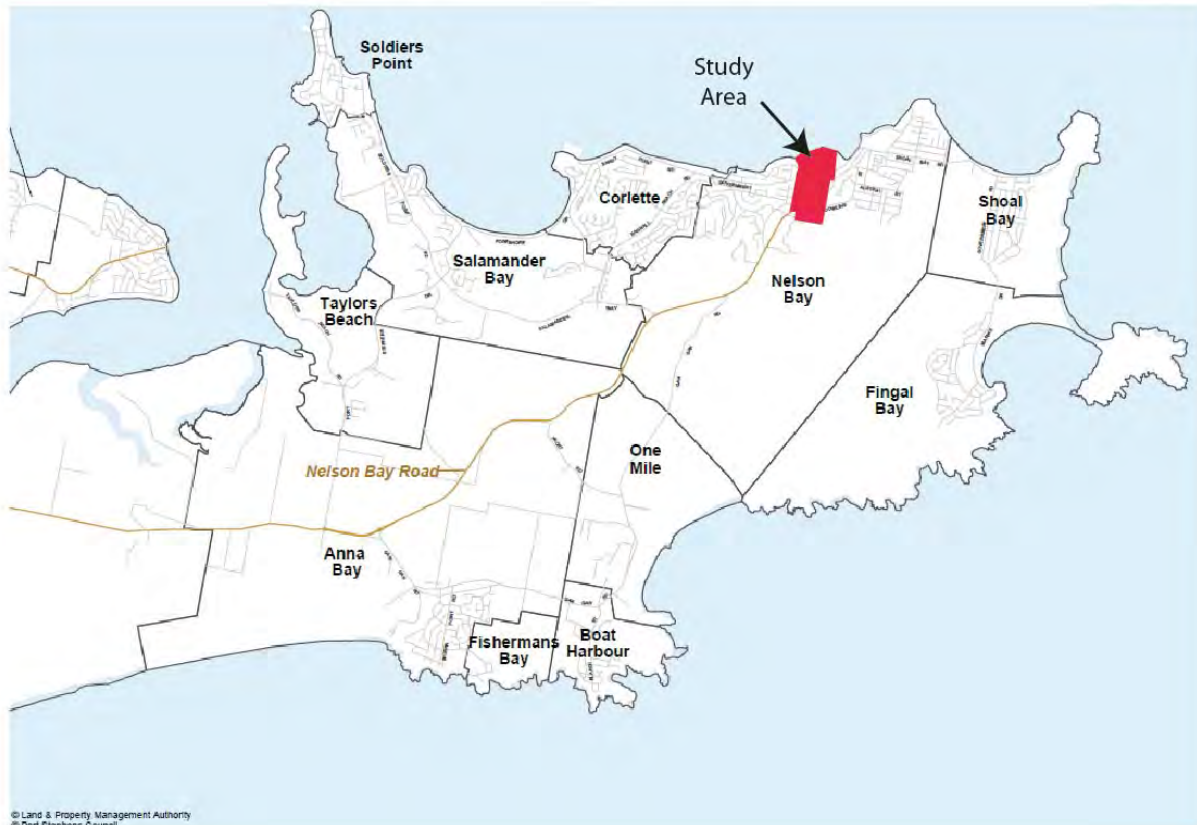


Figure 4: Study Area



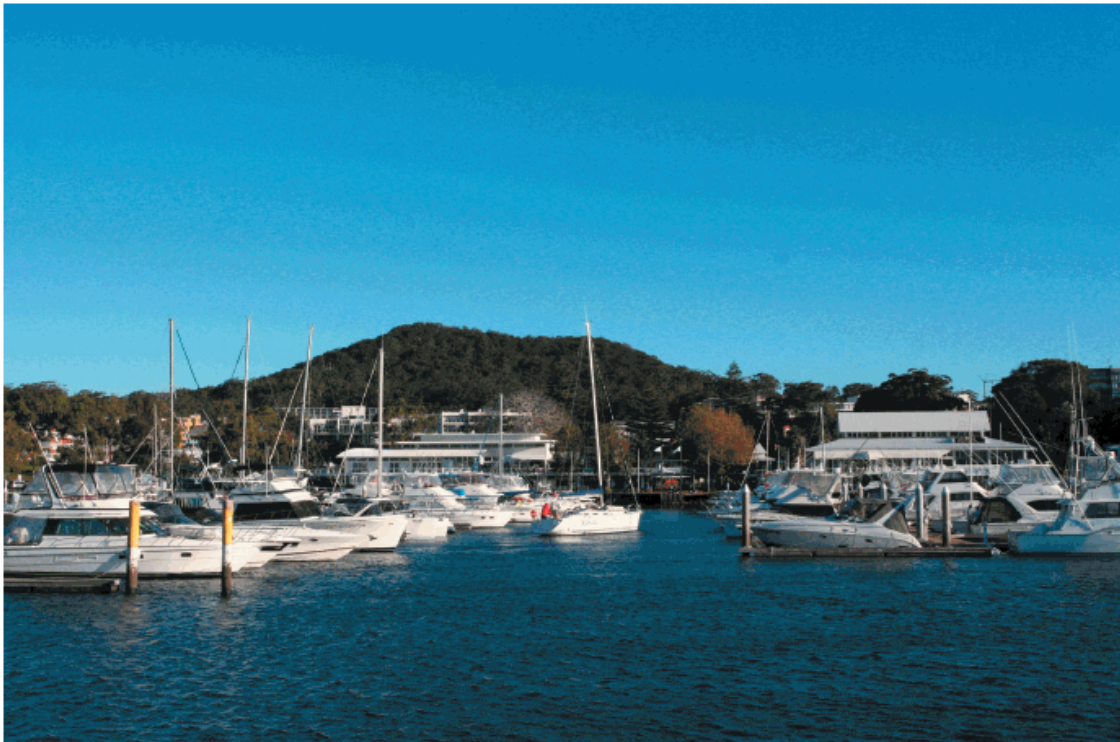
## Local Context

Nelson Bay is located on the southern shore of the Port Stephens water body, on the Tomaree Peninsula along with the settlements of Anna Bay, Fingal Bay, Shoal Bay, Corlette, Salamander Bay, Soldiers Point and Taylors Beach (Figure 5). Each of the settlements are generally separated from the others by natural bush or wetlands and usually located on lower lying lands, close to the waters of Port Stephens or coastal beaches.



**Figure 5: Nelson Bay and the Tomaree Peninsula**

Nelson Bay is the most intensively developed area of Port Stephens Local Government Area. The Town Centre is a mixed use area containing a blend of tourism, retail, commercial and residential land uses. One and two storey developments dominate the centre with a number of multistorey residential and tourist accommodation buildings of up to 5-7 storeys in height generally located on the periphery of the commercial core.



**Figure 6: Nelson Bay Marina looking south across the Town Centre to Kurrara Hill**

To the north of the Town Centre lie extensive parklands which border the Port Stephens water body. A marina and associated two storey commercial development are located on the Foreshore, with a number of government, tourist and marine associated land uses located to the west of the Marina. Extensive public car parking is located along the Foreshore.

Access to Nelson Bay is mainly from the southwest, and traffic passes both through and/or around the Town Centre in order to reach the smaller centres to the east, such as Shoal Bay and Fingal Bay.

The general character of Nelson Bay is that of a casual holiday/lifestyle destination with a strong focus on water based tourism.

The Port Stephens water body and the surrounding wooded hills, coastal area and wetlands have outstanding natural beauty which is the major attraction for tourists and new residents. The higher ridges and steeply rising hills tend to be well vegetated with mature bush land, providing a consistent green backdrop to the urban areas.

While the area has many of the urban services expected of its population size, the proximity of Newcastle means that much higher level commercial, community and medical services are located there. As a result, residents are required to travel to Newcastle to access these services.

## Regional Context

Nelson Bay and the Tomaree Peninsula is located within the Port Stephens Local Government Area (Figure 7), 1 hour (60km) north of Newcastle, and 3 hours (206km) north of Sydney. Newcastle Airport (which also includes the Williamstown RAAF base) is located 32km to the south at Williamstown. Due to the location of Nelson Bay, employment for many residents involves commuting to work, commonly car-based, within the region including Newcastle, Williamstown and Raymond Terrace. A local and regional public transit bus network serves the community and there are also a number of visitors arriving by tourist buses. Figure 7 shows the location of Nelson Bay Road and Richardson Road, both significant access roads to the Tomaree Peninsula and Nelson Bay.



Figure 7: Location of Port Stephens Local Government Area and Nelson Bay





## 6.0 Planning Framework

This section of the Strategy provides an explanation of the wider planning framework and suite of documents the Strategy is related to, as shown (right). A summary of relevant State plans and policies follows. (Opposite): Context of Nelson Bay Town Centre and Foreshore Strategy.

### Lower Hunter Regional Strategy

The Lower Hunter Regional Strategy (LHRS) is the State Government's spatial planning policy for the Lower Hunter, which include the Port Stephens LGA.

The LHRS projects an additional 1500 jobs and 1200 dwellings in the Nelson Bay "specialised centre" by 2031. The projected numbers are estimates only. Although the LHRS does not define the precise boundaries within which these additional dwellings and jobs will be located, it is understood that it refers to the wider Tomaree Tourism and Lifestyle Growth Area.

A specialised centre is defined as "a concentration of regionally significant economic activity and employment". Nelson Bay's specialisation is tourism. Nelson Bay is also designated as a "Town Centre". Interestingly, Salamander is not acknowledged by the LHRS or designated as a Town Centre.

### Port Stephens Community Strategic Plan

The Integrated Planning Framework and its companion documents are produced in response to the NSW Government's requirement for each council to produce an integrated strategic plan. Within this suite of documents, the Community Plan is Council's highest level planning document. The Plan has undergone community consultation and the operational plan has identified the need to carry out Centre Strategies within the Local Government Area (LGA) and to continue planning for the Fingal Bay bypass road.

### Port Stephens Futures

The Port Stephens Futures Strategy (PSFS) was developed after a review of the major issues facing Port Stephens, and comprehensive consultation with the community and agencies, to set overall directions for sustainable future growth in Port Stephens. It aimed to provide a foundation upon which the Community Strategic Plan and future planning strategies could be developed. The PSFS has provided direction for the development of the Port Stephens Planning Strategy, sub strategies (such as Nelson Bay) and provides an additional foundation for the draft Port Stephens Local Environmental Plan 2012. The Strategy sets ten over-arching Strategic Directions for the LGA which are of particular importance to Nelson Bay. These include sustainability, good development outcomes, quality urban design, infrastructure needs, cultural opportunities, social inclusion, environmental protection, economic growth and sound governance.





## Port Stephens Planning Strategy

The Port Stephens Planning Strategy (PSPS) builds on the 2007 Community Settlement and Infrastructure Strategy by providing a comprehensive planning strategy for the LGA. The PSPS responds to the State Government's Lower Hunter Regional Strategy (LHRS) and Lower Hunter Regional Conservation Plan (LHRCPP) by providing local level detail. The Planning Strategy identifies the following in relation to the wider suburb of Nelson Bay:

- Nelson Bay has a significant share of non-retail activity reflecting the business and personal servicing needs of the surrounding population and tourists, with around 53,000 m<sup>2</sup> of occupied floorspace.
- A key element for the economic growth and revitalisation of Nelson Bay will be the likely need to intensify residential development in the Town Centre. Providing more diverse housing choice will assist in attracting permanent residents to the area, as well as supporting the Town Centre outside of the peak tourism season.
- Commercial/retail floorspace demand is forecast to increase almost 15,000 m<sup>2</sup> between 2009 and 2031. This is equivalent to the increase in floorspace forecast for Raymond Terrace. There is insufficient capacity under current development intensity to accommodate this demand, even though there is a substantial amount (4,350 m<sup>2</sup>) of vacant floorspace.
- There is a low average floor space ratio across the Centre, which is partially due to the large number of open air car parks. This means there is a need for more intensive development or more commercially zoned land to meet future demand. Given the Centre is contained by high to medium density residential development, expansion beyond the existing commercially zoned land is not recommended. Intensification of development is a more suitable option.
- Development of the existing open car parks could provide additional car spaces, retail, commercial and residential usage and may also provide stimulus for rejuvenation elsewhere in the Centre. It foreshadowed that the emerging Draft Nelson Bay Town Centre and Foreshore Strategy would provide controls that will provide for additional commercial and residential floor space within the Town Centre to meet these future demands. It also identifies a risk that the southern part of the Centre (up the hill) may suffer if redevelopment exclusively focuses around the end of town closest to the water.

The PSPS identifies the following challenges and opportunities relating to Nelson Bay:

- Outwards expansion is constrained by the Tomaree National Park and the Port Stephens waterway
- The seasonal nature of the tourism industry makes it difficult to tailor supply and demand, in addition to placing pressure on infrastructure over the summer period
- Low average commercial floor space ratio across the centre, which is due to the large number of open air car parks
- Increasing intensification as a result of medium density residential buildings
- Potential to expand the water based and tourism industry
- Nelson Bay has a picturesque natural setting that draws residents and tourists to the LGA.

More detailed analysis was undertaken in the development of the PSPS for the suburb of Nelson Bay than was conducted for the LHRS. The PSPS identified that 600 dwellings of infill residential/mixed use commercial development and 169 dwellings on new residential zoned land (green field) are likely to be developed in the suburb over the next 25 years. The majority of these new dwellings are likely to be in the Nelson Bay Town Centre.

According to the PSPS a key issue for Nelson Bay is the need to achieve an appropriate balance between permanent residential and tourist accommodation. The future urban potential will come from intensification of development, primarily within existing zoned areas as medium density and multi-unit development.

## NSW Coastal Policy

Nelson Bay is within the 'coastal zone' as defined under The NSW Coastal Policy. Accordingly, the provisions of the Coastal Policy and its supporting documents and directions apply to the area. The Coastal Policy has nine goals that seek to protect the natural environment and provide for sustainable developments within the coastal zone.

An interwoven series of State Government planning instruments, directions and guidelines are directed towards implementation of the Coastal Policy. The Department of Planning and Infrastructure requires Councils to ensure that Local Environmental Plans for localities within the coastal zone are consistent with the Coastal Policy, the Coastal Design Guidelines and the NSW Coastline Management Manual.

## Port Stephens Local Environmental Plan 2000

The Port Stephens Local Environmental Plan 2000 (PSLEP 2000) is the primary legal document for controlling land use in the LGA. It describes what is permissible in each of the land use zones of the LGA and the significant development controls that apply. The land use zones applying to Nelson Bay as shown in Figure 8.

Within PSLEP 2000, Nelson Bay Town Centre and Marina are zoned 3(a) Business General A and are characterised by a mix of commercial uses, some tourist accommodation and residential uses. This zone classification is common to the major commercial centres within other areas of Port Stephens.

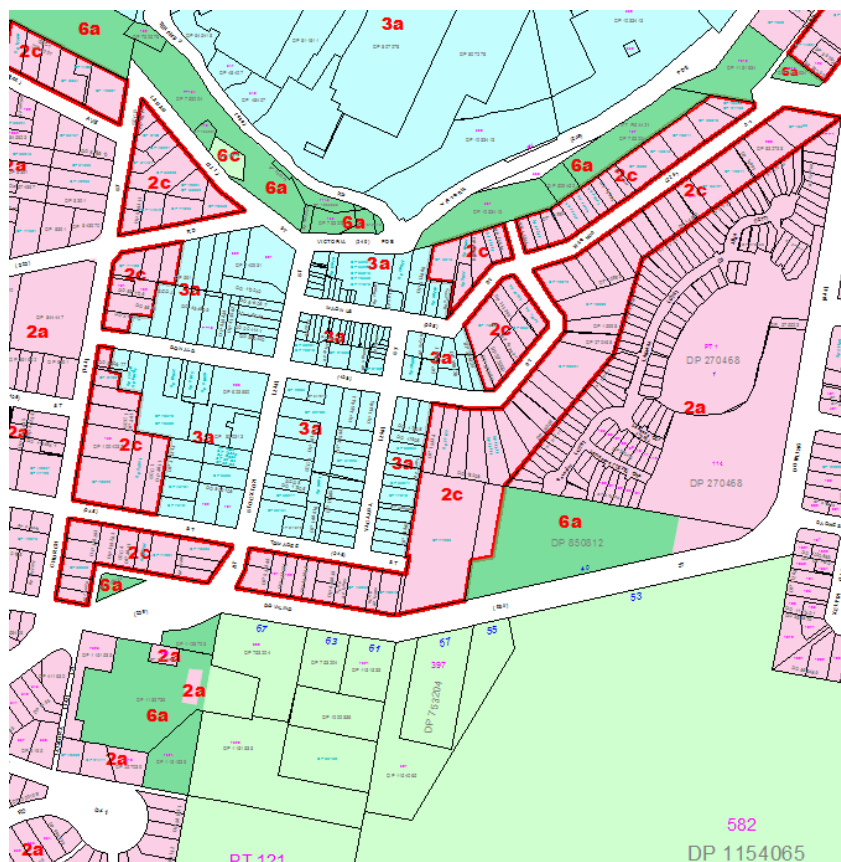


Figure 8: Port Stephens LEP 2000 Zone Map – Nelson Bay Town Centre and Foreshore



A 2(c) Residential zone is located surrounding the 3(a) Business zoned area of the Town Centre. It is generally one block wide and the 2(c) zone contains dwelling houses, dual occupancy housing and higher density residential development and tourist accommodation. This land use zone is generally found adjacent to commercial centres and contains some small scale commercial activities. Tourist facilities are permissible in this zone. A strip of 2(c) land also runs along Victoria Parade, and either side of Magnus Street close to the Town Centre.

Further from the Town Centre, beyond the 2(c) zoned land lies 2(a) Residential A zoned land. The 2(a) zone is characterised by one and two storey dwelling houses and dual occupancies. Townhouses, flats and units up to two storeys occur throughout this area. Tourist facilities, i.e. developments which are predominantly for tourist accommodation or recreation, are not a permissible use.

The Foreshore is generally zoned 6(a) General Recreation A. This zone is usually applied to both active and passive recreation areas and generally relates to land reserved for the public. Development complementary to the use of the land for open space such as restaurants, marinas and recreation facilities are permissible within the zone.

The LEP also specifies minimum site areas per dwelling, floor space ratios and maximum heights for residential development within the Nelson Bay (West) area, which includes the western edge of the Town Centre.

### Draft Port Stephens Local Environmental Plan 2012

Port Stephens Council is required to prepare a new LEP in accordance with the State Government's Standard Instrument. PSLEP 2012 will reflect Council's desired strategic direction for development within the LGA. The Standard Template prescribes a number of different zones with set objectives, permissible and prohibited uses, standard definitions, and special clauses. While finalisation of the LEP is subject to an extensive consultation process and negotiation with the State Government. This Strategy will assist in informing the PSLEP 2012 in regards to building heights and any relevant zone amendments for Nelson Bay.

### Port Stephens Development Control Plan 2007

The Port Stephens Development Control Plan (DCP) provides a more detailed set of development guidelines to complement those contained in the LEP. The DCP contains development guidelines which apply to certain types of development throughout the Port Stephens Local Government Area e.g. car parking, in the form of "General Controls". It also contains guidelines specific to certain localities, including the Nelson Bay Town Centre, and Nelson Bay West.

Within the "General Controls" there are also some locality specific controls relating to the height of commercial and mixed use development and residential development which affect Nelson Bay Town Centre and its surrounds, however these duplicate those in the LEP to a large extent, albeit with some additional detail provided.

Specific controls within Chapter C4 - Nelson Bay Town Centre Area Plan relate to the Study Area. The maintenance of views, control of building height and bulk, appearance, and streetscape, such as pedestrian mobility and access, lighting and signage, are the main foci of the Area Plan. Currently a maximum building height of 15 metres and a maximum floor space ratio of 1.8:1 apply to the Town Centre.

The area immediately west of the land zoned 3(a) in the Town Centre is subject to an area specific Chapter C5 - Nelson Bay West Area Plan. It is a transitional area from the more intense Town Centre to the predominantly detached residential housing to the west which is of environmental and scenic sensitivity.

### Nelson Bay Foreshore Plan of Management

The document forms the Plan of Management for Crown Land within the Nelson Bay Foreshore area. The Land and Property Management Authority (LPMA), formerly known as Department of Lands, and Port Stephens Council, jointly produced the Plan.



The Plan is based on two core principles:

**Core Principle 1** - Community access to, and use of, the Foreshore is a right that must be encouraged and further developed through the provision of enhanced facilities that provide for public safety, enjoyment and a range of recreational and consumer related experiences.

**Core Principle 2** – Business and tourism activities have a legitimate role to play at the Foreshore.

The Plan recognises:

- The high scenic and environmental values associated with the Foreshore and the surrounding natural landforms
- The sites potential to support the economic development of Nelson Bay and fund the provision of recreational infrastructure at the site
- The high level of cultural significance attached to the port and its relationship with the Town.
- The site's importance as a tourist destination
- The ability for the site to be developed to attract all age groups

The LPMA has divided the land subject to the Plan into (5) five management units and identified issues, outcomes and strategies for each unit. These are summarised below



**Figure 9: Map of the area subject to the Nelson Bay Foreshore Plan of Management, and its management units (MU).**

The most intensively developed area is the Nelson Bay Boat Harbour precinct (MU1). Traffic and parking congestion is identified as an issue within this area, particularly during peak season and there is an identified need to improve pedestrian and cycle connections and facilities across the area. Opportunities exist for further recreational infrastructure and tourism related facilities within this management unit.





Apex Park (MU2) was the original village green and contains a number of items of local heritage and cultural significance. The importance of enhancing its role in providing a multipurpose public open space linking the Foreshore with the Town Centre is identified in the Plan.

Victoria Parade (south) (MU3) is quite steep and therefore remains underutilised in terms of recreational activities. The western portion is maintained however the eastern portion of the embankment is heavily vegetated and is infested with weeds. The Plan identified that this site should be investigated as a suitable location for underground car parking as a solution to the removal of car parking from the Foreshore, subject to the preservation of views and pedestrian access from Magnus Street.

The Neil Carroll Park Group (MU4) is outside the scope of this Strategy, however in the context of Apex Park and future recommendations for the site, it is important to note that this area is the location of a reserve that is used for a variety of purposes including concerts and related events, picnics, general public recreation and sporting events. The reserve is the venue for large community markets and has a large stage and grassed area with the ability to cater for large events such as Australia Day citizenship ceremonies. The place is popular due to its natural amphitheatre landform and scenic water views.

The western portion of the Nelson Bay Beach Waterfront (MU5) is located within the Study Area and is a popular swimming and recreational area. The Plan identifies that the site suffers from sand loss and movement and from an ad hoc approach to landscaping and the streetscape, resulting in a patchy appearance. However work within this area has been undertaken since the writing of the Plan with the addition of a new amenities block, shared pathway, landscaping and children's play area.

## Port Stephens Tourism Plan 2010- Diagnostic Report and Action Plan

The *Port Stephens Tourism Plan 2010 - Action Plan and Diagnostic Report* was undertaken for Port Stephens Council, Port Stephens Tourism Limited and The Department of Industry and Investment. The documents provide a detailed analysis of the nature of tourism in Port Stephens and recommendations to meet future challenges.

According to the Diagnostic Report, tourism is a significant industry for Port Stephens. The LGA attracts in the order of 617,000 domestic and 27,000 international overnight visitors per year as well as 612,000 domestic day trippers. These visitors spend an estimated \$377.3 million per annum within the area with 1,574 people directly employed in the tourism sector.

The diagnostic report identifies Nelson Bay as the main tourism destination in Port Stephens and the strong seasonality of the tourism industry. It describes a number of opportunities and challenges faced by the tourism industry.

It comments that while visitors generally make their way from the waterfront to the Town Centre, there is not a lot to offer in the Town Centre, to attract expenditure, to stay longer or generate repeat visitation. It notes that some of the businesses do not present well. The diagnostic report further identifies that traffic congestion and parking are significant problems at peak times, with conflict between through traffic trying to access other areas of the Tomaree Peninsula and destination based traffic. In order to maximise the benefits from the tourism industry these challenges need to be addressed.

Overall issues identified for Nelson Bay include:

- The overall presentation of the area which lacks "vision and co-ordination"
- Parking time limits and the relationship with tourist needs
- Inadequate provision for tourist coaches
- No sense of arrival in the Town. No visual connections between the entry corridor and the waterfront, and similarly a lack of visual cues in the Town Centre
- Very poor directional and information signage
- Poor presentation of the waterfront



- Limited space for events and activities.

The Action Plan focuses on the structure of tourism and marketing in Port Stephens, and includes specific actions relating to market development, product development, and infrastructure improvements for Nelson Bay. The proposed positioning and markets is shown in Table 1, and a table of actions targeting infrastructure improvements is shown in Table 2 below. The Action Plan includes a list of agencies involved in the delivery of tourism infrastructure and services. However, the actions listed in the table are not assigned to specified lead agencies, nor does an overall implementation/monitoring process for the infrastructure development actions appear to be proposed.

**Table 1: Positioning and markets for Nelson Bay**

Positioning / Themes / Points of Difference	Existing and Potential Markets
<ul style="list-style-type: none"> <li>• Primary tourist destination in Port Stephens</li> <li>• Dolphin capital</li> <li>• Activity node and meeting place</li> <li>• Focal point for marine activities / primary gateway to the Port Shopping, dining and entertainment</li> <li>• Service Centre</li> </ul>	<ul style="list-style-type: none"> <li>• Holiday makers and leisure travellers – holiday, short breaks &amp; day trippers</li> <li>• Coach tour groups</li> <li>• Conference and meetings</li> <li>• International – groups and FIT</li> <li>• Events attendees</li> <li>• Cruising boats / boating enthusiasts</li> </ul>

**Table 2: Infrastructure Development Actions from Port Stephens Tourism Action Plan 2010**

Action	Key Tasks	Priority	Timing
<b>Improve presentation of the town</b>	<ul style="list-style-type: none"> <li>• Formulate and adopt vision and design guidelines for the town.</li> </ul>	Very High	Short term – as part of the 2030 Plan
	<b>Entry Corridor</b> <ul style="list-style-type: none"> <li>• Establish gateway entry point – create ‘sense of arrival’</li> <li>• Introduce dolphin / whale themes</li> <li>• ‘Cleanup’ / formalise entry corridor</li> <li>• Landscaping / corridor tree planting along Stockton Street and through to waterfront.</li> </ul>	High	Ongoing – as funds become available
	<b>Waterfront</b> <ul style="list-style-type: none"> <li>• Implement foreshore improvements program</li> <li>• Incorporate dolphins / whale themes</li> <li>• Provide interpretation of the Marine Park</li> </ul>	High	Funding dependent
	<b>Town Centre</b> <ul style="list-style-type: none"> <li>• Continue to beautify Town Centre</li> <li>• Improve ‘appearance’ of Town Centre when viewed from Church-Donald Street and Stockton-Dowling Street intersection</li> <li>• Encourage property / business owners to improve presentation of their building/ business</li> <li>• Encourage footpath trading</li> <li>• Encourage footpath dining – ensure quality tables and chairs</li> </ul>	High	As funds become available – property owners / business community will need to improve their property / business to capitalise on the improvements undertaken by Council.
<b>Improve traffic flow and address parking issues</b>	<ul style="list-style-type: none"> <li>• Continue to lobby for the development of a town by-pass</li> <li>• Develop traffic management plan</li> <li>• Explore tour linked parking vouchers</li> <li>• Resolve coach parking issues</li> </ul>	Very High	Ongoing



<b>Improve signage</b>	<ul style="list-style-type: none"> <li>• Improve directional signage to VIC</li> <li>• Provide signage to marina</li> <li>• Update signage – where appropriate replace fingerboard signage with international symbols</li> <li>• Provide and signpost a designated caravan / long rig parking space close to the shopping centre and VIC</li> </ul>	<p>Very High High Medium</p> <p>High</p>	<p>Immediate When funds available Ongoing</p> <p>Short term if possible</p>
<b>Cater for events</b>	<ul style="list-style-type: none"> <li>• Investigate options for Town Centre events and adopt policy.</li> <li>• Provide support infrastructure and services (e.g. power outlets)</li> <li>• Formulate event access and parking plans</li> </ul>	<p>Medium - High</p>	<p>To resolve as soon as possible</p>



## 7.0 Nelson Bay

### Background

#### Tourism

Tourism is a very important activity for Port Stephens, according to Port Stephens Tourism. Around 1.2 million tourists (i.e. visitors staying one night or more) and just under 1 million day trippers visit Port Stephens each year. Most tourists visit the Tomaree Peninsula and Nelson Bay is the largest tourist destination.

In common with many tourist areas, Port Stephens is subject to severe competition for the domestic tourist market, not only from other domestic tourist destinations, but also low cost overseas destinations. People are travelling less and for shorter periods, and overseas travel is also proving increasingly attractive. International tourism is affected by a variety of factors including the value of the Australian dollar and political events overseas.

Nelson Bay performs a critical role within the Port Stephens tourism industry. It is the major destination for day trippers, and the embarkation point for dolphin, whale watching and general sightseeing cruises.

Nelson Bay also contains the largest concentration of restaurants and tourist related outlets in Port Stephens. There is a very wide variety of accommodation within a 5 minute drive of the Town Centre, ranging from caravan parks to four (4) star hotels and apartments, with an estimated capacity of just under 9,000 beds. Almost 50% of the dwelling stock in Nelson Bay appears to be available for short term (holiday) use.

Port Stephens is part of the North Coast tourism region. According to the Port Stephens Economic Strategy – "the North Coast Tourism Strategy has identified a decline in the traditional destination specific visitor, which is due to competition from other coastal hot spots and stronger marketing by other coastal regions and some of the broader trends identified for national markets (time poor and competing pressures on expenditure). The experiential market (which includes the self drive traveller and the high yield niche markets such as backpacker, nature based, ecotourism, food and wine and cultural heritage travellers) is growing, and this market is more demanding in terms of the type and quality of accommodation, services and experiences".

It is important that Nelson Bay responds to these trends in order to capitalise on these expanding markets and because of its role as a "hub" for tourism in Port Stephens generally.

The Port Stephens Economic Development Strategy identified a number of key issues affecting the tourism industry which need to be addressed, many of which concern Nelson Bay and the nature of its Town Centre:

- the seasonality of the market
- the quality of the offering that is currently available to the high value, high yield market, including the short stay markets
- a need to improve the range and quality of cafes and restaurants and other services in the tourism centres, and to better capitalise on the seafood and horticulture of the area through a food trail
- a need to extend the events program
- problems in securing the business visitor market due to inadequate conference facilities; and community ambivalence to the tourism sector and its positive impacts.

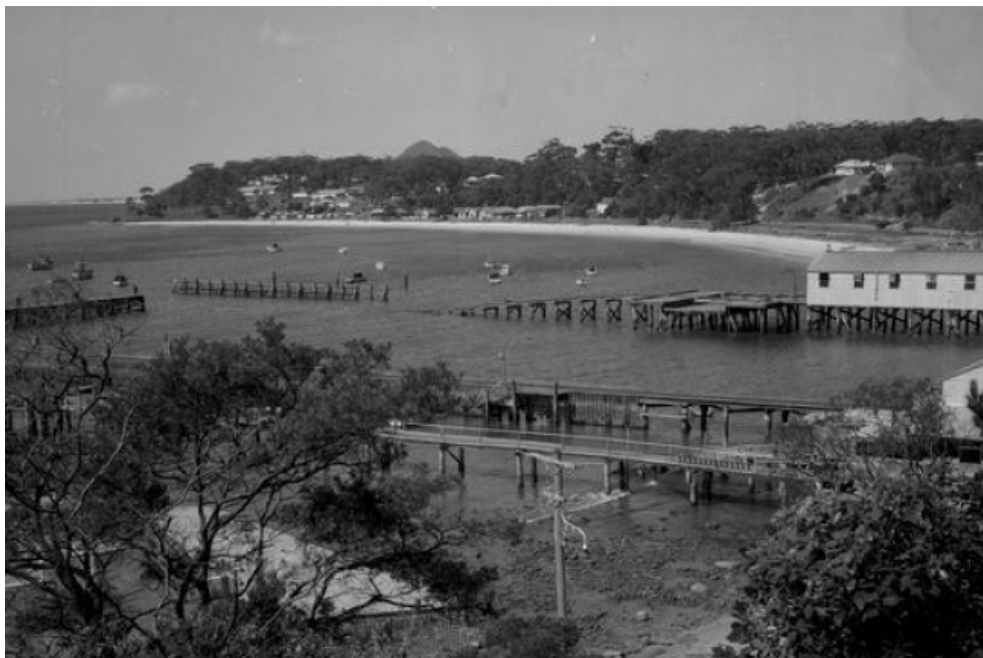
## Social context

### Culture & Heritage

Many Aboriginal people living in the Port Stephens area are members of the Worimi tribe. They were the first people to be attracted by the mild climate and the area's rich biological resources which provided abundant food supply throughout the district and waters of Port Stephens. Many landforms and places in the area are of special significance to the Worimi people.

The first survey of the Port was conducted in 1795 with the earliest grants in the area established in 1840 and the earliest land surveys completed in 1874. Much of the area now known as Apex Park was the original village green or "common" with the park area extending around the steps to the original beach and back to what is now known as Government Road. The common area included the original town well, tennis courts, a rotunda and picnic area. The land in and around the current Apex Park including the Nelson Bay waterfront has been used or occupied for a variety of purposes including the former post office and telegraph station, salt water baths, Roger Light's boathouse and the passenger wharf.

In the Second World War, Nelson Bay was home to many thousands of military personnel. During this time the road from Newcastle was dramatically improved. Many items of military infrastructure, such as the hospital, remain.



**Figure 10: Nelson Bay Foreshore looking east from Laman Street c.1960**

Nelson Bay has also undergone significant 'built' changes during the post war period, and particularly over the last two decades, including the development of the boat harbour and marina and associated tourism infrastructure. The area has also seen an increase in house and unit development to cater for the Town's permanent population as well as visitors to the area.

The Study Area includes the Apex Park Group (including cenotaph, the original town well, and the remains of the memorial steps) which is identified in the Port Stephens LEP 2000 as heritage items of local significance.





## Population

Overall the population of Nelson Bay is diverse. The Bay's desirability as a place to live, visit, holiday and a sought after retirement destination continue. Nelson Bay has a greater aged population profile than Port Stephens LGA overall with 23.8% of the population being over 65 years of age, compared with 15.8% respectively.

Nelson Bay has a smaller proportion of households (12.1%) earning a high income (over \$1700 per week) than Port Stephens (15.1%) but a similar proportion (around 24%) earning a low income (less than \$500 per week).

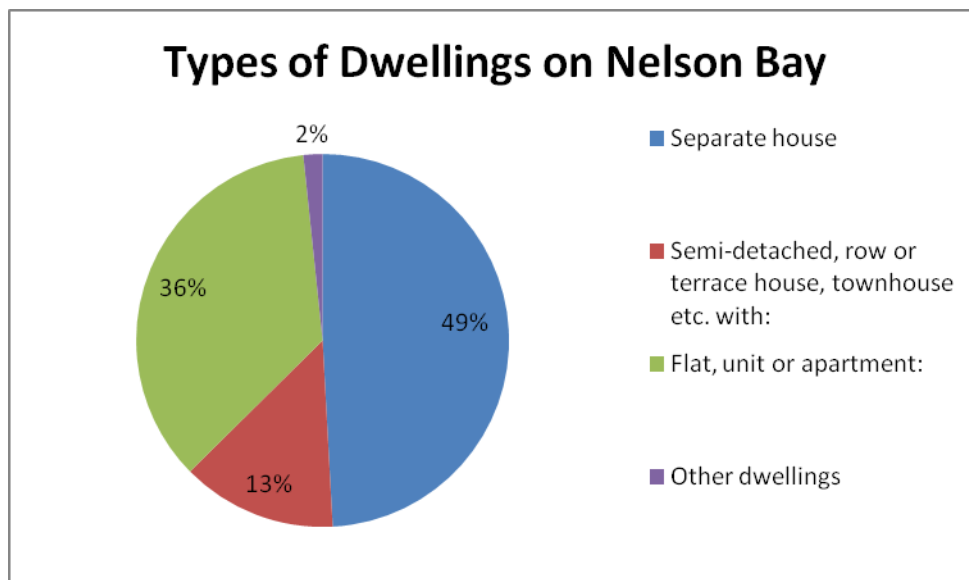
The largest occupational groupings amongst residents are technicians and trades workers, professionals and managers, together comprising 44.3% of employed residents.

Nelson Bay residents are heavily dependent on cars to travel to work. Only 2.4% commute by public transport and 6.6% walk to work. However on average, households own less cars in Nelson Bay than in Port Stephens overall, probably because of the high proportion of older residents.

A lower proportion of people live in rented accommodation in Nelson Bay (32.6%) relative to in Port Stephens (26.3%). A larger proportion of residents own their dwelling, and a smaller proportion are purchasing their dwelling than in Port Stephens overall.

As might be expected with an aged population, a greater proportion of households consist of couples without children or lone persons, than in Port Stephens overall. 28.7% of households consist of one person (22.8% for Port Stephens). The proportion of lone person households is also greater at Nelson Bay.

There are 3619 dwellings in Nelson Bay and the proportion of each dwelling type is shown in Figure 11. A much higher proportion of households live in flats and apartments than in Port Stephens as a whole (16.8% relative to 4.7% respectively)

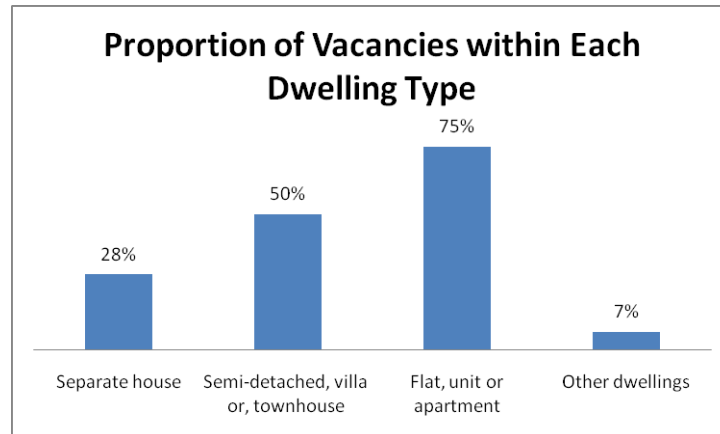


Source: ABS 2006 census, statistical analysis by Strategy Hunter consultants

**Figure 11: Types of Dwellings**

28% of detached houses, 50% of and 75% of apartments and units were vacant at the time of the Census, as shown in Figure 12 below. These statistics clearly show the extent to which the housing stock in Nelson Bay is used for temporary (holiday) accommodation, and the strong high and low of the tourist seasons (the Census month, August, is in the low season).

Figure 12: Dwelling vacancies August 2006



Source: ABS 2006 census, statistical analysis by Strategy Hunter consultants

## Future Dwelling Numbers

The LHRS projects an additional 1500 jobs and 1200 dwellings in the Nelson Bay “specialised centre” by 2031. The LHRS does not define the precise boundaries within which these additional dwellings and jobs will be located, it is understood it refers to the wider Tomaree Tourism and Lifestyle Growth Area.

More detailed analysis has been undertaken for the suburb of Nelson Bay during the development of the Port Stephens Planning Strategy. It identifies that 600 dwellings of infill residential/mixed use commercial development and 169 dwellings on new residential zoned land (green field) are likely to be developed in the suburb over the next 25 years. The majority of these new dwellings are likely to be in the Nelson Bay Town Centre.

According to the Port Stephens Planning Strategy a key issue for Nelson Bay is the need to achieve an appropriate balance between permanent residential and tourist accommodation. The future urban potential will come from intensification of development, primarily within existing zoned areas as medium density and multi-unit development.

The success of residential infill developments within the Town Centre will depend on improvements to the amenity of the Town Centre's streetscape and developing the image of the Town Centre as an attractive place to live.

## Economy

Nelson Bay is categorised in the Port Stephens Planning Strategy as a “Town Centre”. This means that it contains shopping and business for the surrounding district, including health and professional services mixed with medium density housing. Nelson Bay has a dual role in servicing both the local resident population and the strategically important tourism industry.

The largest employment sectors in Nelson Bay are Accommodation and Food Services (16.5% of jobs), Retail (12.8%), Health Care and Social Assistance (10.4%), Public Administration and safety (10.4%), Construction (9.7%). The absence of financial and professional services from the list of top employment sectors indicates the heavy reliance of Nelson Bay Town Centre on the hospitality and retail sectors.

The Lower Hunter Regional Strategy (LHRS) identifies Nelson Bay as a “specialised centre” because of its regionally significant tourism role. However, the LHRS references to “Nelson Bay” relate to the wider Tomaree Tourism and Lifestyle Growth Area which includes such centres as Soldiers Point, Salamander Bay, Nelson Bay, Shoal Bay, Fingal Bay and Anna Bay. As noted previously, the LHRS projects an additional 1,500 jobs in this wider area by 2031.



Retailing in the Nelson Bay Town Centre experiences competition from the nearby Salamander Centre. Salamander attracts much of the Tomaree Peninsula's weekly shopping. Salamander largely functions as a standalone shopping centre, but has broader functions including the location for the Council run Tomaree Library and Community Centre.

In response to the growth of the Salamander Centre, Nelson Bay has increased its emphasis on leisure shopping, cafes, restaurants and tourist services relative to weekly shopping needs. Notwithstanding this emphasis, Nelson Bay has a range of shops catering to weekly shopping needs.

According to the Port Stephens Economic Development Strategy (2007), the LGA's services and tourism economy is based around Nelson Bay and Salamander Bay where it is servicing both the local resident population and the strategically important tourism industry.

Most tourists are domestic, with only a small percentage of international origin. The growth in tourist numbers has averaged 2-4% growth each year over the past 10 years. The tourism industry is strongly seasonal, with most tourists visiting in warmer months, and particularly the Christmas, Easter and the school holidays.

Nelson Bay and Salamander Bay have a significant concentration of tourist facilities - hotels, motels, serviced apartments, holiday parks, marinas and cafes and restaurants. There is significant part-time and seasonal employment in this segment, which represented an estimated 4400 jobs in 2007.

Future employment growth is likely to be generated by population growth and by a strengthening of the tourism sector. The planning and linkage of the town centres in the tourist areas, especially Nelson Bay, is identified in the Economic Development Strategy as one of the key projects in the LGA that will have the largest potential impacts on long term economic growth.

Specific actions recommended by the Economic Development Strategy for boosting Port Stephens' tourism industries in the Nelson Bay area include broadening markets (including events), and improving tourism areas (such as developing the Nelson Bay's town structure to improve the Foreshore areas and their integration with the Town Centre) and Council working with the tourism sector to plan the longer term development of tourism infrastructure, including accommodation, restaurants and other facilities. Capitalising on Newcastle airport is also an important action.

Establishing a wider range of cafes, bars and restaurants within the Town Centre will help increase attractions for tourists as well as locals. A focus on food and entertainment would need to be supported by accommodation. The success of these developments will require making the Town Centre more attractive which will improve the performance of existing and potential businesses.

## Community Facilities

Nelson Bay is serviced by specific purpose and multipurpose community facilities. They include the Ngioka Centre which is a seed propagation nursery run specifically by people with disabilities. Nearby are the Nelson Bay Arts and Crafts Centre and the Nelson Bay Senior Citizens Centre. These facilities are located within approximately 3 km to the Nelson Bay Town Centre. The former school adjacent to the Study Area on the corner of Government Road and Church Street is now occupied by the Tomaree Community College which is an Adult Education Centre. A community garden is located within the grounds of the community college.

Currently there is no accommodation for community facilities/services within the Town Centre. Community Services are primarily provided from the Tomaree Library and Community Centre located at Salamander Bay approximately 8 kms away.

## Emergency services

Emergency services organisations are located within the locality - Police Station adjacent to the study area to the west on the Government Road approach, the Fire Brigade located on Yacaaba Street within the study area, and the Ambulance now located at Salamander Bay.



## Recreation facilities

The Study Area has a number of recreation areas with more available elsewhere on the Peninsula. The Marina provides tourist facilities such as amenities block and access to organised recreational and commercial operations such as fishing, boating and whale watching. The Foreshore and beach area is adjacent to the Marina.

Apex Park provides a central open space area for the Town Centre and Foreshore. Victoria Park is located along the southern side of Victoria Avenue and is generally a steep sloping green space providing access towards the east. Both parks are relatively underutilised, but hold significant opportunity for revitalisation and community benefit.

The Bowling Club, Tennis Courts and Golf Club are located just to the south of the Town Centre. The Salamander Recreation Area to the south west on Nelson Bay Road contains a range of sporting fields as well as an aquatic centre.



## Land Ownership and Development Potential

Land ownership and subdivision patterns can be a significant constraint to development. Large land parcels are easier to develop and provide greater flexibility to achieve good design and functionality. An analysis of ownership patterns in the Study Area has identified a number of relatively large potential development sites. Some are under single ownership, and a number of others have relatively few owners.

These parcels offer reasonable potential for site assembly and larger scale development projects and could form the basis of comprehensive developments. In addition to their size, the benefits of all of the sites identified have a central location, good access to roads and are either underdeveloped or could benefit from redevelopment.



Figure 13: Significant land parcels within the Study Area





## 8.0 Analysis of Existing Conditions

### Natural Environment

The area is environmentally significant because of its landform, rich biodiversity and the outstanding marine environment and setting of the Port Stephens water body. The high environmental value of the area is reflected by the reservation of large areas of land and water in the State reserve and National Park system.

The Town Centre is adjacent to the Port Stephens water body. The environmental significance of the water body is formally recognised by the Port Stephens-Great Lakes Marine Park, which includes the entire Port Stephens water body and offshore areas 3 kilometres from the coast.

The surrounding hills frame the town and provide a high level of amenity, with the surrounding bushland running down to the sea in rugged forms, rare in Australia. The amenity of the locality has contributed to the popularity of the area and investment in the Town. These ecologically important lands are protected by the Port Stephens Regional Crown Reserve and Tomaree National Park.

Sandy coastal vegetation is characteristic of the woodland naturally found within and around the Town Centre, with many native species such as Angophoras, Eucalypts and Melaleucas.

The environmental qualities of the area are a major attraction for visitors and residents, and a judicious balance is required between development and environmental protection.

### Transport and Accessibility

The following section is informed by the Nelson Bay Traffic and Car Parking Study (2012) conducted by GHD, community consultation work and additional analysis work conducted by Council.

#### Town Centre Street Network and Directions

Figure 14 shows the existing street network within Nelson Bay Town Centre.

The Town Centre is accessed by Nelson Bay Road from the southwest, Government Road from the west and Dowling Street, Magnus Street and Victoria Parade from the east. The Foreshore is accessed by Church Street from the south, Government Road from the west and Victoria Parade/Shoal Bay Road from the east.

While Dowling Street provides a direct alternative route to more easterly destinations, considerable through traffic continues to travel via Church Street, Government Road and Victoria Parade, creating congestion around the Town Centre and Foreshore.

Nelson Bay Road, Church Street, Government Road and Victoria Parade are designated main roads and are the responsibility of Road and Maritime Services.

Both the Foreshore route (Government Road, Victoria Parade and Shoal Bay Road) and the Dowling Street route (the alternate direct route to Little Beach, Shoal Bay and Fingal Bay), are the responsibility of Port Stephens Council, as are all other roads.

The street network in the Study Area is mainly a regular grid pattern with some streets such as Stockton Street (south) and Victoria Parade following the natural contours of the land. The grid is truncated to the north, south and east of the Town Centre by water, the recreational facilities of the Bowling Club, and natural features including slope respectively.

Stockton Street serves as the "main street" of the Town Centre. Stockton Street provides an important access to the Town Centre from Dowling Street, while Tomaree and Donald Streets provide access to the Town Centre from Church Street on the western edge of the Town Centre.

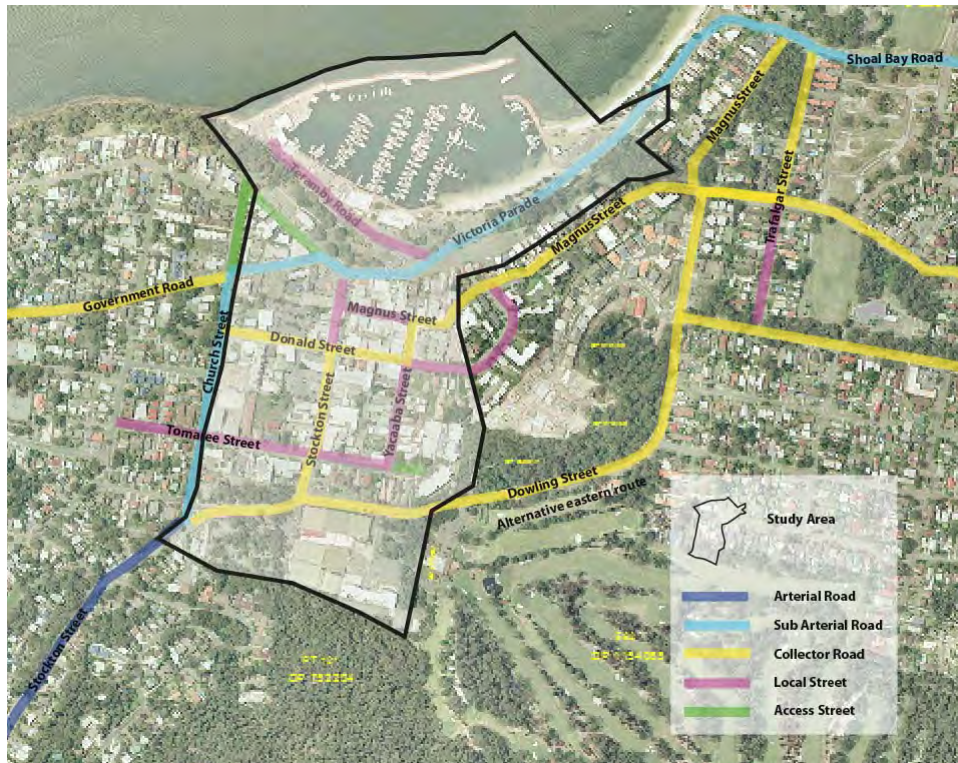


Figure 14: Existing street network within Nelson Bay Town Centre.

### Stockton Street

Stockton Street is the central spine of the Town Centre road network and serves as the unifying "main street". The street has two distinct characters:

- The section south of Donald Street has one traffic lane in each direction with footpaths provided along the majority of the street on both sides. A mix of commercial developments front this section of the road. On - street car parking is provided along this section of the street. This Section of Stockton Street is wider than is required by the function it performs.
- Stockton Street is one way southbound between Donald Street and Victoria Parade. This section has a 10 km/h speed limit and is a high pedestrian activity area and incorporates wide footpaths. On - street car parking is also provided along this section of the street with smaller shop fronts of various uses.

Stockton Street forms part of a route through the Town Centre from the south west to the east via Magnus Street as illustrated in Figure 14. The disadvantage of this through route is that it unnecessarily increases traffic within the Town Centre.

The Nelson Bay Road/Stockton Street approach to the Town Centre is near capacity during the peak hour period for peak event days.

### Stockton and Donald Street Intersection

The intersection of Stockton and Donald Streets is the most heavily trafficked intersection in Nelson Bay. High pedestrian activity flows at this intersection combined with heavy traffic flows adversely affect the operation of the Donald Street and Stockton Street intersection, and result in delays to traffic during peak periods when major tourist events occur, such as "Taste of the Bay".

It is important to reduce and better manage traffic flows in this location in order for this central location to be more pedestrian friendly.

## Government Road and Victoria Parade



**Figure 15: Government Road, Victoria Parade and Stockton Street intersections**

Government Road becomes Victoria Parade as the road passes the northern edge of the Town Centre adjacent to Apex Park. This road provides an east west through route and access to the Nelson Bay Foreshore; therefore it is very busy on weekends, holidays and during major events. Victoria Parade carries one traffic lane in each direction, and its main road classification reflects its current use as a main route for vehicles travelling along the peninsula to the east. Government Road and Victoria Parade's role as a through route conflicts with its role as an important access point to the waterfront and its location adjacent to a major parkland, Foreshore area and Town Centre.

A 40km/h high pedestrian activity area exists along this roadway starting on Government Road approximately 70m east of its intersection with Laman Street and to the western side of the Victoria Parade roundabout intersection with Teramby Road.

On - street car parking is located on both sides of Victoria Parade, but is absent in some locations close to the Town Centre.

Both safety for pedestrians and traffic volume has been a concern for a number of years and as a result traffic signals have been installed at the northern end of Stockton Street to facilitate safe pedestrian access to Apex Park, and a low wall has been constructed in the median of the road east of the crossing to deter pedestrians from crossing the road other than at the traffic signals.

Because the Stockton Street to Apex Park axis is the most important route for pedestrians between the Town Centre and the Foreshore it is critical that the pedestrian crossing and general pedestrian environment is as friendly and seamless as possible. There are a number of ways to improve Victoria Parade in this respect, which could include the following:

### Short to mid term

- Extend the 40km/h zone on Government Road west to the Church Street intersection to reinforce this gateway location, and in conjunction with traffic management measures, streetscape improvements and gateway treatments to encourage motorists to slow down before the decline of Government Road down towards Apex Park and continue to 40km/h along Victoria Parade to its intersection with Shoal Bay Road.
- Encourage more through traffic to use the alternate direct route along Dowling Street thus bypassing the Foreshore. This route currently acts as an informal bypass, has a low incident rate, spare capacity and minimal access. This option will require the Trafalgar Street and Shoal Bay Road intersection to be upgraded. It is likely a roundabout would be necessary and would require community consultation, as required under the *Roads Act 1993*. This Town Centre "bypass" alternative route is supported within the GHD Traffic and Car Parking Study (2012).
- Introduce a "scramble crossing" phase on the traffic signals at the intersection of Stockton Street and Victoria Parade. Such a solution would widen the pedestrian crossing and assist in promoting the pedestrian dominant role of this location.
- Provide avenue plantings at regular short intervals along Government Road and Victoria Parade to highlight the high level of pedestrian activity of the Town Centre/Apex Park interface to motorists and to assist in encouraging lower vehicle speeds.



### Long term

- A long term option could include the redesign of the areas around the Teramby Road (east) and Victoria Parade intersection, including the Victoria Parade roundabout. Such works would be reliant on the future design of Apex Park, specifically to improve connectivity, the relationship to the Foreshore redevelopment and future functions of Apex Park.

Another option would also be to reduce the speed limit within this area to 10km/h, however this option would seriously slow down traffic in this area to an unacceptable level especially during peak periods. The street treatments suggested above should significantly assist with traffic calming.

\* The section of "Government Road" between its intersection with Laman Street and the Stockton Street intersection is formally part of Laman Street, however, the term Government Road has been used throughout this report because of the general community understanding of this section of road being known as "Government Road".

### Magnus Street



**Figure 16: Magnus Street**

Magnus Street has two distinct characters. The eastern section of Magnus Street provides an entry to the Town Centre from the east and has one traffic lane in each direction with on - street parallel car parking. The western section of Magnus Street is a low speed pedestrian oriented shared street which contains part of the most intensive retail area in the Town Centre. The western end of Magnus Street has a 10km/h speed limit and a widened footpath, which complements its retail characteristics and feel. This section of Magnus Street is one-way in the westbound direction and provides parallel time restricted kerbside parking on both sides of the road.

The eastern section of Magnus Street links the Town Centre with localities to the east including Little Beach, Shoal Bay and Fingal Bay. It is part of the bus route for services travelling to or from Little Beach, Shoal Bay and Fingal Bay. Buses turn south at the Yaccaba Street intersection and do not enter the western section of Magnus Street.

### Donald Street

Donald Street is an important Town Centre entry from Church Street, and supports the two main Town Centre car parks (the open Council car park at Donald Street west, the Donald Street east multideck car park and car parking within the "Coles" site) and is part of the bus route through the Town Centre. Donald Street provides access to a number of larger format stores and commercial businesses, the Town Centre main bus stop/bus interchange and taxi rank. The road has one traffic lane in each direction and provides time restricted parallel kerbside parking between Church and Yacaaba Streets. Between Stockton Street and Church Street the road section has numerous access points to small and large scale off - street car parking areas.



Figure 17: Donald Street

### Yacaaba Street

Yacaaba Street is a north-south route running parallel with Stockton Street. Activity is concentrated at its northern end where it intersects with Donald and Magnus Streets and provides access to the multideck car park via Donald Street east. At its southern end it terminates at Tomaree Street and at its northern end it terminates at Magnus Street. The street frontages contain a range of commercial, professional services and low to medium density residential uses. Yacaaba Street has one travel lane in each direction and provides time restricted parallel kerbside parking.

Extension of Yacaaba Street from Magnus Street to Victoria Parade has been proposed to improve access to the Foreshore from the Town Centre and the Donald Street East car park. The GHD Traffic and Car Parking Study (2012) did not identify this extension to be critical to improve the operation of the road network in Nelson Bay, and recommended that it should be evaluated after the implementation of a number of other specified traffic network improvement actions have been carried out.

The GHD Traffic and Car Parking Study (2012) recommends that the extension of Yacaaba Street should be carried out in the context of a holistic approach in addressing:



Figure 18: Yacaaba Street

1. The future needs of the Victoria Parade/Teramby Road intersection within the context of the Foreshore development.
2. The Victoria Parade road realignment that could possibly result from and complement works listed under point 1.
3. The design aspirations of Apex Park and associated cycle links and pathways.

### Signage - Town Centre through route options

There is limited directional signage to divert through traffic away from the Town Centre. This is in part due to the alternative direct route to easterly destinations that utilises Dowling Street requires upgrading of the Trafalgar Street intersection to accommodate additional traffic volume. The existing signage (shown in Figure 18) located on the Stockton Street, Church Street gateway attempts to disperse traffic in both directions – along Dowling Street and down towards Victoria Parade. As a result considerable through traffic still travels along Victoria Parade rather than promoting the alternative direct route.

Following the upgrading of the Trafalgar Street and Shoal Bay Road intersection this signage should be upgraded to clearly inform visitors that they have two options:



1. A route to the Foreshore and Town Centre through an area that is geared towards pedestrians and lower traffic speeds, or;
2. A direct route along Dowling Street to easterly destinations such as Little Beach, Shoal Bay, Fingal Bay and the Foreshore as well as the entire Foreshore of Nelson Bay.



Figure 19: Directional signage provided on the Stockton Street, Church Street gateway.

#### Considerations

- A long term bypass option commonly referred to as the "Fingal Bay Bypass" has been adopted by Council to assist in improving access to the eastern portion of the Tomaree Peninsula. The Fingal Bay Bypass (subject to funding) is illustrated in Figure 19. The proposed Town Centre alternative route is not proposed to replace this long term proposal.



Figure 20: Town Centre alternative route and the Fingal Bay Bypass.

- The road network structure provides a number of alternative routes that vehicles can use to travel eastwards to destinations along the Peninsula, such as Little Beach, Fingal Bay and Shoal



Bay. Many of these routes unnecessarily pass through the Town Centre and as a result increase the levels of traffic within the Town Centre and reduce its amenity.

- Community feedback has strongly advocated improvements to traffic circulation during peak holiday and event periods.
- Victoria Parade presents challenges to pedestrian connectivity between the Town Centre, Apex Park, and the Foreshore due to high traffic volumes and few options for pedestrian crossing points.
- Directional signage to important destination points (car parks, shopping centre, Foreshore) can be improved throughout the Study Area to assist with reducing unnecessary vehicle traffic through the Town Centre and to more efficiently direct vehicles to their destination.
- While Nelson Bay Road is not in the Study Area, it is a major route to the Nelson Bay Town Centre. GHD identified within their Traffic and Car Parking Study (2012) that Nelson Bay Road is operating over capacity at peak times during major events and requires demand management strategies (such as external park and ride sites) on event days, capacity enhancements (short sections of widening, duplication of Nelson Bay Road or Fingal Bay Bypass) or a combination of the these and other measures.

## Parking

Figure 20 shows the major car parking areas in Nelson Bay and the level of parking utilisation as recorded by the GHD Traffic and Car Parking Study (2012).



Figure 21: Off - street car parking locations and capacity within the Town Centre.

On-street parking is provided on all streets in the Study Area, with the exceptions of limited sections of some streets.

The main off-street car parking areas are located in the Council owned car parks at Donald Street east and Donald Street west and within and adjacent to the "Coles" development on the south west corner of Stockton and Donald streets. A number of off - street car parking areas are provided on the Foreshore in the vicinity of the Marina, Fishermen's Co-op and eastern Groyne.

## Considerations

- The Donald Street east car park is a multi deck facility that requires substantial asset preservation work to counter its structural deterioration. The adjacent site remains underdeveloped and is





used as an informal open space car park, also owned by Council. This site has the advantage of being very close to the intensive retail area of Magnus Street and the Foreshore.

- There is strong community feedback to suggest that car parking is difficult to find within the Town Centre and Foreshore, particularly during peak periods. However, GHD Traffic and Car Parking Study (2012) indicates that some car parking capacity is still underutilised as illustrated in Figure 20.
- The Foreshore Plan of Management and community consultation work conducted by the LPMA in conjunction with Port Stephens Council expresses the aim of removing car parking from this area and replacing it with an alternative which could include additional car parking nearby or a park and ride scheme. Therefore future development within the Foreshore area should address how it might facilitate the removal of car parking from the Foreshore and the provision of additional car parking capacity within the Town Centre, or an alternative solution.
- The GHD Traffic and Car Parking Study (2012) suggests;
  - Parking is well utilised, however there is spare capacity at most times. The Donald Street west car park and Stockton Street are the most utilised parking destinations in the Town Centre. Donald Street east was recorded to have spare capacity at all times.
  - There is still available capacity during weekend special events
  - A parking overstay rate of 28% beyond current time restrictions was recorded during weekend events suggesting further parking enforcement could be undertaken to improve the availability of car parking.
- Car parking utilisation was at its highest towards the western side of the Town Centre, as well as Stockton Street and Donald Streets.

## Public Transport

The main interchange point for bus routes in Nelson Bay is on Donald Street near the Stockton Street intersection. Services are provided to Fingal Bay, Shoal Bay, Little Beach, Salamander Bay, Soldiers Point, Raymond Terrace and Newcastle. Most services use a common route through the Town Centre. There is a 30 minute service frequency during peak times along Government Road/ Donald Street/ Magnus Street. Hourly services operate along Stockton Street/Nelson Bay Road during peak times. The spatial extent of the Town Centre is such that it can be comfortably serviced by a limited number of bus stops within a walkable catchment. Most of the Town Centre is within walking distance of the main bus stop on Donald Street.



Figure 22: Bus route through Nelson Bay Town Centre and sub map illustrating the wider bus network for the Tomaree Peninsula.

## Considerations

- The main bus stop/ bus interchange is in a good location given its proximity to shops and services.
- The bus interchange infrastructure, including the shelter, seating, lighting and signage requires upgrading.



## Pedestrian and Cycle Network

A good network of pedestrian pathways exists throughout the Town Centre with the exception being between the north side of Magnus Street and the Foreshore which has only two connections.

Pedestrian movement from the Town Centre to the Foreshore across Victoria Parade is restricted to a single signalised crossing at the northern end of Stockton Street and an overhead pedestrian bridge provided via a commercial complex leading from Magnus Street through to Apex Park.

Key contributors to this restricted movement include:

- Yacaaba Street does not extend north from Magnus Street to the Foreshore (however if it did the roundabout would present an unfriendly pedestrian environment)
- The traffic conditions on Victoria Parade
- A lack of signage to promote the overhead pedestrian bridge.



Figure 23: Restricted pedestrian movement around Victoria Parade in the context of the Town Centre and Foreshore.



## Cycle Network

Access to the Town Centre by bicycle is well provided from the east and west, along the Foreshore. Access from the southwest along Nelson Bay Road is difficult by bicycle due to the lack of a bicycle lane or shared footpath. Within the Town Centre cyclists use the road system, with no designated cycle lanes. The Tomaree Peninsula lends itself to bicycle travel because of its relatively flat topography and lifestyle character, and has the potential to promote cycling as a traffic alternative for tourists and residents.



Figure 24: Current cycle network



### Considerations

- Gaps remain in the cycle network, and signposting of the network could be improved.
- Pedestrian and cyclist access between the Foreshore and the Town Centre can be improved.
- Councils Draft Footpath and Cycling Strategy identifies gaps in the network however, it is in draft form. The draft document requires further development to include a comprehensive list of works required such as street widening and modifications. It is needed to inform the Town Centre Public Domain Plan and should include cost estimates.
- More cyclist facilities should be provided, such as storage facilities, showers and cycle racks.

### Recommendations:

#### Road network improvements

1. Promote Dowling Street/Fingal Street/Trafalgar Street as the alternative route for traffic travelling to Shoal Bay and Fingal Bay by firstly undertaking a design, costing and consultation process for the upgrade of the Trafalgar Street and Shoal Bay intersection.
2. Ensure the proposed Public Domain Plan for the Nelson Bay Town Centre includes street tree planting along Government Road east of the Church Street intersection and down Victoria Parade to assist in reducing traffic speeds by "psychologically" narrowing the street.
3. Move the location of the 40km/h sign posting on Government Road west to the Church Street intersection to reinforce this gateway location and to encourage motorists slow down before the decline of Government Road east towards Apex Park.
4. Extend the 40km/h speed limit along the length of Victoria Parade to its intersection with Shoal Bay Road.
5. Undertake further analysis to understand critical design considerations, benefits and cost effectiveness of extending Yacaaba Street as a link between the Magnus Street and the Teramby Road/Government Road/Victoria Parade roundabout. This should be conducted in conjunction with detailed planning of the Foreshore.

#### Public Transport Improvements

6. Upgrade the main bus stop/public transport interchange on Donald Street.
7. Should the Yacaaba Street extension be implemented and include the capacity for a bus route, a bus stop should be provided along Victoria Parade.

#### Active Transport

8. Improve wayfinding and identification signage for pedestrians – i.e. pedestrian signage that includes directions and walking time to popular destinations in order to encourage walking through the Town Centre to the Foreshore.
9. Promote access between Donald Street east car park and the Foreshore area, via Magnus Street, using gateway treatments and other visual improvements.
10. Provide bicycle end of journey facilities, such as cycle racks in key Town Centre and Foreshore areas.
11. Complete missing footpath and cycle links in the Town Centre and Foreshore area and promote this comprehensive network through effective signage. This is to be done by updating the Draft Footpath and Cycle Strategy to reflect the recommendations of this Strategy and use it to inform the proposed Town Centre Public Domain Plan.



### Traffic Management & Road Safety Improvements

12. Improve wayfinding and identification signage for pedestrians, cyclists and motorists.
13. Introduce gateway treatments to Nelson Bay Town Centre. This should include substantial landscaping at the entries to reinforce a change in traffic conditions and highlight the Town Centre approach in order to slow down traffic and improve driver behaviour. The gateways should also serve as focal points within the pedestrian network.
14. Implement traffic demand management strategies for event days.
15. Reduce the sign posted speed limits to 40km/h in the Town Centre – particularly in Stockton and Donald Streets to reflect Town Centre activity levels, to support a safer pedestrian environment and to discourage through traffic. These sign posted limits should be reinforced by the use of traffic management measures and streetscape enhancement.
16. Develop and implement a Town Centre wayfinding parking signage strategy to direct traffic to the off-street car parks in Donald Street and to avoid unnecessary "circling" within the Town Centre in a search for car parking spaces.

### Car parking

17. When detailed plans are finalised for the Foreshore development and the level of car parking required by this site is better understood, review the relevant alternatives for consolidating car parking and upgrading facilities within the Town Centre. Alternatives may include:
  - Consolidating car parking within a multi storey car park within the Donald Street West car park site.
  - Underground options within the vicinity of the Foreshore.
  - Upgrading/ redeveloping the Donald Street east car park.
18. Develop a demand management strategy for car parking for major events and peak periods.
19. Improve the policing of car parking time restrictions during major events and peak times in order to improve the availability of car parking.
20. Consider the extension of parking charges to areas other than the Foreshore during peak times and major events as part of a wider demand management strategy.



## Urban Design Analysis

### Character Areas

A detailed analysis of Town Centre character was undertaken as part of the development of the Strategy. A number of elements contribute to the character of an area, including building height, the nature of shopfronts and the types of commercial activity underway, the intensity of development, building form, building setbacks and topography.

The analysis revealed that the Nelson Bay Town Centre is composed of a number of areas with a distinct character. These areas as shown in Figure 24 are characterised as follows:

- A central pedestrian focused "village" sector centred on Stockton Street north, Magnus Street, and Donald Street east with links through to the waterfront and to supporting car parking to the east and west. This area is characterised by consistent smaller shopfronts, considerable pedestrian activity, footpath dining, and a sense of enclosure created by street trees and almost continuous awnings.
- A peripheral retail commercial and service sector generally located south of Donald Street. This area surrounds the "village centre" to the east, south and west. It is characterised by larger mixed use open sites, greater inconsistency in building setbacks and built form, and underdeveloped or vacant lots in a state of transition. There is considerable pedestrian activity, but not as high as in the "village" area.
- A "green link" that provides the interface between the Town Centre and the Foreshore, and from east to west, is provided by Apex Park. Government Road/Victoria Parade separates it and the Foreshore from the Town Centre. The green link is characterised by large open spaces, informal recreational facilities, such as the playground and picnic areas, paid car parking and frequent wide angle views of Port Stephens water body.
- The Foreshore is an area of intensive commercial activity incorporating sheltered marina moorings, Fisherman's Co-operative, visitor and restaurant facilities and beach. In contrast to the "green link" the Foreshore has largely paved areas and a significant built element that includes the Marina commercial buildings, government offices, fish processing and retail areas and jetties.
- A surrounding area of residential and tourist apartment buildings and tourist accommodation extending to the upper levels of the natural basin surrounding Nelson Bay and returning towards the shoreline to the east and west of the Town Centre. This area has a relatively low intensity of pedestrian activity and is characterised by multistorey buildings setback from the street frontage, and often features landscaping in the front setback.
- A leisure and tourism focus area incorporating the Seabreeze Hotel and Nelson Resort sites. These sites are located at main interface point between the Town Centre and the Foreshore and are highly visible. They are of critical importance in building a stronger flow of pedestrian activity between the Foreshore and the Town Centre. Another leisure and tourism area is located around the Bowling Club and Landmark development, to the south of Dowling Street. This area is characterised by limited buildings set in large open spaces, which are occupied by formal recreation uses such as bowling greens or tennis courts.

These character areas provide an excellent platform from which the future built form of Nelson Bay can evolve. They enable activity to be focused in particular areas and for less intensive activity to be encouraged in other areas. Development controls and public domain improvements are the primary tools that can be used to achieve this effect.

The commercial zoned area of Nelson Bay is too large for a centre with a relatively limited catchment. As a result activity tends to become dispersed and a sense of focus is lost, with a negative impact on business viability. By developing the character and function of specific areas it is possible to focus activity and to overcome the problems of dispersion.



In particular, Magnus Street, the northern end of Stockton Street and parts of Donald Street contain many small shops, boutique retail and cafes and need to be further developed in a way that builds on its intimate “village” character.

Similarly, larger sized sites and existing premises in the area to the south and west of the “village” offer the potential to provide more flexibility for new development within a number of Nelson Bay specific urban design controls.

The outcome would be a Strategy which is finely tuned to Nelson Bay’s circumstances. It would have a focus on improving the overall ambience and functionality of the Town Centre through such measures as new street tree planting, improved signage, improving access to parking and a better pedestrian network. Incentives and flexibility to encourage incoming investment also could be used to reinforce the character areas.

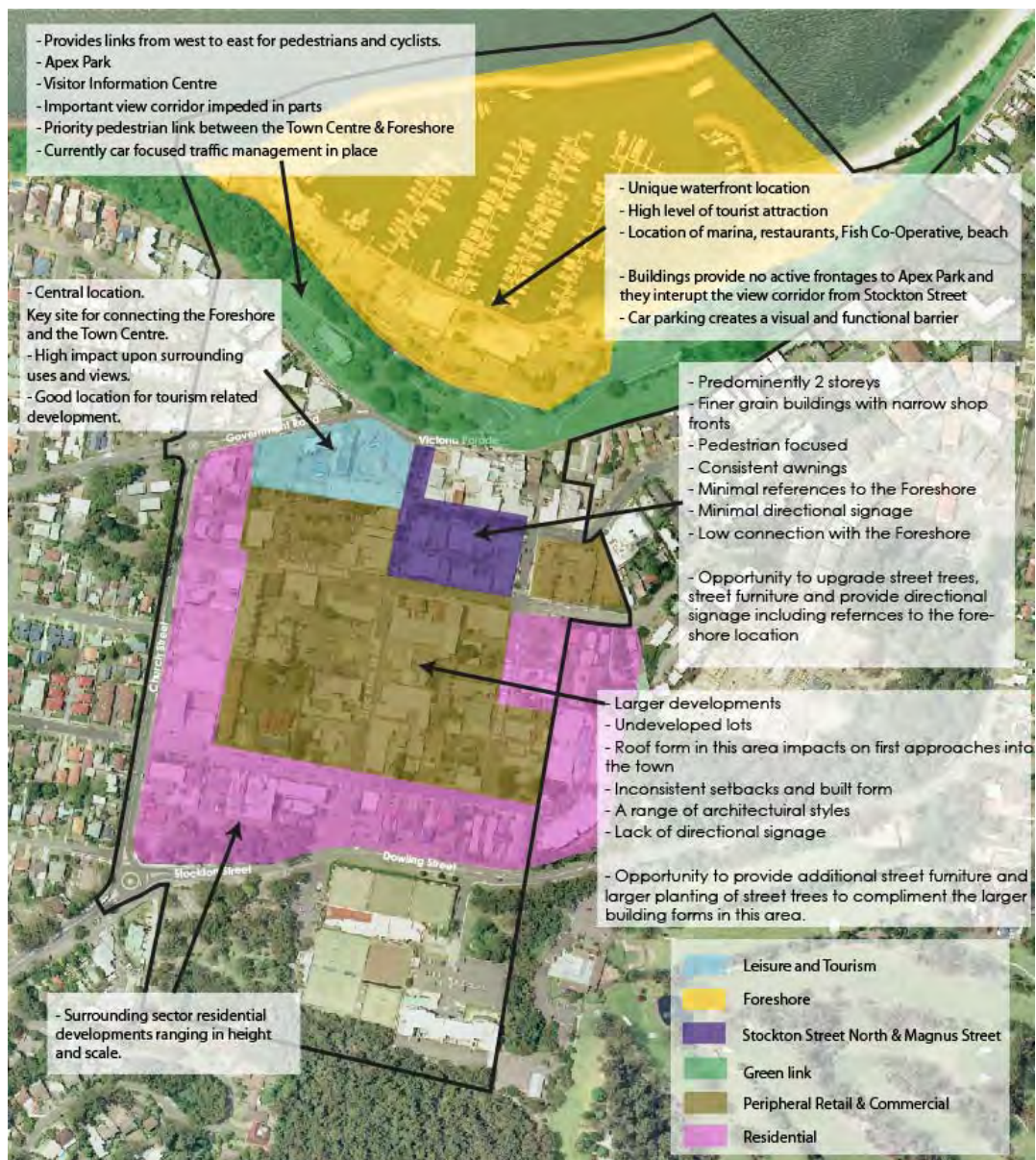


Figure 25: Current characteristics of the Study Area.



## Views

The Town Centre lies in the foreground of a major hillside flanked by low ridges, and this topography has contributed to the overall urban form of the centre, resulting in a natural "amphitheatre bowl" shape. The natural form provides height variations in buildings and assists in creating unique view corridors towards the surrounding hills where vegetation frames the Town Centre, and down towards the waterfront.

Topography further impacts on the entrances to the Town Centre which is located at the high entry point and looks down into the Town Centre and waterfront. This change in height provides opportunities for a natural 'sense of arrival' at the periphery of the town.

A view analysis was conducted as part of the urban design analysis and is provided within Appendix 1 and is summarised below. The analysis was conducted to determine key views from the public realm that should be protected.

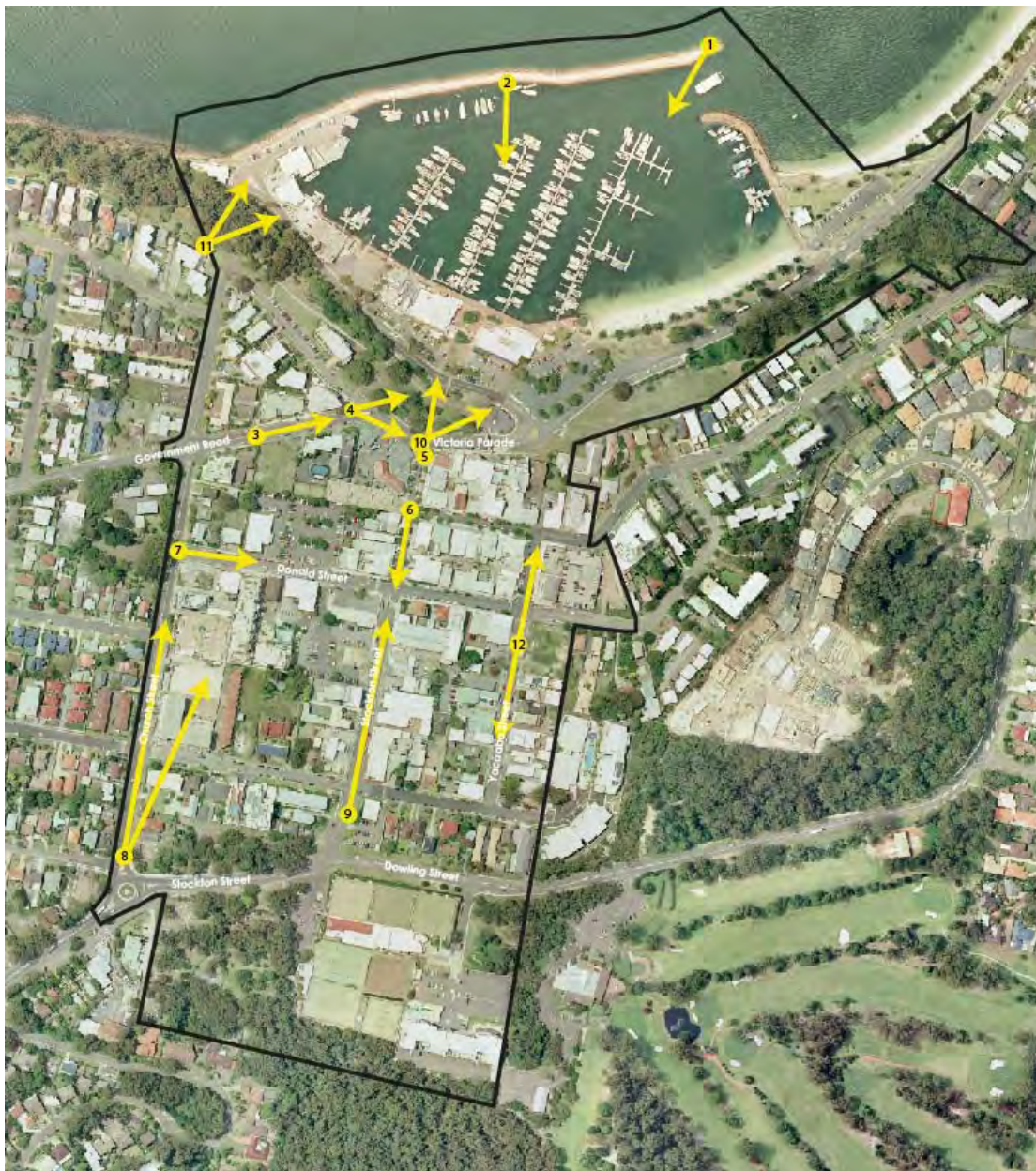


Figure 26: Critical Views

The critical viewpoints and corridors are shown in Figure 25. The following recommendations summarise the outcomes of the view analysis:

- View 1 - The connection between Gan Gan Hill and the waterfront should be preserved through appropriate building heights and protection of view corridors.
- View 2, 5, 6 and 9 - The view lines (Figure 26) between Kurrara Hill and the Marina form an axis for the main street of the Town Centre (Stockton Street), which should be maintained. Future street tree selection should consider an appropriate form type that will reinforce this axis. Additionally, species endemic to the location will provide a connection with the surrounding natural environment.

The Eucalypt located between the two Norfolk Pines adversely affects View 9 because it interrupts the focal point provided by the two Pines. Its removal should be considered within the proposed Strategy to restore the importance and functionality of Apex Park. Additionally, the Town Centre stage impedes what is probably the town's most important view corridor along the Stockton Street axis from the Foreshore to Kurrara Hill



**Figure 27: Stockton Street view corridor**

- View 3 - Future development fronting Government Road should consider the view corridor east from the intersection of Church Street and Government Road. This view corridor provides a first glimpse of the Foreshore area from the west, and buildings should assist in creating an inviting corridor that draws on the surrounding natural features and highlights the road as an important gateway. Streetscape works should aim to assist in managing traffic speeds and behaviour.
- View 4 – Future design of Apex Park and alterations to Victoria Parade should consider the northeast/easterly view from the western approach to Victoria Parade towards the waterfront by considering the location of large trees, the nature and impact of the Visitor Information Centre building, and of the pedestrian overhead bridge.





**Figure 28: View corridor along Stockton Street impeded by the Town Centre stage**

- View 7: Donald Street is a good example of a street that would greatly benefit from street tree planting to soften the environment and frame vistas.
- View 8: This corridor is important because it provides a connection between two important gateways into the Town Centre. New multistorey residential buildings have blocked views towards the waterfront from this street. However, an avenue of street trees can encourage pedestrian and vehicular movement through repeated planting along this corridor, and assist in reducing the apparent bulk of buildings on the eastern side of the road relative to lower scale developments to the west.
- View 10: The intersection of Stockton Street and Victoria Parade provides one of the most important opportunities to improve the connection of the Town Centre with the Foreshore however this view is impeded by the built form of the Visitor Information Centre and the overhead pedestrian bridge.
- View 11: Views from atop the Foreshore escarpment to the north illustrate the importance of appropriate building heights within the Foreshore area, particularly on the Fisherman's Co-op site.
- View 12: Similar to Stockton Street, a view corridor exists along the length of Yacaaba Street. Given Yacaaba Street terminates at Magnus Street views are blocked towards the waterfront by buildings. However, the proposed extension of Yacaaba Street could address this blockage.

Generally, all streets should keep streetscape clutter to a minimum to ensure a direct line of sight is maintained and buildings or public domain elements should not encroach identified view corridors. However, carefully selected and well managed street trees can “frame” important views and reduce the apparent scale of multistorey buildings adjacent to the street.

## Access and Directions

First impressions count, and are probably the most lasting. An entry into any Town Centre is a fundamental factor instantly affecting people's perception and navigation of a place. Gateway treatments can signify to visitors that they are approaching an important place such as a town centre. They assist in the identification of the character of the town, or an area within the town, and can also assist in reducing the speed and behaviour of traffic within the Town Centre core and help people find their way around with the assistance of directional signage and other cues.

Gateway treatments can include public art, signage, and a change in landscaping. Design elements within adjacent buildings can incorporate landmark features, and paired buildings can form an actual 'gateway'. However, no matter what elements form the gateway, it is crucial that they contribute to a co-ordinated theme, and are not a random collection.

There are four possible routes into the Town Centre of Nelson Bay; Stockton Street (southern approach), Government Road (western approach), Magnus Street (eastern approach), and Victoria Parade (eastern approach). It is the two western approaches and the Stockton Street approach from the south that are most important in defining an entryway into the Town Centre. This is because it is likely a number of people entering from the east will have probably already visited the Town Centre, or passed through these gateways on their way east along the Tomaree Peninsula.

The three entry points currently provide little to signal the approach into the Town Centre or to promote the character of Nelson Bay. This is why gateway treatments are so important and are a high priority.



**Figure 29: Gateways into Nelson Bay Town Centre requiring treatment.**

The locations identified in Figure 28 need upgraded directional signage to help motorists travel to their desired locations easily and efficiently (avoiding unnecessary vehicular movements in the Town Centre is an important part of the overall Strategy for Nelson Bay).

Within the Town there are streets performing different functions, and with different importance to traffic flow. To limit confusion for visitors the function and hierarchy of the roads could be reflected in street tree planting and other streetscape works. These works can be surprisingly effective in assisting people to navigate the town, to find car parking, and in reinforcing the desired character of parts of the Town Centre, particularly if they are combined with good signage.



## Town Centre Access and Activity

There is a major pedestrian and retail activity area located in the vicinity of Stockton Street north and Magnus Street, the intersection of Stockton and Donald Streets, and to a lesser extent Donald Street. Off-street car parking is available to serve this area in three locations on the periphery of the area as shown in Figure 29.



**Figure 30: Donald Street and the location of off-street car parking (yellow)**

The greatest vehicular movement within this area is on Donald and Stockton Streets and given the high level of pedestrian movement in this central location, movement is problematic for both motorists and pedestrians. Directional signage and traffic management measures in this area would be very beneficial to traffic flow and pedestrian safety.

### Considerations:

Town Centre access and activity can be improved through:

- A clear and streamlined set of signage including visible tourist information boards and interpretation.
- Clearly defining the street hierarchy and functions with distinctive themes and treatments.
- Highlighting visitor facilities within the Town Centre and the Foreshore.
- Promoting the coastal shared cycle and pedestrian path route provided by the Bridle Track, the Foreshore and Laidler Walk, as part of an integrated pedestrian and cycle network.

## Barriers and Connections

A number of visual and physical barriers exist within the Study Area. These “barriers” affect vehicular and pedestrian movement and views. Seamless movement throughout the area is very important for Nelson Bay liveability and its attraction as a tourist area.



**Figure 31: Connectivity issues in Nelson Bay Town Centre**

There are a number of possible routes into the Town Centre. When navigating these routes there are a number of points that create confusion for visitors. The red swirls shown in Figure 30 demonstrate locations where directional signage could be improved.

Victoria Parade is the most significant barrier within the Study Area. The road is excessively orientated towards vehicles within the central location where the Town Centre faces Apex Park, and particularly the Stockton Street pedestrian crossing. The nature of Victoria Parade at this point alienates the Town Centre from Apex Park and the Foreshore, and excessively impedes pedestrian movement between the Town Centre and the routes through Apex Park leading to the Foreshore.

Apex Park has evolved over time and represents layers of incremental works over a number of years. As a result it has gradually lost its sense of structure, and many of its functions such as the War Memorial, are compromised. A similar comment applies to the landscaping of the Park. For example, two Norfolk Island Pines contribute to, and frame, the iconic view corridor between Stockton Street and the Foreshore (Figure 30), other tree plantings have grown over time to significantly erode this effect. The net effect is that tree selection and landscaping within Apex Park has visually separated the Town Centre and the



Foreshore, rather than helping link them. Contributing to this disconnection is the built form of the Visitor Information Centre on the eastern edge of Apex Park which is a solid mass blocking natural views through the green space. This is compounded by the only active frontage of the Visitor Information Centre facing towards Victoria Parade while the other facades of the building do not address Apex Park. The steps and ramps of the overhead pedestrian bridge located in the vicinity also tend to act as a visually and functional barrier.

The orientation and design of buildings in the Marina is understandably to the water in the north. However the Marina commercial buildings "turn their backs" on Apex Park and do not assist in providing a positive and inviting link between the Town Centre and the Foreshore. The siting of the development also impedes on the natural view corridor from Stockton Street towards the water. Apex Park needs to be a welcoming and functional link between the Town Centre and the Foreshore. A well designed Apex Park and Marina development is a fundamental element in ensuring that both the Town Centre and the Foreshore benefit from Nelson Bay's assets.

Connections between the character areas are required to create a cohesive Town Centre and the Town Centre and Foreshore need to be better connected. This can be achieved through reinforcing the role of Apex Park and the surrounding green link as the fulcrum of Nelson Bay by:

- Opening up water views from Stockton Street and Victoria Parade
- Strengthening pedestrian connections
- Improving signage that assists with directions and interpretive information about the locality
- Integrating public facilities within this area such as BBQs, toilets and seating
- Enhancing the aesthetics and presentation of Apex Park
- Preparation of a design brief for Apex Park to guide future development and regenerate this area.

## Town Centre Amenity and Character

Nelson Bay has a superb coastal location and an outstanding natural environment surrounding the Town. It has the opportunity to build upon natural assets and enhance the Town's character. The Town Centre requires revitalisation to achieve this objective.

Throughout the Town Centre are developments of various sizes and architectural designs. These individual buildings do not create a coherent streetscape. This is particularly evident with development in the south of the Study Area. This can be attributed to a number of reasons: inconsistent architectural form, irregular setbacks, and dramatic changes in building heights. Additionally, a considerable amount of vacant land exists within the Town Centre, further exaggerating the inconsistency in the form and design of buildings.

While absence of a coherent streetscape is partially a result of the gradual nature and random location of redevelopment in the Town Centre, it also indicates that the development controls need to be more effective and that architectural quality of development should be improved.

The footprint (the area zoned for the commercial centre) of the Town Centre is very large for the retail/commercial catchment of Nelson Bay. The Town Centre has a mix of commercial and retail developments to the north, and a greater proportion of residential apartments and dwellings are concentrated towards the south of the Town Centre. Notably there are no designated heritage properties within the Town Centre.

The quantity and quality of business signage within the Town Centre detracts from the streetscape environment. The signage is not well co-ordinated and is of varying quality. The street furniture provided within the Town Centre core is of varying ages and some items should be replaced with a consistent suite while others should be revitalised. The quality of the streetscape should be consistent with the quality of Nelson Bay's natural setting. To do otherwise is to undercapitalise and degrade the assets of the area that are the basis of its tourist and lifestyle attractiveness.



### Considerations:

- Figure 31 summarises the key public domain improvements that should be undertaken to revitalise the Town Centre. These works represent a long term program. Street presentation can be improved by upgrading street furniture with a consistent suite including lighting, seating, and landscaping.
- A street tree program would promote character areas and make them distinctive. Street trees should be planted to ensure they have a long life and do not interfere with paving, public utilities and the like.
- A Wayfinding Strategy could highlight directional routes and draw on the town character through interpretive signage for all forms of transport: motor vehicle, pedestrian and cyclists.
- Integrated public art within public places will reinforce the town character and integrate the waterfront and the town.
- Advertising and business signage can be better coordinated to reflect the quality of the area and promote a coordinated signage suite.
- Pedestrian movement should be promoted over vehicular movement within the town core.
- Built form should be improved throughout the Town Centre by encouraging active frontages and landmark developments at important locations.
- Emerging character areas should be reinforced, including the pedestrian focus and café scene in Magnus Street and larger commercial development footprints.





Figure 32: Key public domain works to be undertaken within Nelson Bay Town Centre and Foreshore





## Foreshore Access and Activity

The Nelson Bay Foreshore and the activities located within this area are the main reason why people visit the town.

The waterfront area is beautiful and the landscape incorporating the natural form of the surrounding hills is unique. There are five main activity areas along the Foreshore; dock and service areas including offices, the marina and commercial premises including restaurants, the beach, and car parking. While pedestrian access is provided through Apex Park, car parking in this location creates a visual barrier and a connectivity problem for cyclists and pedestrians. The car parking areas break up the flow of the open space asset. Previous Sections discuss potential car parking alternatives.

### Considerations:

Design of new development in the Foreshore area could enhance this area and contribute to the Town Centre connection by considering the following:

- Enhancing the promenade for visitors along the length of the waterfront.
- Providing alternatives to large amounts of car parking on prime waterfront open space.
- Reinforcing the shared pedestrian/cycle link that runs in a west-east direction.
- Promoting pedestrian movement over all other forms of transport and enhancing the Town Centre connection.
- The role built form can play in providing an active frontage to address Apex Park and enhancing the view corridor from Stockton Street down to the water.
- The aims and objectives of the LPMA as set out within the Nelson Bay, Boat Harbour and Foreshore Revitalisation Project Concept Plan.



## Development opportunities analysis

### Building Heights and the Street Wall

An important characteristic of Nelson Bay is that it provides the ambience of a relaxed coastal town. This characteristic attracts tourists and residents seeking an experience that is different from the highly developed nature of its competitors in Australia and overseas. A significant factor in managing perceptions of the intensity of development is building height.

Building heights need to be limited in order to ensure that the natural setting of the town is apparent – views of the water and of the surrounding wooded ridges – and to avoid buildings that are incompatible with a pedestrian scale environment. At the same time, development capacity needs to be provided in order to permit Nelson Bay to grow in an economically viable way to support the tourism industry, new areas of employment and to cater for the housing, retail and service needs of residents.

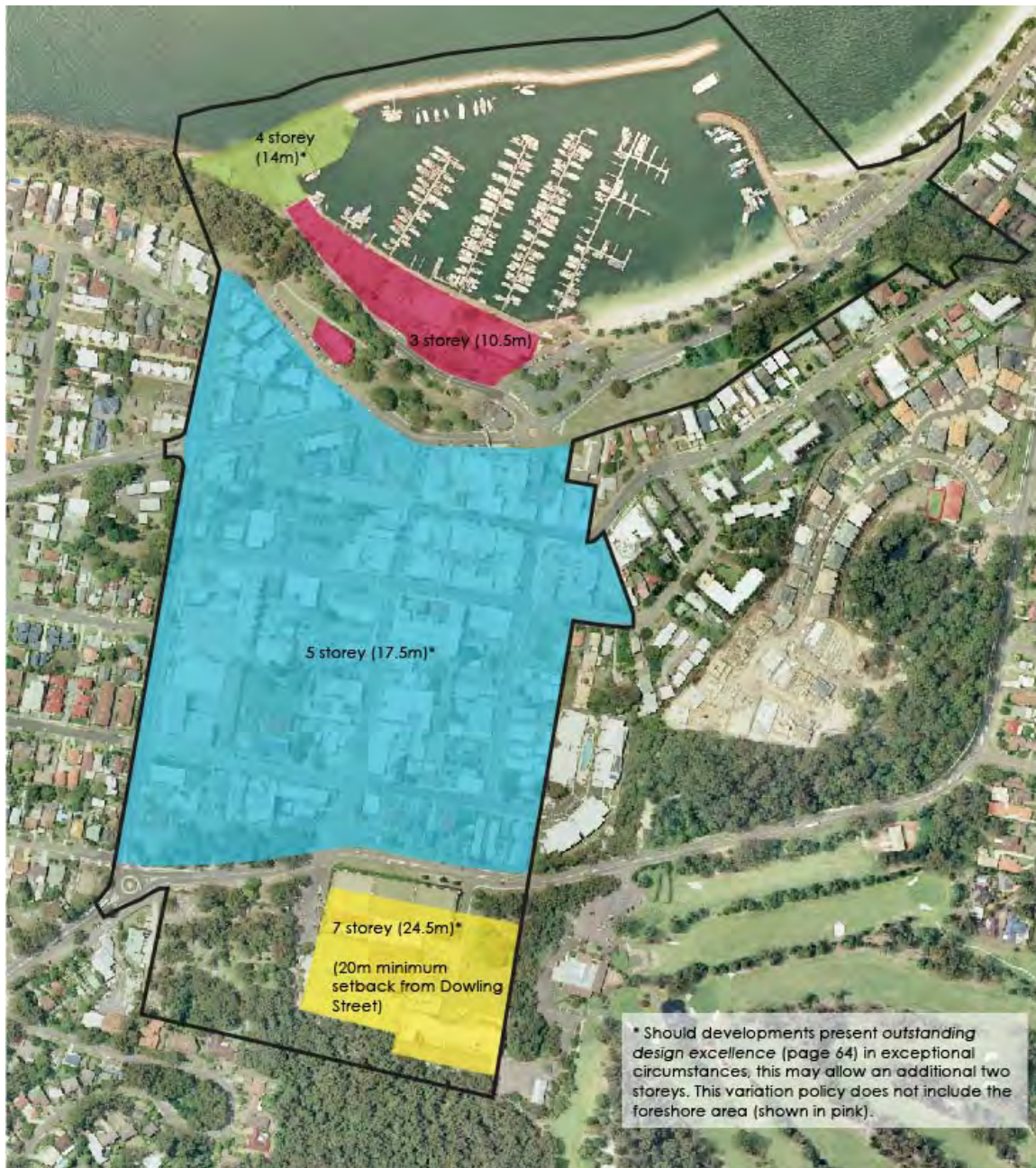
Most buildings in Nelson Bay are one to two storeys in height. Scattered throughout the Study Area are buildings of varying heights, extending up to seven storeys in height in the case of the "Landmark" development to the south of the Bowling Club.

The Port Stephens Development Control Plan 2007 sets a maximum building height of 15 metres (or five storeys) over the Town Centre and many of the recent multistorey developments reflect this. However, it is noted that following consultation with Councils Development Assessment staff the existing allowance of 3 metres per floor is not sufficient for many new commercial and mixed-use buildings. As a result of this feedback, the Strategy makes allowance for 3.5 metres per storey.

Urban design analysis undertaken during the development of the Nelson Bay Town Centre and Foreshore Strategy confirmed the appropriateness of a five storey (17.5m) maximum building height seven storey (24.5m). A maximum five storey (17.5m) building height will maintain the coastal town ambience of Nelson Bay. It will also permit considerable additional development beyond what exists because there are many undeveloped and underdeveloped sites in the Town Centre. Because of the topography of Nelson Bay, buildings will step up the slopes of the amphitheatre (building height is measured from the natural ground level of each site) and will provide a degree of view sharing and visual interest. In addition, the natural shape of the land will be maintained and reflected in the built form as the buildings step up and down the slopes.

There are three exceptions (Figure 32):

1. The land to the south of the Bowling Club, where a seven storey (24.5m) maximum height limit is appropriate. This is because of the separation of this site from the general building mass of the Town Centre, and because a building of this height would not extend above the wooded ridge that provides the southern backdrop to the town from almost all viewing points.
2. The Marina precinct on the Foreshore, where a three storey (10.5m) building height is consistent with low key recreational character to that part of the Town Centre. This height limit is also proposed for 4 Laman Street given the impact any additional height at this location would have on surrounding residential developments (Note: this site is occupied by a relatively new building and it is unlikely this site will be redeveloped for some time).
3. A four storey (14 metre) height limit should apply to the "Fishermen's Co-operative" area to the west of the Marina. This height limit has been identified so as to protect views from the historic Bridle Path located on top of the escarpment. Reduced levels obtained from the LPMA indicate sufficient room for a 16m to 18m building before views are likely to be impeded. Should upon further design analysis and studies an additional floor or two is demonstrated to be possible without impeding views, the additional height could be achieved under the "Outstanding Design Excellence" variation option clause outlined later in this Section. Given the high quality of this Foreshore location it is considered very important that a development meet a high level of design and architecture.



**Figure 33: Proposed building height map**

The height of the street wall is very important in helping to provide a comfortable pedestrian scale environment by allowing adequate solar access and reducing the negative impact of the tall buildings. To ensure a pedestrian scale environment, a maximum street wall height of 3 storeys (10.5m) should apply. This is an increase of 1 storey over the existing maximum street wall height specified in the Port Stephens Development Control Plan 2007. However, it is considered that a comfortable pedestrian scale environment can be provided where the street wall is 3 storeys (10.5m) should a range of other controls also be met, including continuous footpath awnings and horizontal and vertical articulation of the street wall façade. The facades of floors above 10.5 metres should be setback 3 metres behind the street wall.

The proposed maximum street wall and building heights will allow for a variation in height of specific buildings below the maximum height to occur without creating discontinuities in the streetscape due to overly large increments in height.



A significant factor in providing an attractive environment for pedestrians is the detailing of facades. Facades should be detailed to provide clearly defined lower (ground floor), middle, and upper elements. This will have the effect of focusing attention at the ground floor level and in managing the perception of building height. In addition, buildings should feature strong vertical articulation to avoid large unrelieved expanses of walls or glazing. This is particularly important at the ground floor level where vertical articulation and detailing should maintain the rhythm of traditional main street shopfronts, as is evident in most of Magnus Street.

## Setbacks and Street Activation

Nelson Bay is a tourism town. It is important that the core pedestrian and retail streets are lively and interesting. The area of the Town Centre is much larger than is necessary to accommodate the level of commercial activity that the area can support. As a result, if commercial activity was evenly spread across the Town Centre it would dissipate the energy normally expected of a town centre, and lose the sense of focus that is necessary to ensure the viability of places such as the Magnus Street village area. Consequently, it is necessary to encourage some areas where activity is more intense, such as Magnus Street, to achieve the vibrancy that results from a "critical mass" of people activity, and allow other areas to develop in a less intensive relaxed fashion, such as Tomaree Street.

To help build a sense of activity, buildings in the core area of the Town Centre should be required to have an active frontage and be built to the boundary. This includes along streets within the "village precinct" focused on Magnus Street and other designated major pedestrian streets, such as the entire length of Stockton Street. Figure 33 identifies the streets that should provide active frontages. A consistent non setback will also provide a sense of coherence and identity to the area.





**Figure 34: Proposed active frontages**

Along other streets a setback of buildings from the front property boundary is acceptable. While ground floor developments should continue to address the street, they do not necessarily need to present an active frontage. At the property boundary, landscaping or a low wall should be provided to clearly delineate the boundary between public and private space. These setbacks should be sympathetic to the surrounding development so that a coherent streetscape is established. Wholly residential developments on non designated streets should comply with the general setback provisions of the Port Stephens Development Control Plan.

Building setbacks and overall height should also maintain solar access to public places by avoiding the overshadowing of these spaces before 3pm midwinter and 6.30pm Summer Daylight Saving Time.

### Minimum Frontages

In order to provide for good design and to ensure the height of buildings is in good proportion to their width, buildings in sites with a street frontage width of less than 20 metres should be restricted to a maximum building height of 3 storeys (10.5m). Adequate frontage will ensure that there is sufficient width to accommodate entry vestibules, vehicular access and other service requirements in addition to ground floor areas that either address the street or an activated frontage.





## Building Bulk and Scale

Floor Space Ratio provides a tool with which to manage the scale and bulk of developments. Because floor space ratio only measures "building bulk", it needs to be used in conjunction with other development controls in order to achieve the desired built form.

The Port Stephens Development Control Plan specifies a maximum floor space ratio of 1.8:1 for the Town Centre land zoned 3(a) Commercial. Urban design analysis undertaken during the development of this Strategy confirmed that this is an appropriate level of building bulk for the Nelson Bay Town Centre. It is proposed that the control be simplified to provide for a maximum floor space ratio of 2:1 in Nelson Bay.

## Design Excellence and Incentives

Nelson Bay's primary asset is its beautiful setting - the Port Stephens waterway and the wooded background. It is important that buildings and spaces reflect the quality of their setting. If buildings and the surrounding spaces are not high quality they will devalue these natural assets; from an aesthetic and economic viewpoint, this is extremely undesirable.

Accordingly, all new development in Nelson Bay should exhibit design excellence. Development applications should be assessed against the following criteria:

- Architectural design, materials and detailing
- The contribution of the building to the quality and identity of the area
- Scale, and the relationship of the development with other development (existing or proposed)
- The impact on, and any proposed improvements to, the public domain
- Solar access
- Environmental impacts such as sustainable design, overshadowing, wind and reflectivity
- Pedestrian, cycle, vehicular and service access and circulation
- Safety and security, both internal to the development and for the public domain.



## Providing for Variation

There will be circumstances where a development seeks to vary building height or bulk beyond the maximums proposed by this Strategy. The use of variations to development standards should be rare and should only be made in exceptional circumstances.

It is recommended that variations to the development standards proposed for Nelson Bay only occur if a development:

- Exhibits outstanding design excellence, and
- Provides a strategic public benefit

Outstanding design excellence would be determined by requirements that the development application must be accompanied by a detailed urban design report for Council assessment documenting how the proposal exhibits outstanding design excellence, and that the development proposal must be reviewed by a Council appointed panel of independent urban design experts who would make a recommendation to Council.

The strategic public benefit would be determined by the extent to which the proposal implemented the works in the Nelson Bay Improvement Plan and/or delivered another defined strategic benefit, such as the provision of at least 4 star accommodation associated with a comprehensive conference centre that includes a facility seating at least 300 people and breakout rooms.

If a development proposal was assessed as achieving outstanding design excellence and it provided a strategic public benefit of sufficient magnitude, a variation of up to an additional 2 storeys (7m) and additional floor space ratio of up to 0.5:1 could be permitted (i.e. a total FSR of 2.5:1).

Providing for variation policy should be available to all land within the study area with the exception of the areas highlighted in pink within figure 33 (page 61) due to the visually sensitive characteristics of this foreshore location.

## Opportunity Sites

A number of potential development sites that offer unique opportunities are located on the periphery of the village precinct. These sites offer an opportunity to undertake development that can deliver important benefits for Nelson Bay. The sites include:



Figure 35: Opportunity Sites

- The Seabreeze/Nelson Towers/ Donald Street west car park site. These sites combined provide an opportunity for a large scale comprehensive development that can greatly improve the northern end of Stockton Street and its relationship with Apex Park. The site offers north and northeast facing views over Apex Park and the Foreshore as well as offering opportunities to revitalise Stockton Street between Government Road and Magnus Street. The site is well suited to a public oriented tourism use including accommodation with resort and conference facilities. The Donald Street west car park offers the ability to develop multideck public and private car parking and to manage "back of house" activities in a way which provides maximum opportunity to activate the Stockton Street and Government Road frontages.



- The Coles supermarket site and adjacent lots (currently occupied by at grade car parking) offers the opportunity for a landmark development on the highly visible corner of Stockton and Donald Streets. Suitable developments are those which activate the Stockton Street and Donald Street frontages. Redevelopment of this site would activate the mid section of Stockton Street and reinforce its role as a pedestrian movement spine within the Town Centre.
- The Donald Street east car park and adjacent informal grade car park to the east offer the opportunity to provide additional car parking for the TownC and potentially provide an opportunity for the removal of car parking from the Foreshore. Currently the site is not attractive. It provides a development opportunity for such initiatives as a publically oriented active use sleeving the ground floor frontage along Magnus Street, combined with expanded multideck car parking capacity and residential or tourist accommodation above, which would deliver greater pedestrian activity and life at the eastern end of the Magnus Street "village precinct".
- The "Fishermen's Co-operative site" to the west of the marina which offers the ability to provide a development which capitalises on its scenic setting including the scenic views of the waterway and the headlands of Port Stephens, as well as the backdrop of the adjacent headland and escarpment to the south.

Provided the opportunity sites meet the criteria for a variation in development standards as described above, (i.e. outstanding design excellence and a strategic public benefit), the Strategy recommends that these sites be permitted an additional floorspace ratio of up to 0.5:1 over and above that available elsewhere in the Town Centre under the proposed variation provisions (i.e. a total FSR of 3.0:1).

Appendix 2 provides draft Clauses to address these points.



## 9.0 Recommendations

Since 2010, ten strategic principles have guided the draft Strategy. The following section provides the recommendations for Nelson Bay Town Centre and Foreshore by the ten (10) principles (which have been further refined) and providing details of the:

- Key challenges
- Recommended actions

### Principle 1 - Nelson Bay economy has long-term viability and is less seasonally dependent

Nelson Bay is in competition with coastal centres elsewhere in NSW, Australia and increasingly overseas. In order for Nelson Bay to maintain competitive it needs to rejuvenate its suite of tourism products and to provide a unique destination. The visual appearance and amenity of the Town Centre and Foreshore are important elements in providing a unique high quality destination. Diversification of the economy beyond its high reliance on leisure based tourism is also important.

Given Nelson Bay and the wider Tomaree Peninsula has been identified as a regionally significant tourism location there is an opportunity to capitalise on Nelson Bay's natural assets by creating a commercial and tourism centre that expresses a point of difference from other retail commercial centres.

#### Key challenges

- Providing a unique destination that ensures Nelson Bay attracts people all year round.
- Balancing the need to protect the ambience of a relaxed coastal town with the need to facilitate and attract development.

Recommendation	Implementation
<ul style="list-style-type: none"><li>▪ 1.1 Attract developments for the economic benefit of Nelson Bay. Examples may include a conference centre, hotel and ancillary services.</li></ul>	<ul style="list-style-type: none"><li>▪ Provide development controls that facilitate:<ul style="list-style-type: none"><li>- Design excellence</li><li>- Variation to Building Heights in Designated Localities and Centres that exhibit outstanding design excellence and provide a strategic public benefit as detailed under 'providing for variation' within the Strategy (page 65).</li><li>- Opportunity sites as identified within figure 34.</li></ul></li></ul>
<ul style="list-style-type: none"><li>▪ 1.2 In recognition of Nelson Bay's tourist role, a greater emphasis on leisure retailing and services, including the designation of a special tourist precinct in the Town Centre. This precinct should be located with close links to the Foreshore and Apex Park so as to assist in creating the desired connection between the two commercial areas.</li></ul>	<ul style="list-style-type: none"><li>▪ The Strategy has defined character areas and recommends they be enhanced. Specific development controls should be provided within the DCP to reinforce and further develop the character areas. Preliminary work within the Strategy will guide a Public Domain Plan that reflects these areas and the areas need to be recognised within the Implementation Program.</li><li>▪ There is a need to institute Place Management for Nelson Bay, and potentially "case manage" significant developments in order to co-ordinate the implementation of the Strategy and to facilitate desirable development.</li></ul>





<ul style="list-style-type: none"> <li>1.3 Encourage events in the Town Centre such as community markets and night time events that focus on what the Region has to offer such as food and beverage products and local entertainment.</li> </ul>	<ul style="list-style-type: none"> <li>Encourage community events within public spaces including roads and Apex Park. This is to be achieved through the review of planning controls, and Plans of Management.</li> <li>Investigate ways of facilitating events to assist potential organisers in understanding Councils approval process and find ways to streamline applications.</li> <li>Prepare guidelines for traffic management for large events, including preferences for car parking, shuttle services if required, and wayfinding.</li> <li>Identify the necessary facilities (such as electricity points, marquee anchor points etc.) within public domain areas such as Stockton or Magnus Street or Apex Park within the Public Domain Plan (See 6.1).</li> </ul>
<ul style="list-style-type: none"> <li>1.4 Provide a vehicle to co-ordinate the identified recommendations and activities to facilitate Nelson Bay attract economic development.</li> </ul>	<ul style="list-style-type: none"> <li>Examine a 'Place Management' role.</li> </ul>
<ul style="list-style-type: none"> <li>1.5 Encourage footway dining.</li> </ul>	<ul style="list-style-type: none"> <li>Review Councils current policy on footway dining and conduct an audit to identify needs for footway dining.</li> </ul>
<ul style="list-style-type: none"> <li>1.6 All dwelling space in the Town Centre is to be able to accommodate permanent residents even if initially intended for short term holiday accommodation. This will provide flexibility for new developments to cater for permanent residents. The intent is to increase the number of residents within the Town Centre. This will increase activity in the centre all year round and utilise commercial facilities at a variety of times throughout the day and night.</li> </ul>	<ul style="list-style-type: none"> <li>Temporary or short term tourist and visitor accommodation other than backpacker, bed and breakfast, farm stay, hotel and motel uses should comply with SEPP65 requirements.</li> </ul>



## Principle 2 - Town Centre and Foreshore are well connected

Better linkage of the Town Centre with tourist services and facilities located within the Foreshore area is critical to the long term economic growth of Nelson Bay. There are limited references to the waterfront or the natural environment within the Town Centre. The Town Centre needs to have signage, public art and other references to the waterfront, local environment and history in order to link it with the tourism product and the natural assets of the area. In addition the pedestrian network between the Town Centre and waterfront needs to be straightforward and welcoming with minimal barriers to movement.

### Key challenges

- Promoting and improving pedestrian movement between the Town Centre and the Foreshore.
- Attracting visitors into the Town Centre
- Overcoming the change in the natural ground level between, the Town Centre, Apex Park, and the Foreshore
- Accommodating and managing vehicle traffic and pedestrians in Victoria Parade
- Providing solutions when a number of development sites and opportunities are yet to be resolved such as the Foreshore area under the ownership of LPMA preparing redevelopment options yet to be resolved.

Recommendation	Implementation
<ul style="list-style-type: none"> <li>▪ 2.1 Improve pedestrian access across Victoria Parade.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Review the adequacy of the pedestrian bridge as the most suitable option to cross Victoria Parade. This should be considered along with connectivity considerations when design and development phases of Apex Park and the Foreshore redevelopment occur.</li> <li>▪ Identify pedestrian crossing improvements including distinctive pedestrian area pavement and possibly a "scramble" crossing at Stockton Street and Victoria Parade. Improvements to be identified within the Improvement Plan and Public Domain Plan.</li> <li>▪ Ensure crossing point to Apex Park and the waterfront at Stockton Street is the priority route for pedestrians. Treatments such as consistency in paving and materials and avenue planting through Apex Park should be considered in the design review of Apex Park. Consistency is to be reflected within the Public Domain Plan.</li> <li>▪ Discourage through traffic utilising Government Road and Victoria Parade by promoting the alternative direct route along Dowling Street. See Section 3.1</li> <li>▪ Explore the option of Yacaaba Street extension in conjunction with the future Foreshore redevelopment and options for the Donald Street east car park.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 2.2 Investigate how Apex Park can connect the Town Centre and Foreshore areas.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consider design options to promote connectivity such as an overhead bridge over Teramby Road or bringing buildings closer to Apex Park on the Foreshore side, and</li> </ul>



	<p>widen the stairs stepping down onto the Foreshore. It is noted this recommendation will rely on integration with plans for the Foreshore redevelopment.</p> <ul style="list-style-type: none"> <li>▪ See recommendation regarding preparing a masterplan for Apex Park (Recommendation 7.1, <i>Principle 8 - Apex Park is Nelson Bay's civic and community park.</i></li> <li>▪ Implementation Program to detail design considerations and connectivity.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 2.3 Protect and enhance natural view corridors and pedestrian links between the Town Centre and Foreshore.</li> </ul>	<ul style="list-style-type: none"> <li>▪ See recommendation regarding preparing a masterplan for Apex Park (Recommendation 7.1, <i>Principle 8 - Apex Park is Nelson Bay's civic and community park.</i></li> <li>▪ DCP Control – Critical view corridors.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ In conjunction with the masterplan work for Apex Park, review the Visitor Information Centre building. Options may include: <ul style="list-style-type: none"> <li>- Opening the building up to Apex Park, and improving its relationship with its setting</li> <li>- Replacing the existing structure with a more transparent structure that responds better to its setting.</li> <li>- Undertaking the above and incorporating other uses, such as local area interpretation and a café.</li> <li>- Identifying alternative locations for the Visitor Information Centre as raised in the 2010 Port Stephens Tourism Diagnostic Study and Action Plan. Lot 1 DP 1155736 (43 Stockton Street Nelson Bay) may be a suitable alternative location for the Visitor Information Centre. The site is located to the West of the Nelson Bay Bowling Club and has a number of elements that suggest it may be a suitable location</li> </ul> </li> </ul>



## Principle 3 - Town Centre is easy to access with reduced through traffic

An important element in attracting visitors and locals into the Town Centre is ensuring it is attractive for pedestrians. The reduction of traffic within the Centre will greatly assist in creating an environment that will facilitate on - street trading, such as dining, and passing pedestrian trade for retail services.

### Key challenges

- Encourage vehicles that are entering the town from the southwest to use an alternative route rather than travel through the Town Centre.
- Providing car parking in a suitable location that minimises traffic within the Town Centre and Foreshore.
- Identifying a solution to the future of car parking within the Foreshore area when it is redeveloped by LPMA is unclear given there will be an opportunity to remove the car parking from the waterfront and provide it elsewhere.
- Attracting funding to fund options such as the consolidation of car parking within multi storey car parks.
- Encouraging visitors and locals to use alternative transport options.

Recommendation	Implementation
<ul style="list-style-type: none"> <li>▪ Improve the road network capabilities</li> </ul>	<ul style="list-style-type: none"> <li>▪ 3.1 Promote Dowling Street/Fingal Street/Trafalgar Street as the alternative route for traffic travelling to Little Beach, Shoal Bay and Fingal Bay by firstly undertaking a design, costing and consultation process for the upgrade of the Trafalgar Street and Shoal Bay intersection.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ 3.2 Ensure the emerging Public Domain Plan for the Nelson Bay Town Centre includes street tree planting along Government Road starting at the Church Street intersection and down Victoria Parade to assist in traffic management by "psychologically" narrowing the street.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ 3.3 Move the location of the 40km/h sign posting on Government Road west to the Church Street intersection to reinforce this gateway location and to encourage motorists to slow down before the decline of Government Road east towards Apex Park.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ 3.4 Extend the 40km/h speed limit along the length of Victoria Parade to its intersection with Shoal Bay Road.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ 3.5 Undertake further analysis to understand critical design considerations, benefits and cost effectiveness of</li> </ul>



	<p>extending Yacaaba Street as a link between the Magnus Street and the Teramby Road/Government Road/Victoria Parade roundabout. This should be conducted in conjunction with detailed planning of the Foreshore.</p>
<ul style="list-style-type: none"> <li>Public Transport Improvements.</li> </ul>	<ul style="list-style-type: none"> <li>3.6 Upgrade the main bus stop/public transport interchange on Donald Street.</li> </ul>
	<ul style="list-style-type: none"> <li>3.7 Should the Yacaaba Street extension be implemented and include the capacity for a bus route, a bus stop should be provided along Victoria Parade.</li> </ul>
	<ul style="list-style-type: none"> <li>3.8 Improve wayfinding and identification signage for pedestrians – i.e. pedestrian signage that includes directions and walking time to popular destinations in order to encourage walking through the Town Centre to the Foreshore.</li> <li>3.9 Future detailed design proposals for the Foreshore shall include the provision of temporary drop off parking for large vehicles such as buses and provide for their long term parking elsewhere. Include requirement within the Improvement Plan.</li> </ul>
<ul style="list-style-type: none"> <li>Active Transport – Promote alternative travel options to motor vehicles</li> </ul>	<ul style="list-style-type: none"> <li>3.10 Improve wayfinding and identification signage for pedestrians, cyclists and motorists. This is to be achieved by preparing a Wayfinding Strategy for the Town Centre and Foreshore. The Strategy should: <ul style="list-style-type: none"> <li>Identify important sites</li> <li>Direct pedestrians, cyclists and motorists</li> <li>Provide information on walking times between villages (such as to Shoal Bay)</li> <li>Incorporate the outcomes of the Public Art Strategy</li> <li>Recognise local history, character and the natural environment, such as promoting the proximity of the Port Stephens water body to the Town Centre and vice versa</li> <li>Identify local walking tracks</li> <li>Be educational</li> <li>Direct traffic, cyclists and pedestrians</li> <li>Help define the character and theme of Nelson Bay.</li> <li>Be implemented through the Public Domain Plan.</li> </ul> </li> <li>DCP to include controls to ensure future developments incorporate the objectives of the Wayfinding Strategy where relevant.</li> </ul>





	<ul style="list-style-type: none"> <li>3.11 Provide bicycle end of journey facilities, such as cycle racks in key Town Centre and Foreshore areas. The cycle racks should integrate with other street furniture elements such as bollards and street poles/lights. The requirements are to be included within the review of the draft Footpath and Cycle Strategy recommended under 4.4 and inform the recommended Public Domain Plan.</li> <li>3.12 Complete missing footpath and cycle links in the Town Centre and Foreshore area and promote this comprehensive network with effective signage. The plan should also identify the necessary facilities such as end of trip facilities, bike lock up areas and storage and minimise on road paths. This is to be done by updating the Draft Footpath and Cycle Strategy to reflect the recommendations of this strategy and use it to inform the Public Domain Plan. See 6.1.</li> </ul>
<ul style="list-style-type: none"> <li>Traffic Management and Road Safety Improvements</li> </ul>	<ul style="list-style-type: none"> <li>3.13 Introduce gateway treatments to Nelson Bay Town Centre as identified within figure 28. This should include substantial landscaping at the entries to reinforce a change in traffic conditions and highlight the Town Centre approach in order to slow down traffic. The gateways should also serve as focal points within the pedestrian network. See 6.3.</li> <li>3.14 Reduce the sign posted speed limits to 40km/h in the Town Centre to reflect town centre function, activity levels, support a safer pedestrian environment and to discourage traffic. Reinforce these sign posted limits with traffic management measures and streetscape enhancement.</li> <li>3.15 Develop and implement a Town Centre wayfinding parking signage strategy for off-street car parks in Donald Street to ensure traffic is clearly directed to these car parking and to avoid unnecessarily "circling" within the Town Centre to locate car parking spaces.</li> </ul>
<ul style="list-style-type: none"> <li>Car Parking</li> </ul>	<ul style="list-style-type: none"> <li>3.16 When detailed plans are finalised for the Foreshore development and the level of car parking required by this site is better understood, review the alternatives for consolidating car parking and upgrading facilities within the Town Centre. Alternatives may include: <ul style="list-style-type: none"> <li>Consolidating car parking within a multi storey car park within the Donald Street west car park site</li> <li>Underground options within the vicinity of the Foreshore</li> <li>Upgrading of the Donald Street East car park.</li> </ul> </li> <li>Implementation Program to highlight the removal of car parking within the Foreshore area.</li> <li>3.17 Develop a demand management strategy for car parking for major events and peak periods.</li> </ul>



	<ul style="list-style-type: none"><li>▪ 3.18 Improve the policing of car parking time restrictions during major events and peak times in order to improve the availability of car parking.</li></ul>
	<ul style="list-style-type: none"><li>▪ 3.19 Consider the extension of parking charges to areas other than the Foreshore during peak times and major events as part of a wider demand management strategy.</li></ul>



## Principle 4 - The area is attractive and safe to pedestrians and cyclists

Well-designed communities encourage and support walking and cycling. There are several elements within the natural and built environment that can affect the extent of cycling and walking, including mixed land use and density (a wide range of services within one locality will reduce dependence on motor vehicles and promote walking), adequate footpaths and cycle ways and facilities, street connectivity and design, transport infrastructure and systems, and linking residential, commercial and business areas.

Walking and cycle facilities can reduce vehicular traffic and make a place more attractive for visitors and residents. This principle is an essential part of the package of improvements that will make Nelson Bay a more attractive place to visit and stay for both short-term visitors and long-term residents. It is a key element in supporting economic sustainability and growth for the Town Centre.

### Key challenges

- Improving existing infrastructure such as roads, drive ways and pathways to accommodate shared facilities for pedestrians and cyclists.
- Recognising and providing for the transport needs of all age groups and disabilities within the community.
- Providing infrastructure such as end of trip facilities including bike lock up areas.
- Making pedestrian paths and cycle ways attractive so that they encourage people to use them and interact with the natural environment of Nelson Bay.

Recommendation	Implementation
<ul style="list-style-type: none"><li>▪ 4.1 Provide universal access for all users, including older people, children and people with disabilities through the upgrade of streets, such as ramps.</li></ul>	<ul style="list-style-type: none"><li>▪ Prepare a Pedestrian Access and Mobility Plan (PAMP) for Nelson Bay Town Centre.</li><li>▪ Include necessary infrastructure within the Public Domain Plan. Plan may need to be amended following the completion of the Pedestrian Access and Mobility Plan (PAMP).</li></ul>
<ul style="list-style-type: none"><li>▪ See recommendations 3.10 to 3.12 (Active transport within Principles 3)</li></ul>	



## Principle 5 - Incentives encourage development and improve public infrastructure

It is important to attract quality development and to provide incentives to help improve public infrastructure such as car parking, streetscape beautification, and cycle ways.

### Key challenges

- There is only limited funding available to Council.
- An additional levy on development within the Study Area has the risk that this may make alternative locations that do not have a levy, more appealing for investment and as a result not contribute to attracting development.
- Development incentives need to be sufficient to make it worthwhile for developers to assist in improving public infrastructure and the public domain.

Recommendation	Implementation
<ul style="list-style-type: none"><li>▪ 5.1 Develop a forward program of works for Nelson Bay Town Centre.</li></ul>	<ul style="list-style-type: none"><li>▪ Establish a team within the Council administration to develop a detailed implementation program including preliminary costings and resourcing options.</li></ul>
<ul style="list-style-type: none"><li>▪ 5.2 All future development within the Study Area should provide a high level of design.</li></ul>	<ul style="list-style-type: none"><li>▪ See 1.1 – Design excellence.</li></ul>
<ul style="list-style-type: none"><li>▪ 5.3 Identify sites that offer unique opportunities that can deliver important benefits to Nelson Bay and provide development incentives.</li></ul>	<ul style="list-style-type: none"><li>• Opportunity sites identified within this Strategy to be identified within the DCP and a control stating the relevant variation clause for FSR.</li></ul>
<ul style="list-style-type: none"><li>▪ 5.4 Significant development to be allocated a case manager.</li></ul>	<ul style="list-style-type: none"><li>• Internal policy to be developed for managing significant developments.</li></ul>



## Principle 6 - The character of Nelson Bay reflects its setting

Ensuring Nelson Bay preserves and promotes its most important asset, the natural environment, is important to its ongoing sustainability and success as a tourist destination and a great place to live. Development should reflect the outstanding quality of the natural setting of Nelson Bay

### Key challenges:

- Achieving a balance between development and protecting the environment.
- Interpreting the Town's character on behalf of a diverse population.
- Maintaining the 'town village feel' and attracting growth.

Recommendation	Implementation
<ul style="list-style-type: none"> <li>6.1 Enhance the streetscape, public spaces, pedestrian and cycleways, street furniture and signage in a well designed, coordinated and distinctive manner.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare a Public Domain Plan in consultation with Councils Civil Assets Team. A brief will be provided in more detail within the Implementation Program.</li> <li>Seek government support for a "main street program" to aid in implementing the Public Domain Plan.</li> </ul>
<ul style="list-style-type: none"> <li>6.2 Signage to reflect local character.</li> </ul>	<ul style="list-style-type: none"> <li>Council and the Business Chamber to develop a signage suite and theme concepts for Nelson Bay Town Centre.</li> <li>Upon adoption of a signage suite, include controls within the DCP detailing the relevant requirements.</li> </ul>
<ul style="list-style-type: none"> <li>6.3 Provide gateways to the Town Centre.</li> </ul>	<ul style="list-style-type: none"> <li>Develop distinctive gateway treatments to mark the entry to the Nelson Bay Town Centre at the following locations: <ul style="list-style-type: none"> <li>The Dowling Street and Church Street intersection</li> <li>The Dowling Street and Stockton Street intersection</li> <li>Church Street and Government Road intersection</li> </ul> <p>These should be designed reflecting local attributes and European and Indigenous heritage. Examples include sculpture, landscaping and signage. The gateways should consider the Public Art Strategy. The Public Domain Plan (6.1) should include the outcomes.</p> <p>Street tree planting around the perimeter of the Town Centre should be provided to visually support the gateways and provide a change in landscape as visitors enter the Town Centre.</p> </li> <li>DCP to include controls to protect and enhance gateways to the Town Centre.</li> </ul>
<ul style="list-style-type: none"> <li>6.4 Promote buildings with high quality design elements that contribute to the streetscape in a</li> </ul>	<ul style="list-style-type: none"> <li>DCP Controls to guide the following: <ul style="list-style-type: none"> <li>Colours</li> </ul> </li> </ul>





positive manner.	<ul style="list-style-type: none"><li>- Materials (Including local materials)</li><li>- Details and Finishes</li><li>- Façade design including consistent awnings within the street front.</li><li>- Entryways</li><li>- Sustainable buildings</li><li>- Massing and bulk</li><li>- Balconies and verandas</li><li>- Setbacks</li><li>- Building orientation</li><li>- View Preservation</li><li>- Built Form</li><li>- Entryways and Service Areas</li><li>- Large Format Developments.</li><li>- Street Amenity</li></ul>
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## Principle 7 - Apex Park is Nelson Bay's civic and community park

Due to its central location, Apex Park is vital in the revitalisation of the Town Centre and Foreshore areas. The Park holds significance for a number of community groups such as the veterans as the War Memorial is located within the centre of the park. It has the potential to play a greater role as a civic space and to attract a range of age groups through its proximity to both the Town Centre and Foreshore, restaurants, tourist services, cycle ways and pathways, the beach and its open space features.

### Key challenges

- Funding is available to revitalise Apex Park however, given the redevelopment of the Foreshore remains unresolved it is difficult to prepare a design that will integrate with the Foreshore.
- In addition to the above point, the revitalisation of Apex Park needs to include consideration of how access from Victoria Parade is provided, including the effectiveness of the overhead pedestrian bridge.
- The Park is a key element within the wider green link that runs from Carol Rotary Park in the east, through along the waterfront to Laman Street in the west.

Recommendation	Implementation
<ul style="list-style-type: none"><li>▪ 7.1 Revitalise Apex Park.</li></ul>	<ul style="list-style-type: none"><li>▪ Prepare a Masterplan for the revitalisation of Apex Park.</li><li>▪ (In the short term) Council to work with Councillors in identifying suitable works that are essential to Apex Park, keeping in mind the long term goals of integrating the park with wider functions detailed within this sStrategy. Consideration of the community consultation work to date regarding Apex Park should inform these decisions as should the design brief recommended above.</li></ul>



## Principle 8 - Buildings and places reflect the quality of Nelson Bay and enrich people's ability to enjoy it

Buildings that are well designed display a high regard for the local environment. This will create a place where people want to visit and live.

### Key challenges

- Encouraging developers to provide a high level of design
- Ensuring large developments do not reduce the quality of the Town Centre.
- Ensuring new development is appropriate for its location.

Recommendation	Implementation
<ul style="list-style-type: none"> <li>▪ 8.1 New developments should meet a high standard of design.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provide clauses within the LEP for: <ul style="list-style-type: none"> <li>- Design excellence</li> <li>- Variation to Building Heights in Designated Localities and Centres (as per figure 32)</li> <li>- Active Street Frontage (as per figure 33)</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>▪ 8.2 Ensure future large format developments do not negatively impact on the character of Nelson Bay.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The town living and commercial character area has been defined as a suitable location for large format buildings. A DCP control shall inform the design of these buildings.</li> <li>▪ Large developments may be required to be assessed by a Design Review Panel.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 8.3 Protect important views and promote the natural topography that makes Nelson Bay unique.</li> </ul>	<ul style="list-style-type: none"> <li>▪ DCP to guide development in protecting and enhancing important views identified within this Strategy (Figure 25).</li> <li>▪ The street tree plan should consider view preservation when selecting suitable species (6.6).</li> </ul>
<ul style="list-style-type: none"> <li>▪ 8.4 Prepare a Public Art Strategy</li> </ul>	<ul style="list-style-type: none"> <li>▪ A Public Art Strategy should undertake an assessment of public art opportunities that: <ul style="list-style-type: none"> <li>- Contribute to cultural identity and create a distinctive sense of place for Nelson Bay</li> <li>- Connect the community and be accessible to all age groups and backgrounds</li> <li>- Respond to themes of people past and present</li> <li>- Relate to the built and natural environment</li> <li>- Exemplify artistic excellence and integrity</li> <li>- Be sustainable, safe, and easily maintainable</li> <li>- Promote the natural setting and waterfront within public spaces</li> </ul> </li> </ul>



Recommendation	Implementation
	<ul style="list-style-type: none"><li>- Acknowledge the contribution that street furniture makes to the interpretation of urban character</li><li>- Inform the Wayfinding Strategy (3.3) and the Public Domain Plan (6.1)</li></ul>



## Principle 9 - Buildings can adapt to changing needs

Nelson Bay Town Centre should grow and adapt to changing community needs and preferences

### Key challenges

- The community's needs for different types of buildings changes over time.
- It is very difficult to predict future needs.
- Adaptive buildings may be more expensive to construct than single purpose buildings.

Recommendation	Implementation
<ul style="list-style-type: none"><li>▪ 9.1 Provide a diverse housing choice for varying needs by promoting mixed use development and adaptable buildings</li></ul>	The LEP continue to provide zoning for mixed uses.
<ul style="list-style-type: none"><li>▪ 9.2 Short term and temporary residential developments are constructed to cater for permanent residential use.</li></ul>	Provide controls within the DCP to ensure developments such as holiday units and apartments meet the requirements of SEPP 65.





## Principle 10 - Building scale responds to topography, views, solar access, and the surrounding streetscape

Nelson Bay has a beautiful setting in an amphitheatre with a backdrop of wooded ridgelines. Water views are highly valued. Building scale that responds to topography and respects neighbouring sites and public spaces can maximise community access to these areas and maintain a “feel” of the Town

### Key challenges

- Nelson Bay is comprised of many different sites with different owners.
- Different sites will be developed at different times.
- The quality of development can be greatly improved.

Recommendation	Implementation
<ul style="list-style-type: none"> <li>▪ 10.1 Ensure development on the Foreshore does not block views towards the waterfront, particularly development in front of the escarpment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Implementation Plan to provide details</li> <li>▪ Building height controls as described in the Strategy (figure 32) are to be included in Council’s development standards</li> </ul>
<ul style="list-style-type: none"> <li>▪ 10.2 Minimise overshadowing within the public domain.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Development controls protect solar access and reduce overshadowing.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 10.3 Critical view corridors should be preserved and enhanced.</li> </ul>	<ul style="list-style-type: none"> <li>▪ DCP control – Critical Views as per figure 25.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 10.4 Buildings should address the street and provide a consistent built edge to promote structure within the streetscape</li> </ul>	<ul style="list-style-type: none"> <li>▪ DCP controls to define appropriate setbacks within the character areas.</li> <li>▪ See recommendations within 6.4</li> </ul>
<ul style="list-style-type: none"> <li>▪ 10.5 Buildings should consider the impact roof furniture has on views from surrounding buildings.</li> </ul>	<ul style="list-style-type: none"> <li>▪ DCP control – Roof top furniture.</li> </ul>

### Conclusion:

Appendix 3 provides a table listing the recommendations outlined within this chapter with a further explanation of the key stakeholder groups required to implement the recommendations and also gives a priority rating to each task.



## 10.0 Implementation

### Funding Options

The Nelson Bay Town Centre and Foreshore Strategy identify the need for a range of public infrastructure improvements, including car parking, public domain and streetscape improvements, signage, and road and pedestrian network works.

An important issue for Council to consider is how this infrastructure is to be provided.

Local infrastructure can be resourced from a number of sources, including:

- General revenue
- Borrowings/loans
- Special rate levies
- User fees and charges
- Contributions, Grants and subsidies from other governments
- Development contributions
- Conditions of development consent (certain circumstances where the infrastructure is entirely attributable to development)

#### General Revenue

Council could fund an infrastructure improvement program over a number of years from its general revenue. The availability of funds from this avenue is likely to be very limited given other priorities Council may have elsewhere in the LGA, and the low level of “discretionary” funds available in the Council budget.

#### Ward Funds

Council has made provision for “Ward Funds” to provide a discretionary funding source, on a Ward basis, for projects which may have not received priority funding within Council’s adopted budget. Across the LGA, these funds amount to \$60,000 per annum from general revenue and 30% of land development profits. The availability of these funds is dependent on the priorities of Councillors, and varies from year to year in response to the level of land development profits.

#### Loans

Council could borrow funds for the required infrastructure. It would require a source of repayments which would likely be Council general funds (however, see also “special rate”, below). The ability to use this approach would be very dependent on Council’s ability to repay the loans from its general revenue, Council’s borrowing capacity, and the other priorities that Council may have for these funds.

Council’s Financial Plan 2011-2021 regards the option of loan funding as a viable and equitable mechanism for:

- Funding new/significantly upgraded major assets that provide a broad community benefit; or
- Funding capital projects that provide an anticipated future revenue stream sufficient to fund debt redemption payments subject to:
  - Council remaining within the upper limits of its debt Key Performance Indicators
  - Council remaining on target to achieve future operating result targets.

#### Special Rate

The use of a new locationally targeted special rate could be used to either undertake the development of new infrastructure as funds are received, or to repay borrowings for the needed infrastructure if Council wished to “advance” funds to the area on the basis of the funds being paid back from the rate revenue over a specific number of years, as has been previously used in Nelson Bay. This mechanism has the advantage of enabling the highest priority town improvements to be undertaken rapidly and would



meet Council's borrowing criteria of having a revenue stream sufficient to fund debt redemption payments. If a special rate was considered Council would need to ensure that it was well justified and that an equitable approach was being taken. Council would need to obtain Ministerial approval for the special rate.

Council currently has no special rates levied on business.

The Nelson Bay Town Improvement Special Rate was previously levied on businesses located in Nelson Bay Town Centre and raised approximately \$70,000 per annum to repay an internal loan for footpath paving and drainage works carried out in 2000/2001. Approval for that special rate expired in 2009/2010.

In addition, the Nelson Bay Town Improvement Promotion Special Rate was levied on approximately 750 to 1,100 properties between 2000/2001 and 2005/2006 raising \$130,000 to \$152,000 per annum for the purpose of funding the operations of Nelson Bay Town Management Committee Inc. which conducted promotional activities for the benefit of businesses and holiday accommodation within Nelson Bay. According to the Council Financial Plan 2011-2021, the Special Rate was discontinued for a number of reasons including income loss from ratepayers contesting their liability to pay the rate, objection from surveyed ratepayers who argued their properties did not benefit from the special rate, equity issues in relation to application of and exemption from the special rate, and advice from the Minister for Local Government in 2005/2006 that renewal of the special rate was not supported in the context of Council's further application for a special variation in the year 2006/2007.

### User Fees and Charges

In relation to user fees and charges, most of the required infrastructure is not of a type which readily lends itself to the imposition and/or efficient administration of user fees or charges. The availability of user pays revenue sources is likely to be limited.

### Car Parking

There is a limit to the extent to which car parking charges can be applied at Nelson Bay because of the potential impact on the competitiveness of the Nelson Bay Town Centre relative to nearby Salamander Bay where parking is free.

Council has a parking meter reserve that receives the profits from the Nelson Bay parking meters to assist in the future development of on and off - street car parking operation and associated assets. These funds may be available to assist in the development of additional car parking spaces at Nelson Bay. Future car parking spaces are likely to be located within a multideck car park. Multideck car parks are expensive and car parking charges in Nelson Bay are below the cost of providing additional multideck car parking spaces.

### Grants and Government Assistance

Government funding opportunities in the form of grants become available from time to time. These grants may be applicable to projects in the Nelson Bay Improvement Program. An advantage of the Improvement Program is that it will provide Council with a prioritised suite of projects to be drawn upon if grant funding opportunities arise.

An example is local infrastructure project support through the NSW Government's Regional Industries Investment Fund (note: funding is very limited under this fund and business linkages must be clearly demonstrated). Another possibility is the Hunter Infrastructure and Investment Fund. The guidelines for this fund are not yet available and it is likely to focus on long term regional infrastructure priorities rather than more localised infrastructure unless there is a critical regional issue.

Another example is the NSW Local Infrastructure Fund which provides an interest free loan scheme to bring forward infrastructure projects. This fund is directed towards projects that will facilitate the supply of land for housing or employment, and is currently (March 2012) closed.

The Regional Development Australia Fund may have a third round of funding. Funding is directed towards projects that accord with the RDA Regional Plan. In the Hunter RDA Plan tourism is identified as a support sector for "Growing the Regional Economy". Nelson Bay is one of the most important tourist destinations in the Region, especially for international visitors.

Nelson Bay Road, Church Street, Government Road and Victoria Parade are the responsibility of the NSW Government Road and Maritime Services (RMS, formerly RTA). As a result RMS may be willing to undertake or fund works associated with these roads. Other roads are the responsibility of Council.



### Major land holders - LPMA

The Foreshore area is Crown Land. The Land and Property Management Authority has selected Ardent Leisure as the preferred partner for the redevelopment of the Nelson Bay Harbour and Foreshore consistent with the Nelson Bay Foreshore Plan of Management. Any redevelopment may incorporate infrastructure improvements identified in the Nelson Bay Town Centre and Foreshore Strategy, such as elements of improving the pedestrian corridor from Stockton Street to the Foreshore. In addition, contributions to off-site infrastructure related to car parking may result from the relocation of parking on the Foreshore that is advocated by the Nelson Bay Foreshore Plan of Management.

### Public Private Partnerships

This term describes a variety of arrangements whereby a private sector body provides infrastructure and/or services that are traditionally provided directly by the public sector. These are usually arrangements where a cash flow is involved, such as user charges or some other revenue stream including payments from government. Often the infrastructure is handed over to public ownership after a specified period. Public private partnerships can involve very complex financial and institutional arrangements, and NSW Treasury has produced guidelines to assist in their use.

### S94 Contributions and Voluntary Planning Agreements

Two frequently used mechanisms of resourcing infrastructure for new urban development arise from provisions of the Environmental Planning and Assessment Act. These mechanisms are:

- Development contributions pursuant to Section 94 or Section 94A (fixed percentage levy) of the Environmental Planning and Assessment Act. Section 94B of the Act states that Council can only levy contributions in accordance with a Contributions Plan.
- Development contributions made as a result of a voluntary planning agreement (VPA) pursuant to Section 93F of the Environmental Planning and Assessment Act. A VPA is a legally binding agreement, entered into on a voluntary basis between a developer and a planning authority (or authorities). A wide range of matters can be addressed through a planning agreement; however they must be for a public purpose.

The Department of Planning and Infrastructure provides a range of Directions, Circulars, and Practice Notes which define the manner in which Section 94 and 94A Plans and voluntary planning agreements (VPA) are to be structured, applied and managed.

Council's existing Section 94A Development Contributions Plan is very unlikely to raise the amount of revenue required to resource new and upgraded infrastructure identified in the Nelson Bay Improvement Program.

A Development Contributions Plan could be developed to levy new development for infrastructure. The benefits of such a levy are very dependent on the quantum and rate of new development. The revenue available for expenditure will be very limited if development proceeds at a slow pace or only a small amount of development occurs.

A Development Contributions Plan has some limitations. Firstly, a Contributions Plan can only address infrastructure needs arising from new development, not backlogs or refurbishment. Secondly, Contributions Plans place a high reliance on Council to provide infrastructure even if contributions are insufficient to cover the cost. Thirdly, a Contributions Plan is reliant on the accuracy of costing estimates. If the costing estimates are incorrect or costs of infrastructure delivery escalate faster than the CPI, Council will have to make up any shortfall in funds. A clearly stated nexus between the required infrastructure and new development, as well as regular and frequent reviews of the Contributions Plans and its underlying assumptions are effective ways of reducing these risks.

A VPA could potentially address a range of matters including items in the proposed Nelson Bay Improvement Program. VPAs have the advantage of being relatively flexible in the matters they can address. For example under the provisions of a VPA a developer may choose to fully fund priority infrastructure or may offer a cash contribution to Council for provision of infrastructure. A VPA can expedite the delivery of infrastructure and possibly include ongoing maintenance provisions for infrastructure, or it may contain a combination of these provisions. VPAs have a number of limitations. Firstly, a VPA must be proposed by a developer, not by Council. Secondly, the contents of a VPA are often the subject of a lengthy negotiation process and the outcomes of these negotiations may not result in resourcing of the entire required infrastructure. Thirdly, a VPA is not spatially comprehensive; it is usually negotiated with a specific developer with reference to development on their land. Reliance on



VPA's can lead to a patchwork approach to infrastructure resourcing and provision unless there is some way of co-ordinating their content.

The Nelson Bay Improvement Program and an accompanying Development Contributions Plan provide the opportunity to prepare a comprehensive list of required infrastructure and an estimated cost of provision. An Improvement Program and Development Contributions Plan also can provide a list of priority infrastructure that could potentially be delivered under the provisions of a VPA and a checklist to ensure that priority infrastructure is considered.

### Conditions of Development Consent

Consent to undertake a specific development may incorporate conditions requiring certain improvements to public infrastructure to be undertaken as part of the development where there is a relationship between that development and that infrastructure. In addition, the Nelson Bay Town Centre and Foreshore Strategy recommends that provision be made to vary development standards such as maximum building height or floor space ratio where a development is of outstanding design excellence and provides a strategic public benefit.

### Other revenue

Council has the care control of management of considerable areas of Crown land. In some cases activities are carried out which yield revenue, such as holiday (caravan) parks or kiosk/café leases. Net revenue from these activities must be reinvested in the surrounding Crown Lands. Apex Park and the Foreshore is Crown Land, and accordingly may be able to benefit from this revenue source, other priorities permitting.

### Considerations

Implementing the Nelson Bay Improvement Program presents a number of challenges. There are a number of ways in which the Program can be resourced. Each of these mechanisms has advantages and disadvantages.

It is likely that a combination of resourcing mechanisms will be used over time.

The Nelson Bay Improvement Program in conjunction with a Section 94 Plan should provide Council with a "checklist" against which to ensure that priorities are being addressed and provide a mechanism to levy developers for some of the costs of needed infrastructure.

It is essential that the Section 94 Plan is reviewed regularly and frequently in order to reduce costing, timing and cash flow risks.



## Appendix 1 – Critical View Analysis

View 1: While this vantage point is not located within the Study Area, the positioning of the Town Centre within the surrounding hills and the potential effect building heights have on the natural forming environment is important to recognise and preserve. View 1 illustrates how Gan Gan Hill provides a dramatic backdrop to the Town Centre by framing the Town Centre buildings.

The connection between Gan Gan Hill and the waterfront should be preserved.



View of the Town Centre from the eastern end of the Western Groyne

View 2: The view looking South from the Western Groyne shows the ridgelines that surround Nelson Bay Town Centre. This allows for views from the North of the town to maintain strong landscape character and setting.

The view lines between Kurrara Hill and the marina form an axis for the main street of the Town Centre, which should be maintained.

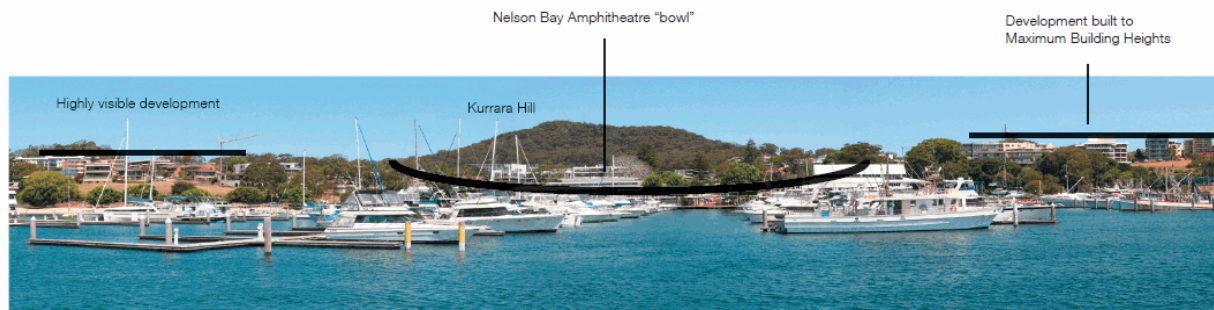


Image of Nelson Bay Town Centre and Marina from Western Groyne

View 3: The view east along Government Road is an important corridor due to it being one of the main approaches and gateway locations into the Town Centre. Views towards the waterfront are blocked by residential developments of up to 4 to 5 metres and by vegetation in Apex Park towards the Town Centre approach. Glimpses of Tomaree Heads towards the east are provided in the background.

While 4 to 5 storey buildings dominate the streetscape on the northern road edge, the southern side is predominantly developments of a lower scale with a proportion of land remaining vacant. Future development fronting Government Road should consider this important view corridor and how buildings can assist in creating an inviting corridor that draws on the surrounding natural features and highlights the road as an important gateway.






Corner of Government Road, Laman Street and Victoria Parade provides a break between the residential developments and vegetation within Apex Park. Glimpses of the waterfront are provided.

View 4: View 3 leads into view 4 as Government Road swings around onto Victoria Avenue between Apex Park and the Town Centre. This corridor is an important feature due to the sloping nature of the road and the first impressions this approach offers visitors from a high vantage point.

This view point demonstrates the importance of the current Seabreeze site, located on the corner of Victoria Avenue and Stockton Street in terms of its potential in contributing to the Town Centre character and built form outcomes due to its central location. This site should be recognised as a key site for future development proposals, in implementing high quality design outcomes that promote this view corridor and appropriately addressing the street in terms of scale, setback, and landscaping.



View looking East down Victoria Avenue illustrates the current lack of structure and coordination of building frontages towards the street and the impact signage can have on the locality.

<p>View 5: The view corridor looking North from Stockton Street (Northern end), across Victoria Parade, provides glimpses of the water body of Port Stephens and directly across Port Stephens to Tea Gardens.</p>	
<p>View 6: The reverse view (of view 5) along Stockton Street (Northern end) towards the North provides views up to Kurrara Hill. Currently the Marina pavilion obstructs this axis for pedestrians along the street frontage.</p> <p>These views create an axis between Kurrara Hill and the Foreshore and is important in linking these two areas. Currently the street tree selection and the lower scale building forms do little to contribute to this important axis. Future development and streetscape elements should reinforce this important axis.</p>	 <p>Stockton Street looking South towards Kurrara Hill from Victoria Parade with the pavilion obstructing the street alignment.</p>  <p>Similar view provided from Apex Park</p>
<p>View 7: The view along Donald Street emphasises the change in</p>	<p>View from Church Street, along Donald Street with Tomaree Heads appearing in the background.</p>



topography within the Town Centre and also illustrates the reduced level of street amenity in this area. The street is relatively wide with minimal landscaping and street trees. The absence of street trees and awnings provides no opportunity for shade for pedestrians and this is reflected in the lack of active frontages that encourage people to spend time on Donald Street, particularly the western end. Further, building form provides little structure to the street due to variations in bulk, scale and setback.

Donald Street presents an opportunity for streetscape regeneration work such as street tree planting, and the need for future controls to address building form.



View 8: Church Street is the focus of view 7 due to its connection between the two main gateway areas from the West. It is also important due to it being the edge of the Town Centre (East) and low rise residential (West).

Implementation of appropriately sized and consistent street tree planting will assist in framing this important corridor and would provide a natural break between the two development types and reduce the impact of higher buildings on lower developments.

Consideration towards an appropriate height of buildings fronting this street is also needed.



View looking North along Church Street, demonstrating the lack of streetscape elements and the alternative development types fronting both sides of the street.

View 9: Perhaps one of the most significant views and corridor is that provided from the top of Stockton Street after entering the South West gateway. Views stretch out towards Port Stephens and a natural sense of arrival due to the sloping topography.

Once again, poor consistency of building forms and setbacks, a lack of streetscape elements and poor street width to building height ratios fail to provide a strong corridor.



View along Stockton Street highlights the importance of its role as

Future street tree selection should consider an appropriate form type that will reinforce this axis. Additionally, species endemic to the location will provide a connection with the surrounding natural environment.

Also impacting on this view is the tree located between the two Norfolk Pines. This tree is interrupting the focal point the two Pines are providing. Its removal should be considered within future works of Apex Park.

the central axis for the Town Centre due to its views towards Port Stephens and its approach from one of the main gateways into the Town Centre.



Secondary to Stockton Street is the axis also provided on Yacaaba Street (parallel to Stockton Street shown below)



View 10: Identifies the view corridor from Stockton Street down to Nelson Bay Beach. This view is currently impeded by the Visitor Information Centre and the overhead pedestrian bridge.





View 11: Views out over the top of the escarpment towards the waterfront should be preserved and appropriate height restrictions for future development within the Foreshore area in this location should ensure buildings sit below the Bridal Path.



View provided from the Bridle Path looking north.

View 12: Similar to Stockton Street, a view corridor exists along the length of Yacaaba Street. Given Yacaaba Street terminates at Magnus Street views are blocked towards the waterfront.



Yacaaba Street terminates at Magnus Street where views are blocked by developments and vegetation.



## Appendix 2 – LEP Clauses

## **Variation Clause and others V3**

### **1.1 Active Street Frontage**

- (1) The objective of this clause is to promote uses that attract pedestrian traffic along certain ground floor street frontages in commercial and activity centres.
- (2) This clause applies to land identified as "Active Street Frontage" on the Active Street Frontages Map.
- (3) Development consent must not be granted to the erection of a building, or a change of use of a building, on land to which this clause applies unless the consent authority is satisfied that the building will have an active street frontage after its erection or change of use.
- (4) Despite subclause (3), an active street frontage is not required for any part of a building that is used for any of the following:
  - (a) entrances and lobbies (including as part of a mixed use development);
  - (b) access for fire services;
  - (c) vehicle access.
- (5) In this clause, a building has an active street frontage if all premises on the ground floor of the building facing the street are used for the purposes of commercial premises.

### **1.2 Street frontage**

- (1) The objective of this clause is to ensure that development has an appropriate horizontal proportion in relation to their vertical proportions.
- (2) This Clause applies to land identified as having a minimum street frontage on the "Minimum Street Frontage" map.
- (3) Development consent must not be granted to the erection of a building on land to which this Clause applies that does not have at least one street frontage of 20 metres or more.
- (4) Despite subclause (2), the consent authority may grant consent to the erection of a building on land referred to in that subclause if it is of the opinion that:
  - (a) the building has a height of no more than 9 metres
  - (b) due to the physical constraints of the site or an adjoining site or sites, it is not possible for the building to be erected with at least one street frontage of 20 metres or more, and
  - (c) the development is consistent with the aims and objectives of this Plan, and
  - (d) the requirements of the Port Stephens Development Control Plan and other relevant Council policies.
- (5) Clause 1.4 Variation to Building Heights in Designated Localities and Centres does not apply to developments to which subclause (4) applies.

### **1.3 Design excellence**

- (1) This Clause applies to development involving the erection of a new building or external alterations to an existing building on land to which this Plan applies.
- (2) This Clause applies to land identified as requiring design excellence on the “Design Excellence” map.
- (3) Development consent must not be granted for development to which this clause applies unless the consent authority considers that the development exhibits design excellence.
- (4) In considering whether the development exhibits design excellence, the consent authority must have regard to the following matters:
  - (a) whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved,
  - (b) the contribution of the building to the quality and identity of the area
  - (c) whether the form and external appearance of the development will improve the quality and amenity of the public domain,
  - (d) whether the development detrimentally impacts on view corridors,
  - (e) the requirements of the Port Stephens Development Control Plan
  - (f) how the development addresses the following matters:
    - (i) the suitability of the land for development,
    - (ii) existing and proposed uses and use mix,
    - (iii) heritage issues and streetscape constraints,
    - (iv) scale, and the relationship of the development with other development (existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form,
    - (iv) the ability of the location to support the proposed intensity of development
    - (v) amenity for users of the development and those using the surrounding buildings and spaces,
    - (vi) bulk, massing and modulation of buildings,
    - (vii) street frontage heights,
    - (viii) solar access controls,
    - (ix) environmental impacts such as sustainable design, overshadowing, wind, reflectivity, energy budget and water reuse
    - (x) the achievement of the principles of ecologically sustainable development,
    - (xi) pedestrian, cycle, vehicular and service access, circulation and requirements,
    - (xii) Safety and security, both internal to the development and for the public domain,
    - (xiii) the impact on, and any proposed improvements to, the public domain.

#### **1.4 Variation to Building Heights in Designated Localities and Centres**

- (1) The objective of this Clause is to provide incentives for developments that provide a major positive contribution to the appearance, social and economic vitality and environmental performance of a centre or locality.
- (2) This clause applies to development involving the erection of a new building or external alterations to an existing building on land to which this Plan applies.
- (3) This Clause applies to land identified as being a designated locality or centre on the “Designated Localities and Centres” map.
- (4) The consent authority may grant development consent to the erection or alteration of a building to which this clause applies that has a height of not more than 7 metres higher than that allowed by the Height of Buildings Map and a floor space ratio of no more than 0.5:1 greater than that allowed by the Floor Space Ratio Map.
- (5) However, development consent must not be granted under subclause (4) unless the consent authority considers that the development exhibits outstanding design excellence and provides a strategic public benefit.

*[note: potential strategic public benefits are to be defined as to be provided by policy, for example through a clause in the DCP]*

- (6) The development application must be accompanied by a report detailing the way in which the development provides a major positive contribution to the appearance, social and economic vitality and environmental performance of a centre or locality consistent with the requirements of this Clause to the satisfaction of the consent authority.
- (7) In considering whether the development exhibits outstanding example of design excellence and provides a strategic public benefit, the consent authority must have regard to the following matters:
  - (a) the degree to which the development addresses the matters listed in Clause 1.3 (Design Excellence) to an outstanding extent
  - (b) the nature of the strategic public benefit associated with the development
  - (c) the degree to which the development contributes to the economic and social vitality of the locality beyond that normally expected of a development
  - (d) the environmental performance of the development
  - (e) the findings of a design excellence review of the development by an urban design review panel comprised of independent urban design experts appointed by the consent authority
  - (f) requirements of the Port Stephens Development Control Plan and other relevant Council policies
  - (g) strategic objectives for the locality contained in a State, Regional or Local strategic document or policy.
- (8) If the proposed development is the land identified as a “opportunity site” on the “Designated Localities and Centres” Map, the consent authority may grant development consent to the erection or alteration of a building to



which this clause applies that has a height of not more than 7 metres higher than that allowed by the Height of Buildings Map and a floor space ratio of no more than 1:1 greater than that allowed by the Floor Space Ratio Map.

- (9) However, development consent must not be granted under subclause (8) unless the consent authority considers that the development meets all the requirements of this Clause (1.4).
- (10) If the proposed development is only for part of the land identified as an “opportunity site” on the “Designated Localities and Centres”, consent shall not be granted for the development unless a concept plan has been lodged to the satisfaction of the consent authority.
- (11) The concept plan referred to in subclause (10) must address
  - (a) the relationship of the development to the balance of the site
  - (b) the potential staging and location of future development within the site
  - (c) the relationship of the development to surrounding sites
  - (d) the relationship of the development to the designed locality or area.
- (10) Development consent must not be granted under subclause (4) or subclause (8) unless after considering the matters referred to in this Clause (1.4) the Director-General concurs with the granting of the development consent.





Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
	<ul style="list-style-type: none"> <li>1.3 Encourage events in the Town Centre such as community markets and night time events that focus on what the region has to offer such as food and beverage products and local entertainment.</li> </ul>	<ul style="list-style-type: none"> <li>Encourage community events within public spaces including roads and Apex Park. This is to be achieved through the review of planning controls, and Plans of Management.</li> <li>Investigate ways of facilitating events to assist potential organisers in understanding Councils approval process and find ways to streamline applications.</li> <li>Prepare guidelines for traffic management for large events, including preferences for car parking, shuttle services if required, and way finding.</li> <li>Identify the necessary facilities (such as electricity points, marquee anchor points etc.) within public domain areas such as Stockton or Magnus Streets or Apex Park within the Public Domain Plan (See 6.1).</li> </ul>	<p>Strategic Planning.</p> <p>Economic Development Unit</p> <p>Economic Development Unit</p>	<p>Medium</p> <p>Medium</p> <p>Medium</p>	
	<ul style="list-style-type: none"> <li>1.4 Provide a vehicle to co-ordinate the identified recommendations and activities to facilitate Nelson Bay attract economic development.</li> </ul>	<ul style="list-style-type: none"> <li>Examine a 'Place Management' role.</li> </ul>	Economic Development Unit	High	
	<ul style="list-style-type: none"> <li>1.5 Encourage footway dining.</li> </ul>	<ul style="list-style-type: none"> <li>Review Councils current policy on footway dining and conduct an audit to identify needs for footway dining.</li> </ul>	<ul style="list-style-type: none"> <li>Civil Assets</li> </ul>	Medium	



Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
	<ul style="list-style-type: none"><li>1.6 All dwelling space in the Town Centre is to be able to accommodate permanent residents even if initially intended for short term holiday accommodation. The intent here is for an increase of residents within the Town Centre that will improve security, surveillance and utilise commercial facilities at a variety of times throughout the day and night.</li></ul>	<ul style="list-style-type: none"><li>Temporary or short term tourist and visitor accommodation other than backpacker, bed and breakfast, farm stay, hotel and motel uses should comply with SEPP 65 requirements.</li></ul>	<ul style="list-style-type: none"><li>Strategic Planning</li></ul>	High	Control – Tourist accommodation.



Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
2. Town centre and Foreshore are well connected.	<ul style="list-style-type: none"> <li>2.1 Improve pedestrian access across Victoria Parade.</li> </ul>	<ul style="list-style-type: none"> <li>Review the adequacy of the pedestrian bridge as the most suitable option to cross Victoria Parade. This should be considered along with connectivity considerations when design and development phases of Apex Park and the Foreshore redevelopment occur.</li> </ul>	<ul style="list-style-type: none"> <li>Facilities and Services/ Strategic Planning</li> </ul>	High Medium	
		<ul style="list-style-type: none"> <li>Identify pedestrian crossing improvements including distinctive pedestrian area pavement and possibly a "scramble" crossing at Stockton Street and Victoria Parade. Improvements to be identified within the Improvement Plan and Public Domain Plan.</li> <li>Ensure the crossing point to Apex Park and the waterfront at Stockton Street is the priority route for pedestrians. Treatments such as consistency in paving and materials and avenue planting through Apex Park should be considered in the design review of Apex Park. Consistency is to be reflected within the Public Domain Plan.</li> <li>Discourage through traffic utilising Government Road and Victoria Parade by promoting the alternative direct route along Dowling Street. See Section 3.1</li> <li>Explore the option of Yacaaba Street extension in conjunction with the future Foreshore redevelopment and options for the Donald Street east car park.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> <li>Civil assets</li> </ul>		
			<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	High	
			<ul style="list-style-type: none"> <li>Civil Assets</li> </ul>		
			<ul style="list-style-type: none"> <li>Civil Assets</li> </ul>		





Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
	<ul style="list-style-type: none"> <li>2.2 Investigate how Apex Park can connect the Town Centre and Foreshore areas.</li> </ul>	<ul style="list-style-type: none"> <li>Consider design options to promote connectivity such as an overhead bridge over Teramby Road or bringing buildings closer to Apex Park on the Foreshore side, and widen the stairs stepping down onto the Foreshore. It is noted this recommendation will rely on integration with plans for the Foreshore redevelopment.</li> <li>See recommendation regarding preparing a master plan for Apex Park (Recommendation 7.1, <i>Principle 8 - Apex Park is Nelson Bay's civic and community park</i>)</li> <li>Implementation Program to detail design considerations and connectivity.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning (Apex Park and green linking area Design Brief) &amp; LPMA (Foreshore redevelopment)</li> <li>Strategic Planning</li> </ul>	Medium	
	<ul style="list-style-type: none"> <li>2.3 Protect and enhance natural view corridors and pedestrian links between the Town Centre and Foreshore.</li> </ul>	<ul style="list-style-type: none"> <li>See recommendation regarding preparing a masterplan for Apex Park (Recommendation 7.1, <i>Principle 8 - Apex Park is Nelson Bay's civic and community park</i>)</li> <li>DCP Control – Critical view corridors.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	High	Control – Critical View Corridors.
		<ul style="list-style-type: none"> <li>In conjunction with the masterplan work for Apex Park, review the current location of the Visitor Information Centre. Options may include:</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning – Provide information in the Implementation Plan</li> </ul>	Medium	
	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Lot 1 DP 1155736 (43 Stockton Street Nelson Bay) as a suitable alternative location for the Visitor Information Centre. The site is located to the West of the Nelson Bay Bowling Club and has a number of elements that suggest it may be a suitable location:               <ul style="list-style-type: none"> <li>It is under the ownership of the Crown.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Economic Development Unit and</li> </ul>		



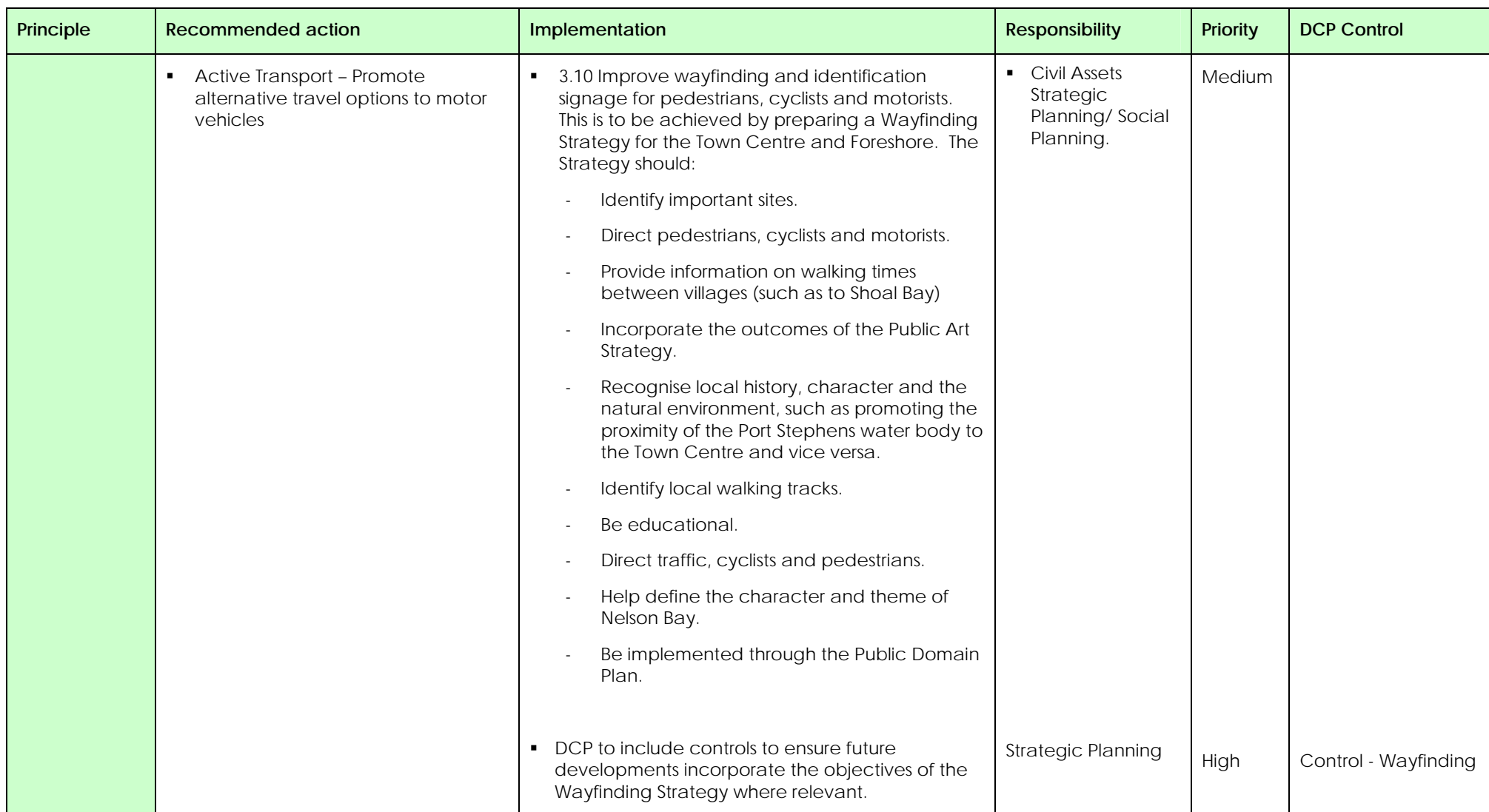
Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
		<ul style="list-style-type: none"> <li>- It is located on a high point looking out over Nelson Bay which would assist in good orientation for visitors.</li> <li>- It appears to have space available within the existing car park area without impacting on the adjacent gardens and memorial area.</li> <li>- It is at the entrance of Nelson Bay Town Centre and is located on the Town Centre alternative route preferred option (Dowling Street).</li> <li>▪ Note that while the Tourism Plan currently supports the decision to move the Visitor Information Centre to a more accessible location, any such decision should involve further participation from Stakeholders, including but not limited to: Councils Economic Development Unit and Port Stephens Tourism Limited.</li> </ul>	Property Services – decision to move		
<b>3. Town Centre is easy to access with reduced through traffic.</b>	Improve the road network capabilities	<ul style="list-style-type: none"> <li>▪ 3.1 Promote Dowling Street/Fingal Street/Trafalgar Street as the alternative route for traffic travelling to Little Beach, Shoal Bay and Fingal Bay by firstly undertaking a design, costing and consultation process for the upgrade of the Trafalgar Street and Shoal Bay Road intersection.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Civil Assets and Project Services (Design and Cost)</li> </ul>	High	
		<ul style="list-style-type: none"> <li>▪ 3.2 Ensure the emerging Public Domain Plan for the Nelson Bay Town Centre includes street tree planting along Government Road starting at the</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strategic Planning</li> </ul>	High	



Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
		Church Street intersection and down Victoria Parade to assist in traffic management by "psychologically" narrowing the street.			
		<ul style="list-style-type: none"> <li>3.3 Move the location of the 40km/h sign posting on Government Road west to the Church Street intersection to reinforce this gateway location and to encourage motorists slow down before the decline of Government Road east towards Apex Park.</li> </ul>	<ul style="list-style-type: none"> <li>Civil Assets</li> </ul>	Medium	
		<ul style="list-style-type: none"> <li>3.4 Extend the 40km/h speed limit along the length of Victoria Parade to its intersection with Shoal Bay Road.</li> </ul>	<ul style="list-style-type: none"> <li>Civil Assets</li> </ul>	Medium	
		<ul style="list-style-type: none"> <li>3.5 Undertake further analysis to understand critical design considerations, benefits and cost effectiveness of extending Yacaaba Street as a link between the Magnus Street and the Teramby Road/Government Road/Victoria Parade roundabout. This should be conducted in conjunction with detailed planning of the Foreshore.</li> </ul>	<ul style="list-style-type: none"> <li>Civil Assets</li> </ul>	Long	
	<ul style="list-style-type: none"> <li>Public Transport Improvements.</li> </ul>	<ul style="list-style-type: none"> <li>3.6 Upgrade the main bus stop/public transport interchange on Donald Street.</li> </ul>	<ul style="list-style-type: none"> <li>Civil Assets</li> </ul>	Medium	



Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
		<ul style="list-style-type: none"><li>3.7 Should the Yacaaba Street extension be implemented and include the capacity for a bus route, a bus stop should be provided along Victoria Parade.</li></ul>	<ul style="list-style-type: none"><li>Strategic Planning/LPMA</li></ul>	High	
		<ul style="list-style-type: none"><li>3.8 Improve wayfinding and identification signage for pedestrians – i.e. pedestrian signage that includes directions and walking time to popular destinations in order to encourage walking through the Town Centre to the Foreshore.</li><li>3.9 Future detailed design proposals for the Foreshore shall include the provision of temporary drop off parking for large vehicles such as buses and provide for their long term parking elsewhere. Include requirement within the Improvement Plan.</li></ul>	<ul style="list-style-type: none"><li>Strategic Planning</li></ul>	High	







Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
		<ul style="list-style-type: none"> <li>3.11 Provide bicycle end of journey facilities, such as cycle racks in key Town Centre and Foreshore areas. The cycle racks should integrate with other street furniture elements such as bollards and street poles/lights. The requirements are to be included within the review of the draft Footpath and Cycle Strategy recommended under 4.4 and inform the recommended Public Domain Plan.</li> </ul>	Civil Assets/Strategic Planning		
		<ul style="list-style-type: none"> <li>3.12 Complete missing footpath and cycle links in the Town Centre and Foreshore area and promote this comprehensive network with effective signage. The plan should also identify the necessary facilities such as end of trip facilities, bike lock up areas and storage and minimise on road paths. This is to be done by updating the Draft Footpath and Cycle Strategy to reflect the recommendations of this strategy and use it to inform the Public Domain Plan. See 6.1.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning and Facilities and Services Transport Team.</li> </ul>	Medium	
	<ul style="list-style-type: none"> <li>Traffic Management and Road Safety Improvements</li> </ul>	<ul style="list-style-type: none"> <li>3.13 Introduce gateway treatments to Nelson Bay Town Centre. This should include substantial landscaping at the entries to reinforce a change in traffic conditions and highlight the Town Centre approach in order to slow down traffic. The gateways should also serve as focal points within the pedestrian network. See 6.3.</li> </ul>	<ul style="list-style-type: none"> <li>Civil Assets</li> </ul>	Medium	
		<ul style="list-style-type: none"> <li>3.14 Reduce the sign posted speed limits to 40km/h in the Town Centre to reflect town centre function, activity levels, support a safer pedestrian environment and to discourage traffic. Reinforce these sign posted limits with</li> </ul>	<ul style="list-style-type: none"> <li>Civil Assets</li> </ul>	Medium	



Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
		traffic management measures and streetscape enhancement.			
		<ul style="list-style-type: none"> <li>3.15 Develop and implement a Town Centre wayfinding parking signage strategy for off-street car parks in Donald Street to ensure traffic is clearly directed to these car parking and to avoid unnecessarily "circling" within the Town Centre to locate car parking spaces.</li> </ul>	<ul style="list-style-type: none"> <li>Civil Assets</li> </ul>	Medium	
	<ul style="list-style-type: none"> <li>Car Parking</li> </ul>	<ul style="list-style-type: none"> <li>3.16 When detailed plans are finalised for the Foreshore development and the level of car parking required by this site is better understood, review the alternatives for consolidating car parking and upgrading facilities within the Town Centre. Alternatives may include:               <ul style="list-style-type: none"> <li>Consolidating car parking within a multi storey car park within the Donald Street West car park site.</li> <li>Underground options within the vicinity of the Foreshore.</li> <li>Upgrading of the Donald Street East car park.</li> </ul> </li> <li>Implementation Program to highlight the removal of car parking within the Foreshore area.</li> </ul>	<ul style="list-style-type: none"> <li>LPMA and Council</li> <li>Strategic Planning (DCP)</li> </ul>		
		<ul style="list-style-type: none"> <li>3.17 Develop a demand management strategy for car parking for major events and peak periods.</li> </ul>	<ul style="list-style-type: none"> <li>Economic Development Unit/Civil Assets</li> </ul>	Medium	



Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
		<ul style="list-style-type: none"> <li>3.18 Improve the policing of car parking time restrictions during major events and peak times in order to improve the availability of car parking.</li> </ul>	<ul style="list-style-type: none"> <li>Development Assessment &amp; Compliance</li> </ul>		
		<ul style="list-style-type: none"> <li>3.19 Consider the extension of parking charges to areas other than the Foreshore during peak times and major events as part of a wider demand management strategy.</li> </ul>	<ul style="list-style-type: none"> <li>Economic Development Unit/Civil Assets</li> </ul>	Medium	
<b>4. The area is attractive and safe to pedestrians and cyclists.</b>	<ul style="list-style-type: none"> <li>4.1 Provide universal access for all users, including older people, children and people with disabilities through the upgrade of streets, such as ramps.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare a Pedestrian Access and Mobility Plan (PAMP) for Nelson Bay Town Centre.</li> <li>Include necessary infrastructure within the Public Domain Plan. Plan may need to be amended following the completion of the Pedestrian Access and Mobility Plan (PAMP).</li> </ul>	<ul style="list-style-type: none"> <li>Social Planning.</li> </ul>	Medium	
			<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	High	
<b>5. Incentives encourage development and improve public infrastructure.</b>	<ul style="list-style-type: none"> <li>5.1 All future development within the Study Area should provide a high level of design.</li> </ul>	<ul style="list-style-type: none"> <li>See 1.1 – design excellence.</li> </ul>			
	<ul style="list-style-type: none"> <li>5.3 Identify sites that offer unique opportunities that can deliver important benefits to Nelson Bay and provide development incentives.</li> </ul>	<ul style="list-style-type: none"> <li>Opportunity site identified within this Strategy to be identified within the DCP and a control stating the relevant variation clause for FSR.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	High	Control – Opportunity Sites



Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
	<ul style="list-style-type: none"> <li>5.4 Significant development to be allocated a case manager.</li> </ul>	<ul style="list-style-type: none"> <li>Internal policy to be developed for managing significant developments.</li> </ul>	<ul style="list-style-type: none"> <li>Development Assessment &amp; Compliance</li> </ul>	Medium	Provide details within the DCP
6. The character of Nelson Bay reflects its setting	<ul style="list-style-type: none"> <li>6.1 Enhance the streetscape, public spaces, pedestrian and cycleways, street furniture and signage in a coordinated and distinctive manner with a high level of design consideration.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare a Public Domain Plan in consultation with Councils Civil Assets Team. A brief will be provided in more detail within the Implementation Program.</li> <li>Seek government support for a "main street program" to aid in implementing the Public Domain Plan.</li> </ul>	Civil Assets  Strategic Planning	The Public Domain Plan is a high priority however is reliant on a number of related strategies and plans (listed)	
	<ul style="list-style-type: none"> <li>6.2 Signage to reflect local character.</li> </ul>	<ul style="list-style-type: none"> <li>Council and the Business Chamber to develop a signage suite and theme concepts for Nelson Bay Town Centre.</li> <li>Upon adoption of a signage suite, include controls within the DCP detailing the relevant requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> <li>Economic Development</li> <li>Business Chamber</li> </ul>	Medium	Control - Signage



Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
	<ul style="list-style-type: none"> <li>6.3 Provide gateways to the Town Centre.</li> </ul>	<ul style="list-style-type: none"> <li>Develop distinctive gateway treatments to mark the entry to the Nelson Bay Town Centre at the following locations:               <ul style="list-style-type: none"> <li>The Dowling Street and Church Street intersection</li> <li>The Dowling Street and Stockton Street intersection</li> <li>Church Street and Government Road intersection</li> </ul> </li> <li>These should be designed reflecting local attributes and European and Indigenous heritage. Examples include sculpture, landscaping and signage. The gateways should consider the Public Art Strategy. The Public Domain Plan (6.1) should include the outcomes.</li> <li>Street tree planting around the perimeter of the Town Centre should be provided to visually support the gateways and provide a change in landscape as visitors enter the Town Centre.</li> <li>DCP to include controls to protect and enhance gateways to the Town Centre.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> <li>Strategic Planning</li> </ul>	<p>High - although dependent on the delivery of the Public Art Strategy.</p> <p>High</p>	Control - Gateways





Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
	<ul style="list-style-type: none"> <li>6.4 Promote buildings with high quality design elements that contribute to the streetscape in a positive manner.</li> </ul>	<ul style="list-style-type: none"> <li>DCP Controls to guide the following:               <ul style="list-style-type: none"> <li>Colours</li> <li>Materials (Including local materials)</li> <li>Details and Finishes</li> <li>Façade design including consistent awnings within the street front.</li> <li>Entryways</li> <li>Sustainable buildings</li> <li>Massing and bulk</li> <li>Balconies and verandas</li> <li>Setbacks</li> <li>Building orientation</li> <li>View Preservation</li> <li>Built Form</li> <li>Entryways and Service Areas</li> <li>Large Format Developments.</li> <li>Street Amenity</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	High	Controls – Colours, Materials, Details and Finishes, Façade design including consistent awnings within the street front, Entryways, Sustainable buildings, Massing and bulk, Balconies and verandas, setbacks, Building orientation, View Preservation, Built Form, Entryways and Service Areas, Large Format Developments, Street Amenity.
<b>7. Apex Park is Nelson Bay's civic and community</b>	<ul style="list-style-type: none"> <li>7.1 Revitalise Apex Park.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare a Masterplan for the revitalisation of Apex Park. (In the short term) Council to work with Councillors in identifying suitable works that are essential to Apex Park, keeping in</li> </ul>	Civil Assets and the Apex Park Design Review Panel (Port		



Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
park.		mind the long term goals of integrating the park with wider functions detailed within this strategy. Consideration of the community consultation work to date regarding Apex Park should informed these decisions as should the design brief recommended above.	Stephens Council)		
8. Buildings and places reflect the quality of Nelson Bay and enrich people's ability to enjoy it.	<ul style="list-style-type: none"> <li>8.1 New developments should meet a high standard of design.</li> </ul>	<ul style="list-style-type: none"> <li>Provide clauses within the LEP for:               <ul style="list-style-type: none"> <li>- Design excellence</li> <li>- Variation to Building Heights in Designated Localities and Centres (as per figure 32)</li> <li>- Active Street Frontage (as per figure 33)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	High	Control - Design excellence, Variation to Building Heights in Designated Localities and Centres, Active Street Frontage
	<ul style="list-style-type: none"> <li>8.2 Ensure future large format developments do not negatively impact on the character of Nelson Bay.</li> </ul>	<ul style="list-style-type: none"> <li>The town living and commercial character area has been defined as a suitable location for large format buildings. A DCP control shall inform the design of these buildings.</li> <li>Large developments may be required to be assessed by a Design Review Panel.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	<ul style="list-style-type: none"> <li>High</li> </ul>	Controls – Character areas, Large format developments.
	<ul style="list-style-type: none"> <li>8.3 Protect important views and promote the natural topography that makes Nelson Bay unique.</li> </ul>	<ul style="list-style-type: none"> <li>DCP to guide development in protecting and enhancing important views identified within this Strategy.</li> <li>The street tree plan should consider view preservation when selecting suitable species (6.6).</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	<ul style="list-style-type: none"> <li>High</li> </ul>	Controls – Critical view corridors



Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
	<ul style="list-style-type: none"> <li>8.4 Prepare a Public Art Strategy</li> </ul>	<ul style="list-style-type: none"> <li>A Public Art Strategy should undertake an assessment of public art opportunities that:               <ul style="list-style-type: none"> <li>Contribute to cultural identity and create a distinctive sense of place for Nelson Bay.</li> <li>Connect the community and be accessible to all age groups and backgrounds.</li> <li>Respond to themes of people past and present</li> <li>Relate to the built and natural environment.</li> <li>Exemplify artistic excellence and integrity.</li> <li>Be sustainable, safe, and easily maintainable.</li> <li>Promote the natural setting and waterfront within public spaces.</li> <li>Acknowledge the contribution that street furniture makes to the interpretation of urban character.</li> <li>Inform the Wayfinding Strategy (3.3) and the Public Domain Plan (6.1)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Social Planning</li> </ul>	High	
<b>9. Buildings can adapt to changing needs.</b>	<ul style="list-style-type: none"> <li>9.1 Provide a diverse housing choice for varying needs by promoting mixed use development and adaptable buildings</li> </ul>	<ul style="list-style-type: none"> <li>The LEP continue to provide zoning for mixed uses.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	<ul style="list-style-type: none"> <li>High</li> </ul>	



Principle	Recommended action	Implementation	Responsibility	Priority	DCP Control
	<ul style="list-style-type: none"> <li>9.2 Short term and temporary residential developments are constructed to cater for permanent residential use.</li> </ul>	<ul style="list-style-type: none"> <li>Provide controls within the DCP to ensure developments such as holiday units and apartments meet the requirements of SEPP 65.</li> </ul>			Control - adaptable buildings.
10. Building scale responds to topography, views, solar access, and the surrounding streetscape.	<ul style="list-style-type: none"> <li>10.1 Ensure development on the Foreshore does not block views towards the waterfront, particularly development in front of the escarpment.</li> <li>10.2 Minimise overshadowing within the public domain.</li> </ul>	<ul style="list-style-type: none"> <li>Implementation Plan to provide details</li> <li>Building height controls as described in the Strategy are included in Council's development standards</li> <li>Development controls protect solar access and reduce overshadowing.</li> <li>Implementation Plan to provide details</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	<ul style="list-style-type: none"> <li>High</li> </ul>	Control - Building Heights, View Preservation
	<ul style="list-style-type: none"> <li>10.3 Buildings should address the street and provide a consistent built edge to promote structure within the streetscape</li> </ul>	<ul style="list-style-type: none"> <li>DCP controls to define appropriate setbacks within the character areas.</li> <li>See recommendations within 6.4</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	<ul style="list-style-type: none"> <li>High</li> </ul>	Control - setbacks.
	<ul style="list-style-type: none"> <li>10.4 Buildings should consider the impact roof furniture has on views from surrounding buildings.</li> </ul>	<ul style="list-style-type: none"> <li>DCP control – Roof top furniture.</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Planning</li> </ul>	<ul style="list-style-type: none"> <li>High</li> </ul>	Control - Roof top furniture.

Post Stephens  
C·O·U·N·C·I·L





## **Appendix 4 – Proposed PSLEP Maps**

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# Port Stephens Local Environmental Plan 2013

## Height of Buildings Map - Sheet HOB\_005D

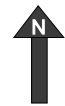
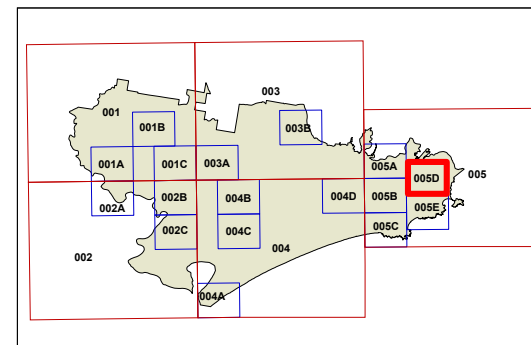
### Maximum Building Height (m)

I	8
J	9
K	10.5
M	12
N	14
O	15
P	17.5
Q	19
T	28
W	42

### Cadastral

Cadastral 17/04/2019 © Spatial Services

Nelson Bay Town Centre & Foreshore  
Strategy Boundary



GDA 1994  
MGA Zone 56

0 400 metres

Scale: 1:20,000 @ A3

Map identification number :  
6400\_COM\_HOB\_005D\_020\_20190417

PORT STEPHENS

NELSON  
BAY


SHOAL  
BAY




Port Stephens  
Local  
Environmental  
Plan 2013

Additional Permitted Uses Map  
Precinct Areas Map  
Waste or Resource Management  
Facility Map  
Sheet CL1\_005


Additional Permitted Uses


 Schedule 1

Precinct Areas


 Precinct Areas

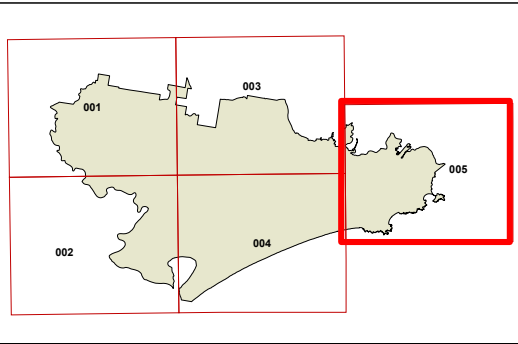
Waste or Resource Management

 Waste or Resource Management Facility

 Nelson Bay Town Centre & Foreshore  
Strategy Boundary

Cadastre

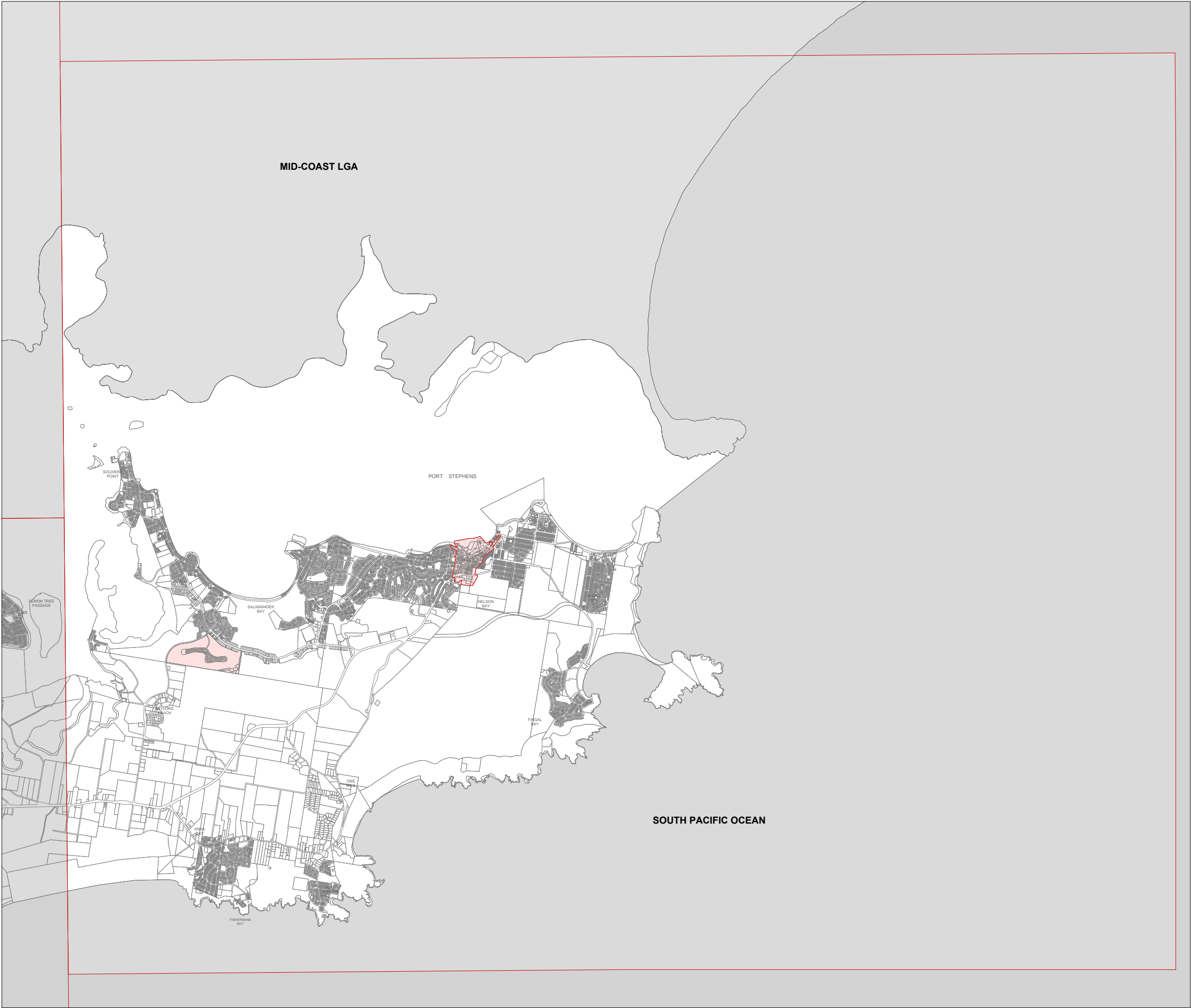
 Cadastre 17/04/2019 © Spatial Services



GDA 1994  
MGA Zone 56

0 1000 metres

Scale 1: 80,000 @ A3





# Port Stephens Local Environmental Plan 2013

## Floor Space Ratio Map - Sheet FSR\_005D

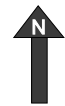
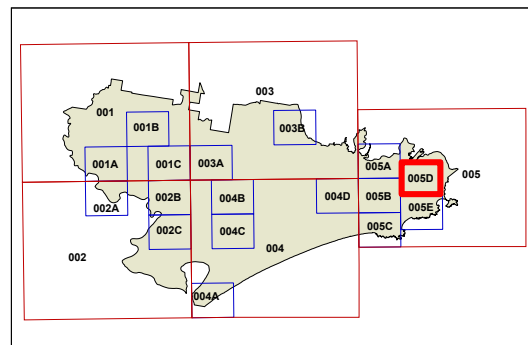
### Maximum Floor Space Ratio (n:1)

T	2
U	2.5
V	3

### Cadastre

Cadastre 17/04/2019 © Spatial Services

Nelson Bay Town Centre & Foreshore  
Strategy Boundary



GDA 1994  
MGA Zone 56

0 400 metres

Scale 1: 20,000 @ A3

Map Identification Number :  
6400\_COM\_FSR\_005D\_020\_20190417

PORT STEPHENS

NELSON  
BAY

SHOAL  
BAY





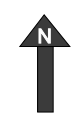
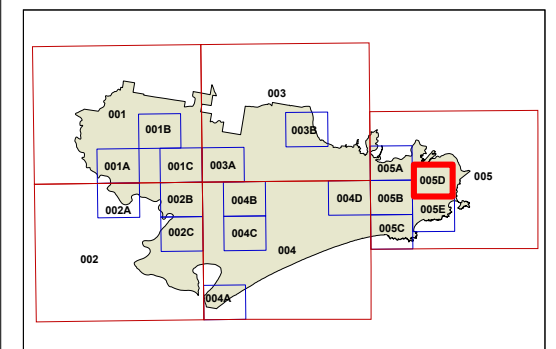
# Port Stephens Local Environmental Plan 2013

## Active Street Frontages Map Sheet ASF\_005D

Active Street Frontage

Cadastre  
Cadastre 1704/2019 © Spatial Services

Nelson Bay Town Centre & Foreshore  
Strategy Boundary



Projection: GDA 1994  
Zone 56  
Map Identification Number :  
6400\_COM\_ASF\_005D\_020\_20190417





## **Appendix 5 – Existing PSLEP Maps**

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# Port Stephens Local Environmental Plan 2013

## Height of Buildings Map - Sheet HOB\_005D

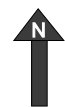
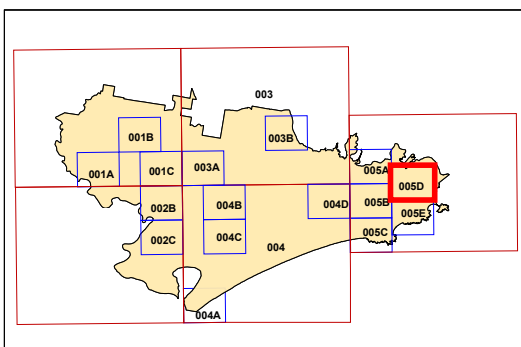
### Maximum Building Height (m)

I	8
J	9
M	12
O	15
Q	19

### Cadastre

Cadastre 18/02/2013 © Land and Property  
Information (LPI)

Nelson Bay Town Centre & Foreshore  
Strategy Boundary



GDA 1994  
MGA Zone 56

0 400 metres

Scale: 1:20000 @ A3

Map identification number :  
6400\_COM\_HOB\_005D\_020\_20131128

PORT STEPHENS

NELSON  
BAY


SHOAL  
BAY



# Port Stephens Local Environmental Plan 2013

Additional Permitted Uses Map  
Precinct Areas Map  
Waste or Resource Management  
Facility Map  
Sheet CL1\_005


## Additional Permitted Uses

 Schedule 1


## Precinct Areas

 Precinct Areas

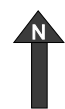
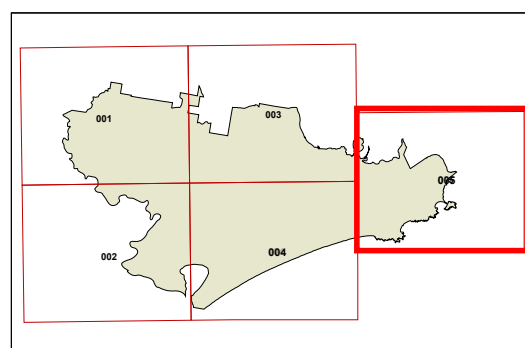
## Waste or Resource Management

 Waste or Resource Management Facility

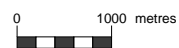
## Cadastre

 Cadastre 18/02/2013 © Land and Property  
Information (LPI)

 Nelson Bay Town Centre & Foreshore  
Strategy Boundary

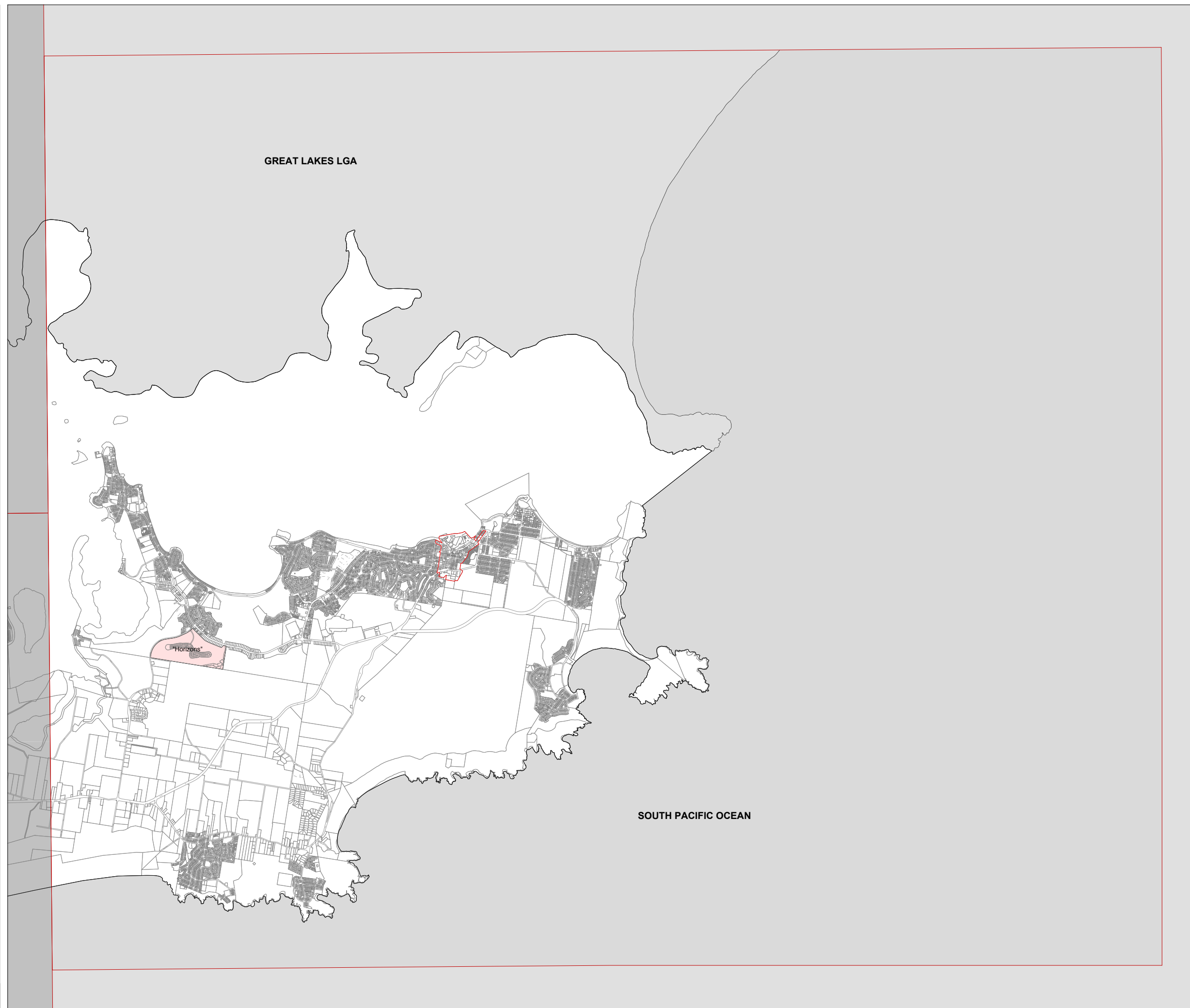


GDA 1994  
MGA Zone 56



Scale: 1:80000 @ A3

Map identification number :  
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## **Appendix 6 – Nelson Bay Town Centre: Feasibility Testing of Residential Development Sites**

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# Nelson Bay Town Centre

Feasibility Testing of Residential Development Sites

Prepared for Port Stephens Council

Final – September 2017

Review of Feasibility Testing Completed in 2016 with Varied Options



## QUALITY ASSURANCE

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Quality Control

This document is for discussion purposes only unless signed and dated by a Principal of HillPDA.

Reviewed by:

Dated 22 September 2016

### Report Details

Job Ref No: Nelson Bay Town Centre – Development Feasibility Testing

Version: Final

Date Printed: 22/09/2016

### Report Details

Job Ref No: V18013 Nelson Bay Feasibility Testing

Version: v2

*Front cover photo – Google Earth image*

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## EXECUTIVE SUMMARY

This Study has been commissioned by Port Stephens Council (Council) to independently consider the development viability of five (5) nominated development sites (Test Sites) located in proximity to the Nelson Bay Town Centre (Study Area). It forms additional testing to that completed 12 months ago based on different building configurations / densities.

We have been requested to examine the development feasibility for the same test sites (5) in the Nelson Bay Town Centre with three (3) target building heights and two (2) FSR's as follows.

**Table 1: Building configurations for each Test Site**

Density Table	FSR	Site Cover	FSR	Site Cover
3 storeys	2.5:1.0	83%	3.0:1.0	100%
5 storeys	2.5:1.0	50%	3.0:1.0	60%
8 storeys	2.5:1.0	33%	3.0:1.0	38%

For each test site (5) the above six (6) building configurations have been tested with our feasibility analysis.

## Background

Port Stephens Council has been in the process of reviewing the Nelson Bay Town Centre and Foreshore Strategy (the Strategy).

Council engaged HillPDA to gain understanding about the limited high rise residential re-development in Nelson Bay, highlighted by some abandoned sites in September 2016 and September 2017.

We have completed this feasibility testing on the basis of:

### ***Parking***

We have reflected parking below ground in each test case to achieve building heights strictly in accord with that stated in the table above. Also, most major projects in Nelson Bay provide below ground parking or in the case of a sloping site a partially exposed podium level. Any further exposed podium parking will impact upon unit pricing.

### ***Retail components***

For two sites a retail component on the ground floor has been included as explained for each.



## Summary of Findings

Our findings into the feasibility of various density and building height combinations may be summarised by adding broad parameters to the Density Table below along the spectrum of Not viable – Marginal and Viable.

**Table 2: Building configurations for each Test Site**

Density Table	FSR	Site Cover	FSR	Site Cover
3 storeys	2.5:1.0	83% Not viable	3.0:1.0	100% Not viable
5 storeys	2.5:1.0	50% Not viable	3.0:1.0	60% Not viable
8 storeys	2.5:1.0	33% Viable	3.0:1.0	38% Viable

### Three storeys

It is apparent that for an FSR of 3:1 and a building height of three storeys the resulting building set back is nil / negligible.

It follows that for an FSR of 2.5:1 and a building height of three storeys, a high site cover ratio of 83% is shown.

This high site cover ratio incurred for three storeys lowers the living amenity (eg. less natural light) and provides the least on site open areas of the options tested.

It is unlikely a building with this high site cover would comply with the SEPP 65 (ADG – Australian Design Guidelines) requirements for residential building set-backs.

This lesser amenity from a high site cover impacts upon unit pricing and is shown in our feasibility testing **not** to be viable for any sites with three storeys combined with the FSR's of 2.5 and 3.0:1.0.

The impact upon unit pricing is worsened as most unit buildings in Nelson Bay have a site cover around or under 50% to achieve an appealing living amenity and to optimise unit sales.

### Five storeys

Development to this height is summarised above as not viable although approaching a “marginal” status for the best sites (Church Street and Donald Street). This contrast between viable results for

eight storeys illustrates the high sensitivity of development feasibility where a small change in key variables can result in a significant change in profit and returns.

### **Eight storeys**

This combination of height (8 storeys) and FSR (2.5 & 3.0:1.0) showed the highest incidence of Viable project returns in our testing for the sites (5).

All sites except those at inferior locations (Stockton Street and Tomaree Street) showed viable returns.

This reflected an optimal building design regarding features inside the building (eg. natural light) and within the enclosed grounds (ie. greater gardens areas and passive recreational areas).

The declining quality of the test sites (5) resulted in this viability being reduced for:

- Distance from the foreshore (less water views);
- Distance from the retail hub (excessive walking distance);
- Inclusion of retail strata units on the ground floor due to lower strata sales rate achieved compared to residential units, particularly those without street frontage;
- Inclusion of underground parking creates a significant additional cost although necessary for unit marketability. Most residential tower buildings in Nelson Bay have underground parking except those on a sloping site where part of a podium is visible in addition to parking beneath; and
- If a large number of houses (improved properties) require simultaneous acquisition for amalgamation of an appropriate site, a significant premium may be required to reflect the improvements (even though later demolished) and a sufficient inducement to encourage all vendors to sell simultaneously.

Therefore, some sites with a high proportion of these detrimental features incurred a label of “Marginal” or in the least appealing case “Not Viable”.

## 1 INTRODUCTION

This development feasibility review adds to a detailed study completed 12 months ago with different development options (different building configurations) tested.

For this study our research has been limited in regard to:

- An inspection of each site has not occurred and we have relied upon Council to advise of any major changes;
- Our unit sales research has been limited to updating the sales that have occurred over the past 12 months for the buildings examined in our prior study;
- We have not completed a detailed Market Soundings (direct) enquiry programme to investigate the supply and demand drivers by speaking with developers and consultants but instead relied upon our enquiries completed 12 months ago; and
- The Site Description for each of the five (5) test sites is assumed to be unchanged from our last report, also included herein.

### Feasibility Site Testing

This Study contains detailed feasibility testing based on this reduced scope of market research and then compared to industry accepted development benchmarks (returns) for residential tower buildings.

As it is not realistic to test the viability of redeveloping every lot or combination of lots within the Study area, Council has identified Test Sites with prescribed densities stated below in the following detailed description of each:

- Test Sites 1, 2 & 4 - Residential flat buildings comprising residential units ; and
- Test Sites 3 & 5 - Mixed use development with ground level retail and residential units above.

## 2 SITE DESCRIPTION



**Table 3: Site 1- 49, 51, 51A & 51B Stockton Street, Nelson Bay**

### 49, 51, 51A & 51B Stockton Street, Nelson Bay

This property is formed by five lots located on Stockton Street just outside of the central township area near a major intersection that forms a gateway for the entering traffic to the Town Centre. It is positioned close to the Nelson Bay Bowling & Recreation Club and opposite the Nelson Bay cemetery. There is access off Stockton Street via a separate (slip) lane in addition to access from Tallean Road (off Stockton Street) and a rear lane (Talmora Lane).

The irregular shape allows for two (2) buildings facing each street frontage (Stockton and Tallean Streets).



Site Particulars	Lot Details:	Lot: B,343,342,336 &337 in DP DP411630 & DP 9165
	Site Area:	4,226.9sqm (combined site area)
	Frontage:	45 metre frontage to Stockton Street
Existing improvements	Abandoned building footings are visible on site with overgrown natural vegetation. Historic photos reveal it was operated as a hardware store with a compact Bunnings outlet in previous years.	
Site Photo		
		
Planning Controls	Zoning:	R2 Low Density Residential
	Height limit:	9metres
	FSR:	N/A (not specified in the Port Stephens LEP)
	Minimum Lot size:	500sqm

Source: HillPDA & Google Maps

**Table 4: Site 2 - 11, 13 & 15 Church Street, Nelson Bay**

11, 13 & 15 Church Street, Nelson Bay		
<p>These three (3) properties are located on Church Street between Donald Street and Tomaree Street being rectangular with front boundary access only from Church Street.</p> <p>This Test Site is located at a high contour over-looking the central retail hub and Nelson Bay with views from lower levels impeded by surrounding medium density residential buildings.</p>		
Site Particulars	Lot Details:	Lot: 17,18 & 156 DP: DP 8611 & DP1094233
	Site Area:	4,621.8sqm (combined site area)
	Frontage:	81.1m total frontages to Church street
Existing improvements	Similar to Test Site 1 (Stockton Street) this site contains abandoned building footings just above ground level in an overgrown state.	
Site Photo		
		
Planning Controls	Zoning:	B2 Local Centre
	Height limit:	15metres
	FSR:	N/A (not in LEP)
	Minimum Lot size:	N/A

Source: HillPDA & Google Maps



**Table 5: Site 3 - 36A to 36F Donald Street, Nelson Bay**

### 36A to 36F Donald Street, Nelson Bay

Located on Donald Street in a section forming the major thoroughfare for the hub of the shopping district around Stockton, Magnus and Donald Streets. This Test Site has high exposure to local foot traffic and provides central public parking that would need to be preserved in any development of the site.

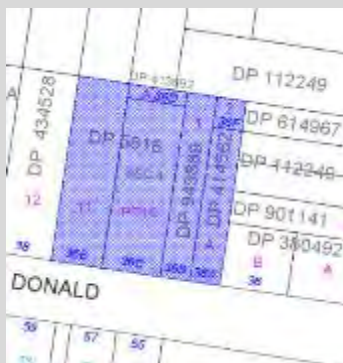
It forms a rectangular shape with a gently sloping contour. It is positioned with proximity to the foreshore so that mid to upper levels on the northern and eastern sides will gain water views.



Site Particulars	Lot Details:	Lot A in DP414562; Lot 2 in DP614967; Lot 1 in DP949889; Lot 10, SecA in DP5616 and Lot A in DP413692
	Site Area:	3,413.1sqm (combined site area)
	Frontages:	90.19m total frontages to Donald St

Existing improvements Bitumen sealed line marked carpark with signage (parking conditions).

#### Site Photo



Planning Controls	Zoning:	B2 Local Centre
	Height limit:	15metres
	FSR:	N/A
	Minimum Lot size:	N/A

Source: HillPDA & Google Maps

**Table 6: Site 4 - 15, 17, 19 & 19A Tomaree Street, Nelson Bay**

### 15, 17, 19 & 19A Tomaree Street, Nelson Bay

This Test Site comprises four (4) lots located just outside of the main shopping precinct, zoned “R3 Medium Density Residential”. The land is improved by detached dwellings (all circa 1985) with the main access from Tomaree St, and rear access available from Dowling Street. The blocks are uniform in shape with a slope downhill from Dowling to Tomaree Street.

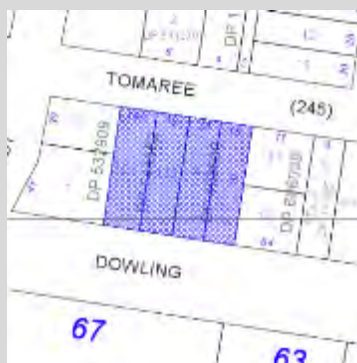
The properties are located opposite the Nelson Bay Bowling & Recreation Club.



Site Particulars	Lot Details:	Lot: 121/122 & A/B DP/SP: DP 544552 & 403600
	Site Area:	2,396.0sqm (combined site area)
	Frontages:	51.83m total frontages to Tomaree St

Existing improvements	Each lot contains a detached residence (circa 1985) that appears to be in a state of reasonable renovation.
-----------------------	---

### Site Photo



Planning Controls	Zoning:	B2 Local Centre
	Height limit:	15metres (as for B2)
	FSR:	N/A
	Minimum Lot size	500m <sup>2</sup>

Source: HillPDA & Google Maps

**Table 7: Site 5 - 16, 18 & 20 Donald St and 61, 63 & 65 Magnus St, Nelson Bay**

16, 18 & 20 Donald St and 61, 63 & 65 Magnus St, Nelson Bay

This Test Site comprises seven (7) adjacent lots located between Donald and Magnus Streets on the eastern periphery of the central township hub. The eastern half of the property is vacant and the western half contains a multi deck concrete (public) car-park with capacity for around 160 cars on each of three (3) levels including the ground level at grade with each street frontage. The upper levels have been “locked off” to vehicles due to the structural degradation of the concrete.



Site Particulars	Lot Details:	Lot: 121/122 & A/B DP/SP: DP 544552 & 403600
	Site Area:	3,636.2sqm (combined site area)
	Frontages:	76metres to Donald Street and 50metres to Magnus Street.

Existing improvements	See above. A Council carpark occupies around 40% of the site with the remainder unimproved with a cleared gravel surface.
-----------------------	---

## Site Photo



Planning Controls	Zoning:	R3 Medium Density Residential
	Height limit:	15metres (as for B2)
	FSR:	N/A
	Minimum Lot size:	500m²

Source: HillPDA & Google Maps

### 3 REDEVELOPMENT OPTIONS

For each of the Test Sites described above under the heading “Site Appraisal” the purpose for selecting each is indicated below.

#### Site 1: 49, 51, 51A & 51B Stockton St, Nelson Bay –4,226.9m<sup>2</sup>



Located around 200 metres south of the Town Centre.

**Existing Improvements:** Concrete block building foundations rising around a metre above ground for an apparently abandoned project.

**History:** This property has been observed in historic images to be a dated and compact Bunnings Hardware store.

**It has recently sold (April 2017) for \$975,000.** It was marketed without any DA consent with advertised potential for sub-division into separate land allotments or townhouses (15) with the usual agent’s caveat – subject to Council approval.

This shows \$65,000/townhouse site which is expected to reveal better returns than a high density residential tower given the significant distance from the retail hub and foreshore (1.5km).

**Purpose:** This site was selected as one with marginal features to add a range to the feasibility results obtained and investigate whether the abandoned site revealed feasibility at any level or density variation.

Development of the whole site would yield an excessive number of units for the local market and it forms an inefficient shape being two sectors side by side. A logical portion of the site with frontage to one street has been selected for feasibility testing having an area of **2,042.2m<sup>2</sup>**.

#### Site 2: 11, 13 & 15 Church St, Nelson Bay – 4,621.8m<sup>2</sup>



Located on the western fringe of the Town Centre at a high contour with views from the middle to upper levels to the north east over the (lower) Town Centre and Nelson Bay being the superior site in this selection for testing.

**Existing Improvements:** Reinforced concrete building foundations for an above ground car-park rising around a metre above ground for an apparently abandoned project.

**History:** Understood to have been sold twice by developers that have not commenced a project. The current owner has recently submitted another DA to Council for an altered scheme now approved with a building envelope above 15 metres (permitted height in the LEP) known as Ascent with 56 units over 8 storeys.

The last sales shows this site has sold in two parts (to two separate developers). The recently approved DA referred to above applies to 11-13 Church Street (**1,258m<sup>2</sup>**) being the site portion tested. This sold in July 2015 for \$1,650,000.

The balance of the site (2,105m<sup>2</sup>) sold in December 2014 for \$825,000 with a DA for a residential tower.

Testing of the entire site would involve examination of two projects as the optimal development scale reflects 56 units over 8 storeys as contained in the Ascent project. The second project is expected to show returns slightly less than our testing due to the Ascent building obscuring water views.

**Purpose:** The location was selected on the basis of its greater altitude to other Test Sites granting district and Bay views in close proximity of the Town Centre to examine the development feasibility of below ground parking and varying building heights.

### Site 3: 36A to 36F Donald St, Nelson Bay – 3,413.1m<sup>2</sup>



Located near the centre of the retail hub of Nelson Bay being a Council car-park surrounded by retail shops and offices suites above. The recently built Woolworths based neighbourhood centre lies around 50 metres to the east at a major central corner of the Town Centre.

**Existing Improvements:** Bitumen sealed car-park surface.

**History:** Owned by Council that seeks to explore development opportunities for the site whilst maintaining the important existing public amenity as a car-park within the retail hub.

**Purpose:** The location was selected on the basis of its central location within the Town Centre within walking distance of all central retail and daily service amenities conducive to a mixed use project with retail suites on the ground floor.

The results will reveal economic returns for a mixed use project with basement parking with mid to upper level water views.



#### Site 4: 15, 17, 19 & 19A Tomaree St, Nelson Bay – 2,396.0m<sup>2</sup>



Located at the southern fringe of the Town Centre comprising four (4) residential lots with detached housing that have a two (2) street frontages (to Tomaree and Dowling Streets). The site enjoys an elevated position with potential water views from the mid-rise to upper levels facing north.

**Existing Improvements:** Four (4) dated detached residences that appear modest although well maintained.

**Purpose:** The location was selected to test the feasibility of amalgamating existing residences for a higher density project to check whether the highest and best use for detached housing surrounding to the retail hub has yet reached the price level for a unit development site.

#### Site 5: 16, 18 & 20 Donald St, Nelson Bay – 3,636.2m<sup>2</sup>



This site is located toward the east of the Town Centre comprising various un-developed lots (unimproved) on the eastern half and a Council car-park being a three (3) storey structure with ground level parking permitted only given some concrete degradation of the upper levels.

**Existing Improvements:** Multi-level public car-park where the upper levels have been closed. Parking is currently permitted on the ground floor. The remainder of the site is open gravel, mostly level.

**Purpose:** The property was selected given its unsightly appearance close to the retail hub whereby an enhancement may be achieved by a residential unit development that activates the site with retail on the ground and preserves the public parking capacity in a separate stratum within or beside a unit tower building. Resulting residential units will be close to the foreshore precinct. Water views would be available from the mid-rise and upper levels.

The location for each of the five (5) sites is shown below.

**Figure 1: Study Area Boundary and Test Sites**



Source: Map Info 12.5 and HillPDA Market Research

## 4 FEASIBILITY APPRAISAL

This chapter summarises the methodology and criteria used to assess the financial viability of each selected Test Site at varying development densities and the subsequent modelling results.

We provide commentary upon optimal and sub-optimal building configurations regarding the density and FSR variations.

### Financial Modelling Methodology

To undertake the feasibility modelling we have used our proprietary software, Estate Master which is an industry benchmark used by developers, financiers and property valuers alike.

The analysis follows the approach of a hypothetical development feasibility adopting an acquisition land value and all the costs associated with the nominated hypothetical development including:

- Site acquisition (stamp duty and legals);
- Professional fees (design and management);
- Demolition and construction (including car parking and balconies);
- Property holding costs and statutory fees;
- Equity, finance charges and interest on debt;
- Marketing and selling costs; and
- Revenue from sales, rentals and other income.

The hypothetical development cash flow is calculated and discounted to determine the internal rate of return before interest costs on an annual effective basis. Such an approach is commonly applied by developers and funders to determine if a project is viable to proceed or whether an alternative land purchase price is required.

## Density Variations – Building Height and Site Cover

Our prior modelling reflected an optimal site cover for the building (tower) footprint of around 30% to 40% of the site area to show a typical floor area with reduced common areas of 600m<sup>2</sup> to 700m<sup>2</sup> for each case of varying density (ie varying building height).

In this feasibility modelling review we have been asked to vary the FSR for three given heights leading to testing of the following building configurations for each test site.

**Table 8: Building configurations tested**

Density table	FSR	Site Cover	FSR	Site Cover
3 storeys	2.5:1.0	83%	3.0:1.0	100%
5 storeys	2.5:1.0	50%	3.0:1.0	60%
8 storeys	2.5:1.0	33%	3.0:1.0	38%

### Sub-optimal Building Configuration

Inner suburban metropolitan areas (near a CBD) contain residential tower buildings with a high site cover, however, this does **not** occur in less densely populated areas where green surrounds on site and greater internal natural light is required for unit buildings to achieve high design standards and appeal compared to competing units for sale.

In Nelson Bay a site cover above 50% may result in a compromised building design arising from:

- Natural light throughout a residential unit is achieved with an optimal floor area in a unit as wide as possible generally achieved with substantial set-backs from a boundary;
- The unit shape becomes narrow for larger sites with a high site cover that compromises room layout as well as light admitted;
- At ground level it is important to provide open space for gardens, passive recreation areas and comfortably proportioned open air access for residents, all achieved with a lower site cover;
- To provide unit appeal for purchasers considering competing stock a similar set-back and moderate site cover is required; and
- An efficient unit shape results in less common areas and therefore greater building space dedicated to saleable area.

Commercial office buildings typically extend to a higher site cover given different design objectives to a residential building.

The building design criteria listed above usually result in a moderate site cover around 50% or less. The required building design standards are reinforced by SEPP65\* in addition to a necessity to compete with the appeal of existing unit stock.

By reference to the density table above and the reasons noted for a moderate site cover (building design and unit saleability) the following trend of feasibility results applies in Nelson Bay:

**Table 9: Sub-optimal building designs**

Density table	FSR Site Cover		FSR Site Cover	
3 storeys	2.5:1.0	83% Non-compliant*	3.0:1.0	100% Non-compliant*
5 storeys	2.5:1.0	50% marginal	3.0:1.0	60% Sub-optimal

In some densely populated (metropolitan) areas, a residential tower building with a site cover of 50% to 60% can achieve building design merit and unit saleability with twin towers above a single podium or a light well for all floor levels within the central floor area.

These features are not evident in the Nelson Bay residential tower market that has a greater tourism influence and less population density than an inner urban (metropolitan) area.

### Optimal Building Configurations

It follows from the observations above and the table provided that the following lower site cover configurations tested should result in feasible projects as an indicative trend:

**Table 10: Building configurations tested**

Density table	FSR	Site Cover	FSR	Site Cover
8 storeys	2.5:1.0	33% Viable	3.0:1.0	38% Viable

### Parking configuration

All densities tested required parking below ground (basement) to achieve the building heights expressed by storeys and unit saleability.

Car-park podiums impact upon unit pricing buildings on sloping sites incorporate podiums more readily than level sites.



## Financial Feasibility Criteria

We have regarded the project Internal Rate of Return (IRR) as the primary indicator of performance (feasibility) and also considered the following performance criteria:

- Development Margin: the profit (defined above) divided by total development costs.
- Residual Land Value: The land purchase price a developer can afford to pay to achieve a feasible project;
- Development Profit: the total revenue less total cost including selling costs (agent's commissions) and interest.

A summary of our property development performance ranking is provided in the table below for the potential range for the Project IRR and Development Margin. This is drawn from wide experience in analysing the returns expected by long term property developers and corporate developers in addition to margins as interpreted by the major lending banks.

**Table 11: Performance Criteria**

Performance Result	Project IRR	Development Margin
Viable	>18%	>20%-25%
Marginally Viable	16%-18%	18%-20%
Not Viable	<16%	<18%

Source: HillPDAResearch

In light of the criteria established above, the various sites were assessed against an 18% Project IRR and 20% Development Margin.

## Common Variables Across the Feasibility Models

The following table shows the commonly adopted variables across the nominated sites tested.

**Table 12: Common Variables Included in each Feasibility Model**

Header Row	3 storeys	4 <sup>th</sup> & 5 <sup>th</sup> storey	6 <sup>th</sup> to 8 <sup>th</sup> storey
Construction Costs	\$2,200/m <sup>2</sup>	\$2,3400/m <sup>2</sup>	\$2,500/m <sup>2</sup>
Balconies	9% of construction costs for Design and Consultants		
External Works	2% of construction costs for landscaping & driveways.		

Source: HillPDA Research

The gross realisations (unit sale prices) differ for each Test Site, however, they resemble a pricing trend level shown below with rates shown based on internal living areas consistent with our analysis of sales.

**Table 13: Core Gross Realisations in each Feasibility Model**

Gross Realisations	3 storeys	5 storeys (water views for some sites)	8 storeys (water views more common)
One Bedroom - 60m <sup>2</sup>	\$400,000 \$6,667/m <sup>2</sup>	\$450,000 \$7,500/m <sup>2</sup>	\$500,000 - \$550,000 \$8,333 - \$9,167/m <sup>2</sup>
Two Bedrooms - 80m <sup>2</sup>	\$450,000 \$5,625/m <sup>2</sup>	\$500,000 \$6,250/m <sup>2</sup>	\$600,000 - \$650,000 \$7,500 - \$8,125/m <sup>2</sup>
Three Bedrooms - 90m <sup>2</sup>	\$525,000 \$5,833/m <sup>2</sup>	\$575,000 \$6,389/m <sup>2</sup>	\$700,000 - \$725,000 \$7,778 - \$8,056/m <sup>2</sup>

Source: HillPDA Research

For retail suites on the ground floor of mixed use projects (16-20 Donald Street & 36A-36F Donald Street) we have adopted a strata rate of \$5,500/m<sup>2</sup> (of strata area) based on our sales research.

Parking costs (construction costs) comprise a major portion of the project costs for below ground (basement) options given the following rates adopted by the standard cost guides in our feasibility testing.

**Table 14: Construction Costs for Parking**

Parking Costs	Below Ground
(incl. excavation)	\$50,000/ bay

Source: HillPDA Research

The following building mix has been reflected for the Test Sites.

**Table 15: Unit Configuration (Bedroom) Mix**

No of Units	Mix% Adopted	Mix Example
One Bedroom	15%	9
Two Bedrooms	75%	46
Three Bedrooms	10%	6
Total	100%	61 units

Source: HillPDA Research

## Site 1 - 49, 51 51A & 51B Stockton Street, Nelson Bay

This Test Site forms a vacant (abandoned) development site given the visible overgrown footings and a “For Sale” sign indicating it was marketed for sale some years ago as a development site for “multi residential development or land sub-division”.

It comprises 4 major lots divided into two adjacent segments each with a street frontage and a total area of 4,226.9m<sup>2</sup> as depicted above in our Site Description section. In our modelling we have tested one of these two segments enclosing an area of 2,042.2m<sup>2</sup> (2 lots) to maximise the possibility of achieving feasible development results based on a land value of at least \$30,000/unit site being a moderate high density residential tower rate for the Nelson Bay district that shows typically \$30,000 to \$45,000/unit site for land where feasible.

The key influences resulting in modest pricing for the units at this site are the lack of water views for all heights tested given the distance of 1.5 km from the foreshore and the distance from the town centre (1 km perceived as beyond a comfortable walking distance for many purchasers).

**Table 16: Unit Pricing Estimates**

49, 51 51A & B Stockton St	3 storeys	4 <sup>th</sup> & 5 <sup>th</sup> storey	6 <sup>th</sup> to 8 <sup>th</sup> storey
One Bedroom	\$400,000	\$430,000	\$460,000
Two Bedrooms	\$450,000	\$480,000	\$510,000
Three Bedrooms	\$525,000	\$550,000	\$560,000

Source: HillPDA Research

### Feasibility Testing Results for 3, 5 and 8 storeys

Our commentary above for optimal (and sub-optimal) building configurations revealed the likelihood of high site cover buildings showing a low feasibility and only the 8 storey heights for an FSR of 2.5:1.0 and 3.0:1.0 revealing a feasible outcome.

This is expected to be particularly evident for this site of marginal status given the key factors noted above leading to modest unit pricing.

The Residual Land Value below indicates the purchase price required to achieve target threshold returns for each configuration.

**Table 17: Feasibility Testing Results – FSR of 2.5:1.0 for 3, 5 & 8 storeys**

Land Purch Price :\$1.08m.	3 Storeys – 57 Units	5 Storeys – 57 Units	8 Storeys - 57 Units
Development Profit	\$1,220,214	\$1,179,415	\$1,859,532
Development Margin	5.25%	4.92%	7.58%
IRR	9.08%	8.73%	11.04%
Performance Ranking	Unviable	Unviable	Unviable
Residual Land Value (RLV)	\$151,201	\$65,469	\$301,774

Source: HillPDA Research

The IRR's above reveal none of the heights and densities tested for an FSR of 2.5:1.0 achieve feasibility for a market land acquisition pricing rate. Alternatively, in order to achieve a developer's target threshold rate of return low RLV's of \$151,201 to \$301,774 are shown. This indicates other forms of residential land development comprise the highest and best use of the land by achieving development feasibility based higher land prices.

Feasibility results are shown below for an FSR of 3.0:1.0.

**Table 18: Feasibility Testing Results – FSR of 3.0:1.0 for 3, 5 & 8 storeys**

Land Purch Price :\$1.08m.	3 Storeys – 70 Units	5 Storeys – 70 Units	8 Storeys - 70 Units
Development Profit	\$1,881,722	\$2,224,615	\$2,328,611
Development Margin	6.67%	7.68%	7.19%
IRR	10.91%	11.52%	10.80%
Performance Ranking	Unviable	Unviable	Unviable
Residual Land Value	\$223,742	\$243,537	\$47,506

Source: HillPDA Research

### Historic Sales Pricing

Our enquiry into the last sale of this site shows \$642,000 transacted in August 2012 with an obsolete (warehouse style) building that has since been demolished. It recently sold for \$975,000 without a DA based on potential land sub-division or townhouse development.

### Likely Outcome for Development of this Site

Sub-division into detached housing blocks (being 3 on each of two street frontages without internal roads) may show a profitable return or alternatively a townhouse project would provide suitable stock for the immediate area.

## Site 2 - 11, 13 & 15 Church Street, Nelson Bay

This Test Site is located in Church Street where a “T” intersection is formed with Dalton Street and also forms a vacant (abandoned) development site given the visible concrete footings.

The entire site comprises three lots with a single street frontage and a total area of 4,621.8m<sup>2</sup> as depicted above in our Site Description section. In our modelling we have tested a site comprising two (of the three) lots enclosing an area of 1,258m<sup>2</sup> (2 lots) that reflects the land area of a project that recently received a Development Application (DA) consent from Council for a residential tower.

The key influences result in optimal unit pricing for the site where its elevated position near the town centre will achieve a higher proportion of water views than the other sites tested.

Water views can be obtained above three storeys on two (2) building faces, although most of the direct north aspect is obscured by the existing residential tower building at 9 Church Street for lower to mid-rise levels.

**Table 19: Unit Pricing Estimates**

11, 13 & 15 Church Street	3 storeys	4 <sup>th</sup> & 5 <sup>th</sup> storey	6 <sup>th</sup> to 8 <sup>th</sup> storey
One Bedroom	\$450,000	\$500,000	\$550,000
Two Bedrooms	\$500,000	\$550,000	\$650,000
Three Bedrooms	\$575,000	\$625,000	\$725,000

Source: HillPDA Research

### Feasibility Testing Results for 3, 5 and 8 storeys

Our commentary above for optimal (and sub-optimal) building configurations revealed the likelihood of high site cover buildings (ie. 3 storeys) showing a low feasibility and only the 5 and 8 storey heights for an FSR of 2.5:1.0 and 3.0:1.0 revealing a feasible outcome.

This is expected to be particularly evident for this site with the most favourable status of those tested given the key factors noted above (ie. high altitude (views) and town centre proximity) leading to optimal unit pricing.

The Residual Land Value below indicates the purchase price required to achieve target threshold returns for each configuration.



**Table 20: Feasibility Testing Results – FSR of 2.5:1.0 for 3, 5 & 8 storeys**

Land Purch Price :\$1.08m.	3 Storeys – 43 Units	5 Storeys – 43 Units	8 Storeys - 43 Units
Development Profit	\$517,737	\$514,944	\$2,296,195
Development Margin	3.56%	3.44%	15.00%
IRR	7.01%	6.91%	18.37%
Performance Ranking	Unviable	Unviable	Viable
Residual Land Value (RLV)	\$54,718	\$20,988	\$1,087,065

Source: HillPDA Research

The IRR's above reveal eight storeys on the basis of an FSR of 2.5:1.0 achieves feasibility based on a target threshold return of 18% IRR. This also indicates 3 and 5 storeys do not achieve sufficient (unit) market demand given the building configuration at an FSR of 2.5:1.0.

Feasibility results are shown below for an FSR of 3.0:1.0.

**Table 21: Feasibility Testing Results – FSR of 3.0:1.0 for 3, 5 & 8 storeys**

Land Purch Price :\$1.08m.	3 Storeys – 53 Units	5 Storeys – 53 Units	8 Storeys - 53 Units
Development Profit	\$1,131,648	\$1,646,320	\$3,279,418
Development Margin	6.34%	9.00%	17.46%
IRR	10.14%	12.49%	20.82%
Performance Ranking	Unviable	Unviable	Viable
Residual Land Value	\$428,834	\$644,579	\$1,635,746

Source: HillPDA Research

Only the 8 storey option shows viable returns for a benchmark (market) land purchase price of \$1.3million (\$30,000/unit site) or alternatively, a land purchase price of \$1.635million depicts feasible returns with an IRR of 18.0%.

The five storey option reaches viable returns if the land purchase price is reduced to \$644,000 (or \$12,150/unit site).

### Outcome for Development of this Site

As indicated above a DA consent has been recently achieved for the tested site where the project called “Ascent” contains 56 units over eight (8) storeys being consistent with the testing results shown above. The last sale price for this portion of the overall site aligned with the land area of that tested was \$1.65million in July 2015.

### Site 3 - 36A-36F Donald Street, Nelson Bay

This Test Site is formed by an open public car-park near the central hub of the retail precinct close to the Rivers store in Donald Street.

The feasibility results below depict a (residential flat building project with parking either below ground) as noted in the tables below for buildings of varying height all with retail on the ground floor.

The feasibility results are expected to reveal lower overall returns for the retail component given the strata rate adopted for the shops of \$5,500/m<sup>2</sup> of lettable area inclusive of associated parking to be considerably less than the residential equivalent (around \$6,500/m<sup>2</sup> for most 2 bedroom units). Water views can be obtained from the mid rise and upper level units on the northern and eastern sides.

This feasibility testing is done before considering a public parking preserved element that would render all options unviable given the cost of \$25,000/bay (above ground) and \$50,000/bay (below ground)

The following indicative units prices reflect that adopted for this property including the premium for water views on the northern and eastern sides of the tower.

**Table 22: 36A – 36F Donald Street – Unit Pricing Estimates**

36A – 36F Donald Street	Low Rise	Mid Rise	High Rise	Water Views
One Bedroom	\$400,000	\$450,000	\$500,000	\$550,000
Two Bedrooms	\$450,000	\$500,000	\$550,000	\$650,000
Three Bedrooms	\$525,000	\$575,000	\$625,000	\$725,000

Source: HillPDA Research

The feasibility results reveal unviable returns as shown below for 5 storeys and varied results for 8 storeys.

**Table 23: Feasibility Testing Results – FSR of 2.5:1.0 for 3, 5 & 8 storeys**

Land Purch Price :\$2.91m.	3 Storeys – 97 Units	5 Storeys – 97 Units	8 Storeys - 97 Units
Development Profit	\$1,560,343	\$1,535,451	\$6,392,654
Development Margin	3.87%	3.70%	15.06%
IRR	7.45%	7.19%	18.40%
Performance Ranking	Unviable	Unviable	Viable
Residual Land Value (RLV)	\$390,118	\$224,844	\$3,020,314

Source: HillPDA Research

The IRR's above reveal the highest density tested for an FSR of 2.5:1.0 (8 storeys) achieves feasibility based on a target threshold return of 18% IRR. This also indicates 3 and 5 storeys do not achieve sufficient market demand given the building configuration at an FSR of 2.5:1.0 (ie. high site cover).

Feasibility results are shown below for an FSR of 3.0:1.0.

**Table 24: Feasibility Testing Results – FSR of 3.0:1.0 for 3, 5 & 8 storeys**

Land Purch Price :\$3.51m.	3 Storeys – 53 Units	5 Storeys – 53 Units	8 Storeys – 53 Units
Development Profit	\$2,676,020	\$4,195,296	\$8,834,377
Development Margin	5.50%	8.41%	17.31%
IRR	9.13%	11.82%	20.62%
Performance Ranking	Unviable	Unviable	Viable
Residual Land Value	\$907,653	\$1,563,776	\$4,370,759

Source: HillPDA Research

As expected the maximum height tested of 8 storeys shows a site cover of 35% which allows for an optimal building design regarding natural light and set-backs, landscaped gardens on site and consistency with other higher priced (prestige) unit buildings in Nelson Bay.

The lower heights (3 and 5 storeys) for an FSR of 3.0:1.0 reveal a high site cover that compromises the building design, natural light admitted and amenity resulting in lower unit pricing.

This testing shows a similar trend of returns as for Church Street where the high unit pricing (for water views) is lowered by the retail strata lots on the ground floor with sale rates around \$5,500/m<sup>2</sup> (retail component) compared to the residential equivalent around \$6,500/m<sup>2</sup>.

## Conclusions

The retail component would have a neutral effect (instead of a negative impact) upon potential sales if it was reduced to a series of small shops facing the street (only) with residential units or parking behind at ground level. This highlights developers preferences for residential stock only that leads to highest sales rates.

## Site 4 - 15, 17, 19 & 19A Tomaree Street, Nelson Bay

This Test Site is formed by four (4) existing detached dwellings of modest presentation (circa 1975) with an assessed market value of \$350,000 each with two (2) street frontages upon Tomaree and Dowling Streets.

The total development site acquisition price is assessed with an amalgamation premium of 30% to acquire all dwellings as typically encountered. Total site acquisition price adopted = \$350,000 x 4 x 1.3 (\$1.82mill.)

The feasibility results below depict a residential flat building project with parking below ground. The unit pricing below is moderate with small increase for height given the location on the southern fringe of the retail hub.

The key influences resulting in modest pricing for the units at this site are the lack of water views except for the uppermost heights tested given the distance of 750metres from the foreshore on the southern periphery of the retail hub. This distance from the town centre is still within a comfortable walking distance for many purchasers.

**Table 25: Unit Pricing Estimates**

11, 13 & 15 Church Street	3 storeys	4 <sup>th</sup> & 5 <sup>th</sup> storey	6 <sup>th</sup> to 8 <sup>th</sup> storey
One Bedroom	\$400,000	\$440,000	\$460,000
Two Bedrooms	\$450,000	\$490,000	\$510,000
Three Bedrooms	\$500,000	\$540,000	\$560,000

Source: HillPDA Research

### Feasibility Testing Results for 3, 5 and 8 storeys

Our commentary above for optimal (and sub-optimal) building configurations revealed the likelihood of high site cover buildings (ie. 3 storeys) showing a low feasibility and only the 5 and 8 storey heights for an FSR of 2.5:1.0 and 3.0:1.0 revealing a feasible outcome.

This lower degree of feasibility across the options tested is expected for this site given the key factors noted above (ie. distant water views only from the upper levels).

The Residual Land Value below indicates the purchase price required to achieve target threshold returns for each configuration.

**Table 26: Feasibility Testing Results – FSR of 2.5:1.0 for 3, 5 & 8 storeys**

Land Purch Price :\$1.40m.	3 Storeys – 69 Units	5 Storeys – 69 Units	8 Storeys – 69 Units
Development Profit	\$1,701,873	\$1,696,401	\$2,519,561
Development Margin	6.10%	5.91%	8.57%
IRR	10.22%	10.02%	12.26%
Performance Ranking	Unviable	Unviable	Unviable
Residual Land Value (RLV)	\$116,292	\$50,498	\$336,714

Source: HillPDA Research

The IRR's above for all results reveal an amalgamated site value (RLV) to be considerably lower than the individual market value of the existing dwellings by comparing the RLV above to \$1.4million (\$350,000 x 4).

Feasibility results are shown below for an FSR of 3.0:1.0.

**Table 27: Feasibility Testing Results – FSR of 3.0:1.0 for 3, 5 & 8 storeys**

Land Purch Price :\$1.40m.	3 Storeys – 83 Units	5 Storeys – 83 Units	8 Storeys – 83 Units
Development Profit	\$2,462,647	\$2,869,715	\$2,767,991
Development Margin	7.41%	8.42%	7.90%
IRR	11.93%	12.48%	11.70%
Performance Ranking	Unviable	Unviable	Unviable
Residual Land Value	\$233,968	\$257,504	\$24,788

Source: HillPDA Research

### Site Amalgamation “Expensive” in this Case

To amalgamate existing houses the site acquisition price is relatively high reflecting the premium to acquire the land simultaneously, effectively paying above the value of the improvements (ie. houses) that are then demolished. The results confirm that only the most favourable sites with extensive water views are likely to be feasible for residential tower development given the modest unit pricing in Nelson Bay.

### Conclusion

These results show in the current market it is unlikely a site will be amalgamated with existing housing at this distance from the foreshore given the premium required to pay for the improvements for a simultaneous purchase of multiple lots.



## Site 5 - 16, 18 & 20 Donald Street, Nelson Bay

This Test Site comprises the existing Council car-park around 75 metres east of the corner of Donald and Stockton Streets considered to be on the fringe of the established retail hub that intensifies on the opposite side of this intersection where Woolworths lies.

### Mixed Use

The feasibility results below depict a mixed use project with retail strata units on the ground floor and parking below with residential units above over various heights.

Given the fringe location removed from the retail hub, the value (GR's) apportioned to ground floor retail suites (\$5,500/m<sup>2</sup> of strata area) is lower than the residential sales rate as found for 36A – 36F Donald Street resulting in a lower feasibility by the inclusion of shops at this location. As noted for 36A to 36F Donald Street (retail core site) a few shops only facing the street would achieve higher strata rates and the feasibility effect would wither be neutral or positive.

### Existing Public Parking Not Preserved in this Feasibility Testing

The existing carpark presently provides parking for around 232 cars over three levels however, this is restricted to 90 cars only on the ground level as the upper levels are closed due to concrete degradation.

Our modelling reflects does not reflect any preserved public parking that would impose a capital outlay of \$3.5million for 140 cars in an above ground (concrete deck) structure over 2 levels beside the residential building.

As demonstrated in our prior analysis this impediment renders the project unviable at all heights and has not been incorporated to this testing.

### Unit Pricing Boosted by Water Views

Water views can be obtained above three (3) storeys on two (2) building faces.

This site and the site at Church Street will generate the highest unit pricing being the closest to the foreshore (Donald Street) and the highest altitude allowing water views from the mid-rise and upper levels with a summary of the price profile below.

**Table 28: 16, 18 & 20 Donald Street Nelson Bay – Unit Pricing Estimates**

16, 18 & 20 Donald Street	Low Rise	Mid Rise	High Rise	Water Views
One Bedroom	\$400,000	\$450,000	\$500,000	\$550,000
Two Bedrooms	\$450,000	\$500,000	\$550,000	\$650,000
Three Bedrooms	\$525,000	\$575,000	\$625,000	\$725,000

Source: HillPDA Research

The feasibility results show a mix of returns for the two FSR's below.

**Table 29: Feasibility Testing Results – FSR of 2.5:1.0 for 3, 5 & 8 storeys**

Land Purch Price :\$3.12m.	3 Storeys – 104 Units	5 Storeys – 104 Units	8 Storeys - 104 Units
Development Profit	\$1,630,878	\$1,603,051	\$6,813,744
Development Margin	3.77%	3.60%	14.97%
IRR	7.34%	7.08%	18.31%
Performance Ranking	Unviable	Unviable	Viable
Residual Land Value (RLV)	\$392,109	\$214,126	\$3,209,035

Source: HillPDA Research

The IRR's above reveal the highest density tested for an FSR of 2.5:1.0 (8 storeys) achieves a viable feasibility based on a target threshold return of 18% IRR. This also indicates 3 and 5 storeys do not achieve sufficient market demand given the building configuration at an FSR of 2.5:1.0 resulting in a low amenity from the high site cover.

Feasibility results are shown below for an FSR of 3.0:1.0.

**Table 30: Feasibility Testing Results – FSR of 3.0:1.0 for 3, 5 & 8 storeys**

Land Purch Price :\$3.78m.	3 Storeys – 126 Units	5 Storeys – 126 Units	8 Storeys - 126 Units
Development Profit	\$2,891,103	\$4,528,649	\$9,374,366
Development Margin	5.52%	8.43%	17.00%
IRR	9.14%	11.83%	20.27%
Performance Ranking	Unviable	Unviable	Viable
Residual Land Value	\$978,465	\$1,687,586	\$4,587,223

Source: HillPDA Research

As expected the maximum height tested of 8 storeys shows a site cover of 35% which allows for an optimal building design regarding natural light and set-backs, landscaped gardens on site and consistency with other higher priced (prestige) unit buildings in Nelson Bay.

## 5 CONCLUSIONS

Our findings into the feasibility of various density and building height combinations may be summarised by the broad parameters in the Density Table below along the spectrum of Not viable – Marginal and Viable.

**Table 31: Building configurations for each Test Site**

Density Table	FSR	Site Cover	FSR	Site Cover
3 storeys	2.5:1.0	83% Not viable	3.0:1.0	100% Not viable
5 storeys	2.5:1.0	50% Not viable	3.0:1.0	60% Not viable
8 storeys	2.5:1.0	33% Viable	3.0:1.0	38% Viable

The section at the front of this report titled Summary of Findings provides details for the building design constraints around 3, 5 and 8 storeys.

### Three storeys

In essence for residential unit buildings, 3 storeys are found to be compatible regarding design merits with an FSR of 1:1 to 1.2:1.

For townhouses designed with two to three storeys a lower FSR of 0.6:1 to 0.8:1 is likely to be feasible after regard to the areas required for garages and landscaping.

### Further Heights

In our experience with feasibility modelling over a range of districts, we typically find the following height and FSR combinations to be common:

- 3 to 4 storeys are often compatible with an FSR of 1.6:1 to 1.8:1;
- 5 to 6 storeys are often compatible with an FSR of 1.8:1 to 2:1;  
and
- 7 to 8 storeys are often compatible with an FSR of 2.2:1 to 2.5:1.

## APPENDIX A: UNIT SALES EVIDENCE

1A Tomaree Street – Mantra	Sold Date	Sold Price	Internals	\$/sqm	Configuration
<p>The Mantra apartments building is known as "Mantra Aqua Resort" located at the eastern end of Tomaree Street with a second street frontage to Dowling Street. It lies around 200 metres from the retail hub of Nelson Bay and 300 metres from the foreshore.</p> <p>The complex comprises three (3) main buildings containing 110 units formed as four (4) storeys above ground and basement parking beneath.</p> <p>Completion of construction occurred in early 2006 with a design suited for holiday units without internal laundries. Our enquiries indicate occupation comprises mostly casual lettings (short stay patrons) and tenants with fixed terms and only a few owner occupiers.</p> <p>The complex provides water views for units on the upper level of Building A with other unit's sight lines upon the internal pool area and landscaped surrounds or the immediate surrounding district.</p> <p>The sample of recent sales below depicts modest rates (\$/m<sup>2</sup>) reflecting the limited market demand for ownership of holiday letting units that are mostly included in an agent's letting pool.</p>					
Unit 17	August -2016	\$395,000	114m <sup>2</sup>	\$3,465	
3 bedrooms, 2 bathrooms and 2 Car spaces. Located at the rear of the building on Level 1.					
Unit 13	July -2016	\$360,000	90m <sup>2</sup>	\$4,000	
2 bedrooms, 2 bathrooms and 1 car space. Located at the front of the building on level 2.					
Unit 92	May -2016	\$405,000	116m <sup>2</sup>	\$3,491	
3 bedrooms, 2 bathrooms and 2 Car spaces. Located at the front of the building on Level 1.					
Unit 25	April -2016	\$367,000	80m <sup>2</sup>	\$4,588	
2 bedrooms, 2 bathrooms and 1 Car space. Located at the front of the building on Level 3.					
Unit 27	April -2016	\$355,000	79m <sup>2</sup>	\$4,494	
2 bedrooms, 2 bathrooms and 1 Car space. Located at the front of the building on Level 3.					



1A Tomaree Street - Mantra - continued	Sold Date	Sold Price	Internals	\$/sqm	Configuration
Unit 109	March -2016	\$335,000	80m <sup>2</sup>	\$4,188	
2 bedrooms, 2 bathrooms and 1 Car space. Located at the rear of the building on Level 2.					
Unit 102	March -2016	\$427,000	118m <sup>2</sup>	\$3,619	
3 bedrooms, 2 bathrooms and 2 Car spaces. Located at the front & side of the building on Level 2.					
Unit 4	January -2016	\$355,000	95m <sup>2</sup>	\$3,737	
2 bedrooms, 2 bathrooms and 1 Car space. Located at the rear of the building with a large courtyard attached.					
Unit 88	December -2015	\$322,000	79m <sup>2</sup>	\$4,076	
2 bedrooms, 2 bathrooms and 1 Car space. Located at the rear of the building on Level 1.					
Unit 70	December -2015	\$345,000	79m <sup>2</sup>	\$4,367	
2 bedrooms, 2 bathrooms and 1 Car space. Located at the rear of the building on Level 2.					
Unit 55	November -2015	\$345,000	79m <sup>2</sup>	\$4,367	
2 bedrooms, 2 bathrooms and 1 Car space. Located at the rear of the building on Level 1 with extensive terrace attached.					
Unit 69	November 2015	\$350,000	79m <sup>2</sup>	\$4,430	
2 bedrooms, 2 bathrooms and 1 Car space. Located at the rear of the building on Level 2 (1 above ground).					
Unit 77	November -2015	\$285,000	60m <sup>2</sup>	\$4,750	
1 bedroom, 1 bathroom and 1 Car space. Located at the rear of the building on Level 2.					

1A Tomaree Street. - Mantra - continued	Sold Date	Sold Price	Internals	\$/sqm	Configuration
Unit 45	October -2015	\$630,000	110m <sup>2</sup>	\$5,727	
3 bedrooms, 2 bathrooms and 2 Car spaces. Located at the front of the building on Level 4					
Unit 2	August -2015	\$305,000	79m <sup>2</sup>	\$3,861	
2 bedrooms, 2 bathrooms and 1 Car space. Located on the ground floor at the front of the building.					
Unit 58	July 2015	\$323,000	76m <sup>2</sup>	\$4,250	
2 bedrooms, 2 bathrooms and 1 Car space. Located on the ground floor at the rear of the building.					

### LandMark Resort

Another building with holiday letting units contained is the Landmark Resort at 61B Dowling Street Nelson Bay.


This large complex contains 123 units mostly with a two (2) bedroom configuration constructed for holiday lettings like the Mantra Apartments (above). Recent sales show modest rates of \$3,000/m<sup>2</sup> to \$4,600/m<sup>2</sup>, the latter applying to compact units of 72m<sup>2</sup> (living area) achieving a typical sale price of \$335,000 to \$350,000.

Its status as holiday apartments is evident in:

- Extensive common areas on the ground floor both enclosed and open (with extensive landscaped grounds including a pool);
- Extensive visitor parking (at grade) at the rear of the property;
- All units face north with a narrow, elongated shape interconnected by a long corridor at the rear of each floor; and
- Our enquiry confirms investors are the majority owners restricted to a single letting pool operated by a particular local agent letting given reluctance from other agents to undertake “one off” holiday lettings in the building.


### “The Shoal Apartments”

See commentary within the report under the heading “3 The Shoal Apartments” for the only known case of current unit pre-sales occurring within proximity to Nelson Bay.

42 Stockton Street. Bayview Apartments	Sold Date	Sold Price	Internals	\$/sqm	Configuration
<p>The Bayview building is located at the corner with Tomaree Street around 150 metres from the retail hub of Nelson Bay that contains a recently opened Woolworths supermarket with parking beneath.</p> <p>The complex contains 12 units with a north facing aspect for each over three (3) storeys above basement parking for 18 vehicles and a passenger lift servicing all levels. Construction completion occurred in mid 2003. Our enquiries indicate occupation by owner occupiers and long term tenants (6-12 months) mostly. The sales rates shown reflect an appealing well maintained block with some age (16 years) effect.</p>					
Unit 3	June -2016	\$415,000	100m <sup>2</sup>	\$4,150	
2 bedrooms, 2 bathrooms and 1 car space. Located on the ground floor. Bedroom advertised as divisible into two (2) as confirmed by the published floor plan.					
Unit 2	March -2016	\$420,000	105m <sup>2</sup>	\$4,000	
3 bedrooms, 2 bathrooms and 2 car spaces. Located on the ground floor court yard and garden.					
Unit 10	June -2014	\$440,000	105m <sup>2</sup>	\$4,190	
3 bedrooms, 2 bathrooms and 2 lock up garages. Located on the front, side and rear of the building.					

2 Government Road. Dolphin Cove	Sold Date	Sold Price	Internals	\$/sqm	Configuration
<p>Known as Dolphin Cove, this building is located at a relatively high altitude close to the retail hub of Nelson Bay and hotel near the foreshore.</p> <p>The complex contains 16 units over five (5) storeys including six (6) south facing only units given the street frontage has a southerly aspect. There is basement parking for 28 vehicles and a passenger lift servicing all levels.</p> <p>Construction completion occurred in late 2005. The strata plan indicates occupation by owner occupiers and long term tenants (6-12 months) given the upper two (2) floors are divided into only four (4) large units all facing north (opposite the street).</p> <p>The moderate sales rates shown below reflect lower level units with modest views in a modern well maintained building.</p>					
Unit 8	Feb -2016	\$385,000	116m <sup>2</sup>	\$3,319	
3 bedrooms, 2 bathrooms and 2 car spaces. Located on the first floor in the middle-front of the building with a single aspect to the south.					
Unit 5	Feb -2016	\$415,000	133m <sup>2</sup>	\$3,120	
3 bedrooms, 2 bathrooms and 1 car space. Also located on the first floor at the front of the building with views to the west and south.					
Unit 3	June - 2014	\$405,000	117m <sup>2</sup>	\$3,462	
3 bedrooms, 2 bathrooms and 1 car space. Located on the ground floor at the rear of the building with views to the north and east.					
Unit 10	Dec -2012	\$386,000	102m <sup>2</sup>	\$3,784	
3 bedrooms, 2 bathrooms and 2 car spaces. Located at the rear of the building on level 2 with views toward the water facing north and west.					



5 Laman Street. - Oasis	Sold Date	Sold Price	Internal (Living) Area	\$/sqm	Configuration
<p>The Oasis building has a prominent location at the corner of Laman Street and Government Road around 100 metres from the retail hub of Nelson Bay.</p> <p>It contains 12 units with all except two (2) providing north facing aspects. It is formed over five (5) storeys above basement parking for 20 vehicles and a passenger lift servicing all levels.</p> <p>Construction completion occurred in late 2006. Our enquiries indicate occupation by owner occupiers and long term tenants (6-12 months) mostly. The relatively high sales rate shown for unit 6 reflects a broad frontage facing north and water views given the elevated position and proximity to the foreshore (100 metres).</p>					
Unit 6	February -2016	\$730,000	110m <sup>2</sup>	\$6,636	
3 bedrooms, 2 bathrooms and 2 car space. Located on the second floor with water views of the marina and Nelson Bay.					
Unit 1	February -2016	\$605,000	133m <sup>2</sup>	\$4,548	
3 bedrooms, 2 bathrooms and 1 car space. Located on the ground floor.					
Unit 2	December - 2013	\$425,000	100m <sup>2</sup>	\$4,250	
3 bedrooms, 2 bathrooms and 1 car space. Located on the ground floor with north facing aspect.					



21 Tomaree Street. - Scirocco Apartments	Sold Date	Sold Price	Internal (Living) Area	\$/sqm	Configuration
<p>The Scirocco apartments building is located in Tomaree Street toward the top of the steep rise from Stockton Street with a rear alignment upon Dowling Street around 200 metres from the retail hub of Nelson Bay and 400 metres from the foreshore.</p> <p>The complex contains 18 units all shaped as narrow and elongated to achieve a north facing aspect for all over six (6) storeys above basement parking for 35 vehicles and a passenger lift servicing all levels.</p> <p>Construction completion occurred in late 2004. It is likely that owner occupiers and long term tenants (6-12 months) characterise the occupancy. The sales rates shown reflect an appealing well maintained block at a high altitude although dated stock (12 years).</p>					
Unit 13	June -2016	\$550,000	126m <sup>2</sup>	\$4,365	
3 bedrooms, 2 bathrooms and 2 car spaces. Located on the third floor with a north facing aspect. Currently has water views that may be eventually be built out.					
Unit 4	June -2016	\$590,000	150m <sup>2</sup>	\$3,933	
3 bedrooms, 2 bathrooms and 2 car spaces. Located on the first floor with north facing aspect and water glimpses.					
Unit 16	Jan -2016	\$600,000	120m <sup>2</sup>	\$5,000	
3 bedrooms, 2 bathrooms and 2 car spaces. Located on the fourth floor with views to the north and west.					
Unit 18	Dec-2014	\$377,000	123m <sup>2</sup>	\$3,065	
2 bedrooms, 2 bathrooms and 1 car space. Located on the ground floor with a large court yard.					

55 Magnus Street. The Magnus	Sold Date	Sold Price	Internal (Living ) Area	\$/sqm	Configuration
<p>This building known as the Magnus Apartments is located on the southern side of a street parallel (and close) to the foreshore. It provides large units with expensive finishes such as floor to ceiling windows and broad sweeping (curved) balconies.</p> <p>It is widely regarded as one of the most notable apartment buildings in Nelson Bay.</p>  <p>The units enclose a large living area being (arguably) oversized for the price range applicable to Nelson Bay resulting in a lengthy selling time of around three (3) years after completion in 2009 and low sales rates for the relatively high pricing given the large internal (living) areas as shown below.</p> <p>Discussions with a long term residential sales agent confirmed the expected outcome of this project being a significant loss given the sales rates equivalent to the building construction cost, completed by a well-resourced developer with little external funding reliance.</p>					
Unit 1	June -2016	\$800,000	287m <sup>2</sup>	\$2,787	
4 bedrooms, 2 bathrooms and 2 car spaces.					
Unit 6	June -2016	\$940,000	300m <sup>2</sup>	\$3,133	
5 bedrooms, 3 bathrooms and 2 lock up garages. Located on the first floor with north facing aspect.					
Unit 10	April -2015	\$1,600,000	360m <sup>2</sup>	\$4,444	
5 bedrooms, 5 bathrooms and 3 car spaces. Located on the fourth floor with views north/west.					
Unit 2	April - 2015	\$700,000	172m <sup>2</sup>	\$4,070	
3 bedrooms, 2 bathrooms and 2 car space. Located on the first level with north aspect.					

25 Tomaree Street.	Sold Date	Sold Price	Internal (Living) Area	\$/sqm	Configuration
<p>This older style building (circa 2005) is located (almost) at one of the highest points of the Nelson Bay urban hub near the top of the steep rise of Tomaree Street around 200 metres from the retail centre of Nelson Bay.</p> <p>The complex contains six (6) units all with north facing aspects over three (3) storeys above parking for 18 vehicles at ground level without a passenger lift.</p> <p>The units on Level 3 have a second level above with the balance of the rooftop dedicated to common area (aspect to the south).</p> <p>The modest sales rate below provides an indication of the price ceiling for three (3) bedroom stock in older buildings without views.</p>					
Unit 1	February -2015	\$580,000	150m <sup>2</sup>	\$3,867	
3 bedrooms, 2 bathrooms and 2 car spaces. Located on the ground floor.					



## APPENDIX B: DISCLAIMER

## Disclaimer

1. This report is for the confidential use only of the party to whom it is addressed ("Client") for the specific purposes to which it refers and has been based on, and takes into account, the Client's specific instructions. It is not intended to be relied on by any third party who, subject to paragraph 3, must make their own enquiries in relation to the issues with which this report deals.
2. HillPDA makes no representations as to the appropriateness, accuracy or completeness of this report for the purpose of any party other than the Client ("Recipient"). HillPDA disclaims all liability to any Recipient for any loss, error or other consequence which may arise as a result of the Recipient acting, relying upon or using the whole or part of this report's contents.
3. This report must not be disclosed to any Recipient or reproduced in whole or in part, for any purpose not directly connected to the project for which HillPDA was engaged to prepare the report, without the prior written approval of HillPDA. In the event that a Recipient wishes to rely upon this report, the Recipient must inform HillPDA who may, in its sole discretion and on specified terms, provide its consent.
4. This report and its attached appendices are based on estimates, assumptions and information provided by the Client or sourced and referenced from external sources by HillPDA. While we endeavour to check these estimates, assumptions and information, no warranty is given in relation to their reliability, feasibility, accuracy or reasonableness. HillPDA presents these estimates and assumptions as a basis for the Client's interpretation and analysis. With respect to forecasts, HillPDA does not present them as results that will actually be achieved. HillPDA relies upon the interpretation of the Client to judge for itself the likelihood of whether these projections can be achieved or not.
5. Due care has been taken to prepare the attached financial models from available information at the time of writing, however no responsibility can be or is accepted for errors or inaccuracies that may have occurred either with the programming or the resultant financial projections and their assumptions.
6. This report does not constitute a valuation of any property or interest in property. In preparing this report HillPDA has relied upon information concerning the subject property and/or proposed development provided by the Client and HillPDA has not independently verified this information except where noted in this report.
7. In relation to any valuation which is undertaken for a Managed Investment Scheme (as defined by the Managed Investments Act 1998) or for any lender that is subject to the provisions of the Managed Investments Act, the following clause applies:

This valuation is prepared on the assumption that the lender or addressee as referred to in this valuation report (and no other) may rely on the valuation for mortgage finance purposes and the lender has complied with its own lending guidelines as well as prudent finance industry lending practices, and has considered all prudent aspects of credit risk for any potential borrower, including the borrower's ability to service and repay any mortgage loan. Further, the valuation is prepared on the assumption that the lender is providing mortgage financing at a conservative and prudent loan to value ratio.
8. HillPDA makes no representations or warranties of any kind, about the accuracy, reliability, completeness, suitability or fitness in relation to maps generated by HillPDA or contained within this report.





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## **Appendix 7 – Council Meeting Minutes Excerpt**

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**ORDINARY COUNCIL MEETING - 25 SEPTEMBER 2018**  
**MOTION**

094	<b>Councillor Giacomo Arnott</b> <b>Councillor Chris Doohan</b>  It was resolved that Council move into Committee of the Whole.
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Mayor Ryan Palmer left the meeting at 6:32pm, in Committee of the Whole. The Deputy Mayor, Cr Sarah Smith Chaired the meeting during the absence of the Mayor.

**ITEM NO. 4**

**FILE NO: 18/109715**  
**EDRMS NO: PSC2007-1204V3**

**NELSON BAY TOWN CENTRE & FORESHORE STRATEGY IMPLEMENTATION  
AND DELIVERY PROGRAM**

REPORT OF: STEVEN PEART - STRATEGY & ENVIRONMENT SECTION  
MANAGER  
GROUP: DEVELOPMENT SERVICES

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**RECOMMENDATION IS THAT COUNCIL:**

- 1) Note the outcomes of the exhibition of the draft 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (2017)' (Delivery Program) and draft Clause 4.6 Policy - Exceptions to Development Standards summarised in the Community and Stakeholder Consultation Report (**TABLED DOCUMENT 1**).
  - 2) Adopt the Delivery Program which recommends raising the height limit in Nelson Bay Town Centre to 10 storeys and other actions to increase investment feasibility, whilst maintaining a high quality public domain and improved design outcomes (**TABLED DOCUMENT 2**).
  - 3) Endorse the Clause 4.6 Policy - Exceptions to Development Standards (**ATTACHMENT 1**).
  - 4) Endorse the preparation and submission of a planning proposal for a Gateway certificate to the NSW Department of Planning seeking to amend the *Port Stephens Local Environmental Plan 2013* and implement the relevant actions in the adopted Delivery Program.
- 

**ORDINARY COUNCIL MEETING - 25 SEPTEMBER 2018**  
**COMMITTEE OF THE WHOLE RECOMMENDATION**

	<b>Councillor John Nell</b> <b>Councillor Glen Dunkley</b>
--	---

## MINUTES ORDINARY COUNCIL - 25 SEPTEMBER 2018

	<p>That Council:</p> <ol style="list-style-type: none"><li>1) Note the outcomes of the exhibition of the draft 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (2017)' (Delivery Program) and draft Clause 4.6 Policy - Exceptions to Development Standards summarised in the Community and Stakeholder Consultation Report <b>(TABLED DOCUMENT 1)</b>.</li><li>2) Adopt a revised version of Tabled Document 3, to retain a height limit of 5 storeys in the core of the town centre, and reduce the height limit of the area proposed at 10 storeys along the edges of the town centre to 8 storeys (28 metres). Make all necessary changes to the Delivery Program to give effect to these height limits.</li><li>3) Endorse the Clause 4.6 Policy - Exceptions to Development Standards <b>(ATTACHMENT 1)</b>.</li><li>4) Endorse the preparation and submission of a planning proposal for a Gateway certificate to the NSW Department of Planning seeking to amend the <i>Port Stephens Local Environmental Plan 2013</i> and implement the relevant actions in the adopted Delivery Program.</li></ol>
--	---

In accordance with Section 375 (A) of the *Local Government Act 1993*, a division is required for this item.

Those for the Motion: Crs Chris Doohan, Glen Dunkley, Paul Le Mottee, John Nell, Sarah Smith and Steve Tucker.

Those against the Motion: Crs Jaimie Abbott, Giacomo Arnott and Ken Jordan.

The motion was carried.

### ORDINARY COUNCIL MEETING - 25 SEPTEMBER 2018 PROCEDURAL MOTION

	<p><b>Councillor Giacomo Arnott</b></p> <p>That Council allow Nigel Waters from the Tomaree Ratepayers and Residents Association to speak on this item prior to a decision for five minutes and allow questions from Councillors, in accordance with the normal public access process.</p>
--	--

The motion lapsed without a seconder.

**ORDINARY COUNCIL MEETING - 25 SEPTEMBER 2018**  
**PROCEDURAL MOTION**

	<b>Councillor Giacomo Arnott</b> <b>Councillor John Nell</b>  That Council suspend the Council meeting to allow Nigel Waters from the Tomaree Ratepayers and Residents Association to speak for five minutes, in accordance with the normal public access process.
--	---

**ORDINARY COUNCIL MEETING - 25 SEPTEMBER 2018**  
**MOTION**

	<b>Councillor Giacomo Arnott</b> <b>Councillor John Nell</b>  That a division be recorded.
--	---

Those for the Motion: Crs Jaimie Abbott, Giacomo Arnott, Chris Doohan, Glen Dunkley, John Nell and Steve Tucker.

Those against the Motion: Crs Ken Jordan, Paul Le Mottee and Sarah Smith.

The motion was put and carried in Committee of the Whole. The Council meeting was suspended and Mr Waters presented to Council.

**ORDINARY COUNCIL MEETING - 25 SEPTEMBER 2018**  
**AMENDMENT**

	<b>Councillor Giacomo Arnott</b> <b>Councillor Jaimie Abbott</b>  That the item be deferred until the next Council meeting to be held on 9 October 2018.
--	---

In accordance with Section 375 (A) of the *Local Government Act 1993*, a division is required for this item.

Those for the Motion: Crs Jaimie Abbott, Giacomo Arnott and John Nell.

Those against the Motion: Crs Chris Doohan, Glen Dunkley, Ken Jordan, Paul Le Mottee, Sarah Smith and Steve Tucker.

The motion on being put was lost.

Mayor Ryan Palmer left the meeting at 8:42pm in Open Council. The Deputy Mayor, Cr Sarah Smith Chaired the meeting during the absence of the Mayor.

**ORDINARY COUNCIL MEETING - 25 SEPTEMBER 2018**  
**MOTION**

<b>095</b>	<p><b>Councillor John Nell</b> <b>Councillor Glen Dunkley</b></p> <p>It was resolved that Council:</p> <ol style="list-style-type: none"><li>1) Note the outcomes of the exhibition of the draft 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (2017)' (Delivery Program) and draft Clause 4.6 Policy - Exceptions to Development Standards summarised in the Community and Stakeholder Consultation Report <b>(TABLED DOCUMENT 1)</b>.</li><li>2) Adopt a revised version of Tabled Document 3, to retain a height limit of 5 storeys in the core of the town centre, and reduce the height limit of the area proposed at 10 storeys along the edges of the town centre to 8 storeys (28 metres). Make all necessary changes to the Delivery Program to give effect to these height limits.</li><li>3) Endorse the Clause 4.6 Policy - Exceptions to Development Standards <b>(ATTACHMENT 1)</b>.</li><li>4) Endorse the preparation and submission of a planning proposal for a Gateway certificate to the NSW Department of Planning seeking to amend the <i>Port Stephens Local Environmental Plan 2013</i> and implement the relevant actions in the adopted Delivery Program.</li></ol>
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In accordance with Section 375 (A) of the *Local Government Act 1993*, a division is required for this item.

Those for the Motion: Crs Glen Dunkley, Paul Le Mottee, John Nell, Sarah Smith and Steve Tucker.

Those against the Motion: Crs Jaimie Abbott, Giacomo Arnott, Chris Doohan and Ken Jordan.

Mayor Ryan Palmer returned to the meeting at 8:46pm in Open Council and resumed the Chair.



## **BACKGROUND**

The purpose of this report is to advise Council of the outcomes of the consultation during the public exhibition of the draft 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (2017)' and draft Clause 4.6 Policy - Exceptions to Development Standards (draft Clause 4.6 Policy). The report recommends Council adopt the final versions of the documents that have been amended in response to submissions, and endorse the preparation of the amendments to the *Port Stephens Local Environmental Plan 2013* (PSLEP) that are necessary to implement the adopted Delivery Program.

The Delivery Program is the end product of the 'Discussion Paper: Progress of the Nelson Bay Town Centre and Foreshore Strategy' prepared in 2016 to examine why limited private investment and economic development has occurred in the Nelson Bay since the preparation of the Nelson Bay Town Centre and Foreshore Strategy (2012). The Discussion Paper was publicly exhibited in the first half of 2017 and a summary of submissions was reported back to Council on 12 December 2017.

The Delivery Program includes actions to introduce new development standards and controls in the legal planning framework that will improve design outcomes, encourage an activated town centre, and stimulate investment. It also contains actions related to planning for a vibrant public domain, addressing traffic and parking management, and actions related to resourcing and implementation.

The Clause 4.6 Policy has been prepared in response to community feedback about managing building heights in Nelson Bay, however the Policy will apply across the entire local government area to guide the assessment of applications that seek to vary any relevant development standard. The Policy seeks to provide greater transparency, community participation and more robust assessments when a variation to a development standard is proposed.

It is noted that Clause 4.6 of the PSLEP is a standard provision of local environmental plans, and provides the necessary criteria for Council to assess variations to development standards.

A frequently asked questions document (FAQs) setting out further details on the principles and objectives of the Delivery Program and Clause 4.6 Policy is attached to this Report (**ATTACHMENT 2**). The FAQs provide information and responses to some of the key issues raised during exhibition period and the next steps for change in Nelson Bay. The FAQs will be made available on Council's website and provided to interested community members.

The draft 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (2017)' and draft Clause 4.6 Policy - Exceptions to Development Standards were exhibited from 21 February 2018 to 4 April 2018.

During the public exhibition period, 151 submitters made individual written submissions. Submissions were also received from peak organisations, such as Destination Port Stephens and the Tomaree Business Chamber, community groups such as EcoNetwork and the Tomaree Residents and Ratepayers Association, and a submission was received from the NSW Department of Planning and Environment. There were also 1674 pro forma submissions and one petition with 813 signatures. A detailed report, and response to the issues raised in the submissions is provided in **(TABLED DOCUMENT 1)**.

Overall the key issues raised in submissions related to the proposed increase in building height controls in the town centre. Over 90% of submissions expressed concern over a proposed height increase, however some submitters supported a modest increase in height from the existing five (5) storey height limit. Close to 90% of submissions supported all other recommendations or actions they referred to, including proposed public domain improvements and design excellence initiatives.

The NSW Department of Planning and Environment has expressed support for Council's strategic vision for the revitalisation of Nelson Bay in correspondence dated 11 April 2018:

'Nelson Bay is identified as a strategic centre in the Hunter Regional Plan 2036 because of its role as a tourist centre for the region and as a hub for the Tomaree Peninsula. It is recognised that, among other matters, the delivery plan responds to the Regional Plan's desire for Council to investigate opportunities for high density development that maintains and enhances the tourist, recreation and residential appeal of the centre.'

Further details on the consultation and the submissions received are summarised in the Community and Stakeholder Consultation Report **(TABLED DOCUMENT 1)**.

Whilst it is recommended that the height limits in the Town Centre be raised to 10 storeys to maximise improvements to investment feasibility, a version of the Delivery Program has been prepared to respond to the submissions that expressed concerns about the impact of the proposed changes to height limits **(TABLED DOCUMENT 3)**.

A five (5) storey height limit could be retained in the core of the Town Centre, and height limits of 10 storeys could be confined to along the edges of the Town Centre **(ATTACHMENT 3)**.

Analysis has indicated that 10 storeys, with the incorporation of floor space ratio controls, can be achieved across the Town Centre, particularly along the Town Centre 'edges'. It is acknowledged that the core of Nelson Bay Town Centre is highly fragmented and, without consolidation of multiple lots, analysis shows that there may be limitations to achieving 10 storeys given the proposed controls for floor space ratio.

Raising height limits to 10 storeys across the town centre remains the preferred option to respond to the economic analysis and recommendations outlined in the Delivery Program, however given the existing development pattern, a 10 storey height limit in the core of the centre may not have the intended impact on development feasibility to the same extent as within the edges of the Town Centre.

A five (5) storey height limit in the Town Centre core may also retain the natural amphitheatre and 'coastal village feel', whilst facilitating greater view sharing.

It is noted that the height limits that currently apply to Nelson Bay Foreshore Reserve are not proposed to be amended, and were shown in the exhibited draft Delivery Program as they currently exist in the *Port Stephens Local Environmental Plan 2013*.

As it is not proposed to amend this development standard, these height limits are not shown in **(TABLED DOCUMENT 2, TABLED DOCUMENT 3 and ATTACHMENT 3)**.

The other key changes to the Delivery Program and Clause 4.6 Policy that have been proposed in response to the issues raised in the submissions include:

<b>Issue</b>	<b>Exhibited</b>	<b>Changes after exhibition</b>
Plan for a vibrant town centre.	Requirements for new buildings to provide an activated street frontage in some parts of the town centre.	The area in the town centre where new buildings will be required to provide an activated street frontage has been extended.
Address solutions for peak season parking and traffic.	New Citizen's Panel will be established to reach consensus and make recommendations to Council.	Expedited establishment of the Panel to the immediate term and commissioned consultants to establish the Panel following a random survey of residents and visitors. The Panel will consider a range of options to address traffic and parking and give an objective community perspective on what can be done to ease the pressure on parking during peak periods.
Prepare and implement public domain improvements to the town centre and foreshore as a priority.	Prepare Public Domain Plan in medium term (1-3 years from Strategy adoption). In the meantime, Yacaaba St works have been recently completed.	Expedited this action to the immediate term and commissioned consultants to prepare a Public Domain Plan, Street Tree Masterplan, and Wayfinding / Signage package for Nelson Bay Town Centre. This will be subject to public exhibition prior to final adoption.

## MINUTES ORDINARY COUNCIL - 25 SEPTEMBER 2018

Issue	Exhibited	Changes after exhibition
Plan for an improved pedestrian and visitor experience.	No express actions related to utilising technology to resolve traffic and parking issues or to facilitate better wayfinding.	New action directly related to incorporating 'Smart City' initiatives wherever possible to improve the visitor and pedestrian experience. This may include initiatives such as a Smart parking app and digital information. These initiatives can help resolve traffic and parking issues and facilitate a better visitor experience.
Plan for density with an accompanying focus on design excellence to improve amenity.	Design excellence initiatives included in the Implementation Plan including training for staff and the establishment of an independent urban design panel.	Additional initiatives have been added to the Implementation Plan including a new action to commission a digital 3D model of the existing town centre using digital aerial mapping. The tool will be able to be used by assessment staff to support decision making and to inform the assessment of impacts including overshadowing, bulk and scale, and pedestrian amenity.
Ensure new buildings are designed to maximise view sharing where possible and minimise overshadowing of the public domain.	Bulk and scale of new buildings is to be addressed through floor space ratio controls and side and rear setback requirements.	Development controls will be prepared to include objectives for upper storey setbacks to facilitate view sharing and visual privacy for residential flat buildings. Upper storey setbacks will also increase day light access to the street and improve the quality of the public domain.
The Clause 4.6 Policy - Exceptions to development standards, is too broad. Development standards should be enforced in Nelson Bay.	Proposals that exceed height (or other limits) by greater than 10% will be peer reviewed prior to determination.	Note that Clause 4.6 is a standard clause of the <i>Port Stephens Local Environmental Plan 2013</i> and applies across the local government area. All councils must include this clause in their local environmental plans and cannot amend the clause. The Clause 4.6 Policy has been further strengthened following exhibition and proposals that exceed height (or other limits) by greater than 10% will now be determined by the full Council. The elected Council will have the final say on these variations.

This report recommends Council endorse the preparation of an amendment to the *Port Stephens Local Environmental Plan 2013*, which is necessary to implement the actions in the Delivery Program to change the development standards for building height, floor space ratio and to introduce new requirements for active street frontages and appropriate vertical to horizontal proportions for new buildings in the Town Centre.

The planning proposal to amend the *Port Stephens Local Environmental Plan 2013* will:

1. Increase height limits in Nelson Bay Town Centre in accordance with the adopted Delivery Program.
2. Set floor space ratios in Nelson Bay Town Centre in accordance with the adopted Delivery Program.
3. Set minimum vertical to horizontal proportions for new buildings to limit tall and skinny developments by encouraging existing lots that are less than 15m wide and 35m long to amalgamate in order to re-develop.
4. Include provisions for active street frontages in the areas identified in the adopted Delivery Program.

The proposed amendment to require 'active street frontages' in Nelson Bay Town Centre will require all premises on the ground floor of the building facing the street to be used for the purposes of business premises or retail premises. This could include amusement centres, community facilities, educational establishments, entertainment facilities, function centres, information and education facilities, medical centres, public administration buildings, recreation facilities (indoor), or registered clubs.

The land use planning objectives of the planning proposal will seek to create a lively Nelson Bay Town Centre with an amenable and pedestrian-focused public domain, activated by building uses that engage with the street.

## **COMMUNITY STRATEGIC PLAN**

<b>Strategic Direction</b>	<b>Delivery Program 2018-2021</b>
Thriving and Safe Place to Live	Provide land use plans, tools and advice that sustainably support the community.

**FINANCIAL/RESOURCE IMPLICATIONS**

<b>Source of Funds</b>	<b>Yes/No</b>	<b>Funding (\$)</b>	<b>Comment</b>
Existing budget	Yes	To be determined	Funding will be required to implement a range of actions in the Delivery Program, including works associated with the Public Domain Plan and Apex Park Masterplan and projects related to traffic, transport and parking improvements. This will be implemented consistent with the relevant actions in the Delivery Program.
Reserve Funds	No		
Development Contributions (\$7.11)	Yes	To be determined	Future development will be subject to local infrastructure contributions calculated in accordance with the Port Stephens Development Contributions Plan with a specific action in the Delivery Program to give effect to this.
External Grants	Yes	\$70,000	Grant for the preparation of a Public Domain Plan received from the Tourism Demand Driver Infrastructure grant program. This has been matched through Council funding.
Other	No		

**LEGAL, POLICY AND RISK IMPLICATIONS**Hunter Regional Plan

The Delivery Program is consistent with the Hunter Regional Plan 2036 (HRP). The HRP lists Nelson Bay as a regionally significant centre with the following priorities:

- Maintain it as one of the primary tourist centres for the region and a hub for the Tomaree Peninsula.
- Maintain retail and professional services for the surrounding communities.
- Investigate opportunities for high-density development that maintains and enhances the tourist, recreational and residential appeal of the centre.



- Balance the mix of permanent residential and tourist accommodation to enhance the vibrancy and appeal of the centre and surrounds.

The submission for the NSW Department of Planning and Environment also confirmed the consistency of the Delivery Program as exhibited with the Hunter Regional Plan.

#### Port Stephens Planning Strategy 2011-2036

The Delivery Program is consistent with the Port Stephens Planning Strategy (PSPS). The PSPS provides a comprehensive planning strategy for the LGA. The PSPS identifies a number of key challenges and opportunities for Nelson Bay which are addressed in the Delivery Program.

#### Port Stephens Local Environmental Plan 2013

Land use changes envisioned by the Delivery Program will be facilitated by amendments to the *Port Stephens Local Environmental Plan 2013* through the planning proposal process. The planning proposal will be prepared to address the comments received from the NSW Department of Planning and Environment will give effect to the strategic direction outlined in the adopted Delivery Program.

The proposed amendment will follow the relevant processes for all planning proposals, including provision for further public consultation.

The Clause 4.6 Policy is consistent with the model clauses of the Standard Instrument Local Environmental Plan and the guidance published by the NSW Department of Planning and Environment on the administration of the clause.

<b>Risk</b>	<b><u>Risk Ranking</u></b>	<b>Proposed Treatments</b>	<b>Within Existing Resources?</b>
There is a risk that the strategy does not address all State government issues and a planning proposal will not be supported.	Low	Address the comments in the submission provided by the NSW Department of Planning and continue to consult with the Department prior to the submission of a planning proposal.	Yes

<b>Risk</b>	<b><u>Risk Ranking</u></b>	<b>Proposed Treatments</b>	<b>Within Existing Resources?</b>
There is a risk that future development is not supported by adequate infrastructure.	Medium	Ensure Council's Strategic Asset Management Plan and development contributions plans are updated to align with the Delivery Program, including the Nelson Bay Public Domain Plan (when adopted).	Yes
There is a risk that funding to implement the Delivery Program will not be available.	Medium	Apply for grant funding and commit to reviewing the Delivery Program to monitor whether proposed development standards remain appropriate for market conditions.	Yes

**SUSTAINABILITY IMPLICATIONS**

Includes Social, Economic and Environmental Implications

Adopting the Delivery Program and Clause 4.6 Policy has broad positive social, economic and environmental implications. It ensures that strategic land use planning in Nelson Bay Town Centre plans to accommodate growth and facilitates an activated centre that includes community infrastructure.

The Delivery Program and Clause 4.6 Policy contain measures that increase opportunities for community participation in planning processes and increase transparency and facilitate improved decision making.

The Delivery Program aims to achieve improved economic and environmental outcomes by encouraging private investment and facilitating better quality public spaces in Nelson Bay Town Centre.

**CONSULTATION**

Consultation with the community and key stakeholders has been undertaken by the Strategy and Environment Section.

The objective of the consultation was to obtain community and stakeholder feedback on the draft 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (2017)' and the draft Clause 4.6 Policy - Exceptions to Development Standards.

### Internal

Internal consultation was undertaken prior to exhibition and will be ongoing as part of the implementation of the Delivery Program and Policy. This will include the establishment of an Implementation Panel involving the various sections of Council on an 'as needed' basis. Other actions identified in the Delivery Program will also include ongoing internal consultation with the relevant Council sections during implementation.

### External

Community and external stakeholder consultation has been ongoing since the preparation and exhibition of the initial Discussion Paper: Progress of the Nelson Bay Town Centre and Foreshore Strategy in the first half of 2017. This included community consultation initiatives such as surveys on Engagement HQ (an online consultation tool on Council's website), letter drops to local businesses, special interest groups and other stakeholders, key stakeholder meetings, including with Tomaree Ratepayers and Residents Association (TRRA), Tomaree Business Chamber, local real estate agents, Destination Port Stephens, meeting with TRRA planning assessment team, the Aboriginal Strategic Committee, the Nelson Bay Pop-

Up Shop (Smart Art Program), the NSW Department of Planning and Environment and NSW Crown Lands. A total of 82 individual and 67 survey submissions were made on the Discussion Paper that were considered in the preparation of the Delivery Program. This was previously reported to Council on 12 December 2017.

The draft 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (2017)' and the draft Clause 4.6 Policy - Exceptions to Development Standards were exhibited from 21 February 2018 to 4 April 2018.

A number of supporting documents were also exhibited with these documents, including an updated traffic and transport study, a report on the feasibility testing of residential development sites in Nelson Bay Town Centre, and an independent third party peer review of the feasibility testing.

The information was made publicly available on Council's website and Engagement HQ, notification letters were sent to businesses, key stakeholders and special interest groups, and public notices were published in the local newspaper. Social media promotions (Port Stephens Council website, Twitter, Facebook, LinkedIn) were conducted, and articles and interviews with the Mayor were published in the local newspaper.

More than 50 people attended a launch of the 'Nelson Bay Next' brand and over 30 people attended two 'Drop-In Sessions' held in Apex Park, Nelson Bay. Both events took place within the public exhibition period and the community could speak directly to Council Officers at the Drop-In Sessions. Councillors and Council Officers also

spoke and answered questions at a TRRA meeting at the Nelson Bay Bowling Club within this period.

A summary of the submissions received during the exhibition of the draft 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (2017)' and the draft Clause 4.6 Policy - Exceptions to Development Standards and the responses to the issues raised in submissions is set out in the Community and Stakeholder Consultation Report (**TABLED DOCUMENT 1**).

The FAQ document (**ATTACHMENT 2**) will be made public on adoption of the Delivery Program to provide further details on some of the principles and objectives of the Delivery Program and the Clause 4.6 Policy (**ATTACHMENT 1**), subject to Council adoption.

Further community consultation will be undertaken in accordance with the *Environmental Planning and Assessment Act 1979* should Council endorse the preparation and submission of a planning proposal to the NSW Department of Planning seeking to amend the *Port Stephens Local Environmental Plan 2013* to implement aspects of the adopted Delivery Program.

## **OPTIONS**

- 1) Accept the recommendations.
- 2) Amend the recommendations.
- 3) Reject the recommendations.

## **ATTACHMENTS**

- 1) Clause 4.6 Policy - Exceptions to Development Standards.
- 2) Nelson Bay Frequently Asked Questions.
- 3) Height Map - 10 storeys + five (5) storeys.

## **COUNCILLORS ROOM**

- 1) Draft 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (2017)' (Delivery Program) and draft Clause 4.6 Policy - Exceptions to Development Standards – Submissions.

## **TABLED DOCUMENTS**

- 1) Community and Stakeholder Consultation Report.
- 2) Nelson Bay Town Centre Delivery Program.
- 3) Nelson Bay Town Centre Delivery Program – 10 storeys + five (5) storeys.

## **Appendix 8 – Apex Park Masterplan**

---



NELSON BAY

D'ALBORA MARINA

TERAMBY ROAD

LANAN STREET

## LEGEND



Existing trees to be retained



Existing Araucaria feature trees to be retained



Existing feature Date Palm trees to be retained



- 1 PARK SEAT to be upgraded and relocated with consideration for view corridor
- 2 OPEN GRASSED AREA and VEGETATION CORRIDOR to be retained and managed as appropriate. This includes management of informal public access paths and issues of public safety and erosion control.
- 3 Maintain and upgrade BRIDLE PATH as necessary. Provide measures to slow cyclists and
- 4 GRASSED TERRACE AMPHITHEATRE - Create low seating walls to existing grass slope to enhance / encourage passive use of the park
- 5 EMBANKMENT STABILISATION works including the establishment of low vegetation
- 6 RETAINING WALLS to be upgraded along northern boundary to match existing material used along eastern boundary retaining walls
- 7 HERIT cenotaph, remains of memorial steps and the well to be retained, restored and managed as appropriate.
- 8 PARK FURNITURE to be upgraded throughout the park to a consistent style
- 9 'LONE PINE' to be retained and protected. Further consultation to be undertaken with key stakeholders to review current location, during implementation.
- 10 Upgrade RETAINING WALL surrounds to match existing on lower side of park
- 11 Widen ENTRY PATHWAY, upgrade footpath pavement and create a WATER FEATURE along the pathway edge. Upgrade existing banner poles to incorporate suitable LIGHTING and minimise visual clutter.
- 12 Widen ENTRY STEPS and upgrade paving material and railings
- 13 Retain existing WAR MEMORIAL MONUMENTS and investigate design solutions to better intergrate the area into the overall character of the park
- 14 Upgrade existing RAMP to meet access requirements in accordance with relevant Standards
- 15 Future consideration to be given to the VISITORS CENTRE park frontage to encourage activation between the building and the park
- Install WAYFINDING AND HISTORICAL INTERPRETIVE SIGNAGE
- Park ELECTRICAL upgrade to incorporate provision of three phase power for events support

# APEX PARK MASTER PLAN

NOVEMBER 2015

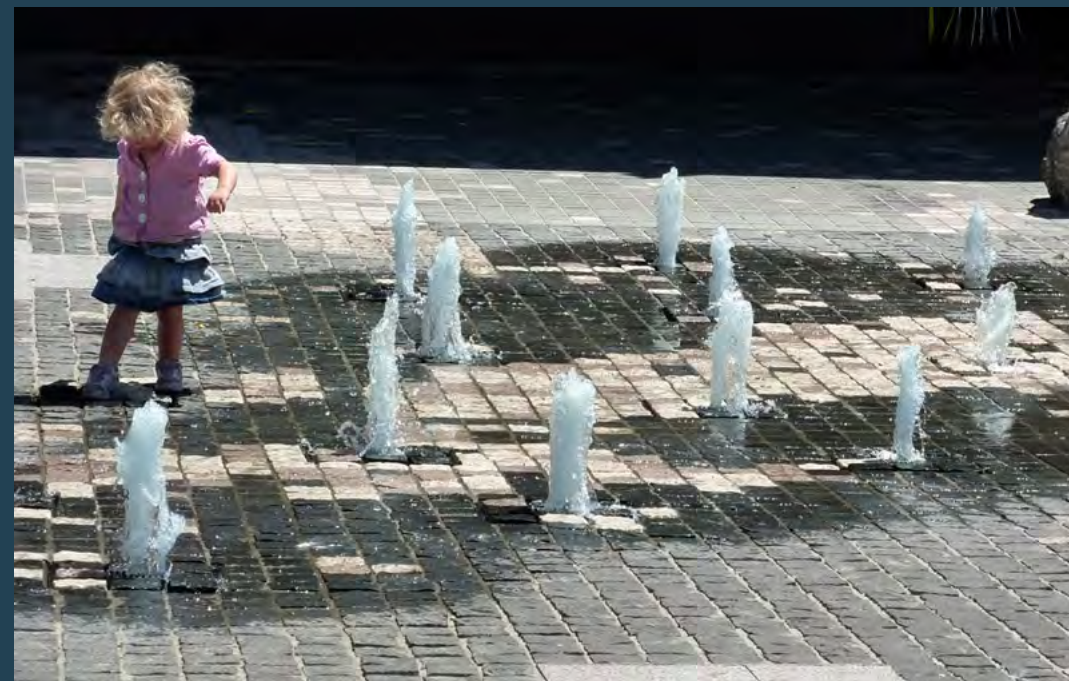




### MASTER PLAN NOTE

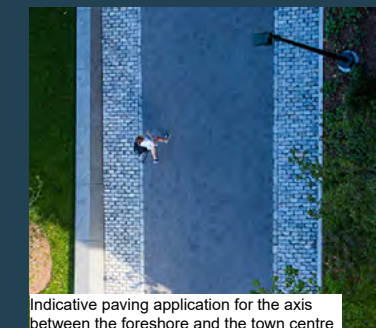
Example of the desired open grass and tree

to display colourful and site appropriate species  
e.g *A.Carpobrotus sp.* (Pigface), *B.Gazania sp.*,  
*C.Westringia sp.*

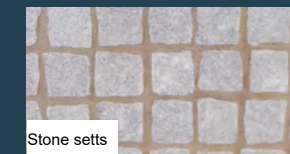


### MASTER PLAN NOTE 11

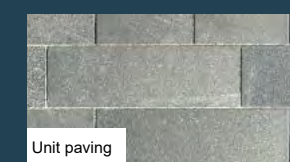
Example of a possible water feature treatment along  
the edge of the main entry pathway



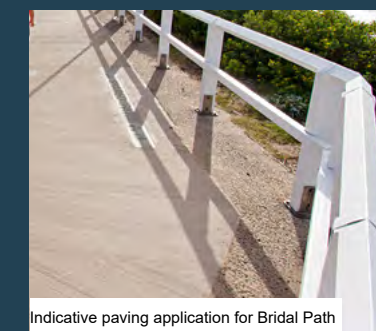
Indicative paving application for the axis  
between the foreshore and the town centre



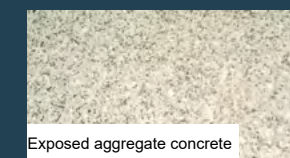
Stone setts



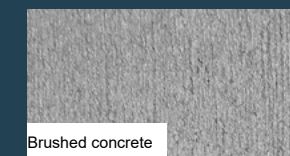
Unit paving



Indicative paving application for Bridal Path



Exposed aggregate concrete



Brushed concrete

### MATERIAL PALETTE

Palette examples



### MASTER PLAN NOTE 4

Examples of grassed terraces with low sitting walling; to enhance and encourage passive use of the park



### MASTER PLAN NOTE 8

Example park furniture palette

# APEX PARK : DESCRIPTION NOTES



## **Appendix 9 – Nelson Bay Traffic and Parking Study 2013**

---

**Port Stephens Council**

Report for Nelson Bay Town Centre  
Transport and Parking Study

Final Report  
23 May 2013

*This Nelson Bay Town Centre Transport and Parking Study ("Report"):*

- 1. has been prepared by GHD Pty Ltd ("GHD") for Port Stephens Council;*
- 2. may only be used and relied on by Port Stephens Council;*
- 3. must not be copied to, used by, or relied on by any person other than Port Stephens Council without the prior written consent of GHD;*
- 4. may only be used for the purpose of identifying possible improvement, quantifying the current performance of the town centre transport network during a major event and better understanding current network deficiencies (and must not be used for any other purpose).*

*GHD and its servants, employees and officers otherwise expressly disclaim responsibility to any person other than Port Stephens Council arising from or in connection with this Report.*

*To the maximum extent permitted by law, all implied warranties and conditions in relation to the services provided by GHD and the Report are excluded unless they are expressly stated to apply in this Report.*

*The services undertaken by GHD in connection with preparing this Report:*

- were limited to those specifically detailed in section 1.3 of this Report;*
- did not include consultation with third parties; and*
- did not include cost estimates or a comparative assessment of costs of improvement options.*

*The opinions, conclusions and any recommendations in this Report are based on assumptions made by GHD when undertaking services and preparing the Report ("Assumptions"), including (but not limited to):*

- qualitative assessment against strategy objectives;*
- consideration that the survey data are representative of local traffic conditions;*
- intersection modeling undertaken for Year 2011 only; and*
- traffic data provided a good representation of typical peak traffic conditions during major event days.*

*GHD expressly disclaims responsibility for any error in, or omission from, this Report arising from or in connection with any of the Assumptions being incorrect.*

*Subject to the paragraphs in this section of the Report, the opinions, conclusions and any recommendations in this Report are based on conditions encountered and information reviewed at the time of preparation and may be relied on until 6 months, after which time, GHD expressly disclaims responsibility for any error in, or omission from, this Report arising from or in connection with those opinions, conclusions and any recommendations.*

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- A 2011 Intersection Performance
- B Review of Future Traffic Conditions
- C Review of Yacaaba St Extension Options

# 1. Introduction

## 1.1 Overview

GHD was commissioned by Port Stephens Council (PSC) to undertake a Transport and Parking Study ('The Study') for Nelson Bay with the view of supporting the revision of the draft Nelson Bay 2030 Strategy. The draft Nelson Bay 2030 Strategy seeks to provide a clear direction for the future growth of Nelson Bay having regard to the targets for additional population and employment outlined in the Lower Hunter Regional Strategy (NSW Government, 2006) and the town's tourism role in the wider Tomaree Tourism and Lifestyle Growth area.

The purpose of this investigation is to identify and confirm appropriate transport planning principles and provide improvement measures required to support the planned future growth of the town centre. These improvements should consider access and movement around the town centre as well as support the future redevelopment of the foreshore area. The strategies will form a package of improvement measures, which highlight priorities and provide action plans that can be used to assist the future planning of Nelson Bay.

## 1.2 Objectives

The key outcomes of the Nelson Bay Transport and Parking Study are:

- ▶ To investigate the capability of the road and transport network under a typical peak traffic conditions and to better understand the demand characteristics of a tourism and lifestyle area;
- ▶ To identify deficiencies in the transport network and parking limitations; and
- ▶ To develop a package of transport measures that will help to enhance the town centre transport network and its future development potential.

## 1.3 Study Approach

In order to develop realistic and achievable transport outcomes for Nelson Bay, the study was required to take a staged approach that firstly built an appropriate level of intelligence to both inform and focus recommendations and the staging of improvements. This staged approach provided a broad understanding of the current issues, the desired levels of activity in the town centre, the current objectives of the growth strategy and development control policies, and enabled the project to develop a range of improvement packages.

The study investigation has involved stakeholder workshops, which allowed stakeholders to inform the study outcomes. The selected improvement options and its staging offer an extensive package of measures that are required to manage travel demand, now and in the future. The appraisal process adopted reviews each option against its ability to support a backdrop of broader local and regional objectives and strategies with the key aim of improving the management of assets, access and movement across the town centre transport network.

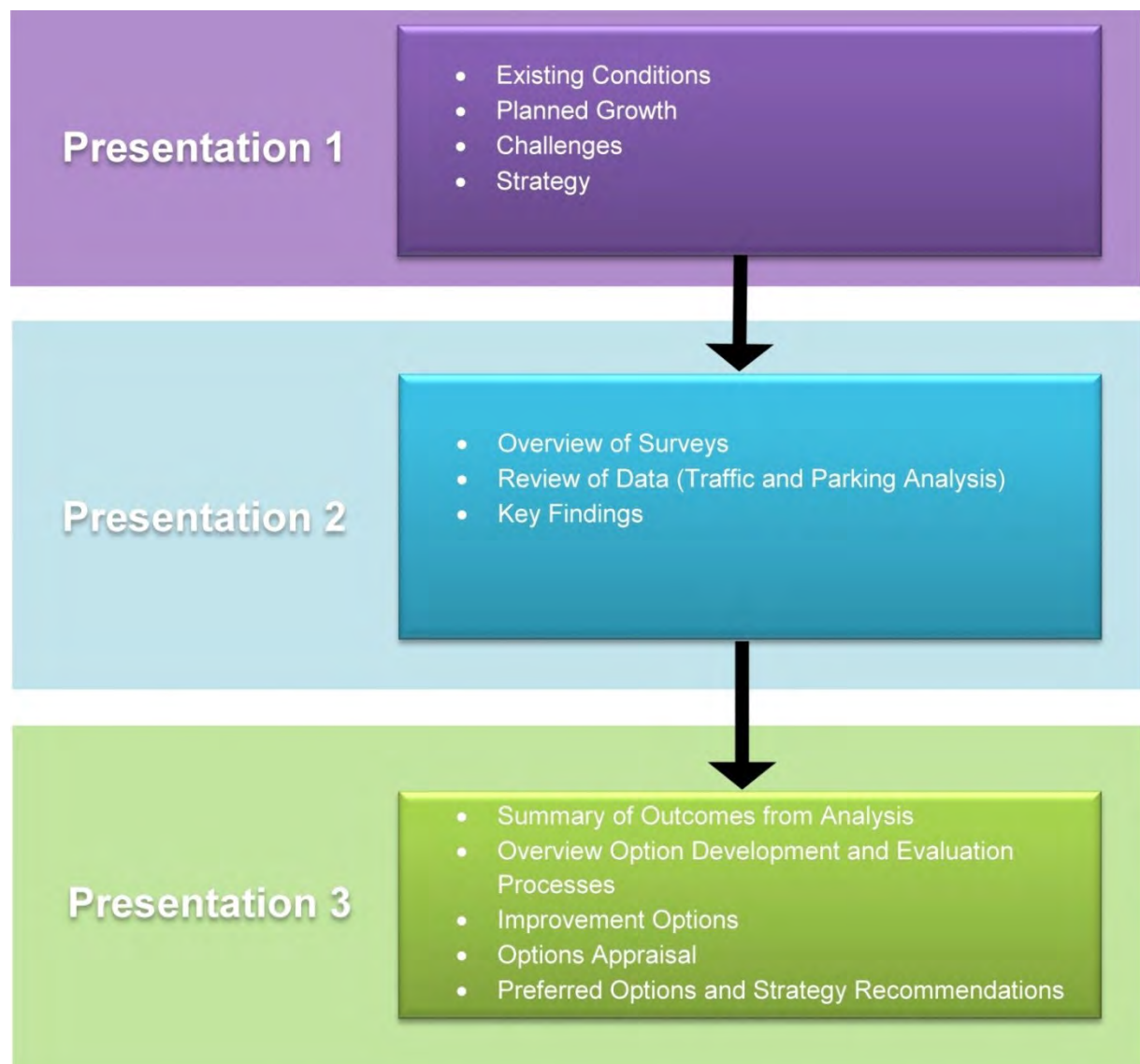
In this regard, the Study has aimed to provide a transport and parking framework that can support

growth, address known deficiencies and protect the character of Nelson Bay through improving the quality of the current transportation system. The transport strategies developed as part of the study have focused on achievable targets and supporting the vision for Nelson Bay within the wider Tomaree Tourism and Lifestyle Growth Area.

#### 1.4 Consultation Process

The study has involved the attendance and presentation of findings at three stakeholder workshops, which were attended by key representatives from local community groups, local businesses and Council. The process adopted and its content is presented in Figure 1.

**Figure 1 Study Stakeholder Consultation Process**



The intent of these workshops was to inform stakeholders of the progress of the study, present the findings to date and the process adopted for identifying and evaluating options for improving the transport and parking environment in Nelson Bay. Most importantly, the purpose of the stakeholder engagement was used to inform, seek feedback on progress and to ensure the study addressed the key needs, and provided the necessary direction and solutions to inform the completion of the 2030 Nelson Bay Strategy.

Key study directions recorded as part of the stakeholder workshops are summarised as follows:

- Donald Street east car park is perceived locally to be an undesirable and underutilised town centre asset;
- The operation of Victoria Parade is impacted by delays due to traffic levels in the high season and operation of the pedestrian traffic signals outside of this period;
- The difficulty of identifying available parking;
- To consider conditions outside of high season in the planning of infrastructure, i.e. additional delay to everyday users from the provision of traffic lights to resolve a 4-6 week peak season issue;
- Focus on sustainable solutions that resolve current deficiencies and barriers before delivering more costly infrastructure that is deemed to be required to support increases in peak season traffic;
- The need to consider access needs of the current population and what would attract and encourage business activity; and
- To better manage demand, the network and current assets.

## 1.5 Report Structure

The remainder of this report is structured as follows:

- Section 2 – **Local and Regional Context** reviews relevant growth strategies, planning policies and background information applicable to the study.
- Section 3 – **Transport Infrastructure and Services** reviews the existing traffic, road, public transport, parking, pedestrian and cycling conditions within Nelson Bay.
- Section 4 – **Indicators to Achieve Sustainable Accessibility** presents a range of key indicators that are typically used to measure performance and to evaluate potential options that can be used to support the long-term masterplan for Nelson Bay.
- Section 5 – **Data Sources and Service Measures** provides an understanding of the current performance of the transport network and parking facilities in Nelson Bay under 2011 peak traffic conditions and sets out the service measures to be used.
- Section 6 – **Network Evaluation** provides the results of the assessment of existing and projected peak traffic conditions for intersections and roads in the study area. Bus service frequency and pedestrian and cyclist movement patterns are reviewed, road crash data is analysed and parking utilisation is assessed.
- Section 7 – **The Strategy** outlines the issues, design principles, strategy improvement options and

action plans that will help to better manage current and future travel demand, improve the transport environment and support the objectives set in the draft Nelson Bay 2030 Strategy.

- Section 8 – **Summary and Next Steps** summarises the findings of this study and the next steps in the implementation of the improvement option work packages.

## 2. Local and Regional Context

This section reviews the relevant regional and local planning strategies and proposals that influence the current and future planning of Nelson Bay town centre.

### 2.1 Location

Nelson Bay is located on the Tomaree Peninsula in the Port Stephens Local Government Area (LGA), approximately 45km east of Raymond Terrace, 58km north east of Newcastle and 206km north of Sydney. The location of Nelson Bay on the Tomaree peninsula restricts regional access to the town.

Nelson Bay has been designated as a town centre in the 'Lower Hunter Regional Strategy, NSW Department of Planning, 2006' (LHRS) with specialisation as a centre for recreation, tourism and culture for the Port Stephens LGA.

Figure 1 shows the location of Nelson Bay, and its geographical location in relation to other key centres, such as Raymond Terrace and Newcastle.

**Figure 2 Key Urban Centres in the Lower Hunter Region**



Source: Lower Hunter Regional Strategy, NSW Department of Planning, 2006



The study area consists of the area shown in Figure 2, although the traffic and parking investigation has been primarily focused on the town centre and providing an appropriate bypass route.

**Figure 3 Nelson Bay Traffic and Parking Study Area**



Source: Port Stephens Council, 2011

## **2.2 Existing Land Uses**

Existing land uses in Nelson Bay have been identified from the Port Stephens Retail and Commercial Centres Study Draft Report, SGS, 2009 and is shown in Figure 4.

**Figure 4 Nelson Bay Town Centre and Foreshore Land Uses**



Source: Port Stephens Retail and Commercial Centres Study – Draft Report, SGS, 2009

The map highlights that the majority of the town centre and foreshore is occupied by 'Retail Main Street' land uses which include shops, cafes and restaurants. Other features include:

- ▶ The zoning at the intersection of Donald Street with Stockton Street for retail 'big box', which is currently leased by Coles supermarket;
- ▶ Main street retail and offices zoned along the foreshore;
- ▶ Approximately 20 per cent of high valued land within the town centre zoned and used for parking; and
- ▶ Some areas of available vacant land (approximately 5 per cent) situated on the edges of the town centre in Yacaaba, Donald and Tomaree Streets.

Nelson Bay's town centre contains land zoned for residential uses, which are situated within a short walking distance of areas considered to be the Main Streets in the town centre (i.e. Stockton Street north, Donald Street west and Magnus Street west). The area surrounding the town centre is zoned for low to medium residential density to the east and west, and for recreational purposes to the north and south. This land use arrangement provides a good level of transport and land use integration through

offering direct access from the surrounding community to the town centre and high quality recreation facilities, such as the tennis club, bowling club, golf course and open spaces along the foreshore area. Refer to Figure 5 for an understanding of the assumed precinct structure and functions in the town centre and foreshore areas.

**Figure 5 Key Destinations in Nelson Bay Town Centre**



Source: Port Stephens Council Digital Data, 2011

## 2.3 Planning Policy and Strategy

The following section provides an understanding of both regional and local planning strategy and policy objectives that the study should consider and support.

### 2.3.1 Strategic Objectives

#### Lower Hunter Regional Strategy (2006)

The Lower Hunter Regional Strategy (LHRS) provides the following, which is relevant to this study:

- NSW government's position on the future of the Lower Hunter Region;
- A regional planning framework to complement and inform other relevant State planning instruments;
- A regional urban structure through a hierarchy of urban centres with Nelson Bay identified as having a specialisation in tourism;



- ▶ A future growth target understood to cover both Nelson Bay and Tomaree Peninsula for projected growth of an additional 1200 dwellings and 1500 jobs by 2031 with the majority of these jobs focused in and around Nelson Bay town centre;
- ▶ An understanding that Nelson Bay has a role in supporting economic activity and employment in the Lower Hunter region;
- ▶ Promotes the importance of integrated land use and transport planning approach in the future planning of the region and centres to achieve the growth target goals; and
- ▶ Encourages better connecting homes, employment and services to provide an opportunity to support growth by reducing the need to travel and its associated impacts on energy use and emissions.

The LHRS does not identify any other strategies which are applicable to the management of transport or parking within the Nelson Bay town centre.

### **2.3.2 Local Government Objectives**

#### **Port Stephens Planning Strategy (2011)**

The Port Stephens Planning Strategy (PSPS) builds on the 2007 Community Settlement and Infrastructure Strategy by providing a comprehensive planning strategy for the Local Government Area (LGA). The PSPS responds to the State Government's Lower Hunter Regional Strategy (LHRS) and Lower Hunter Regional Conservation Plan (LHRCP) by providing local level detail. The PSPS identifies the following challenges and opportunities relating to Nelson Bay:

- ▶ General
  - Opportunity to expand the town centre or foreshore is limited by land availability, the Tomaree National Park and the Port Stephens waterway and will have to be delivered through intensification in and around the town centre;
  - The scenery and characteristics of Nelson Bay attracts both residents and tourists to the LGA and needs to be protected;
  - The seasonal nature of the tourism industry places pressure on infrastructure over the summer period; and
  - Potential opportunities for expansion at a sustainable level of growth are linked to building higher quality services around the existing water based and tourism industry, and targeting more visitation and business activity outside of the high season peak.
- ▶ Residential
  - Historically land use intensification in the town centre has occurred as a result of residential uses relating to holiday lettings;
  - The focus for revitalisation is the likely need to intensify residential development and provide more diverse housing choice to attract permanent residents to the area, which would support the town centre outside of the peak tourism season; and
  - There is potential to delivery 600 new dwellings as infill on land zoned for residential/mixed use commercial development and over 150 new dwellings on Greenfield land to be zoned for new

residential uses over the next 25 years in or around Nelson Bay town centre.

► Commercial/ Retail

- A large proportion or 53,000 m<sup>2</sup> of occupied floor space in the town centre is non-retail (business and personal servicing);
- There is currently a low commercial floor space ratio across the town centre, which is due to the number of low value off-street surface car parks;
- The forecast increase in commercial/retail floor space between 2009 and 2031 for Nelson Bay is on the same scale to Raymond Terrace;
- There is insufficient capacity within the current zoned town centre land use to accommodate this projected increase; and
- Intensification of development within the existing town centre is feasible and a suitable option, which includes the removal and replacement of existing car parks.

**Draft Nelson Bay 2030 Strategy (May 2011)**

The draft Nelson Bay 2030 Strategy (NBS 2030) was prepared by PSC and outlines a number of strategies for Nelson Bay town centre. The acceptance of the strategy will result in amendments to Chapter C4 - Nelson Bay Town Centre of the existing Port Stephens Development Control Plan 2007. The strategy discusses provision and management strategies for the road network, parking, and pedestrian and cyclists facilities in the town centre.

The key traffic and transportation aspects in the draft strategy are:

- Improve access and movement to support increased development in the town centre and address wider peak traffic flow and circulation issues;
- Encourage the increased use of alternative modes of transportation, including walking, cycling and public transport (buses, taxis, etc.) to reduce congestion and excess demand on both off-street and kerbside parking facilities;
- Prioritise pedestrian access to town centre and reduce reliance on private vehicles; and
- Provide a high quality pedestrian experience by creating desirable streetscapes.

**Nelson Bay Policy for Future Development of the Town Centre and Foreshore (August 2010)**

The 'Policy for Future Development of the Town Centre and Foreshore – Strategic Planning Principles' (the Policy) was developed by Port Stephens Council to provide a framework for decision making by linking State planning policy to local needs and expectations. The Policy highlights that the current disconnection between the town centre and the waterfront is currently seen as an economic disadvantage to the town. Its major need and priority for supporting the future growth of Nelson Bay is to improve the integration of the town centre and the foreshore, so that it is considered to be the "same place". To support this approach, the Policy highlights the following issues that need to be addressed:

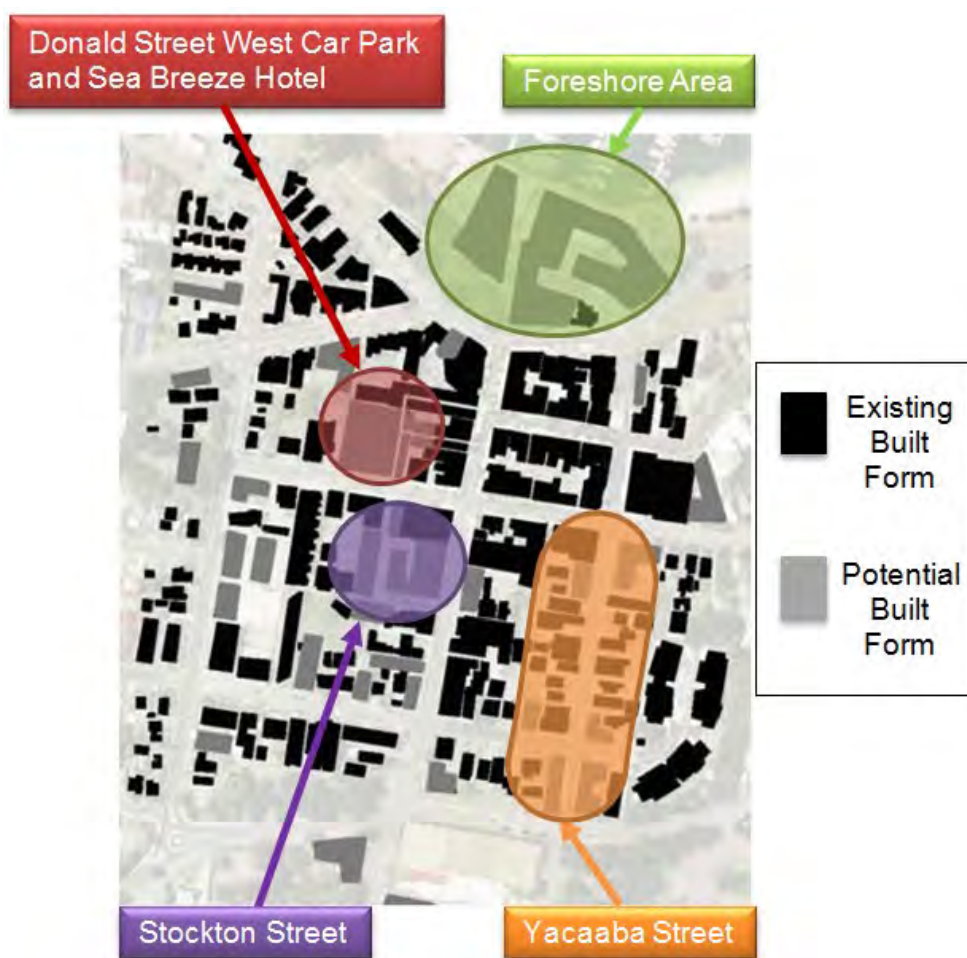
- The current road network limits connectivity;
- Disconnection between functions and activities carried out in the town centre and at the waterfront;

- › Open space between the town centre and waterfront may act as a barrier;
- › Traffic behaviour and the design of the street environment needs to be reviewed to slow traffic in the town centre;
- › A lack of direct links for car access between the waterfront and the town centre; and
- › The need for complementary development controls to apply to both the town centre and waterfront area.

### Modelling the Development Capacity of the Town Centre (March 2011)

The 'Modelling the Development Capacity of the Town Centre – Nelson Bay Town Centre' is a study undertaken by Design Urban Pty Ltd on behalf of Port Stephens Council to understand the redevelopment potential of Nelson Bay town centre. Refer to Figure 6 for a snapshot of the outcome of the study.

**Figure 6 Development Potential in Town Centre**



Source: *Modelling the Development Capacity of the Town Centre*, Design Urban Pty Ltd, March 2011



The study concentrated on the redevelopment potential in terms of what can be undertaken to revitalise the town centre and has been used to inform the planning and rezoning process for the town centre area. The report highlighted the following opportunities:

- ▶ To replace existing off-street surface car parks with built form that could incorporate parking;
- ▶ Allow development intensification between Donald Street and Government Road east of Stockton Street, and along Stockton Street and to a less extent Yacaaba Street between Tomaree and Donald Streets;
- ▶ The potential to reduce the parking rate for larger residential dwellings to one and remove visitor parking; and
- ▶ Possible future connections from Yacaaba Street to Dowling Street to the south and Victoria Parade/ Government Road to the north.

The above redevelopment opportunity are based around optimising vacant land, intensification of underutilised areas and promoting the redevelopment of areas deemed to be at the end of its economic life. The land areas identified have the potential to supply an area that is greater than the growth targets specified in the draft Nelson Bay 2030 Strategy and LHRS.

#### **Port Stephens Development Control Plan (2007)**

Parts B3 'Parking, Traffic and Transport' and C4 'Nelson Bay Town Centre' of the Port Stephens Development Control Plan (DCP) produced by Port Stephens Council was reviewed in relation to improving transport and parking in Nelson Bay.

Part B3 outlines controls for the provision of transport infrastructure and parking and highlights the following:

- ▶ An aim to 'maximise efficiency and patronage on bus services' through the provision of bus stops, prioritising movement and facilities;
- ▶ Support for new development, change of use or intensification of existing businesses applications that offer agreements that would consolidate parking by utilising alternative sites or making a contribution towards development of parking spaces as part of Council's Section 94 plan for the area; and
- ▶ Provide design standards to address access to developments, internal roads and circulation, and parking bays.

Part C4 outlines controls for the development of Nelson Bay town centre and in particular focuses on pedestrian access, mobility and streetscape controls. This part requires new development to:

- ▶ Encourage pedestrian movement throughout the entire centre without discontinuity;
- ▶ Promote interconnect streets and avoid terminating arcades, which is identified to be particularly desirable within the core town centre area; and
- ▶ To design town centre streetscapes that allows for attractive and functional outdoor environments.

### **Port Stephens Local Environmental Plan<sup>1</sup>**

Under the current Local Environmental Plan (LEP) it highlights the following:

- ▶ Section 41 (1) indicates that direct access to certain roads is restricted and no new means of vehicular access shall be formed without consent of Council and the relevant road authority. This includes under sub section (b) Nelson Bay Road (Main Road 108) from the roundabout of Stockton Street with Church Street in Nelson Bay to the boundary of the Port Stephens LGA; and
- ▶ Section 42 indicates that development fronting an arterial road will not receive consent to an application from the consent authority unless (a) access to the land is provided by a road other than the arterial road, wherever practicable; and (b) it does not adversely affect the safety and efficiency of the arterial road.

This policy recognises the importance of network design in supporting traffic movement and network efficiency. By doing so, it identifies the need to protect certain routes that have a primary movement role to ensure that safety and efficiency targets are met.

### **2.3.3 Nelson Bay Boat Harbour and Foreshore Revitalisation Project<sup>2</sup>**

This is a joint initiative between the Land & Property Management Authority (LPMA) and Ardent Leisure, which previously developed a high level draft concept plan for supporting future development within the harbour and foreshore areas. The focus of the plan was to attract investment, support long-term growth in Nelson Bay and help to diversify its economy by adding other business activities to its tourism base. The plan aims to improve access for locals by providing better connection with the town centre and enhancing the experience from visiting the foreshore. The objective of this plan is to provide benefit through offering improvements in the quality of the environment, access and spreading of the level of business activity across the year.

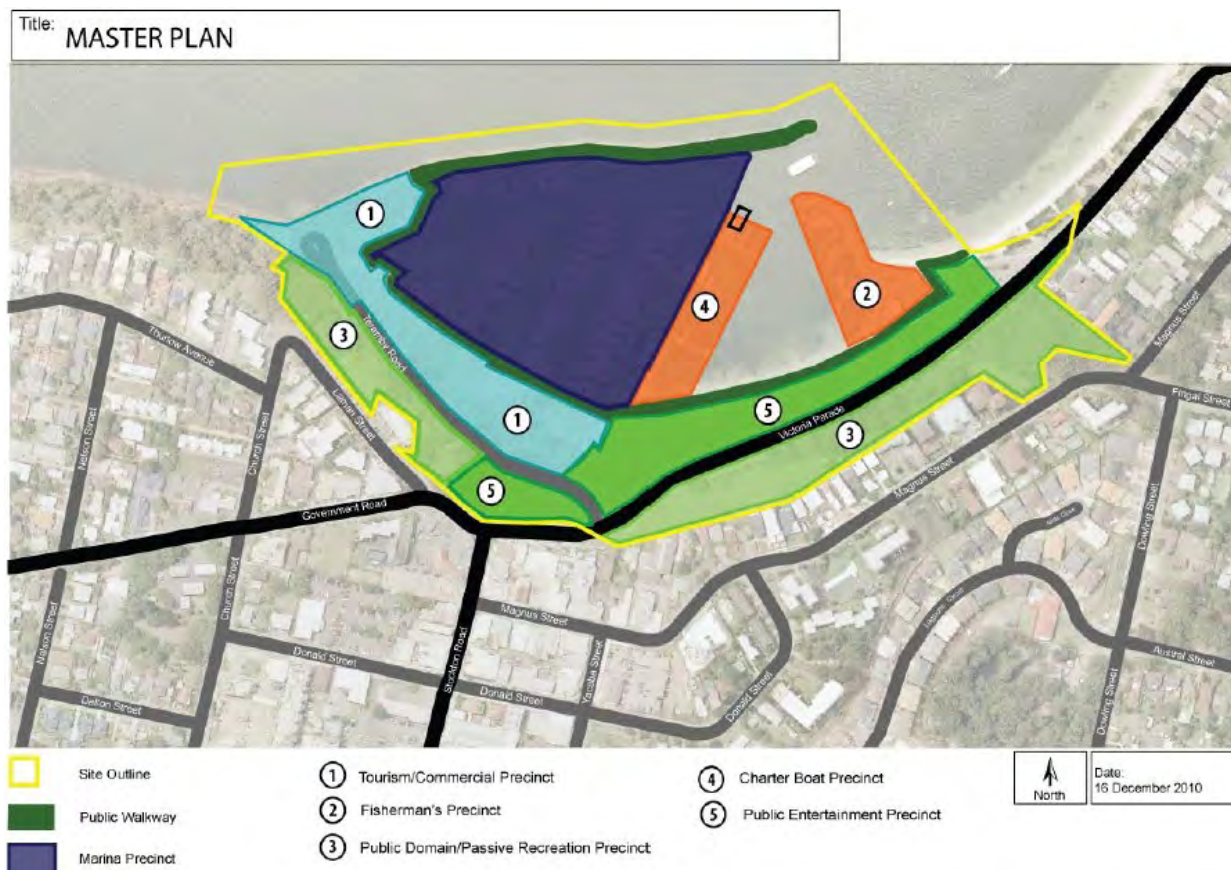
The project was originally intended to be lodged as a Part 3A application and went through some initial community consultation for the formulation of a concept plan. The concept plan development stage identified a number of key issues, including traffic management and parking arrangements during high season and a need for a holistic approach for the future planning of Nelson Bay. The draft concept plan separates the foreshore area into six precincts; a marine, tourism and commercial, fisherman's, public domain and passive recreation, charter boat, and public entertainment precincts, as detailed in Figure 7.

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<sup>1</sup> Port Stephens Local Environmental Plan (Port Stephens Council, 2000)

<sup>2</sup> Nelson Bay Boat Harbour and Foreshore Revitalisation Project (Ardent Leisure, 2010)

**Figure 7 Foreshore Masterplan (Dec 2010)**



Workshops undertaken as part of the planning process indicated car parking could be removed from precinct 3 and incorporated into a new facility in precinct 5 or consolidated in the town centre. Event parking was also highlighted as being required in other locations especially during high season.

#### **Public Exhibition Draft Nelson Bay Foreshore Concept Plan (March 2011)**

The draft Concept Plan was exhibited from 9 March 2011 until 19 April 2011 on LPMA's website and at the Nelson Bay Visitor Information Centre. A summary of the responses was formulated by Hampton's Property Services, which identified the following associated with transport and parking:

- ▶ Traffic and parking to be one of the biggest infrastructure issues for the area with congestion and parking overload during the peak tourist season;
- ▶ The proposal will impact on the town centre road network and parking supply and should aim to provide a holistic/integrated traffic and parking plan for both the foreshore and Nelson Bay town centre in subsequent planning stages of the project;
- ▶ Expansion of seasonal uses and hotel facility would put further pressure on existing infrastructure already at capacity during seasonal peaks;
- ▶ Access to foreshore area may be improved through the closure of the existing car park and possible

relocating the newly proposed parking facilities from within the hillside of Victoria Parade to Donald Street (expanding existing facilities);

- ▶ Locate car parking on the fringe of the town serviced by shuttle bus operations during peak periods; and
- ▶ Widening of the foreshore area to include a harbour frontage boardwalk within precinct 3.

The draft concept plan has not finalised during the study evaluation process.

#### **2.3.4 Other Development Proposals**

The following development proposals were identified during the study evaluation.

##### **Existing Coles Supermarket Site**

This site is situated to the southwest of the intersection of Donald Street with Stockton Street and has recently been purchased by Woolworths Limited, whom are seeking to redevelop the site once the current lease to Coles supermarkets has expired. It is currently unknown if the proposal is aimed at expanding the facility to support future planned residential and employment growth within the town centre, or if it is only seeking to upgrade the current structure and site operations. The proposal will only be confirmed once a development application is received by Council from the proponent.

##### **Hotel and Conference Centre**

Stakeholders have indicated that there is a need for a high quality hotel and conference facility in Nelson to help diversify the economy away from reliance on high season tourism. This facility was not identified during discussion to contribute towards an expansion of the existing high season peak, but instead provide a facility that can hold events, attract business and encourage all year round activity in Nelson Bay. The proposal will only be confirmed once a development application is received by Council from the proponent.

## **2.4 Population**

The 'Port Stephens Tourism Plan 2010 – Diagnostic Report' indicates that 'Port Stephens has a population of approximately 65,000, which are situated in 5 geographical areas. The majority of the population is concentrated on the Tomaree Peninsula and in the Raymond Terrace (central corridor area). 37% of the LGA's population (22,389 people at the 2006 Census) resides on the Tomaree Peninsula, with 20.6% residing in the Corlette-Nelson Bay-Shoal Bay-Fingal Bay area'. The Tomaree Peninsula is the main tourist destination in the LGA with tourism focussed on Nelson Bay as a centre for future growth.

### **2.4.1 Strategic Objectives**

The Lower Hunter aims to benefit from its growth opportunities whilst maintaining its environmental and lifestyle values. In order to achieve this goal, it recognises the need to carefully plan where growth is needed, and to identify how it can ensure that environmental, economic and social balanced lifestyle outcomes are obtained now and in the future.

The LHRS identifies that an additional 1200 dwellings will be created in Nelson Bay by 2031, which in broad terms can be estimated to be a 50% increase in the number of dwellings in the Nelson Bay centre and its catchment. The draft Nelson Bay 2030 Strategy indicates that the boundaries of the 'specialised centre' are not defined, however, the urban consolidation principles set within the strategy indicates that the intent is to accommodate growth in and around the Nelson Bay town centre, rather than within the entire Tomaree Peninsula. It also indicates that the growth projections are approximate and the final estimates are subject to change.

#### 2.4.2 Local Government Objectives

The 'Nelson Bay Policy for Future Development of the Town Centre and Foreshore, Port Stephens Council, 2010' (PFDTCF) estimates the population for Nelson Bay as 5,249 in 2006. The Policy identifies that the population of Nelson Bay is expected to grow at an average rate of 1.5% per year from 2006 to 2036 with key incremental years shown in Table 1.

**Table 1 Nelson Bay Forecast Population Growth**

Year	2006	2011	2021	2026	2031
Total Population	5,249	5,687	6,646	7,115	7,587

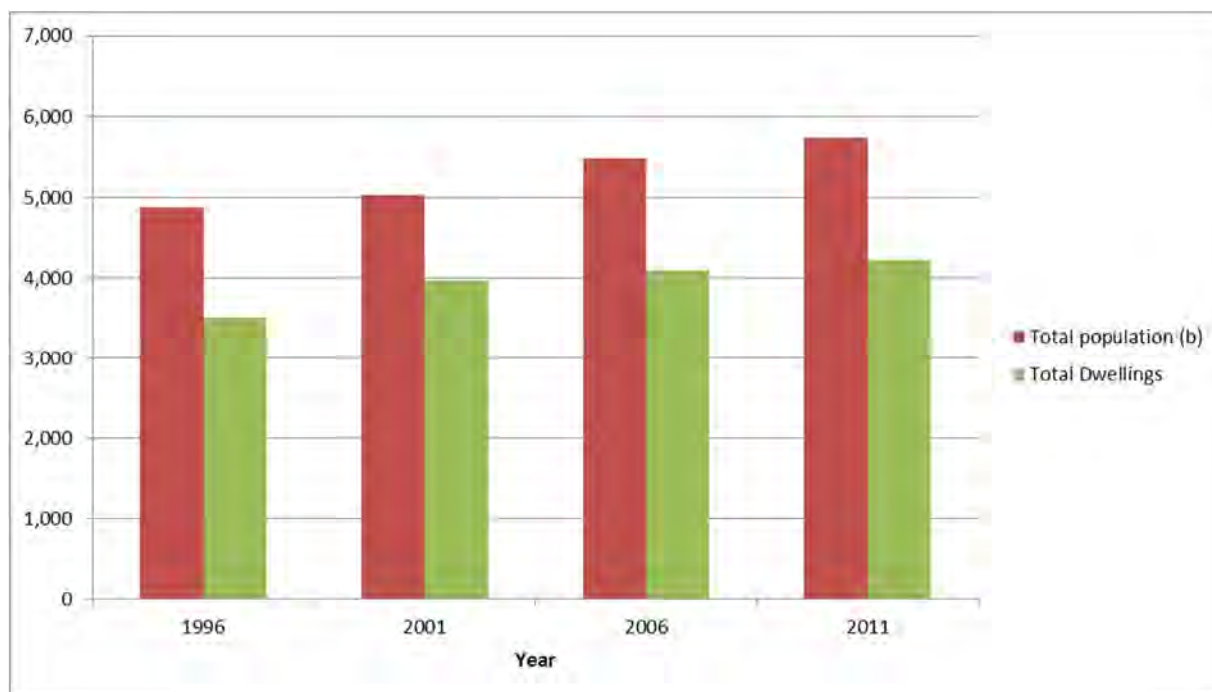
The draft Nelson Bay 2030 Strategy (NBS 2030) indicates that 'Nelson Bay is predicted to have the highest population growth rate of any locality within the Tomaree Peninsula'. The NBS 2030 also states that there is an 'ongoing decline in the average number of people in each dwelling', which together with the population forecast indicates the dwelling forecast provides only a small allowance for increases in tourist accommodation.

#### 2.4.3 Population Forecasts

Additional analysis of the 1996 to 2011 census data for Nelson Bay suburbs highlighted the following and is supported by key data sets presented in Figure 8:

- ▶ The population was recorded to have increased by approximately 864 people or approximately 18.0% between 1996 and 2011 (15 year period); and
- ▶ The number of dwellings has increased by approximately 730 or approximately 21.0% from approximately 3,500 to 4,230.

**Figure 8 Nelson Bay: Historical Population & Dwelling Trends**



Source: ABS Census Data 1996 to 2011

Based on a review of the population and dwelling data, it is estimated that there is an average of 1.36 persons per household in Nelson Bay in 2011. This figure is low and may reflect the size of the dwellings or that some dwellings are not occupied during low season periods.

## 2.5 Employment

This section highlights the regional and local planning objectives for encouraging growth through the promotion of Nelson Bay's specialisation in tourism.

### 2.5.1 Strategic Objectives

The LHRS indicates that the region has recently enjoyed strong job growth and a reduction in its unemployment rate. The majority of this growth in the region has been identified to be linked to tertiary sectors, such as health, education, financial and personal services, as well as tourism. This trend was identified in the strategy to continue and strengthen. Building upon this expectation for growth, the LHRS identifies that an additional 1500 jobs will be created in Nelson Bay by 2031, which covers the Tomaree Peninsula and in broad terms is highlighted to mean that approximate 50% of the estimated increase in jobs will occur in Nelson Bay.

In reference to the type of the employment that will be created, 'Towards 2020 - NSW Tourism Masterplan<sup>3</sup>' (Masterplan) presents the strategy for improving tourism in NSW and in particular, focuses on urban areas whose economies are reliant on the industry. The 'Masterplan' highlights that 'a successful New South Wales tourism industry will focus on yield, not just numbers of visitors. Yield is

<sup>3</sup> Towards 2020 – New South Wales Tourism Masterplan, Tourism NSW, 2002.



more than total visitor expenditure' and relates to generating sustainable (or all year round) employment opportunities and 'minimising the impact a visitor has on a host community'. The plan encourages tourist based economies to focus on attracting the 'right kinds of businesses', which are 'properly managed' and can 'create prosperity for communities' through protecting and even enhancing the business environment and the community. It encourages centres to target market segments that can 'provide higher economic returns' and to consider the 'social and environmental impact'. In the case of Nelson Bay, this can be achieved through the creation of other market segments that align with the current role of the centre and are attracted by its unique attributes.

## 2.5.2 Local Government Objectives

According to the information published in the 'Port Stephens Economic Development Strategy Report, Buchan, 2007', (the Economic Development Strategy) there were 2,627 jobs in Nelson Bay in 2001. This equates to 14.8% of all jobs in the Port Stephens LGA. The data presented in this strategy highlights that the services industry is the primary employer in Nelson Bay, providing 65% of employment, with the tourism related accommodation, hospitality and restaurant sectors accounting for nearly a third of these jobs. The majority of the remaining jobs are made up of the goods production industry and business and knowledge based services.

The draft Nelson Bay 2030 Strategy (NBS 2030) indicates that the town centre catchment is made up of around '5,400 jobs and serves a population of 19,300' with a '53% self-sufficiency' rating. Some 2,974 of these jobs or 55% of jobs in the Tomaree Peninsula are identified to be situated in Nelson Bay, with an additional 1,002 jobs (or 18%) in Anna Bay, 1,015 jobs (or 19%) in Corlette, and 432 jobs (8%) in Fingal Bay/Shoal Bay. Growth predictions have been estimated to maintain the self-sufficiency 'rate to 2021'.

A major component of the planned growth is the provision of office and retail space and opportunities within Nelson Bay town centre with the NBS 2030 predicting the provision of the following by 2031:

- ▶ Office Space: 8,500m<sup>2</sup>, which is estimated to amount to 450 jobs;
- ▶ Retail Space: 8,500m<sup>2</sup>, which is estimated to amount to 240 jobs and includes food service jobs in retail sector;
- ▶ Additional accommodation and food service facilities, which is estimated to amount to 200 jobs; and
- ▶ A new high quality hotel and conference centre, which is identified to be critical to establishing a more sustainable/ all year round event industry and improving the economic performance of the town centre.

The Port Stephens Commercial and Industrial Lands Study projected the additional floor space for Nelson Bay town centre by 2016, which is presented in Table 2.

**Table 2 Nelson Bay Commercial Floorspace Forecast**

Design Year	2006	2011	2016
Floorspace (m2)	53,000	58,129 (+5,129)	67,393 (+14,393)

Source: Port Stephens Commercial and Industrial Lands Study, June 2010, Port Stephens Council.

The information presented implies that 30% of new retail/ commercial floorspace are scheduled to be delivered by 2011 and that over 80% of planned new retail and commercial development will be implemented by 2016.

The overall strategy for improving the Nelson Bay economy is not necessarily aimed at increasing the peak tourism capacity of the area, but instead focused on improving the quality of business related facilities and supporting an event related business market. This is identified to have the potential to create an additional 900 jobs (or 60% of jobs projected by 2031 in the LHRS) in Nelson Bay town centre. The key focus of job creation is to strengthen the economic base of Nelson Bay and encourage business and event related activity outside of the tourism seasonal peaks. On this basis, the majority of forecast job growth may not have a significant impact on the current seasonal peaks. Instead these jobs may be associated with supporting the planned increase in the frequency of events in the shoulder peaks or low season periods, which may not necessarily result in a requirement for additional capacity or future growth.

### 2.5.3 Employment Forecast

Employment data for the Nelson Bay Town Centre has been collated from information provided in 'TDC Employment Forecasts – October 2009 Release, Bureau of Transport Statistics (BTS)' and is provided in Table 3.

**Table 3 Nelson Bay Forecast Employment Growth**

Area	2006	2011	2016	2021	2026	2031	2036
Nelson Bay West	400	416	435	465	481	497	516
Nelson Bay and Fly Point	1,832	1,956	2,091	2,254	2,334	2,413	2,510
Total	2,233	2,372	2,526	2,720	2,815	2,910	3,026

Source: TDC Employment Forecasts – October 2009 Release, Bureau of Transport Statistics (BTS)

The data indicates that a total of 2,372 people were included as part of employment forecast for Nelson Bay in 2011 and 2,233 jobs in 2006. This is expected to grow to 3,026 people by 2036 or by approximately 650 new jobs (or approximately 800 additional jobs after 2006) in the town centre area (including Fly Point) from the 2011 base. This employment forecast represents over 80% of the estimated increase in total people employed within the Nelson Bay town centre. These estimates are consistent with those predicted in the LHRS and draft Nelson Bay 2030 Strategy and also highlight that the majority of new employment is currently linked to normal weekday job creation, which may not necessarily result in growth in current seasonal peaks. As an outcome, planned growth may not require increases in network capacity, which is typically associated seasonal traffic demand.

## 2.6 Network Demand

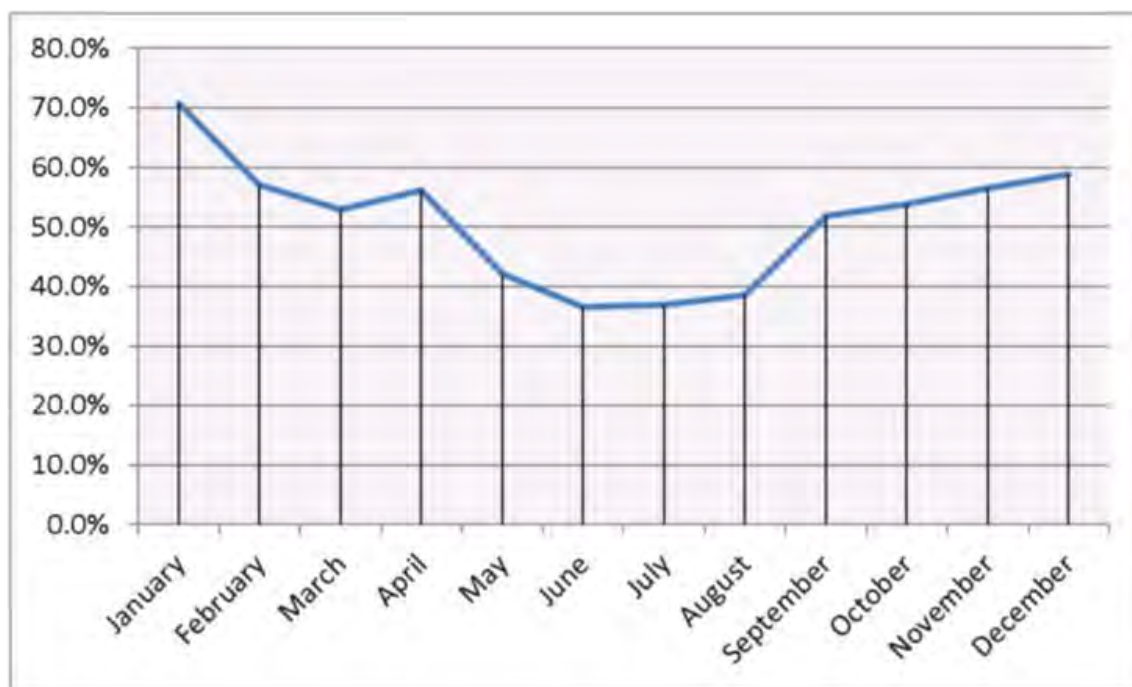
Typically the network design of towns and urban settlements is influenced by the market it serves and its related demand profile. Nelson Bay is an urban centre that is heavily reliant on the tourism industry, and as a result, seasonal traffic patterns and associated land use expansion and change will influence how the network is required to perform. Historical traffic can be used to understand how traffic behaves and help to identify how and where traffic demand has grown.

### 2.6.1 Seasonal Traffic Demand

This study is identified to be limited by a lack of seasonal or historical traffic data, which would typically be used to understand growth, seasonal traffic and performance of the network. Discussions with Council and other stakeholders indicated that traffic volumes are subject to significant seasonal influences, which reach a peak in late December/early January, at Easter, and when events occur during other school holiday periods. The key road corridors identified to accommodate seasonal traffic growth are identified to be Nelson Bay Road, Church Street, Government Road and Victoria Parade.

Season trends are displayed in the Port Stephens Tourist Plan 2010<sup>6</sup> and indicates that over 40% of property in Nelson Bay and Shoal Bay during the 2006 census (August) was not occupied. The seasonal demand profile for Nelson Bay can be better understood through reviewing the historical annual seasonal occupancy rates, which are presented in Figure 9.

**Figure 9 Average Monthly Occupancy Rates (2008)**



Source – Port Stephens Tourist Plan 2010

The graph indicates that the provision of physical infrastructure associated with high season peak demand may only be required in January, when on average occupancy rates are at 70%. Further

<sup>6</sup> Port Stephens Tourism Plan 2010 – Diagnostic Report, by Jenny Rand & Associates/ Dain Simpson Associates for Industry & Investment NSW, Ports Stephens Council and Port Stephens Tourism Limited.,

observation of the above occupancy trend indicates that seven of the twelve months generate a tourist occupancy rate ranging between 50% and 60%, and includes February to April and September to November. This peak appears to represent the peak shoulder period or a more common peak trend than that presented for January. Based on these trends the month of February, April, November and December display high average occupancy rates and as a result would provide a good representation of traffic condition during the shoulder peak period.

Other information that references seasonal traffic is the 'Port Stephens Tourist Plan 2030', which indicates that parking and access are major issues for the peak season, and when major events are held in Nelson Bay. It indicates that demand exceeds supply during these periods and recommends that a traffic management plan should be adopted to help prioritise movement and address access and parking needs for local businesses and residents. This study has undertaken a survey during a major event period in November in order to obtain a better understanding of the major event demand profile and its impact on network performance and parking.

### **2.6.2 Peak Demand**

The 'Tastes at the Bay' festival has been chosen to develop an understanding of demand levels and infrastructure needs associated with peak shoulder seasonal months combined with an organised major event on a weekend. The event itself occurs in November and would typically attract a high proportion of day visitors rather than tourists. Tourists typically stay overnight or longer, and as a result, are considered to have a lower impact on the capacity of the transport network.

Based on the above, the 'Tastes at the Bay' festival will provide a good understanding of the capacity limitations of the current network and the location of over and underutilised infrastructure.

In reference to future growth it is acknowledged that the focus of planning is to encourage more events and people to stay for longer periods rather than additional demand from tourists that visit for the day and place significant pressure on the transport network. It is also acknowledged that the planned growth in population and jobs is expected to be taken up by residents that permanently reside in Nelson Bay. As a result, traffic growth generated from new development is likely to be low.

The 'Tastes at the Bay' is acknowledged to be a unique event, which attracts higher than normal traffic demand along the regional and town centre network. This demand is understood to be in excess of that generated during the normal commuter peak periods and like most organised events its timing is unlikely to impact on the commuter peak period.

On this basis, the 'Tastes at the Bay' will provide a good network capacity profile for the design of both current and future network improvements. Future estimates indicate that future growth is unlikely to be high and as a conservative estimate may increase at a rate of 1.5% per annum (based on employment and residential forecast) or could result in a 30% increase in traffic over a 20 year period. If the peak traffic profile for the 'Tastes at the Bay' is over and above a 30% increase in normal commuter traffic, then it can be assumed that designing for the 'Tastes at the Bay' event is sufficient for accommodating normal peak commuter traffic now and in the future. It is also acknowledged the planned economic growth profile for Nelson Bay is not aimed at increasing the quantum of demand on a peak event day, but instead it aims to encourage the same size of event on a more frequent basis. The basis for

modelling future growth will be assessed and confirmed as part of the review of daily and peak hour traffic volumes in section 6.2 of this report.

## **2.7 Travel Characteristics**

The travel characteristics of people who reside in Nelson Bay have been assessed based on information available from the Bureau of Transport Statistics and Australian national census data.

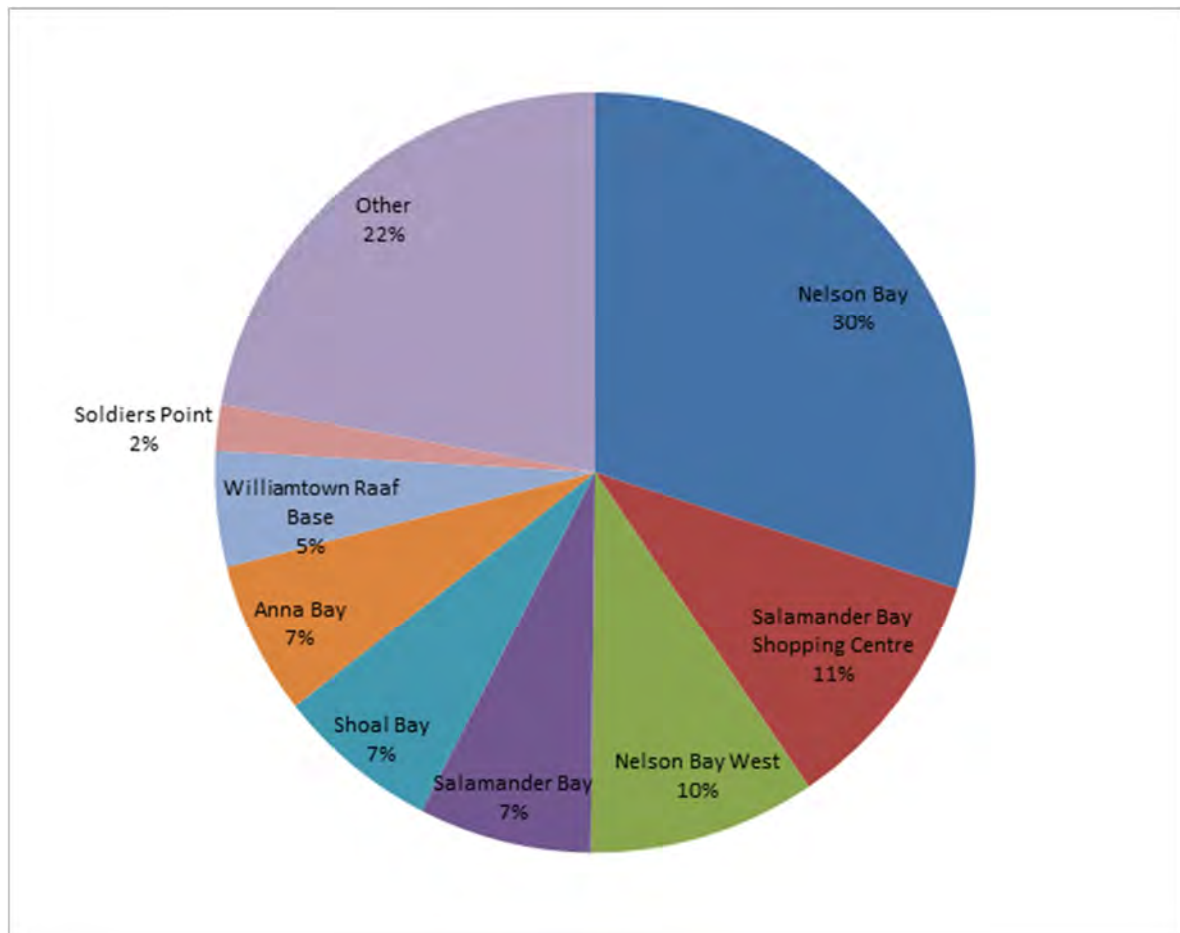
### **2.7.1 Travel Patterns**

Figure 10 provides a summary of the place of work for residents of Nelson Bay. This data indicates that around 40% of the population in Nelson Bay live and work in the suburb of Nelson Bay. These findings highlight that with balanced growth in residents and employment there is potential for a proportion of Nelson Bay residents to choose not travel to work by private vehicle, and instead select an alternative travel mode.

Other notable journey to work trends from Nelson Bay include trips to Corlette or Salamander Bay Shopping Centre (11%), Salamander Bay (7%), Shoal Bay (7% identified as Zenith Beach in the survey information) and Anna Bay (7% identified as Little Kingsley Beach and includes Fishermans Bay, Boat Harbour and Taylors Beach). The majority of these locations are within a 5km radius of Nelson Bay or in the case of Anna Bay within 10km, and are served by existing bus route services. It is also acknowledged that public transport is an option, however there is significant convenience and journey travel time advantages from travel by private vehicle in comparison to public transport.

The trip containment potential presented in is a snapshot of the total working population in the low season (August) on a particular working day. It is noted from the objectives of both the LHRS and the draft Nelson Bay 2030 Strategy is to encourage more people to access Nelson Bay by walking or cycling and as a result minimise the impact on parking or road upgrades. This data set indicates that there is potential to manage growth through creating jobs and encouraging population growth within Nelson Bay, which will reduce the overall need to supply additional and excessive infrastructure.

**Figure 10 Employment Destinations for Nelson Bay Residents**



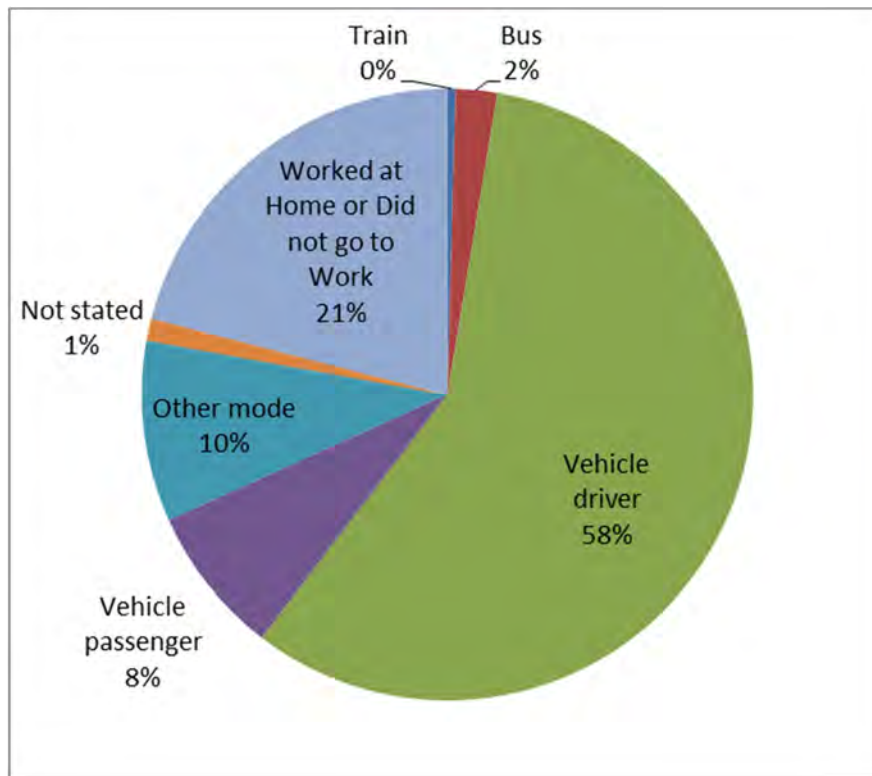
Source: Journey to Work (JTW - travel zones 3504 and 3511), TDC 2006

### 2.7.2 Mode Choice

Figure 11 provides a summary of the Journey-to-Work (JTW) travel modes for people residing in Nelson Bay. The data indicates that approximately 65% of people who live in Nelson Bay prefer to travel to work using a private vehicle. It is also noted that JTW by public transport represents only 2% of total travel and 10% of travel was stated as 'other mode', which captures walking and cycling. Further evaluation of the 'worked at home or did not go to work' data set indicated that the response range may be influenced by seasonal and part time workers who are not employed due to survey being undertaken in the low season.



**Figure 11 Nelson Bay Journey-to-Work Travel Mode**

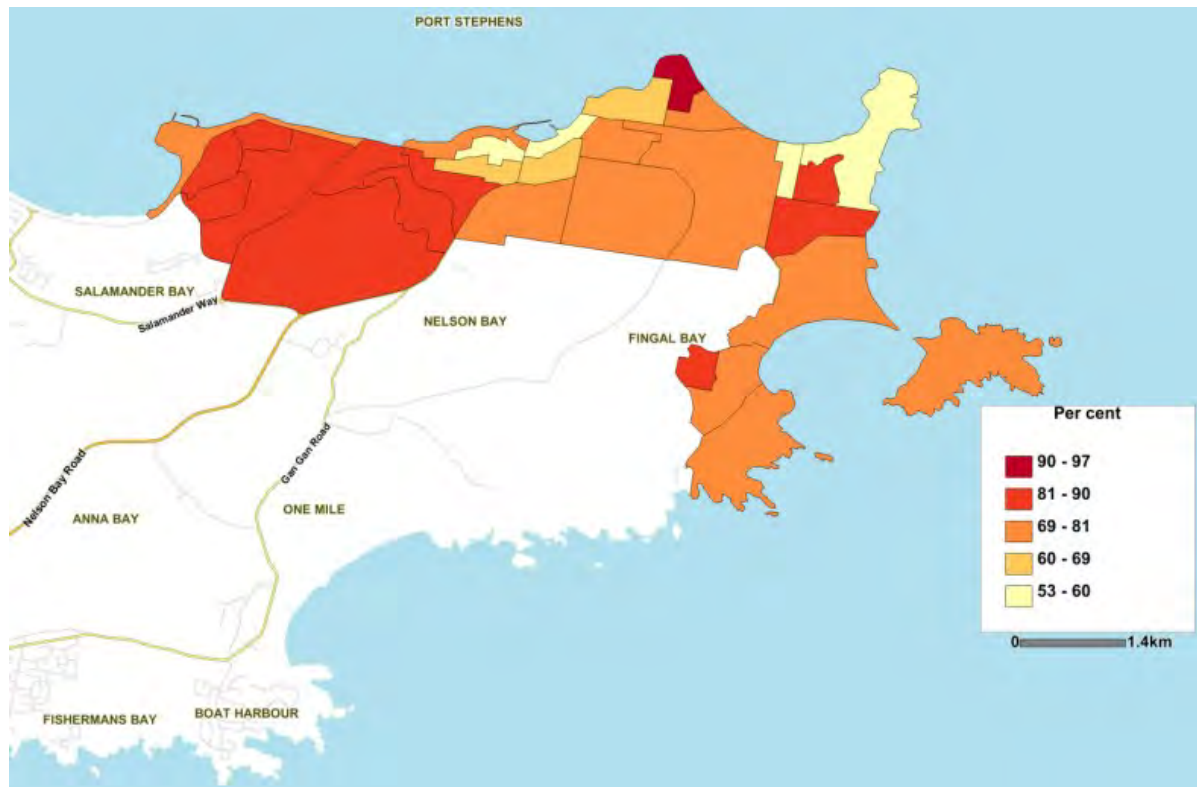


Source: Journey to Work (JTW – travel zones 3504 and 3511), TDC 2006

Figure 12 provides a 2006 area snapshot of the journey to work by car profile for Nelson Bay residents. The information confirms that there is a higher car mode share for journeys to work for most Nelson Bay residents. It is noted that areas identified to be within close proximity to Nelson Bay town centre and the foreshore exhibit a lower private vehicle mode share profile (69% or less).

The relatively high proportion of workers that make trips by car highlights the challenge to promote travel by alternative mode choices and the need to support growth through sustainable forms of travel.

**Figure 12 Car Mode Shares for Journey to Work Trips**



Source: Australian Bureau of Statistics, 2007

## 2.8 Previous Studies

### Traffic and Parking Strategy for Nelson Bay Business and Foreshore Precinct (1997)

The Port Stephens Council 'Traffic and Parking Strategy for Nelson Bay Business and Foreshore Precinct' presented the following:

- ▶ That the historical access routes to the town centre and foreshore area was Stockton Street and that this was previously downgraded to promote Church Street - Government Road – Victoria Parade for accessing the Foreshore and as a through route;
- ▶ Dowling Street (defined as a residential bypass) was introduced to support the further development of the area and to offer an alternative route to Fingal Bay and Shoal Bay;
- ▶ The network performance was generally reported to be satisfactory with certain intersection such as Donald Street with Church Street impacted by peak season traffic;
- ▶ Significant traffic growth was predicted to occur both during the peak and off peak periods under a business as usual scenario and it is currently unknown if these growth predictions may not have been realised; and
- ▶ To accommodate future growth it was recommended to expand both Donald Street east and west car

parks and on-street parking capacity improvements through changes to angle parking.

### Stage 1 Nelson Bay CBD & Foreshore Parking Strategy – draft Options Paper (2002)

The Port Stephens Council 'Stage 1 Nelson Bay CBD & Foreshore Parking Strategy – draft Options Paper' presented the following:

- On-street parking along Victoria Parade and the lack of parking creates additional traffic and delays to through movement and traffic flow;
- A need to eliminate long stay coach parking along the foreshore and identify a more suitable area for accommodating this need; and
- A need to encourage parking turnover through the introduction of time restrictions, increases in enforcement and paid parking to capitalise its strategic importance.

Angled parking, time restrictions and parking fees have been implemented along the foreshore area and used to manage parking on a day to day basis.

## 2.9 Summary

Table 4 provides an understanding of the connection between regional (Lower Hunter Regional Strategy) and local (Draft Nelson Bay 2030 Strategy (NBS 2030)) strategies.

**Table 4 Alignment of Regional and Local Objectives**

Lower Hunter Regional Strategy (2006)	Relevant Regional Objectives	NBS2030 - Strategic Planning Principles	Local Transport Objectives
Protect and promotion of centres	Maintain character of existing centres and protects Port Stephens foreshore	Create a sense of place and focal points Connect the town centre and waterfront	Support public transport Encourage walking and cycling
Plan for Growth	Allow for higher density and planned growth in centres	Provide for Economic Stimulus	Better manage access to the town centre and planned growth
Improve Access	Promotes sustainable transport and healthier communities	Improve access links, network efficiency and traffic circulation	Improve network efficiency and circulation

<b>Lower Hunter Regional Strategy (2006)</b>	<b>Relevant Regional Objectives</b>	<b>NBS2030 - Strategic Planning Principles</b>	<b>Local Transport Objectives</b>
Better infrastructure	Cycleway development for Port Stephens Supports more efficient use of infrastructure	Improve pedestrian amenity Funding public infrastructure	Remove network deficiencies Optimise parking

The strategy objectives indicate the improvement plan should focus on the removal of current network deficiencies, optimising network operations and supporting growth in Nelson Bay through better managing peak traffic demand. The key findings from reviewing the local and regional context will be used to inform the transport and parking plan for Nelson Bay and includes:

- ▶ Planning of transport in Nelson Bay town centre should be driven by sustainable levels of growth;
- ▶ Planning for the high season peak is not sustainable and the shoulder peak tourism periods represent a more continuous peak profile for the planning of the network;
- ▶ Intensification of land use in Nelson Bay town centre is likely to be concentrated along Stockton Street, Donald Street and Yacaaba Street and the foreshore area;
- ▶ The revitalisation of the town centre is focused on developing quality land uses that would support all year round business activity and events and through encouraging more permanent residents to reside in proximity of the town centre;
- ▶ Growth does not necessarily mean an increase in high season demand but is more likely result in an increase in all year round activity and the number of major events that occur outside of high season;
- ▶ High season activity impacts on the town centre and needs to be better managed;
- ▶ Parking from the foreshore maybe relocated to the edge of the town centre in the future;
- ▶ A typical shoulder peak seasonal day without a major event can easily be accommodated by Nelson Bay's current road and parking infrastructure;
- ▶ It would be beneficial if the current network is designed to efficiently manage access and circulation for a major event during the peak shoulder season, which is expected to be a desirable network design peak; and
- ▶ Access by public transport, walking an cycling and its connection to parking is critical in the planning of access, protecting areas of high activity and improving connectivity between the foreshore and town centre.

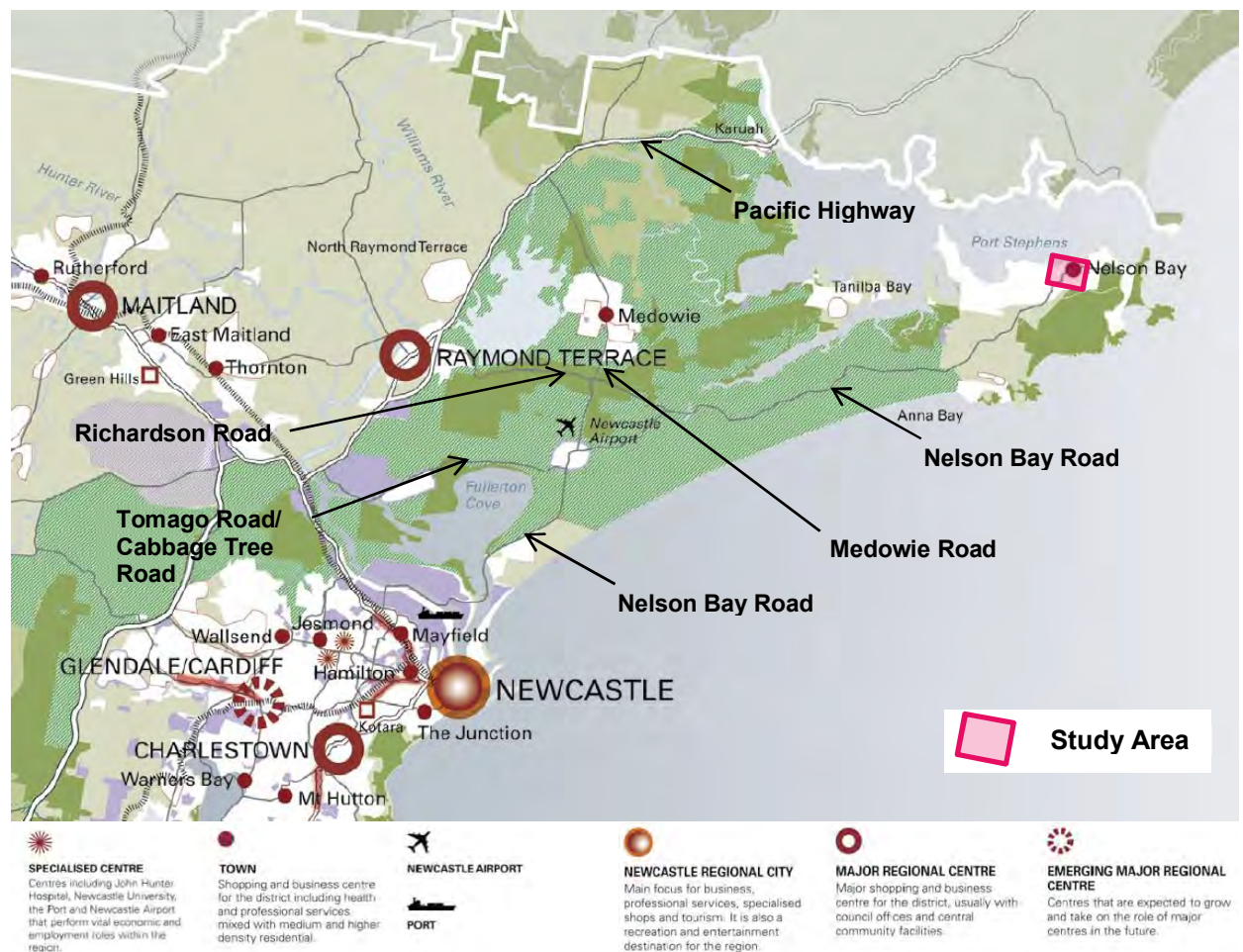
### 3. Transport Infrastructure and Services

This section reviews the existing traffic, road, public transport, parking, pedestrian and cycling conditions within Nelson Bay. The analysis and evaluation of current transport performance will assist in understanding the current and likely future challenges of the road network and parking supply of Nelson Bay.

#### 3.1 Regional Linkages

The key regional road connections servicing Nelson Bay are shown in Figure 13 and summarised below.

**Figure 13 Regional Road Links**



Source: Lower Hunter Regional Strategy, 2006

A summary of the key regional road routes that serve Nelson Bay area as follows:

### **Pacific Highway**

Pacific Highway is classified as State Highway No. 10 and functions as a main arterial road linking Sydney and Brisbane. It provides the main access route to and from Nelson Bay for visitors from outside of the Lower Hunter region. The Pacific Highway in the vicinity of Richardson Road carried an annual average daily traffic (AADT) of more than 23,000 vehicles in 2004.

### **Richardson Road**

Richardson Road is classified as Main Road 104 and functions as a regional main road linking the Pacific Highway with Nelson Bay Road and other destinations to the west, including Raymond Terrace and Williamtown. Traffic information for 2004 indicates that in the vicinity of the Pacific Highway, Richardson Road had an AADT of approximately 14,000 vehicles.

### **Tomago Road/Cabbage Tree Road**

Tomago Road/Cabbage Tree Road is classified as Main Road 302 and functions as a regional main road link for traffic wanting to access Nelson Bay from the Pacific Highway. Traffic information for 2004 indicates that in the vicinity of Williamtown, Cabbage Tree Road had an AADT of approximately 5,600 vehicles.

### **Nelson Bay Road**

Nelson Bay Road is classified as Main Road 108 and functions as the only main route to the Tomaree peninsula, which includes Nelson Bay. Traffic information for 2004 indicates that the average daily traffic on Nelson Bay Road, in the vicinity of Salamander Bay was approximately 13,100 vehicles.

The local road network and connectivity to other local centres are described in section 3.2, which includes access routes to Salamander Bay and Colette to the west, and Fingal Bay and Shoal Bay to the east.

## **3.2 Town Centre Street Network**

Figure 14 to Figure 16 provides an understanding of the existing road network characteristics in Nelson Bay town centre.

The street network in Nelson Bay town centre is a regular grid pattern, which is identified to have some missing connections to the higher order road network. This includes the current lack of connectivity between Yacaaba Street and Victoria Parade-Government Road or Dowling Street.

Nelson Bay Road, Church Street and Victoria Parade currently serve as the key traffic routes for through traffic and traffic travelling to the foreshore. Government Road west offers an alternative route for traffic travelling to destinations situated to the west, such as Colette and Salamander Bay. Key access routes to the town centre include Stockton Street (southern gateway) and Donald Street (western gateway), which serve as the main streets in the commercial core of the town centre. Other key access links in the town centre street network include Yacaaba Street and Magnus Street (eastern gateway).



Figure 14 Town Centre Road Hierarchy Plan



Source: Port Stephens Council Digital Data, 2011

Figure 15 Town Centre Speed Zone Plan



Source: Port Stephens Council Digital Data, 2011



**Figure 16 Town Centre Intersection Control Plan**



Source: Port Stephens Council Digital Data, 2011

Key observations from the review of traffic conditions in the town centre indicate that:

- ▶ On a day to day basis the local transport network operates satisfactorily;
- ▶ Speed within the town centre is controlled by low signposted speed limits, traffic management treatments and streetscape design in areas of high activity;
- ▶ The town centre has numerous pedestrian treatments that supports the function of Stockton Street north, Donald Street and Magnus Street west;
- ▶ Key intersections situated around the boundary of the town centre are controlled by roundabouts;
- ▶ The intersection of Donald Street and Church Street has no visible traffic control; and
- ▶ The residential bypass route along Dowling Street is complex and diverts to Trafalgar Street to access Shoal Bay Road.

A summary of key roads in Nelson Bay town centre are as follows:

### 3.2.1 Stockton Street

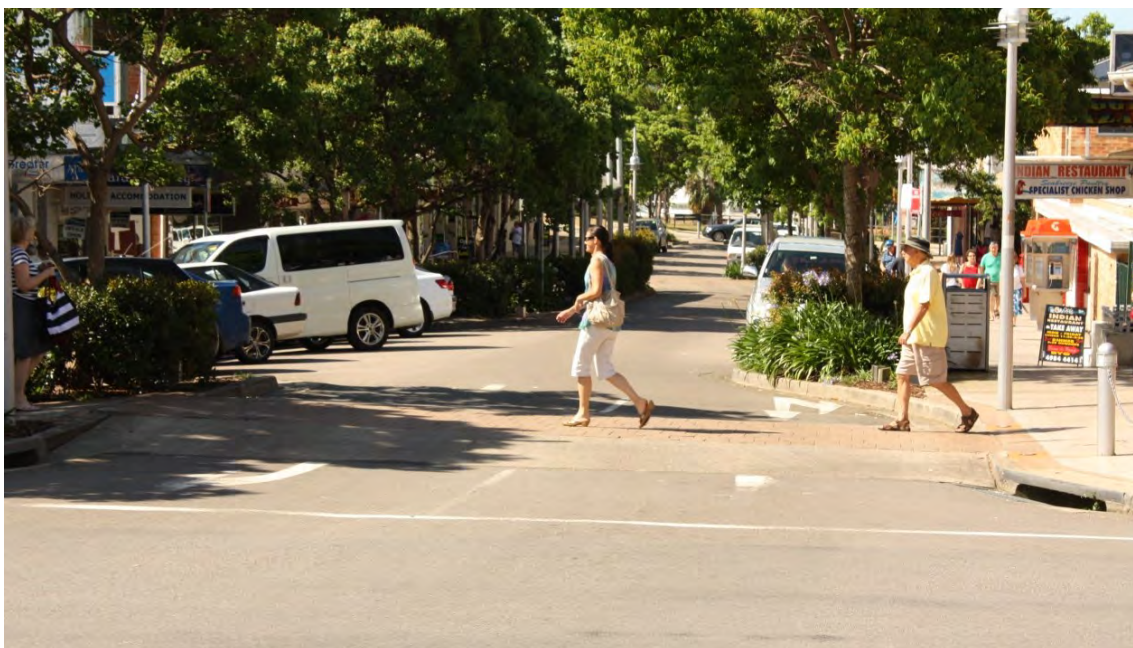
Stockton Street serves as a local main road and acts as the southern gateway to the Nelson Bay town centre. It is a two-way road with two traffic lanes for the majority of its length with a section between Government Road and Donald Street operating as a one lane one-way link for southbound traffic. The one-way section of the road travels through the heart of the town centre and provides access through the

westbound traffic lane of Victoria Parade. The road section situated between Government Road and Dowling Street provides parallel kerbside parking on both sides of the road, which is signposted with short-term parking restrictions. Most intersections are controlled under stop or give way conditions, and between Tomaree and Donald Street the road section has numerous access points to a mix of different uses, including medium density residential, a service station and an access from Coles car park.

**Figure 17 Stockton Street Facing North From Tomaree Street**



**Figure 18 Stockton Street Facing North From Donald Street**





### 3.2.2 Victoria Parade

Victoria Parade serves as a local main road and acts as both a bypass and the eastern gateway to the Nelson Bay town centre and the foreshore area. The road itself provides access to the Nelson Bay foreshore, Shoal Bay Road to the east, and Colette and Salamander Bay via Government Road to the west. The road configuration has one lane in each direction and fronts town centre and foreshore uses. Along its eastern section it accommodates time restricted parallel and angled kerbside parking. Access to this route is restricted due to the topography and the surrounding land use.

### 3.2.3 Government Road

Government Road serves as a local main road and acts as both a bypass and the western gateway to the Nelson Bay town centre and the foreshore area. The road itself provides access to both Nelson Bay town centre and foreshore area via Victoria Parade to the east, and Colette and Salamander Bay to the west. The road configuration has one lane in each direction and fronts residential, town centre and foreshore uses. Along its eastern section it accommodates a limited number of time restricted parallel kerbside parking spaces and offers access to surrounding local roads via priority controlled intersections.

**Figure 19 Government Road Facing East From Stockton Street**



### 3.2.4 Dowling Street

Dowling Street serves as a collector road and a defacto bypass around Nelson Bay town centre. The route also serves as a connection to Stockton Street and Nelson Bay Road to the west, and residential areas in Nelson Bay east and Shoal Bay Road to the west. The road configuration has one lane in each direction, with a limited number of road connections and access points from fronting properties and solid double continuous centre lines. Most intersections are controlled by line marking and giveaway and stop signs, and the road has limited provision for kerbside parking. Fronting property includes the bowling club

and golf club to the west and residential properties in the east.

**Figure 20 Dowling Street Facing East From Stockton Street**



### **3.2.5 Magnus Street**

Magnus Street links the town centre with local areas to the east and acts as a secondary eastern gateway to the town centre at Yacaaba Street. It also acts as a key bus corridor for services travelling to and from Fly Point, Shoal Bay and Fingal Bay. The western end of Magnus (between Stockton Street and Yacaaba Street) provides access to the heart of Nelson Bay town centre and has a signposted 10km/h speed limit. The streetscape and operation complements its 'Main Street' characteristics and feel and is supported by a one-way westbound direction restriction and parallel time restricted kerbside parking on both sides of the road. To the east of Yacaaba Street the road operates as a two-way road serving tourist accommodation and residential land uses. The road travels along some steep grades and navigates a number of tight bends that restrict visibility to oncoming traffic and other road users.



**Figure 21 Magnus St Facing East from Donald St East Car Park**



**Figure 22 Magnus Street Facing East from the Stockton Street**



### **3.2.6 Donald Street**

Donald Street is a key town centre east west route, which supports the two main town centre car parks, Coles car park and operates as the key bus corridor through the town centre. The road link acts as the



gateway to the town centre in the west and serves retail outlets, commercial businesses and the town centre bus interchange and taxi rank. The road has one traffic lane in each direction and provides time restricted parallel kerbside parking between Stockton and Yacaaba Streets. Between Stockton Street and Church Street the road section has numerous access points to small and large scale off-street car parking areas.

**Figure 23 Donald Street Facing West from Yacaaba Street**



### **3.2.7 Yacaaba Street**

Yacaaba Street offers an alternative north south town centre route running parallel with Stockton Street. It fronts the edge of town retail and commercial businesses along with some mixed use residential and vacant lots. Activity is concentrated at its northern end where it provides connection to Donald and Magnus Street and access to the eastern Donald Street car park. At its southern end it connects with Tomaree Street and serves both commercial, professional services and low to medium density residential uses. Yacaaba Street has one lane in each direction and provides time restricted parallel kerbside parking.

**Figure 24 Yacaaba Street Facing South from Magnus Street**



### **3.3 Parking**

Both on-street and off-street parking provision is provided in Nelson Bay. On-street parking facilities in the Nelson Bay Town Centre are characterised by time-restricted parallel parking kerbside spaces located along Donald Street, Stockton Street, Tomaree Street, Magnus Street, and Yacaaba Street. In addition, there are time-restricted spaces located along Victoria Parade in the Nelson Bay foreshore area.

**Figure 25 Kerbside Parking Stockton Street**





Outside of the town centre and foreshore area most residential streets situated within walking distance of the town centre are unrestricted and available for all day parking.

Off-street parking facilities in the Nelson Bay Town Centre comprise of a multi-storey car park and an at-grade car park both located on Donald Street. In addition, two at-grade car parks are situated along the foreshore area.

**Figure 26 Donald Street East Car Park**



**Figure 27 Donald Street West Car Park**



### 3.3.1 Parking Restrictions

Figure 28 shows the town centre and foreshore parking provision, along with the parking restrictions for parking in each location. This plan indicates that the majority of on-street parking provided in the Town Centre is restricted to one hour, with some 2 hour parking in Yacaaba Street and fifteen minute parking and loading zones for short sections of Magnus Street, Donald Street and Stockton Street. The off-street parking facilities offer a time limit restriction of three hours. In the foreshore area, both on-street and off-street parking is controlled through 'pay and display' paid parking facilities and a four-hour time restriction limit.

**Figure 28 Town Centre Parking Restrictions**



Source: Port Stephens Council Digital Data, 2011

### 3.3.2 Parking Supply

The 'Stage 1 Nelson Bay CBD and Foreshore Parking Strategy - draft Options Paper' completed by Port Stephens Council in 2002 indicated that in general there is 1090 off-street parking spaces within Nelson Bay Town centre and foreshore area with approximately 340 of this situated along the foreshore. These parking supply estimates apply to the town centre only, and were reviewed as part of the GHD parking surveys undertaken during the 'Tastes at the Bay' festival, and are shown in Table 5 and Table 6.



**Table 5 Town Centre On-street Parking Supply**

Street Name	Parking Capacity
Magnus Street	26
Donald Street	44
Stockton Street	55
Yacaaba Street	49

**Table 6 Town Centre Off-Street Parking Supply**

Car Park Name	Parking Capacity
Donald Street West (Open Car Park)	92
Donald Street East (Multi-Storey Car Park)	174
Donald Street Vacant Lot	30

The information presented above indicates that approximately 300 off-street parking spaces in the town centre are managed and controlled by Council and the remaining 800 are assumed to be managed by private landowners in the town centre or situated along the foreshore area. Significant private off-street parking areas situated within the town centre and available to the general public include Coles, cinema and the bowling club.

**Figure 29 Access to Coles Car Park from Donald Street**



### **3.3.3 Parking Management**

Current car parking management in Nelson Bay can be generally characterised by the following:

- ▶ Practically all kerb spaces in the town centre accommodate car parking, except for Church Street and limited stretches on Donald Street, Government Road and eastern sections of Magnus Street and those spaces designated as bus zones;
- ▶ There are currently time restrictions in place for most parking spaces (although no information on levels of infringements were assessed in this review);
- ▶ Off-street car park at Donald Street west is controlled by signposted time restrictions;
- ▶ No parking user fees are currently being charged in Nelson Bay town centre;
- ▶ Both off-street car parks in Teramby Road and on-street parking spaces in Victoria Parade are controlled through time restriction signposting and parking user fees; and
- ▶ Surveys and site observations indicate more intense parking demand occurs in the town centre high activity areas (Magnus Street and Stockton Street), Donald Street west car parking, Donald Street and Teramby Street car park.

### **3.3.4 Accessible Parking**

A review of on-street accessible parking spaces in the town centre reveals the following key findings:

- ▶ On-street accessible parking is provided on the western end of Magnus Street and northern end of Stockton Street;
- ▶ Quantum of accessible parking spaces on Magnus Street and Stockton Street appears to be sufficient to satisfy demand during a weekday during the peak shoulder tourism period;
- ▶ There is limited provision of on-street accessible spaces outside of the signposted 10km/h high activity areas; and
- ▶ Accessible parking is provided in Donald Street west and Teramby Road car parks and was observed to offer spare capacity on a weekday during the peak shoulder tourism period.

### **3.3.5 Shared Parking**

Traditionally, development controls have favoured the provision of private car parking for each development, based on an average peak trip generation rate from RTA surveys. When viewed within the context of a local centre, this approach tends to provide an oversupply of fragmented parking areas with undesirable impacts on urban form and amenity.

This is already evident in some portions of Magnus Street, Donald Street and Stockton Street, where commercial and residential developments provide off-street parking associated with the development and on-street parking is also still provided. These off-street car parking areas require multiple access points and are often underutilised outside of peak season and can potentially be shared with other nearby parking generators to manage the requirements for parking supply in the town centre.

### **3.3.6 Foreshore Area Parking Supply**

The impact from the proposed development of the Foreshore area is relatively unknown and current planning indicates that parking may be relocated to a new car park at Donald Street west. It is intended that a new parking area would be a shared facility and utilised by customers associated with both existing and future developments. This presents an opportunity to remove traffic and on-street from Government Road and Victoria Parade, reduce pedestrian vehicle conflict and further improve the streetscape. Further details of the Foreshore Area Masterplan are expected to be released in the future and were not made available for this study. The ability to accommodate parking and a major event park-and-ride site, control parking across the network and support improvements in town centre access by bus, walking and cycling is critical for managing for frequent major events in Nelson Bay.

### **3.3.7 Review of Port Stephens DCP on Parking**

Summary of key findings from the review of Port Stephens DCP 2007 Chapter B3 – Parking, Traffic and Transport relating to provision of car parking facilities in commercial centres are as follows:

- ▶ Port Stephens Council DCP Chapter B3 applies to the entire LGA; there is no specific DCP relating to parking in Nelson Bay;
- ▶ There is provision for reduction in minimum parking rates for sharing between residential and non-residential uses (B3.C8);
- ▶ Guidance needs to be included that the traffic study should include a profile of the variation of parking demand, in order to assess opportunities for shared parking;
- ▶ B3.C8: DCP allows for reduction in required parking spaces for certain conditions, however, provides no indication of a relationship with locality, mix use density or public transport accessibility as a consideration for reducing the parking requirement;
- ▶ Further guidance needs to be provided on the scope of traffic studies to enable parking demand and provision rate reductions to be considered and evaluated on a consistent basis; and
- ▶ The Parking DCP only covers car parking and no provision is made for bicycle parking.

### **3.3.8 Section 94 Contributions**

The Port Stephens DCP Chapter B3 Paragraph C5 allows for cash-in-lieu contribution for on-site provision of parking spaces (Section 94). Paragraph B3.C6 indicates Council would need to use S94 contributions on acquisition of land and construction of public parking facilities in vicinity of the development proposal. Exceptions noted are those for residential or tourist uses.

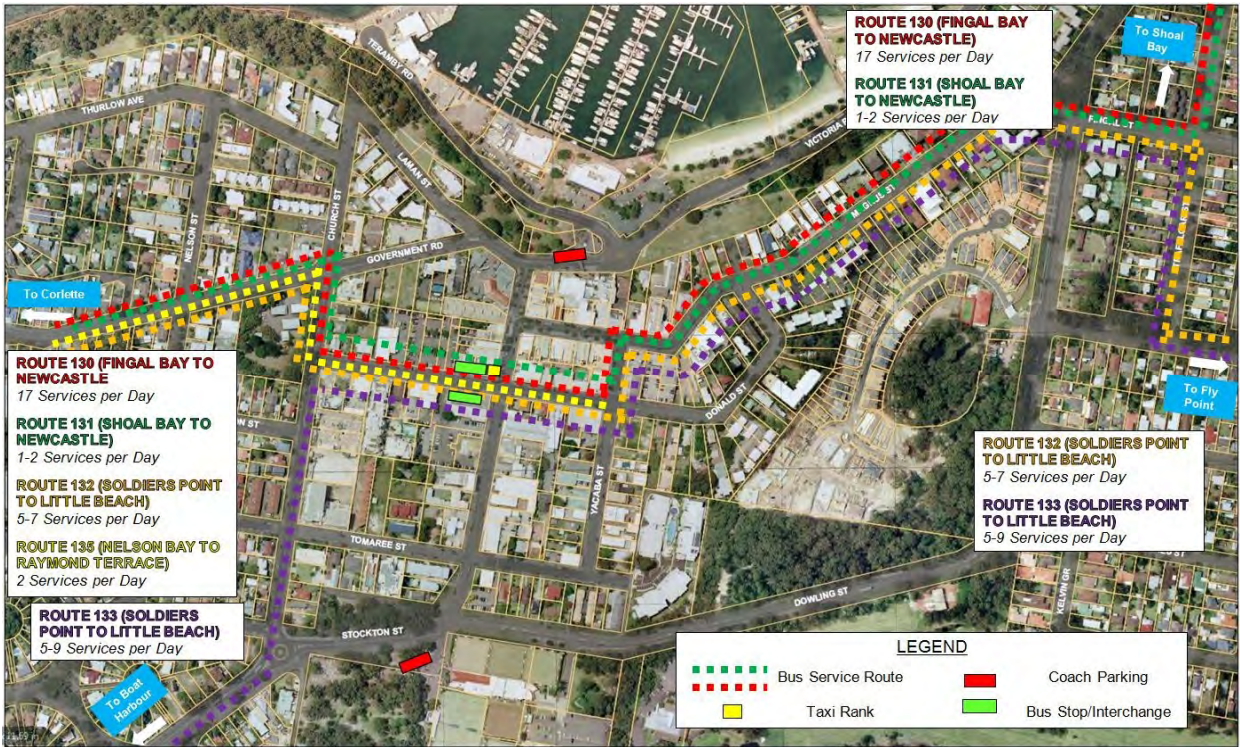
## **3.4 Public Transport**

Nelson Bay is served by a local and regional bus network operated by Port Stephens Coaches. Five bus services operate from Nelson Bay, providing regional links with Boat Harbour, Corlette, Shoal Bay, and Fly Point.

Figure 30 shows bus routes and bus and coach facilities within the Nelson Bay town centre and

foreshore.

**Figure 30 Public Transport Routes and Facilities**



Source: Port Stephens Council Digital Data, 2011

Figure 30 identifies that the primary bus stop or town centre transport interchange in Nelson Bay is located along Donald Street in the town centre. Bus services 130, 131, 132 and 135 access the Donald Street bus stops (Nelson Bay bus interchange) via Government Road, whilst the route 133 travels via Stockton Street.



**Figure 31 Nelson Bay Bus Interchange on Donald Street**



**Figure 32 133 Bus Service on Magnus Street**



In addition to the Port Stephens Coaches bus services, a number of tourist coaches provide access to Nelson Bay. A significant number of visitors arrive by touring buses, with coach stops located along Teramby Street and Stockton Street. A signposted taxi zone is also situated adjacent to the bus interchange on Donald Street (refer to Figure 30).

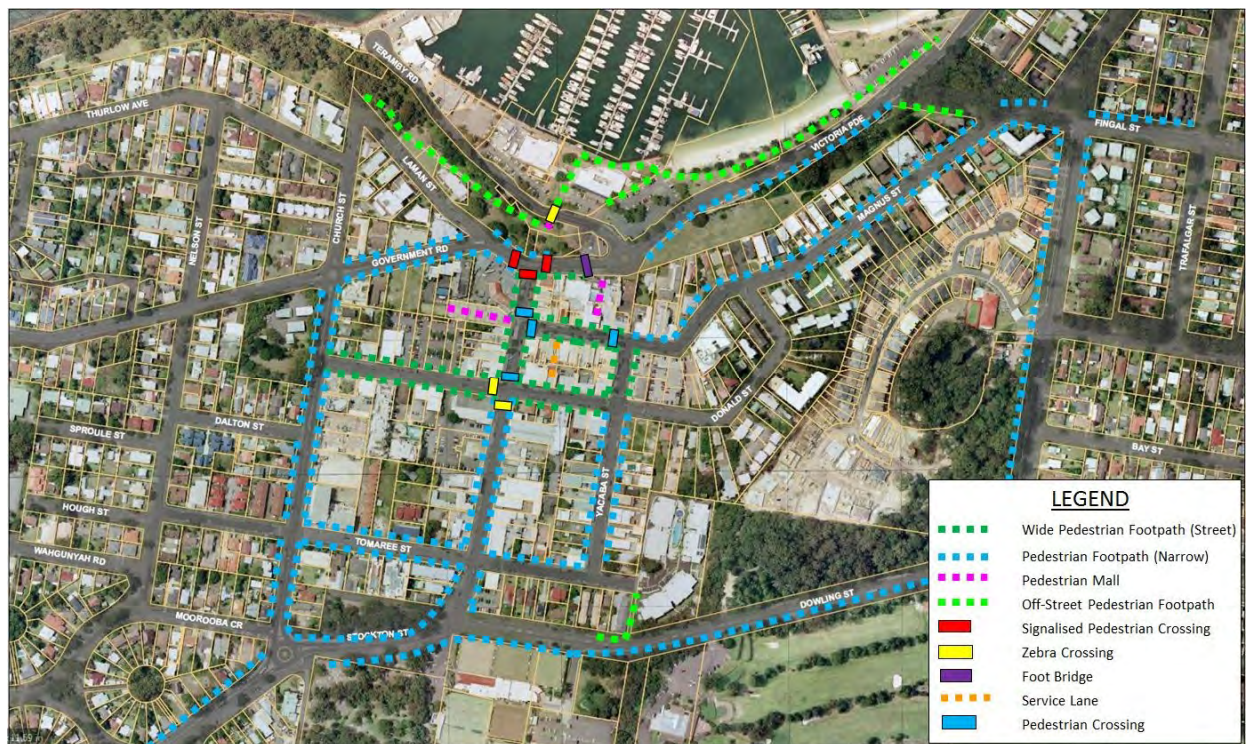
## 3.5 Pedestrian and Cycle Network

### 3.5.1 Pedestrian Network

Nelson Bay features an extensive pedestrian footpath network which links the main commercial precinct with adjacent foreshore and residential areas. There is a widespread network of narrow on-street footpaths that feature prominently throughout the Town Centre and neighbouring residential zones. In addition to this, the foreshore area provides a network of off-street pedestrian footpaths which provide connection with the Wharf, Shoal Bay Road, Magnus Street and Fly Point.

An illustration of pedestrian facilities in the Nelson Bay Town Centre is provided in Figure 33.

**Figure 33 Town Centre Pedestrian Facilities**



Source: Port Stephens Council Digital Data, 2011

Figure 33 shows that pedestrian crossing facilities are situated at the intersection of Donald Street/Stockton Street, Magnus Street/Stockton Street, Government Road/Stockton Street and Teramby Road. In addition, a pedestrian footbridge is situated on Victoria Parade, increasing accessibility between the Town Centre and foreshore area.



**Figure 34 Magnus Street east of Yacaaba Street (narrow paths)**



**Figure 35 Donald Street with Stockton Street (crossing facilities)**





**Figure 36 Donald St facing west at the Bus Stop and Taxi Zone (Core Area)**



**Figure 37 Magnus St facing west towards Stockton St (kerbside dining)**

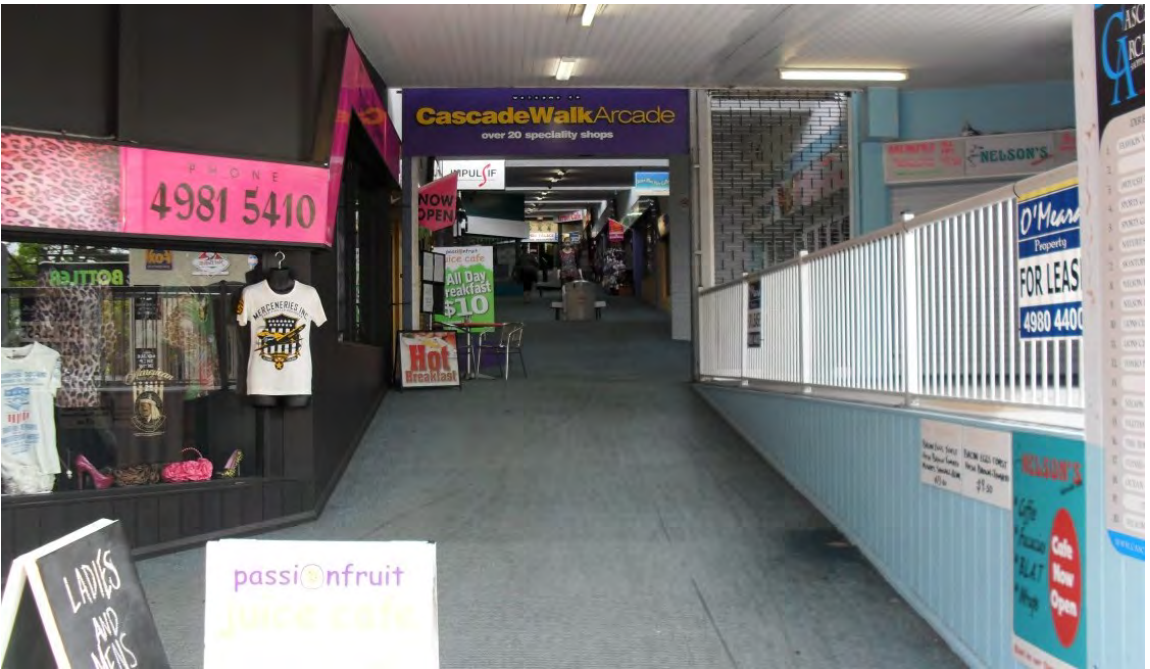




**Figure 38** Stockton St facing south towards Magnus St (Core Area)



**Figure 39** Cascade Arcade linking Stockton St and Donald St West Car Park





**Figure 40 Victoria Pde – Town Centre-Foreshore Pedestrians Links**



**Figure 41 Apex Park – Town Centre-Foreshore Pedestrian Connection**





**Figure 42 Teramby Road - Town Centre-Foreshore Pedestrian Connection**



**Figure 43 Nelson Bay Marina – Foreshore Walk**





**Figure 44 Victoria Parade - Foreshore Walk (Shared Path)**



### **3.5.2 Cycle Network**

Refer to Figure 45 for a schematic map highlighting existing cycling facility provision in the town centre. Cycling facilities in the Nelson Bay Town Centre are limited to a shared path that runs along the foreshore area and a short section of on-road cycle lane. The off-road route that runs along the foreshore is understood to be in conflict with areas that attract high volumes of pedestrian activity in proximity to Apex Park and the Marina precinct.

It is noted that the town centre does not appear to have a network of dedicated on-road bicycle lanes, except for a short link on Government Road between Stockton Street and Laman Street. The on-road cycle facility on Government Road is provided to assist cyclist movement between the Victoria Parade foreshore walk and Laman Street west of Apex Park. No other on or off-road cycle lane facilities were identified that would facilitate access between the town centre and its surrounding residential catchments.

Observations during the site visit indicated that there is a lack of designated cycling facilities for parking bicycles or shared end of trip facilities that would support cycling as a travel mode option for accessing Nelson Bay.



**Figure 45 Town Centre Cycling Facilities**



Source: Port Stephens Council Digital Data, 2011

**Figure 46 Government Rd facing west from Stockton St (Bicycle Lane)**



## 4. Indicators to Achieve Sustainable Accessibility

### 4.1 Overview

The Transport and Parking Study has been prepared on the basis of managing travel demand by maximising existing infrastructure and service provision and promoting accessibility options through more sustainable modes of transport such as walking, cycling and public transport. The following section presents a range of key indicators that are typically used to measure performance and to evaluate potential options that can be used to support the long-term masterplan for Nelson Bay. This evaluation technique will help to establish a framework for identifying a range of improvements that form the transport and parking plan for Nelson Bay.

These indicators have been grouped according under the following components:

- Improving non-car mode share;
- Promoting public transport and active transport use;
- Establishing public transport service quality;
- Robust network planning;
- Land use and public transport integration;
- Land use and private transport integration; and
- Maintaining road network performance.

### 4.2 Mode Share

Journey-to-Work (JTW) data from the ABS and the BTS indicate that in 2006, the car mode share for Nelson Bay was surveyed to be 66% (refer to section 1.1) with 2% captured by bus and approximately 10% by walking and cycling. The *Lower Hunter Regional Strategy* indicates that “*the historical focus of providing new housing in urban release areas is being reflected in very low levels of public transport usage, increasing congestion on key connecting roads and underutilised infrastructure capacity in some existing urban areas*”.

If a better mode share to public transport and active transport is not achieved, a range of interrelated outcomes can be expected, as summarised below:

- A smaller proportion of all trips will be carried on public and active transport modes, resulting in more trips being made in private vehicles and increased investment required in the less efficient private transport system;
- The public transport network and active transport facilities will fall short of its potential to contribute to an efficient and effective access system, and the public transport system as a whole would be less viable and require additional subsidies;
- There would be an increased propensity for traffic congestion in and around the development. This will tend to reduce the amenity of the area and reduce the efficiency of the transport and access

network serving it (i.e. increasing its 'operating cost');

- ▶ It will reduce the attractiveness of the area to investors due to poor levels of access;
- ▶ It will reduce the development potential of the area due to the lack of capacity available in its transport and access network and the network into which it integrates; and
- ▶ More space will be needed for car parking.

All of these would be expected to contribute to a negative impact on the value and competitiveness of Nelson Bay, particularly as a town with a significant tourist function that supports the Lower Hunter economy.

### **4.3 Promoting Public Transport Use**

Provision of a public transport system to serve Nelson Bay will not, by itself, be sufficient to achieve the required mode share on public transport and thus to achieve competitive levels of access for Tomaree peninsula. It will be necessary to provide a public transport service that is sufficiently attractive that people will *choose* to use it.

If the public transport system were provided in a manner that does not reflect people's requirements, there would be a reduced mode share to public transport, with outcomes as outlined in section 4.2. Transport planning should focus on developing an interconnected network of quality public transport nodes and services that are easily accessed and that respond to the needs of users.

The focus should not be limited to strategic level planning. Planning for development at all levels need to be planned in conscious consideration of the objectives of achieving public transport mode shift targets, and this will ultimately involve all planning and design aspects to encourage people towards the planned shift. Details that need to be considered that contribute towards achieving the desired customer focused outcomes, are as follows:

- ▶ Facilities planning and design;
- ▶ Fare integration;
- ▶ System integration;
- ▶ Operational considerations (e.g. timetable interfaces among different public transport modes); and
- ▶ Other measures, for example, such as provisions in DCPs limiting parking availability.

To address these issues and understand what public transport can achieve the following questions need to be answered:

- ▶ How easy would it be to find and access public transport?
- ▶ Is the trip direct and how long does it take in comparison to other modes?
- ▶ How much does it cost in comparison to other modes?

### **4.4 Public Transport Service Quality**

Public transport services should run on links / corridors that provide public transport with sufficient

operational priority to ensure a very high degree of reliability (i.e. immunity from any foreseeable delays and uncertainties associated with private transport modes) and attractive operating speeds.

A key feature of quality public transport services is frequency. It is understood that current bus services in Nelson Bay operate on a low frequency, however there are five separate routes that serve the town centre and other access to similar locations in the surrounding suburbs before travelling to other destinations. As a result, the frequency to neighbouring suburbs is considered satisfactory in comparison with other centres in the Lower Hunter.

In view of the principles to promote public transport, and Nelson Bay's designation as a town centre, consideration for more frequent services to and from Nelson Bay need to be given. This should also review the potential to expand service area coverage and weekend service's needs, which would typically enable public transport to become an attractive alternative.

## **4.5 Network Planning**

The *Outer Metropolitan Service Planning Guidelines* (NSW Transport and Infrastructure, 2009) provide for principles in the planning of public transport routes.

The main desire for a bus route network is to achieve a balance between the need and ease of access, and minimising travel time. Accessibility invariably relates to proximity to services, and in order to provide a wider coverage, bus routes will tend to be circuitous to achieve this desire. However, the consequent outcome would be longer travel times.

The *Guidelines* prescribe public transport service coverage to built-up residential areas with higher population densities within a 400 metre walk trip to a bus service during the daytime, and an 800 metre walk trip to a bus service at night.

The network should be legible, providing clear and simple to understand routes, as well as provide direct service with limited diversions. The intensification of Nelson Bay with permanent land use for jobs and additional residents aligns with these principles, however, the extent of development external to the town centre is unknown and needs to be controlled and planned to align with planned improvements in network coverage and service frequency. These principles can also be applied to the issue of managing demand and road capacity during major events and as a direction the location of parking should aim to help to reduce congestion and by doing so offer a point to transfer onto more efficient modes. These modes will need to offer reliable and high frequency services and connect with key central destinations during peak periods.

## **4.6 Land Use and Public Transport Integration**

One of the key actions under Transport in the Lower Hunter Regional Strategy is to: "*concentrate employment and residential development in proximity to public transport to maximise transport access*".

The *Integrating Land Use and Transport (ILUT)* policy package developed by the Department of Planning sets out objectives and principles that are important in shaping a transport strategy for expanding an urban centre, such as Nelson Bay. The ILUT principles are aimed at:



- ▶ Increasing access by public transport, walking and cycling;
- ▶ Encouraging people to travel shorter distances and make fewer trips; and
- ▶ Reducing car dependency.

The promotion of public transport use needs to be integrated with measures to reduce car dependency, and can be achieved by planning for efficient locations, densities and facilities for key trip generators and to maximise access by public transport.

The provision of bus services in the Hunter Region would be in various level of public transport hierarchy: regional routes, district routes, and where required, local routes. These bus services will need to be integrated with the broader public transport network that service Nelson Bay, its surrounding areas and provide for movement around the region.

#### **4.7 Land Use and Private Transport Integration**

Measures that integrate land use planning with trips by private vehicle are interrelated to the availability of parking and urban policy that supports the use of parking as a travel demand management tool. This is based on supply needs for vehicles and the requirement for each private vehicle trip to start and end with parking. It is an inherent component of the private vehicle trip and is a strong influence in mode choice. Land use integration will require that the provision of parking needs to be investigated and considered. The availability of free or cheap parking and its convenience will encourage more car trips regardless of the availability of public transport and good accessibility by walking and cycling.

This means that development authorities would need to influence parking availability either through actual limits on provision (i.e. maximum parking instead of the traditional minimum rates), cost of parking, and time restrictions. Where appropriate, compatible co-located land uses should be identified and considered for parking rate reductions (lower costs of construction and land allocation needs), if it is situated in a centre and has non-conflicting parking provision needs then there is an option to share. This may be achieved through the provision of parking stations situated on the edge of the town centre offering good accessibility to town centre land uses and the surrounding strategic road network.

These principles support the location of car parks on the edge of town, which in the case of Nelson Bay and its demand profile could potentially include a larger consolidated car park at either Donald Street, on entry to the town or at park-and-ride site situated on Nelson Bay Road.

#### **4.8 Network Performance**

One indicator of the robustness of the transport strategy for Nelson Bay will be the overall performance of the road network in satisfying the levels of travel demand. However, attaining acceptable vehicle flow levels of service along road corridors and at intersections will need to be balanced with the overall accessibility and day to day and seasonal movement level needs for Nelson Bay.

There will inherently be areas of conflict between vehicle flows attributing to road network performance, and the continuity and directness of access for pedestrians, cyclists and public transport users, either in locational or temporal aspects. The desires for a better-performing road network will need to be balanced with the other transport objectives for Nelson Bay and has a direct relationship with parking and the

attractiveness and quality of both active and public transport alternatives.

A particular focus for this planning principle is along town centre core streets, such as Stockton Street, Donald Street and Government Road, where levels of conflict exist and intensify with additional demand pressure generated during events or tourism peaks. The removal and relocation of this conflict through prioritising movement in these areas for appropriate modes will help create a safer and more efficient network that can satisfy demand in highly concentrated core areas.

## 4.9 Summary of Indicators

Table 7 below shows a summary of the transport planning indicators discussed.

**Table 7 Transport Planning Indicators**

	<b>Metric</b>	<b>Indicators</b>
1	Mode Share	Adopt a minimum public transport mode share target for major event days, the peak season and day to day commuter trips, with the target to be agreed with the Department of Planning and Infrastructure and Transport for NSW. This should take into account NSW 2021 and aim to increase the public transport mode share target to 10% (an increase of 8%) and focus on the planning of new development and events. Future bus network planning should take this target into account.
2	Focus on people using public transport	The planning of the public transport system should reflect the needs and expectations of the people who are going to choose to use it. This entails a fundamentally different approach to planning for traffic and should focus on likely user groups, key destinations and the needs of tourists.
3	Public transport service quality - reliability and speed	<p>The <i>Service Planning Guidelines</i> for buses provides the following guidelines relevant to bus operating frequency and travel times:</p> <ul style="list-style-type: none"> <li>Regional routes: 30-60 minutes travel time; 10-25 km in length; can operate on strategic transport corridors.</li> <li>District routes: link residential areas to the nearest district centre and a strategic transport corridor, or another mode or node, that operates to the nearest designated centre.</li> </ul> <p>With growth planned in Nelson Bay and in the surrounding precincts, and other employment centres in the LGA, demand-based frequency changes should be investigated regularly and follow the direction provided in the guideline. The ultimate aim is to improve frequency and reliability of services to help manage increases in travel demand.</p>

	Metric	Indicators
4	Network planning	<p>Public transport routes within Nelson Bay should link to key transfer nodes and trip generators in the surrounding region. This includes other growth centres within Port Stephens LGA, nearby major regional centres such as Raymond Terrace, Maitland, and Newcastle Regional City.</p> <p>The planning for increases in services should account for known deficiencies in road network capacity in the future and align with current services and parking opportunities. The focus during peak periods is to encourage day visitors to park in locations external to the town centre and foreshore areas to avoid congested areas. The aim is to limit parking and make a shuttle bus alternative attractive to the potential user group by offering a direct, efficient and reliable service and discouraging vehicle travel into the centre.</p>
5	Land use and public transport integration	<p>Public transport corridors should run <i>through</i> the core and service key destinations that are not easily accessible by car (lack of parking or cost difference).</p> <p>Planning for public transport should focus on the highest intensity land uses and activity areas around the primary public transport network such that the potential passenger catchment is within a 400 metre radius of a stop.</p>
6	Land use and private transport integration	<p>Arterial roads should run <i>around</i> development parcels and activity areas. Access to major parking facilities should be located directly off the arterial road network, or at least along routes that do not conflict with key pedestrian and cyclist corridors. Parking should be used as a point to funnel demand on to more efficient and appropriate travel modes, especially when network capacity is limited and peak demand levels are not constant.</p>
8	Road network performance	<p>Standards of service for strategic road network planning of Nelson Bay road network relate to:</p> <ul style="list-style-type: none"> <li>▮ Protection of town centre and key activity areas from through traffic intrusion.</li> <li>▮ Provision of an orderly and legible road network.</li> <li>▮ Provision of adequate capacity to meet reasonable community expectations on the higher order traffic carrying roads.</li> </ul> <p>The first two issues are addressed by developing an orderly road hierarchy with specific design standards and target maximum traffic loads related to the road hierarchy.</p> <p>The issue of adequate capacity on the major road network is addressed by defining acceptable levels of service (volume to capacity ratios). Target maximum volume / capacity for road links set to 0.8. The minimum acceptable level of service standards for intersections Level of Service D.</p>

## 5. Data Sources and Service Measures

This section provides an understanding of the current performance of the transport network and parking facilities in Nelson Bay under 2011 peak traffic conditions. The assessment has been based on surveyed traffic and parking volume data undertaken by GHD in November 2011 and historical traffic and crash data (2005-10) provided to GHD by Port Stephens Council (PSC).

### 5.1 Transport Data

#### 5.1.1 Movement or Activity Counts

Traffic and pedestrian count surveys were undertaken over the weekend of the 'Tastes at the Bay' festival in Nelson Bay, which occurred on Saturday 5<sup>th</sup> and Sunday 6<sup>th</sup> November 2011. Additional link 'tube' count surveys were undertaken by PSC on behalf of GHD between 2 November and 9 November 2011 and 9 November and 17 November 2011.

The intersection and pedestrian counts were undertaken for the periods 08:30-10:30, 12:00-14:00 and 16:00-18:00 on Saturday 5 November 2011. Link counts were completed continuously over 24 hours for the full survey period. The locations of the traffic surveys are shown in Figure 47.

**Figure 47 Traffic Survey Locations**



Source: Port Stephens Council Digital Data, 2011

Pedestrian survey counts were undertaken on Saturday 5 November 2011 during the weekend of the 'Tastes at the Bay' festival at the following intersections:

- ▶ Donald Street with Church Street;
- ▶ Donald Street with Stockton Street;
- ▶ Donald Street with Yacaaba Street;
- ▶ Magnus Street with Yacaaba Street; and
- ▶ Tomaree Street with Stockton Street.

### 5.1.2 Seasonal Travel Patterns

As indicated in section 2.6.1, there is a limited amount of data that is available on seasonal traffic volume factors for roads within Nelson Bay town centre or its key access routes. This limitation has made it very difficult to understand peak seasonal variation factors or the length of that period. Data presented in the Port Stephens 2010 Tourist Plan and other traffic volume data sets provided by Council for the study indicate that November and the Taste for the Bay festival provides a good understanding of capacity needs along the road network. The 'Tastes at the Bay' event is understood to attract high volumes of day visitors and occurs during the peak tourist shoulder period. It is understood that future planned growth in Nelson Bay will be based around an event demand profile, which in the future are planned to occur on a more frequent basis and support jobs and sustainable growth profile for Nelson Bay.

Based on the above information, the Taste of Bay event is deemed to provide a consistent measure of typical peak conditions. These conditions will become more frequent in the future and as a result is deemed to be suitable for designing a network for Nelson Bay and managing access and measuring network performance.

### 5.1.3 Bus Services

Current bus services serving Nelson Bay and the Tomaree Peninsula are operated by Ports Stephens Coaches. A detailed summary of bus service routes and the frequency of bus services operating within the Nelson Bay Town Centre are provided in Table 8.

**Table 8 Bus Service Routes and Frequency Estimates**

Route No.	Route	Direction	Weekday Operating Hours	Weekday Average Frequency	Weekend Operating Hours	No. of Services	Weekend Average Frequency
130	Fingal Bay to Newcastle	SB	5.33am – 10.08pm	1 hour	6.35am – 9.15pm	9	1.5 hours
	<i>via Nelson Bay, Salamander Bay and Airport</i>	NB	5.45am – 9.30pm	1 hour	7.42am – 8.35pm	8	1.5 hours
131	Shoal Bay to Newcastle	SB	8.20am	1 per day	N/A		N/A



Route No.	Route	Direction	Weekday Operating Hours	Weekday Average Frequency	Weekend Operating Hours	No. of Services	Weekend Average Frequency
	(Express) via Nelson Bay, Salamander Bay and Airport	NB	11.27am - 6.10pm	3 hours	N/A		N/A
132	Soldiers Point to Little Beach	SB	10.18am - 9.23pm	1.5 hours	11.55am - 7.50pm	3	3 hours
	via Salamander Bay, Vintage Estate and Nelson Bay (Mon-Fri)	NB	8.53am - 9.10pm	2 hours	8.45am - 7.30pm	4	3 hours
133	Soldiers Point to Little Beach	SB	7.50am-3.53pm	1.5 hours	9.32am - 12.58pm	2	2 hours
	via Salamander Bay, Galoola Drive and Nelson Bay (7 Days)	NB	7.37am - 6.35pm	1 hour	12.52pm - 3.37pm	2	2 hours
135	Nelson bay to Raymond Terrace via Salamander Bay (Mon-Fri)	WB	7.25am - 2.20pm	3 hours	N/A		N/A
		EB	9.57am - 4.57pm	3 hours	N/A		N/A

Source: <http://www.psoaches.com.au>

Note: \* NB – Newcastle to Port Stephens, SB – Port Stephens to Newcastle, EB – Raymond Terrace to Nelson Bay, WB – Nelson Bay – Raymond Terrace.

#### 5.1.4 Parking

Parking surveys were undertaken on Saturday 5 November 2011 during the weekend of the 'Tastes at the Bay' festival. This weekend was chosen in order to gain an understanding of the utilisation of parking resources in Nelson Bay during periods of increased demand, such as an event weekend or school holiday period. Parking surveys were undertaken by recording the parking utilisation each hour, from 09:00 to 17:00, at the following locations:

- ▀ Donald Street;
- ▀ Stockton Street;
- ▀ Yacaaba Street;
- ▀ Magnus Street;
- ▀ Donald Street West (open car park);
- ▀ Donald Street East (multi-storey car park); and
- ▀ Donald Street vacant lot (sometimes used for parking).

The location of the parking surveys are shown in Figure 48.

**Figure 48 Parking Survey Coverage**



Source: Port Stephens Council Digital Data, 2011

## 5.2 Service Measures

This section sets out the service measures used to assess the performance of intersections and roads, parking needs, safety, service frequency levels for bus services and performance measures adopted to promote walking and cycling.

### 5.2.1 Intersection Performance

The performance of the road network is largely dependent on the operating performance of key intersections, which are critical capacity control points along the road network. It is therefore appropriate to consider intersection operation as a measure of capacity of the road network. The SIDRA Intersection 5.0 software has been used to assess the peak hour operating performance of the intersections.

Intersection performance can be graded on several measures; however it is considered that the most useful is the average vehicle delay (AVD) per vehicle (expressed in seconds per vehicle). The AVD is a measure of operational performance of an intersection relating to its LOS.

The average vehicle delay is equated to a corresponding level of service (LOS), which ranges from A (best) to F (worst). The criteria for evaluating the operational performance of intersections are provided in Table 9.

**Table 9 Intersection Level of Service Range**

LOS	Average Delay/ Vehicle (secs)	Traffic Signals & Roundabouts	Give-way & Stop signs
A	Less than 15	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	28 to 42	Satisfactory	Satisfactory, but accident study required
D	42 to 56	Operating near capacity	Near capacity, accident study required
E	56 to 70	At capacity, excessive delays; roundabout requires other control mode	At capacity; requires other control mode
F	exceeding 70	Unsatisfactory; requires additional capacity	Unsatisfactory, requires other control mode.

Source: *Guide to Traffic Generating Developments (RMS 2002)*

Notes:

1. The average delay assessed for signalised intersections is over all movements.
2. For roundabouts and priority control intersections (with Stop and Give Way signs or operating under the T-junction rule), the critical criterion for assessment is the movement with the highest delay per vehicle. Average delay is expressed in seconds per vehicle.

The criteria for evaluating the performance of intersections are for all intersections to perform at a LoS of C or better, unless it is desirable not to encourage vehicle traffic through this area under certain peak event conditions.

### 5.2.2 Midblock Performance

The AUSTROADS Guide to Traffic Management – Part 3: Traffic Studies and Analysis defines “capacity” in accordance with the Transport Research Board Highway Capacity Manual 2000:

*‘Capacity is the maximum hourly rate at which persons or vehicles can be reasonably expected to traverse a point or uniform section of lane or roadway during a given time period under the prevailing roadway, traffic and control conditions’.*

Typical roadway capacities for urban streets with interrupted flows are given in Section 5.2 of the AUSTROADS Guide to Traffic Management. These capacity values are shown below in Table 10.

**Table 10 Typical Mid-block Capacities for Urban Streets**

Type of Lane	One-Way Mid-block Capacity (vph*)
Median or inner lane	
Divided Road	1,000
Undivided Road	900

Source: 'Guide to Traffic Engineering Practice: Part 2 – Roadway Capacity', AUSTROADS, 1999

\*vehicles per hour per traffic lane

The AUSTROADS Guide to Traffic Management – Part 3: Traffic Studies and Analysis (2009) outlines Level of Service criteria for mid-block sections of road based on volume-to-capacity ratios (VCR). A summary of these Levels of Service is presented below in Table 11.

**Table 11 Level of Service Descriptions for Roads**

Level of Service	Uninterrupted Flow Facilities	Interrupted Flow Facilities	VCR Range
A	Free flow conditions in which individual drivers are unaffected by the presence of others in the traffic stream.	Primarily free flow operations at average travel speeds and vehicles are completely unimpeded in their ability to manoeuvre within the traffic stream.	0.00 to 0.34
B	Zone of stable flow and drivers still have reasonable freedom to select their desired speed and to manoeuvre within the traffic stream.	Reasonably unimpeded operations at average travel speeds.	0.35 to 0.50
C	Also in the zone of stable flow, but most drivers are restricted to some extent in their freedom to select their desired speed and to manoeuvre within the traffic stream.	Stable operations; however ability to manoeuvre and change lanes in mid-block locations may be more restricted and intersection controls may contribute to lower average travel speeds.	0.51 to 0.74
D	Close to the limit of stable flow and is approaching unstable flow. All drivers are severely restricted in their freedom to select their desired speed and to manoeuvre within the traffic stream.	A range in which small increases in flow may cause substantial increases in delay and decreases in travel speed.	0.75 to 0.89
E	Occurs when traffic volumes are at or close to capacity, and there is virtually no freedom to select desired speeds or to manoeuvre within the traffic stream.	Characterised by significant delays and reductions in average speed.	0.90 to 0.99

Level of Service	Uninterrupted Flow Facilities	Interrupted Flow Facilities	VCR Range
F	In the zone of forced flow and flow breakdown, this results in queuing and delays.	Characterised by urban street flow at extremely low speeds and Intersection congestion is likely at critical locations.	1.0 or greater.

*Source: Adapted from AUSTROADS Guide to Traffic Management - Part 3: Traffic Studies and Analysis*

The criteria for evaluating midblock performance of roads is for all road sections to perform at a LoS of C or better during typical weekday peak periods and have the ability to accommodate a 40% increase (identified event day peak traffic growth factor which is above the conservatively estimated 20 year growth factor of 1.5% per annum) without performing at a LoS E or worse.

### 5.2.3 Parking

The following service measures were applied to measuring current parking needs:

- ▶ An 85% occupancy profile was selected to understand parking capacity issues associated with parking within the town centre on an event day;
- ▶ A factor of 5% of total traffic staying beyond the parking time restriction was identified as a benchmark for understanding issues with parking overstay and enforcement needs in Nelson Bay; and
- ▶ If parking rates for new development are higher than the parking rates used in other centres with similar characteristics then consider revising the current DCP and adopting a lower rate for new development.

### 5.2.4 Crashes

The following service performance measures were applied to identify and address safety issues:

- ▶ Locations with three crashes or more over a 5 year period require further investigation;
- ▶ Crashes involving a fatality over a five year period require further investigation; and
- ▶ Intersections with crash histories that are likely to be impacted by peak period traffic and planned town centre improvements require further investigation.

### 5.2.5 Bus Services

To assist in promoting the use of bus services as a viable alternative to the private car for travel to Nelson Bay, the following performance measures were adopted:

- ▶ Services should achieve at a minimum of an hourly frequency during peak periods or above, along key corridors; and
- ▶ During event days and high season the service frequency should increase to at least one bus service every 30 minutes or above (desirable to have a 10 minute service frequency at park-and-ride sites)



along a key demand corridor that is impacted by congestion and excess parking demand.

Increases in bus service frequency along with an attractive public transport interchange in a central location (visible) to the town centre offer a desired outcome for managing short-term increases in demand, i.e. during an event day and the high season tourism periods. It will also offer an opportunity to promote public transport on a day to day basis when capacity issues are not an issue.

#### **5.2.6 Walking and Cycling**

To assist in promoting the use of walking and cycling as a viable alternative to the private car for travel to Nelson Bay, the following performance measures were adopted:

- ▶ All roads should offer a safe crossing point to town centre gateways;
- ▶ All roads in the town centre should have a footpath;
- ▶ Pedestrians to have movement priority along identified Main Streets.; and
- ▶ At least one cycle route should be provided in each direction (east, south and west) from all surrounding catchment areas to Nelson Bay.

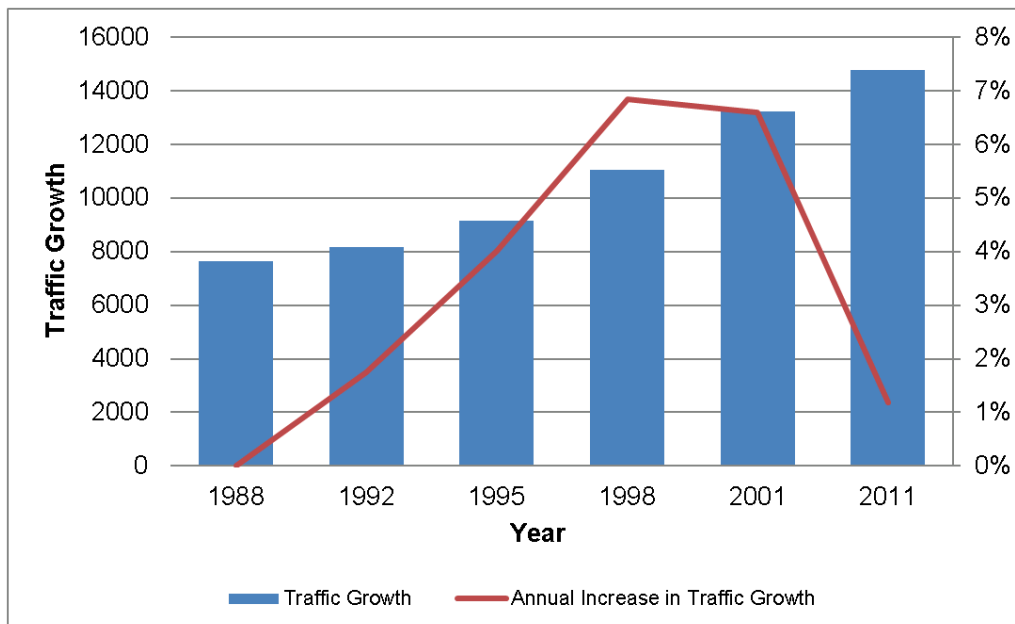
## 6. Network Evaluation

The performance of critical sections of the Nelson Bay town centre road network has been assessed based on traffic data obtained during the survey period and the performance criteria listed under section 5.2. The performance assessment includes both midblock and intersections, and has been limited to the information that has been obtained during the study period.

### 6.1 Historical Traffic Growth

Figure 49 provides an understanding of traffic growth along Nelson Bay Road between 1988 and 2011, which has been taken from count sites in close proximity to the Nelson Bay town centre.

**Figure 49 Historical Traffic Growth on Nelson Bay Road**



Source: 'Traffic Volume Data for Hunter Region 2001, RTA' and PSC traffic volume survey data collated in Nov 2011.

The above data set indicates that traffic has grown significantly over the last 20 years. The growth in traffic peaked around 1998 to 2001 and during the last ten years has reduced to an annual increase of approximately 1%.

### 6.2 Traffic Volumes

Table 12 and Table 13 provide a comparison of total daily traffic volumes and the daily traffic profile for both weekend event day and a typical weekday.

**Table 12 Daily Traffic Flows (Two way flows)**

Road	Daily Traffic Flow (Two-way)		
	Saturday (event)	Sunday (event)	Typical Weekday
Nelson Bay Road	15426 (+11%)	14497 (+4%)	13874
Government Road	11806 (+42%)	11271 (+35%)	8320
Church Street	7700 (+24%)	7503 (+21%)	6218
Magnus Street	3548 (+26%)	2901 (+3%)	2827
Dowling Street	N/A*	N/A*	5713*

Source: daily traffic volume data obtained for November 2011 from Port Stephens Council

Note: \* represents site vandalized during the survey period. (+42%) represent the percentage increase in daily traffic in comparison to observed typical weekday traffic volumes.

The above information indicates that daily traffic levels were significantly higher for an event day (over 10%) than those presented for a typical working day.

**Table 13 Peak Hour Traffic Flows (Two way flows)**

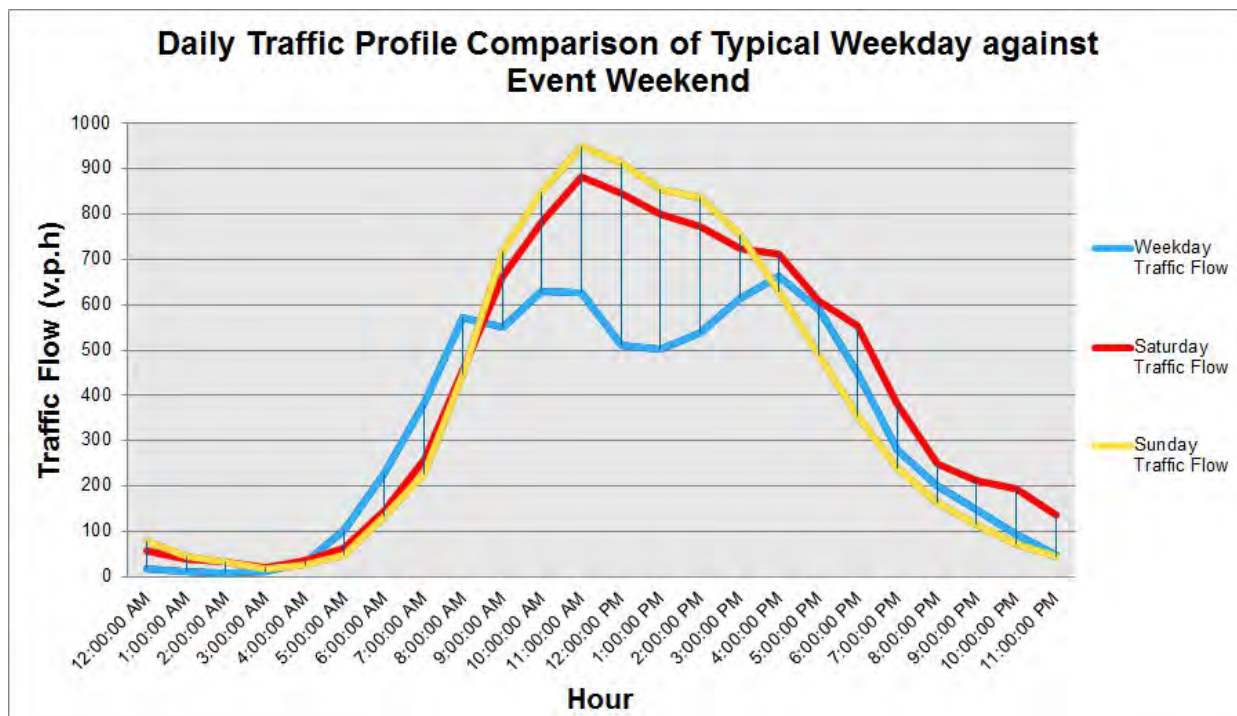
Road	Daily Traffic Flow					
	Saturday (event)		Sunday (event)		Typical Weekday	
	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Nelson Bay Rd	906 (39%)	681 (17%)	819 (25%)	633 (9%)	653	580
Government Rd	638 (66%)	464 (43%)	599 (56%)	441 (36%)	385	324
Church Street	474 (87%)	340 (42%)	422 (66%)	262 (10%)	254	239
Magnus Street	164 (16%)	148 (3%)	176 (25%)	175 (22%)	141	143
Dowling Street	N/A*		N/A*		322	245

Source: peak hour traffic volume data obtained for November 2011 from Port Stephens Council

Note: \* represents site vandalized during the survey period. (39%) represent the percentage increase in peak hour traffic in comparison to observed typical weekday traffic volumes.

The above information indicates that peak hour traffic levels were significantly higher for an event day (up to 87%) than those presented for a typical working day.

**Figure 50 Event Day versus Typical Weekday Comparison**



Source: daily traffic volume data obtained for November 2011 from Port Stephens Council

Note: traffic profile displays the average two way traffic volume along four roads and is presented for each hour of the day.

Based on an appraisal of total traffic volumes across all traffic count sites, it is apparent that traffic levels during the peak hour on an event day Sunday presents a 40% increase in traffic demand than that recorded during the peak hour on a typical weekday. It is also noted that traffic levels on the Saturday are within 10% of the peak hour and daily traffic volumes generated on the Sunday event day. Based on these findings, the modelling of network performance on either the Saturday or Sunday during the 'Tastes at the Bay' festival is considered to offer a good representation of known capacity needs for general peak traffic demand in and around Nelson Bay.

The intention of this study is to understand current and future network capacity needs by evaluating the capacity of the network against peak operations on an event day.

### 6.3 Midblock Performance

The following analysis provides an understanding of both event day traffic conditions during the 'Tastes at the Bay' festival and typical weekday peak conditions.

#### 6.3.1 Typical Weekday Traffic Conditions (November 2011)

Table 14 and Figure 51 provide an understanding of the performance levels of the road network in and around Nelson Bay on a typical weekday during November.

**Table 14 Typical Weekday Peak Hour Flows & LoS**

	NB /EB	SB /WB	V/C (NB /EB)	LoS	V/C (SB /WB)	LoS
Church St	254	239	0.28	A	0.27	A
Government Road	385	324	0.43	B	0.36	A
Magnus St	141	143	0.16	A	0.16	A
Nelson Bay Rd	653	580	0.73	C	0.64	C
Dowling Street	322	245	0.36	B	0.27	A

Source: daily traffic volume data obtained for November 2011 from Port Stephens Council and Port Stephens Council Historical Traffic Volume Data.

Note: NB indicates northbound direction, EB indicates eastbound direction, SB indicates southbound direction and WB indicates westbound direction.

It is apparent from the information presented in Table 14 and Figure 51 that the performance of all roads surveyed during a typical weekday peak hour period performed satisfactory with some spare capacity

**Figure 51 Typical Weekday Network Performance Plots**



Source: Port Stephens Council Digital Data, 2011.

Note: LoS has been calculated using a combination of PSC November 2011 and historical weekday average peak hour and peak directional traffic volume data.



### 6.3.2 Sunday Event Day – ‘Tastes at the Bay’ Traffic Conditions (November 2011)

Table 15 and Figure 52 provides an understanding of a Sunday event day (weekend) traffic conditions in Nelson Bay and are based on November 2011 traffic counts during the ‘Tastes at the Bay’ festival.

**Table 15 Event Day (Sun) Peak Hour Flows & LoS**

	NB /EB	SB /WB	V/C (NB /EB)	LoS	V/C (SB /WB)	LoS
Church St	474	340	0.53	C	0.38	B
Government Road	638	464	0.71	C	0.52	C
Magnus St	164	148	0.18	A	0.16	A
<b>Nelson Bay Rd</b>	<b>906</b>	<b>681</b>	<b>1.01</b>	<b>F</b>	<b>0.76</b>	<b>D</b>

Source: Port Stephen Council, November 2011, MetroCount collected vehicle classified tube counts.

Note: NB indicates northbound direction, EB indicates eastbound direction, SB indicates southbound direction and WB indicates westbound direction.

**Figure 52 Road Network LoS: Peak Period Event Day (Sun)**



Source: Port Stephens Council Digital Data, 2011.

Note: LoS has been calculated using PSC ‘Tastes at the Bay’ event day November 2011 peak hour and peak directional traffic volume data.

The performance results in Table 15 indicate that there is spare capacity on most roads except Nelson

Bay Road during a typical event day peak hour period with both Church Street and Government Road operating close to capacity in the peak hour. Both Table 15 and Figure 52 indicate that peak directional traffic flows can impact on the efficient operation of the road network and especially access to Nelson Bay, Shoal Bay and Fingal Bay during these peak periods. The traffic flow exceeded a level of service D between 10am and 2pm on this event day along Nelson Bay Road in the inbound direction only.

### 6.3.3 Saturday Event Day – ‘Tastes at the Bay’ Traffic Conditions (November 2011)

Table 16 and Figure 53 provides an understanding of a Saturday event day (weekend) traffic conditions in Nelson Bay and are based on November 2011 traffic counts during the ‘Tastes at the Bay’ festival.

**Table 16 Event Day (Sat) Peak Hour Flows & LoS**

	NB /EB	SB /WB	V/C (NB /EB)	LoS	V/C (SB /WB)	LoS
Church St	422	262	0.47	B	0.29	A
Government Road	599	441	0.67	C	0.49	B
Magnus St	176	175	0.20	A	0.19	A
Nelson Bay Rd	819	633	0.91	E	0.70	C

Source: Port Stephen Council, November 2011, MetroCount collected vehicle classified tube counts.

Note: NB indicates northbound direction, EB indicates eastbound direction, SB indicates southbound direction and WB indicates westbound direction.

The performance results presented in Table 16 indicate that there is spare capacity on most roads except Nelson Bay Road during a typical event day peak hour period, with Government Road also operating close to capacity. Both Table 16 and Figure 53 presented similar results to those experienced during the Sunday, with peak directional traffic potentially impacting on the efficiency of the network and access to Nelson Bay, Shoal Bay and Fingal Bay during this peak period. The traffic flows exceeded a level of service D between 10am and 1pm in the inbound direction and between 11am and 4pm in the outbound direction on Nelson Bay Road only.

Consideration of additional capacity or travel demand management measures should be considered to better manage the impact on the network and the effects on access to other surrounding precincts. Due to the demand being event day related and likely to be generated by day visitors to an event held in the area the management of event related demand through external park-and-ride sites may offer a more effective solution to road capacity enhancements and should be investigated further.



**Figure 53 Road Network LoS: Peak Period Event Day (Sat)**



Source: Port Stephens Council Digital Data, 2011.

Note: LoS has been calculated using PSC 'Tastes at the Bay' event day November 2011 peak hour and peak directional traffic volume data.

#### 6.3.4 2031 Traffic Conditions

It is acknowledged that Nelson Bay Road is the pinch point on the road network during a major event. It is typically expected that traffic demand will grow in the future along the network, and the typical approach taken to measuring growth is to increase traffic levels on the basis of the size and function of new proposed development. This would result in widening of roads and upgrades to intersections to accommodate expected growth, which will need to be matched by increases in parking.

In the case of Nelson Bay, the peak does not occur on a day to day basis and the day to day peak can easily be accommodated under the current infrastructure. Instead of designing for the day to day peak, Nelson Bay is focused on peaks that occur on a less frequent basis as a result of an event. Consequently, increasing road capacity may not always be viable. It is also noted that under the guidance provided in both the local and regional strategies the aim is to minimise the impact on the local community. The measurement of growth is also unknown and it is more likely that growth actually means the growing of demand during the shoulder peak periods and result in an increase in the number of events that occur rather than a peak quantum capacity increase.

Vehicle demand starts and ends with a parking space and if this demand can be shifted to a point that does not impact on congested parts of the road network then it would be deemed to optimise assets and

align with local and regional strategy goals. The management of increases in traffic demand should also aim to protect core areas of the town centre, prioritise pedestrian activity and support improvements in the quality of public transport system. This management approach is typically used for managing travel demand associated with events where temporary infrastructure is better suited to providing the solution than the permanent provision of services and infrastructure. The solution is related to the temporary nature of the problem, the cost of the project and the impact from its implementation on the local community.

Due to these reasons and the previous strategy recommendation for the control of peak period traffic conditions through the implementation of a transport management plan, it is considered more appropriate to control access to Nelson Bay and facilitate a transfer of visitors onto more efficient transport modes. As a result, the future measurement of future traffic levels on Nelson Bay Road is not necessary as traffic levels measured for a major event will form the basis of the major event network design.

## 6.4 Intersection Performance

Critical periods for the operation of the Nelson Bay road network are identified in section 6.2 to occur during event days and the peak tourist season. The analysis highlights during an event day the peak can represent an increase of over 40% above the typical weekday commuter peak conditions. Based on these characteristics, any improvements required on the transport network should target event day conditions, which are targeted to become more common in the future.

### 6.4.1 Intersection Performance on a Typical Event Day

The performance of the existing road network is largely dependent on the operating performance of key intersections which are critical capacity control points on the road network. SIDRA<sup>7</sup> Intersection was used to assess the existing event day peak hour operating performance of intersections identified in Table 17. An evaluation of intersection capacity was undertaken to understand network operating conditions at critical locations along the Nelson Bay town centre road network under the above peak traffic conditions. Table 17 provides the performance outputs from the assessment.

**Table 17 Intersection Performance: Peak Period Event Day (Sat)**

Intersection	Method of Control	Worst Approach LoS	Maximum Delay (s)	95% Queue (m)
Church Street / Donald Street	Give Way	B	30.8	26.9
Stockton Street / Donald Street	Stop Control	D	42.9	19.9
Stockton Street / Tomaree Street	Give-way Control	A	10.4	8.0
Yacaaba Street / Donald Street	Stop Control	A	11.6	10.7
Yacaaba Street / Magnus Street	Stop Control	A	13.2	5.7

*Note- the performance of the intersection has been evaluated using peak hour traffic data obtained during an event day (Tastes at*

<sup>7</sup> SIDRA – Computer modelling package which analyses the operation of intersections controlled by traffic signals, priority signs and roundabouts.

*the Bay – Saturday, 5th November 2011)*

It is apparent from the information presented in Table 17 that the performance of all intersections during a typical event day peak period is satisfactory. It is also noted that traffic at the intersection of Donald Street with Stockton Street will experience some level of delay. Further evaluation of the conditions at this intersection indicated that the performance is impacted by high pedestrian flows across Donald Street, which conflicts with circulating traffic. Site observations and supporting data highlighted that this is a focal point for pedestrian movement in the town centre and it may be undesirable to encourage or promote vehicle access to the town centre via Stockton Street.

Access to car parks at Donald Street west and east can be obtained via Church Street and Yacaaba Street respectively, and the current delays may act as a desirable traffic management measure during peak periods. This measure is supported and complements expected improvements to wayfinding signage for access to car parks in the town centre and areas situated beyond.

#### **6.4.2 Church Street with Donald Street Improvement Options**

Consultation with stakeholders indicated that the intersection of Church Street with Donald Street was a concern during event day operations. A further review and assessment of intersection operations was undertaken to better understand actual observed traffic conditions. Current traffic controls at this intersection are limited with no linemarked yield line or signposted traffic control on the Donald Street approach. However, observations during peak period traffic conditions indicated that drivers stop and give way to Church Street traffic approach from the north and south. Under observed peak traffic conditions it is acknowledged that the intersection actually operates under give-way traffic control conditions. The intersection has been remodelled under stop sign and roundabout control arrangements to better understand the implications on performance. The results from the assessments are presented in Table 18.

The result highlights that under these intersection arrangements the levels of service are C and B under stop sign control and roundabout control, respectively. The analysis result for the stop sign case indicates that average delays have increased on the Donald Street approach indicating that a crash assessment should be undertaken to better understand current road safety risks.

**Table 18 Peak Event Day Intersection Performance: Church Street with Donald Street Options**

Intersection	Method of Control	LoS	Average Delay (s)	95% Queue (m)
Church Street / Donald Street	Stop Sign Control	C	33.4	26.9
Church Street / Donald Street	Roundabout	B	10.3	27.7

*Note- the performance of the intersection has been evaluated using peak hour traffic data obtained during an event day (Tastes at the Bay – Saturday, 5th November 2011)*

The remodelling of the intersection under roundabout control indicates that the intersection would perform satisfactorily as follows:



- Reduced delays during typical event day traffic conditions;
- Safer and more efficient traffic arrangement for vehicles exiting the town centre via the western gateway and access to Donald Street west car park; and
- Improved bus service access and movement from Donald Street to Church Street south.

Based on these results a roundabout traffic arrangement is recommended at this location to better manage conflicting traffic movement and improve peak network performance. This type of arrangement will also help to define Donald Street as the western gateway to the town centre and should be supported by a new gateway treatment.

#### 6.4.3 2031 Event Day Network Evaluation

A conservative approach has been adopted for understanding the potential impacts from planned growth in employment and population in the Nelson Bay town centre. This approach includes increasing event day traffic in Nelson Bay town centre by 25% in order to test intersection improvements and to identify if any additional upgrades to intersection should be considered. The results from this test are presented in Table 19.

It is apparent from the information presented in Table 19 that the performance of all intersections during a future event peak period with traffic growth is satisfactory, except for the intersection of Donald Street with Stockton Street and Donald Street with Church Street. Both present similar results to those experienced under the event day peak periods.

**Table 19 2031 Peak Event Day Intersection Performance**

Intersection	Method of Control	LoS	Maximum Delay (s)	95% Queue (m)
Church Street / Donald Street	Stop Control*	F	200.3	185.9
Upgraded Church Street / Donald Street	Roundabout	A	11.4	23.3
Stockton Street / Donald Street	Stop Control	F	596.8	287.7
Stockton Street / Tomaree Street	Give-way Control	A	11.6	11.5
Yacaaba Street / Donald Street	Stop Control	A	11.9	14.9
Yacaaba Street / Magnus Street	Stop Control	A	14.3	8.2

*Note- the performance of the intersection has been evaluated using peak hour traffic data obtained during an event day (Tastes at the Bay – Saturday, 5th November 2011). It assumes 25% increase in traffic from 2011 Tastes at the Bay demand levels.*

The results for the intersection of Donald Street with Stockton Street indicate that there will be some delay for traffic on Stockton Street due to pedestrian activity in the area. Discussions with stakeholders, current planning of network access arrangements and observations of peak traffic conditions highlight that it is a desirable situation and traffic should be encouraged to be redirect away from this intersection.

In general, traffic using this intersection is in conflict with pedestrian movement, which should have a higher priority at this point in the town centre network. The traffic levels are generated by vehicles seeking access to parking areas (kerbside, Donald Street west, Donald Street east or Coles car park) and other more desirable routes to these facilities should be promoted. This includes access to Coles or Donald Street west car park from Donald Street via Church Street and to Donald Street east car park from Yacaaba Street via Tomaree Street. The promotion of these routes together with other streetscape and wayfinding improvements should reduce the amount of vehicle and pedestrian conflict at this point in the network.

The performance of Donald Street with Church Street intersection was also evaluated as a roundabout, which is the proposal identified to satisfy demand under a typical event day peak traffic conditions (refer to section 6.4.2). The results indicate that under 2031 event day traffic conditions (including a 25% growth in traffic) the intersection performs satisfactorily.

The proposal for managing access to car parks, which is aimed at shifting traffic away from the intersection of Donald Street with Stockton Street to other routes will result in the redistribution traffic and may impact other intersections. Under this proposal, traffic will be encouraged to be redirected to the new proposed roundabout at Church Street with Donald Street, which together with other town centre intersections is evaluated in section 6.4.4.

#### **6.4.4 Town Centre Parking Access Improvements**

This section appraises the impact from redistributing traffic from Stockton Street towards Yacaaba Street and Church Street to access public off-street parking areas on Donald Street (Donald Street east and west car parks). The assumptions developed for reassigning traffic in Nelson Bay town centre are based on 2031 event day traffic levels and the following:

- ▶ 50% of traffic currently travelling on Stockton Street (between Tomaree Street and Donald Street) is distributed towards Donald Street car parks west and east:
  - 50% of the redistributed traffic is redirected on to Church Street and is expected to travel to Donald Street (western gateway); and
  - 50% of redistributed traffic is redirected on to Tomaree Street and Yacaaba Street and is expected to travel to Donald or Magnus Streets (eastern gateway).
- ▶ 50% of traffic wanting to access Stockton Street from Victoria Parade to travel to Donald Street will be redirected:
  - 50% of this redirected foreshore traffic will be assigned to Church Street and access Donald Street via the proposed roundabout (western gateway); and
  - The remaining traffic is assumed to represent traffic previously wanting to bypass Nelson Bay and as a result of the proposed Dowling Street town centre bypass should be removed from this area of the Nelson Bay road network.

The results from this test are presented in Table 20.

**Table 20 2031 Peak Event Intersection Performance:**

Intersection	Method of Control	LoS	Maximum Delay (s)	95% Queue (m)
Stockton Street / Donald Street	Stop Control	D	49.6	13.9
Upgraded Church Street / Donald Street	Roundabout	A	11.6	25.5

*Note- the performance of the intersection has been evaluated using peak hour traffic data obtained during an event day (Tastes at the Bay – Saturday, 5th November 2011) It assumes some redistributed of traffic and 25% increase in traffic from 2011 Tastes at the Bay demand levels.*

The above results indicate that all intersections perform at a 'satisfactory' level of service in the future with the upgrade to Donald Street and Church Street intersection to roundabout control and 2031 redistributed traffic.

#### 6.4.5 Summary of Findings

In general terms the evaluation of traffic conditions on a typical weekday in both November 2011 and February 2012 indicated that all roads and intersections performed satisfactory with minimal delays experienced along the road network.

The installation of the following improvements will assist in the management of traffic flow along the town centre road network under current event day traffic conditions:

- ▶ The upgrade of the intersection at Donald Street with Church Street to a roundabout.
- ▶ Improved directional signage to parking areas will assist in removing circulating traffic from high activity areas, such as Stockton Street and Donald Street.
- ▶ The operation of an external Park-and-Ride sites during an event day with advanced warning signs of limited parking, time restrictions and parking charges in the town centre and foreshore areas.

All of the above mentioned traffic management improvement measures are expected to offer improved network conditions along Nelson Bay Road, Church Street, Government Road, Donald Street and Stockton Street during event day peak hour periods and reduce the level of delay due to conflict in the town centre.

Nelson Bay Road performs poorly under event day peak conditions and will impact on the performance of the network and the volume of traffic that is able to enter Nelson Bay and travel to its surrounding suburbs, including Fingal Bay and Shoal Bay. The operation of a park-and-ride site, which encourages traffic generated by day visitors to travel to the foreshore area and town centre by shuttle bus services, will help to reduce pressure on this road link. This improvement is expected to be supported by other travel demand management measures, including ITS and parking management.

Testing of traffic conditions under 2031 event day traffic conditions and the above proposal has also been undertaken and indicate that the network will perform satisfactorily under the above proposed traffic management improvements.

## 6.5 Bus Service Assessment

Assessment of bus timetable information indicates that during a typical weekday, there are between 30 and 37 bus services per direction operating within the Nelson Bay town centre. This represents approximately two bus services per hour per direction during a typical weekday. The Government Road – Donald Street – Magnus Street has a desirable bus service frequency of 30 minutes during peak periods and the Church Street – Nelson Bay Road route offers an hourly service frequency.

The potential to improve bus service frequency between key destinations should be considered as part of addressing current and potential future capacity deficiency along Nelson Bay Road. This may only be achieved during peak season and event days held at Nelson Bay by supporting service frequency improvements through supplementary bus services operating between a park-and-ride site and the town centre and possible other nearby destinations.

## 6.6 Walking and Cycling Assessments

Pedestrian movement surveys were conducted to identify key pedestrian desire lines to provide a focus for the management of conflict between pedestrians and vehicles. Journey to work or education catchments are also mapped.

### 6.6.1 Pedestrian Volumes and Network Conflict

The results of the pedestrian survey conducted are provided in Figure 54.

**Figure 54 Pedestrian Survey Count Results**



Source: Port Stephens Council Digital Data, 2011.

Note: numbers represent peak hour pedestrian flows during an event day (Tastes at the Bay – Saturday, 5th November 2011)

Figure 54 indicates that 63% of surveyed pedestrian movements occurred at the intersection of Donald

Street and Stockton Street. Additional observations highlight that the intersection of Magnus Street and Yacaaba Street, which serves the Donald Street east car park, is another intersection that attracts significant pedestrian movement during event days. Based on these findings it is apparent that the key pedestrian desire lines are situated in the northern sections of Yacaaba and Stockton Streets, Magnus Street west, and in Donald Street between Donald Street west car park and Yacaaba Street.

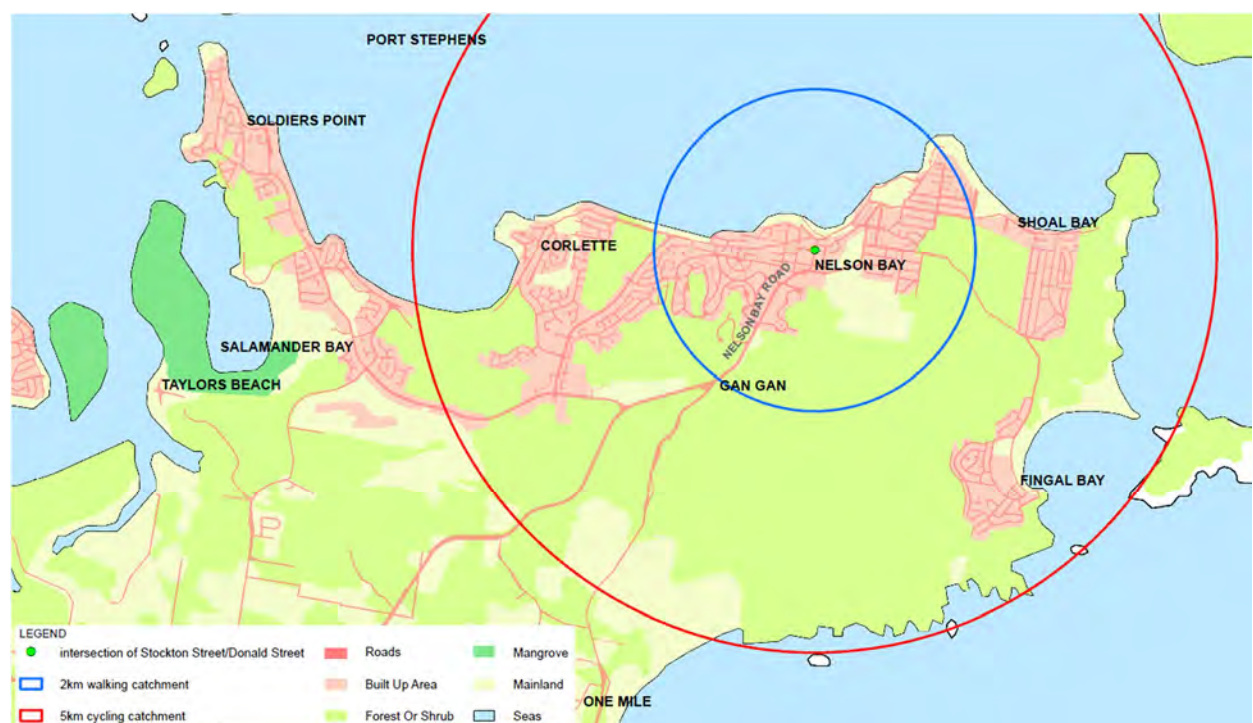
Consideration needs to be given to managing conflict between pedestrian and traffic movement through the core areas of the town centre. These should be supported by improvements in the streetscape to promote accessibility and pedestrian amenity within town centre. The aim is to encourage and promote walking as a safe and efficient travel mode for moving around the town centre and to the foreshore areas, and can only be achieved through better managing other conflicting movements.

### 6.6.2 Walking and Cycling Spatial Analysis

Five kilometres is often considered to be an acceptable cycling distance for commuting and travelling to education facilities. This equates to a 30 minute travel time at an average speed of 8km/h and should be encouraged to support a healthier residential population. Figure 55 provides an understanding of the market catchment that could potentially travel by bicycle for trips to Nelson Bay.

The plan indicates that a high proportion of the Nelson Bay catchment could potentially travel to Nelson Bay by bike, although it is also acknowledged that not all trips or residents are suited to cycling.

**Figure 55 Nelson Bay Active Transport Spatial Analysis**





## 6.7 Road Safety

Road crash information for the Nelson Bay town centre was analysed using data provided by PSC for the five- year period (2005-2010). A summary of the data is provided in Figure 56 and Figure 57.

The key trends observed from the data are as follows:

- ▶ 30 crashes occurred during the six-year study period along the town centre road network;
- ▶ 80% of the crashes occurred at intersections;
- ▶ 60% of the recorded road crashes resulted in an injury, and no fatalities were recorded during this period;
- ▶ More than 50% of crashes had a relationship with the operation of Stockton Street;
- ▶ 6 of the crashes (20%) involved pedestrians and cyclists with crashes recorded at intersections at Stockton Street with Donald Street and Victoria Parade and Teramby Road;
- ▶ 43% (13) of all crashes were recorded to occur as a result of a relationship with vehicle performing a conflicting turning movement at an intersection; and
- ▶ 23% (7) of all crashes occurred at the Stockton Street with Tomaree Street intersection.

**Figure 56 Nelson Bay Crash History Snapshot (2005-10)**



Source: Port Stephens Council Digital Data, 2011 and historical crash data(2005-2010) obtained from PSC

*Note: Green circles represent crashes with recorded injuries and red triangles indicated a non-injury (property damage) recorded crash. Only crashes reported to the police are recorded in this data base, which does not include near misses.*

Improvements to the Stockton Street with Tomaree Street intersection should be a primary objective along with reducing conflict and protecting pedestrian movement at the intersection of Stockton Street with Donald Street. It is noted that a roundabout was recently constructed at Stockton Street with Dowling Street, which has resulted in a reduction in the number of crashes in this area. Current and future operational needs should also be considered for the intersection of Donald Street with Church Street and the roundabout at Victoria Parade with Teramby Road.

**Figure 57 Crashes Recorded at Town Centre Intersections**



Source: Port Stephens Council Digital Data, 2011

## 6.8 Parking

This section presents the results of analysis of parking utilisation survey data, identifies locations where vehicles stay beyond the time restrictions and reviews parking rate provision for new development.

### 6.8.1 Parking Utilisation

Parking surveys undertaken on the Saturday of the 'Tastes at the Bay' festival have been analysed to understand parking utilisation rates in key car parking locations that support the town centre. The findings from the appraisal of off and on-street parking in the town centre are shown in Table 21 and Figure 58, and include parking locations, and average and maximum (peak) utilisation rates.

**Table 21 Analysis of Parking Survey Counts**

On-Street Parking			Off-Street Parking		
Location	% Average Utilisation	% Maximum Utilisation	Location	% Average Utilisation	% Maximum Utilisation
Donald Street	76%	95%	Donald Street East	45%	74%
Magnus Street	81%	92%			
Stockton Street	75%	89%	Donald Street West	86%	100%
Yacaaba Street	62%	82%			
<b>Total</b>	<b>73%</b>	<b>88%</b>		<b>65%</b>	<b>86%</b>

Source: Port Stephens Council Digital Data, 2011 and GHD parking surveys undertaken on an event day (Tastes at the Bay – Saturday, 5th November 2011).

Note: Utilisation is based on parking occupancy surveys undertaken every hour between 09:00 to 17:00 during the above event day.

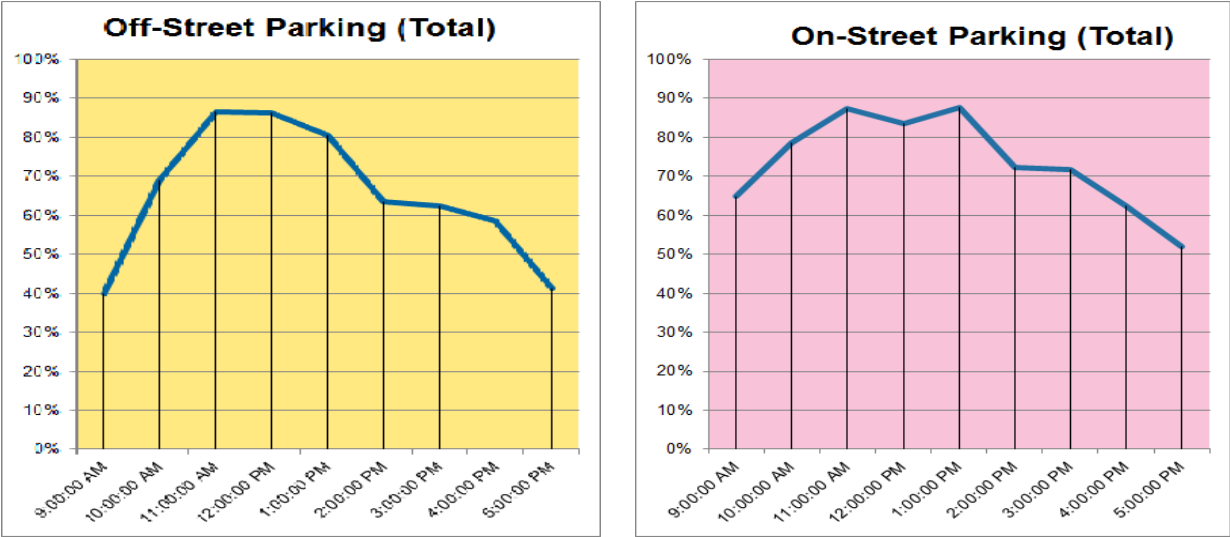
In summary the parking appraisal indicated the following:

- ▶ Donald Street West car park and Stockton Street are the most popular parking areas and are situated with good access to core areas of the town centre;
- ▶ Donald Street West car park was the only parking area to reach capacity during the survey period;
- ▶ On-street car parking in Stockton, Magnus and Donald Streets recorded high average utilisation rates due to their proximity to town centre facilities; and
- ▶ There is spare capacity in the off-street car park on the eastern side of the town centre during peak demand periods on an event day and this may reflect poor wayfinding and its visual presentation.

The daily utilisation parking profile for on and off-street parking areas are illustrated in Table 21 and Figure 58.

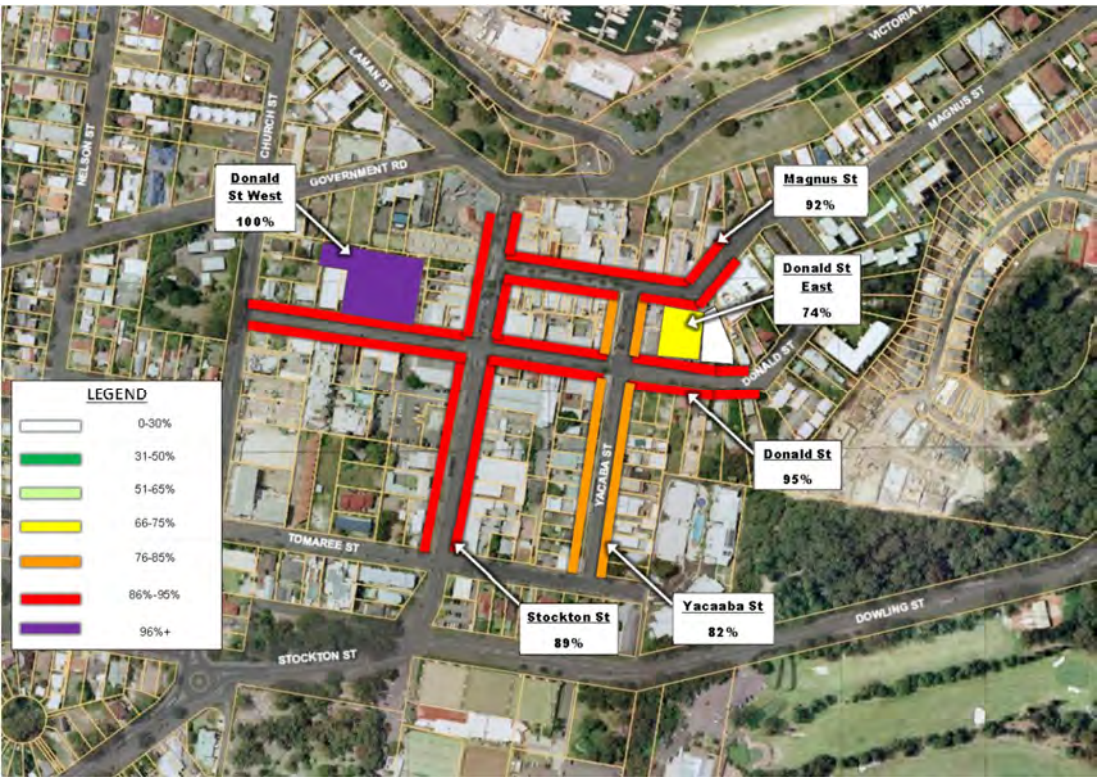


Figure 58 Daily Off and On-Street Parking Utilisation Rates



Source: GHD parking surveys undertaken on an event day (Tastes at the Bay – Saturday, 5th November 2011)  
Note: Utilisation is based on parking occupancy surveys undertaken every hour between 09:00 to 17:00 during the above event day.

Figure 59 Maximum Parking Utilisation Rates



Source: Port Stephens Council Digital Data, 2011

## 6.8.2 Parking Overstay

Additional analysis was used to identify if there is a trend for parked vehicles to stay beyond the signposted parking time restrictions (overstay).

**Figure 60 Locations Impacted By Parking Overstay**



Source: Port Stephens Council Digital Data, 2011 and GHD parking surveys undertaken on an event day (Tastes at the Bay – Saturday, 5th November 2011).

Note: Overstay is based on vehicles recorded to overstay beyond the signposted parking restriction during the surveys undertaken every hour between 09:00 to 17:00 during the above event day.

Analysis of the data sets indicated that there is a parking overstay trend that occurs during peak periods on an event day. The overstay problem appears to be associated with on-street locations (in most cases over 30% of vehicles that park appear to overstay), and to a lesser extent this trend occurs in off-street parking areas. Overstay indicates that assets are not being maximised and in this case, accessibility of some land uses and business in the town centre may be impacted. It also is likely to result in increases circulating traffic, as vehicles search for an available parking space, which conflicts with pedestrian movement and have a negative impact on the performance of intersections in the town centre.

Improved enforcement may help to address this issue, which is an identified problem on an event day in Nelson Bay with 28% of all parked vehicles staying for longer than the permitted parking duration.

## 6.8.3 Parking Provision Rates Comparison

Table 22 provides a summary of the parking rate comparison undertaken using the current Port Stephens Development Control Plan (DCP) 2007, Road and Maritime Services standard guidelines<sup>8</sup> and other local council DCPs that were deemed to have similar area characteristics. The purpose of the review is to understand the current benchmark parking codes and based on the general codes if there is potential to adjust the current rates. The lower of parking rates is the current Port Stephens DCP 2007 is

<sup>8</sup> RTA Guide to Traffic Generating Developments, RMS, 2002.



envisaged to generally support event and high season travel demand management measures and increased use of active transport and public transport for travel in and around Nelson Bay.

**Table 22 Review of New Development Parking Codes**

Use	Facility	Port Stephens Council		Other DCPs	Action
Commercial	Hotel		1 space per Hotel room	Byron Shire Council and Lake Macquarie City Council increase parking rate based on room size.	No Action.
	Additional facilities associated with Hotel accommodation		Not applicable	Byron Shire Council 1 space /5m <sup>2</sup> of bar area 1.5 spaces /10m <sup>2</sup> for restaurant or function room 1 space per 2 employees	Adopt Byron Shire Council parking rates for additional hotel facilities that support future land use proposals.
	Hotel - Bar	Within Commercial Centre	1 space per 7m <sup>2</sup> licensed floor area 1 space per 10m <sup>2</sup> courtyard/beer garden	PSC rate in line with rates specified by Byron Shire Council and Lake Macquarie City Council.	No Action.
	Restaurant	Within Commercial Centre	4.5 spaces per 100m <sup>2</sup> GFA	Other council areas use higher rates except Lake Macquarie, which is slightly lower.	No Action.
		Outside Commercial Centre	15 spaces per 100m <sup>2</sup> GFA or 1 space per 3 seats (whichever is greater)		No Action
	Commercial Premises		1 space per 40m <sup>2</sup> GFA	PSC rate in line with most other DCPs. Byron Shire Council specified a higher parking rate.	No Action.
	Shop		1 space per 20m <sup>2</sup> GLFA	Lake Macquarie City Council and Coffs Harbour City Council specify a lower parking rate.	No Action.
Residential	Dwelling	Up to 2 bed	1	PSC rate in line with most other DCPs. RMS specify a lower parking rate for 3 beds or more.	No Action.
		More than 2 bed	2		
	Flats	Less than 100m <sup>2</sup> More than 100m <sup>2</sup> Visitor spaces	1 per dwelling 2 per dwelling 1 per 3 per dwellings	Macquarie City Council and RMS specify a lower parking rate for larger dwellings. Byron Shire Council and Lake Macquarie City Council, specifies a lower visitor parking rate.	Potential to lower for dwellings more than 100m <sup>2</sup> to 1.5 per dwelling and visitor parking rate to 1 per 4 dwellings.

The findings from this review indicated that there is potential to reduce the parking rates in the current Port Stephens DCP (2007) for flats over 100m<sup>2</sup> and for visitor parking. The inclusion of parking for additional hotel facilities may need to be a consideration of proposed new development along the foreshore.

## 6.9 Summary

Based on the surveys and analysis undertaken, the following key points were noted:

- ▮ Road Network;
  - The road network performs well, with spare capacity available during a typical weekday peak periods; and
  - Under a weekend event peak period the road network performed satisfactory in most locations with some areas identified to require additional capacity improvements.
- ▮ Midblock and intersection performance;
  - Stockton Street with Donald Street and Church Street with Donald Street intersection are key nodes in the network and were observed to perform at or near to capacity during weekend event day peak periods;
  - Assessment of the Donald Street/Stockton Street intersection indicated that delays occurred due largely to the volume of pedestrians and its conflict with circulating traffic in the town centre during an event day peak period;
  - The intersection of Church Street with Donald Street would benefit from upgrading to a roundabout and offer spare capacity during event day peak periods to accommodate future growth;
  - All other intersections appraised offer spare capacity during event day peak periods and can accommodate future growth;
  - Nelson Bay Road is operating over capacity during peak periods on a weekend event day;
  - Church Road was recorded to have spare capacity of over 250 vehicles in the peak direction at peak times on an event day;
  - Government Road was recorded to have over 5% spare capacity at peak times on an event day;
  - Magnus Street was recorded to have spare capacity of over 250 vehicles in the peak direction at peak times on an event day;
  - Dowling Street was recorded to have substantial available capacity at peak times on a typical weekday; and
  - Capacity enhancements or the removal of traffic from Nelson Bay Road, Stockton Street and Donald Street would assist improve the performance of the network during peak periods on weekend event day.
- ▮ Crash History
  - The intersections of Stockton Street with Dowling Street and Stockton Street with Tomaree Street recorded the highest crash rates in Nelson Bay, representing approximately 40% of all crashes.

The former intersection has been improved to roundabout control and resulted in a reduction in recorded crashes. The latter intersection is a remaining issue and should be addressed as part of future works;

- Victoria Parade recorded a number of crashes along its entire length, which reflects the level of activity, parking conflict, and its use as a through route by traffic travelling to areas to the east of the town centre; and
- Dowling Street was observed to have a relative low crash history rate.

#### ▮ Parking

- Parking was well utilised on an event day in November with spare capacity identified at all times in Donald Street east car park, which indicates that it is an underutilised asset;
- Donald Street west car park and Stockton Street were identified to be the most popular parking destinations in the town centre performing with parking utilisation levels of 80% or above throughout a weekend event day;
- An average parking overstay rate of 28% was identified for vehicles parking beyond the current time restrictions during a weekend event day;
- On-street parking in Donald, Yacaaba, Magnus and Stockton Streets and off-street parking in Donald Street east car park were identified as locations impacted by vehicles parking beyond the time restrictions with an average overstay rate of 20% or over;
- There is potential to reduce the current DCP 2007 parking rate requirement for flats over 100m<sup>2</sup> and visitor parking;
- There is a need to establish an additional hotel facilities parking rate for new development; and
- Bicycle parking is not formally provided.

#### ▮ Public Transport

- Town Centre is served by a 30 min bus service frequency during peak times along Government Road and Magnus Street and an hourly bus service frequency along Stockton Street - Nelson Bay Road;
- The current journey to work mode share for people travelling by bus is 2%; and
- A park-and-ride site external to the town centre may help to support improvement in public transport service frequency.

#### ▮ Pedestrian amenity

- Pedestrian activity is concentrated in the town centre and foreshore areas and results in conflict with vehicle movement at Victoria Parade and along Stockton Street;
- The performance at the intersection of Stockton Street with Donald Street is impacted by conflict between circulating traffic and pedestrian movement during peak periods on a weekend event day.;
- There is limited pedestrian or cycling movement from areas to the west with Church Street;
- Most roads located to the south of Donald Street were identified to have poor quality footpaths and/ or cycle environment and overall its connectivity to the town centre would benefit from

infrastructure related improvement; and

- There is potential to support growth in walking and cycling through targeting growth within Nelson Bay town centre and foreshore areas, encouraging higher quality medium density mixed land use development and improving access by cycling or walking from existing surrounding areas to the west and east.

## 7. The Strategy

This section outlines improvement options that have been developed to improve the current transport environment within Nelson Bay and support for the draft Nelson Bay 2030 Strategy.

### 7.1 Transport Improvement Framework

The strategic planning principles and local and regional transport objectives for supporting the future growth and transformation of Nelson Bay are highlighted in Table 3 and summarised below:

1. Provide a **safe and efficient network** for travel to Nelson Bay and support predicted growth in the draft Nelson Bay 2030 Strategy (refer to road network management);
2. Improve the **management of parking** and accommodating future growth (refer to parking management);
3. Optimising **access and circulation** within the town centre (refer to road network management);
4. Support and **encourage public transport** (refer to public transport); and
5. Support and **encourage** walking and cycling (refer to active transport).

The above principles together with the findings from the network appraisal were used to identify issues and a high level transport improvement framework, which are presented in Figure 61 and Figure 62.

**Figure 61 Town Centre Network Conflict Profile**



Source: Port Stephens Council Digital Data, 2011

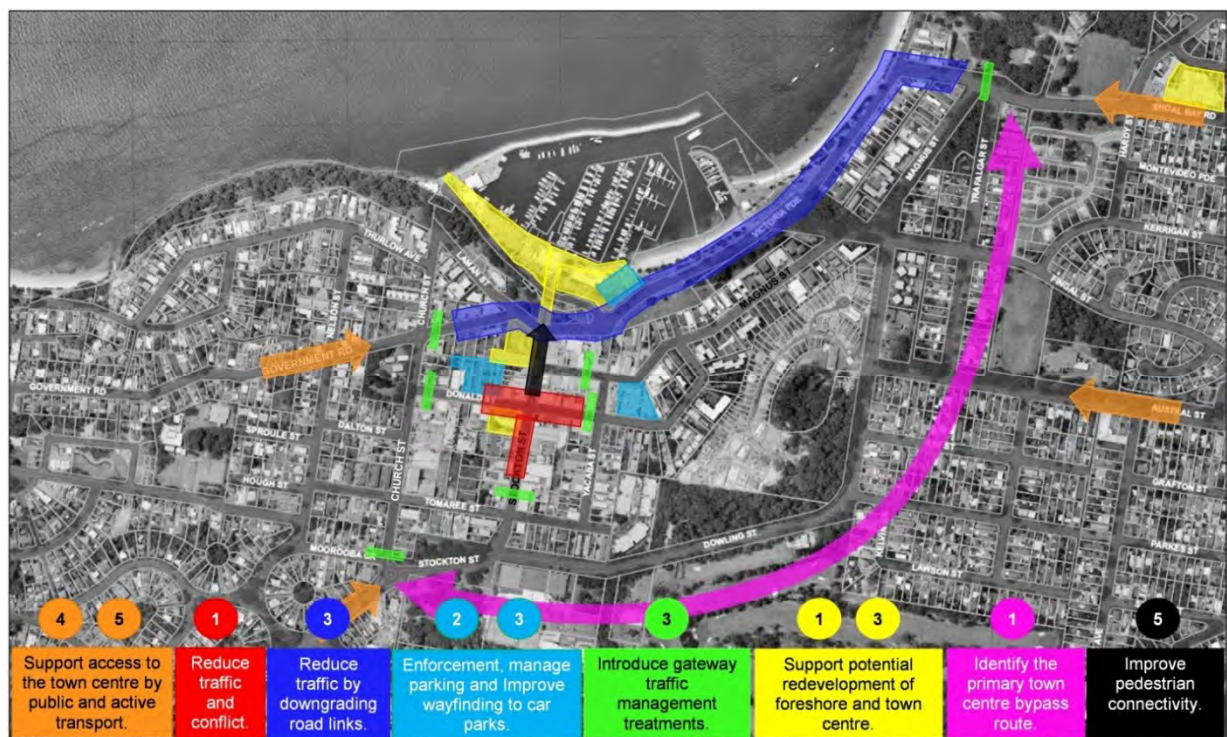


Figure 61 indicates that the downgrading of certain roads and the refinement of access routes to and around the town centre would assist in reducing conflict, better managing demand and improve movement efficiency in and around the town centre. Based on this concept the following road function downgrades are recommended to be considered as part of the improvement option assessment:

- Stockton Street north of Tomaree Street to be downgraded as an access route to parking areas and to discourage circulating traffic in the town centre;
- Donald Street between Donald Street west car park and Yacaaba Street to be downgraded to discourage circulating traffic in the town centre;
- Government Road between Church Street and Teramby Road to be downgraded to discourage through traffic and improve pedestrian connectivity between the town centre and foreshore areas;
- Downgrade Victoria Parade between Teramby Road and Magnus Street to discourage through traffic and promote the Dowling Street bypass; and
- A possible Park-and-Ride site to the south of Nelson Bay and the introduction of Dowling Street as a town centre bypass route would also assist in managing travel demand during peak periods and help to optimise current network assets.

The high level improvement framework is presented in Figure 62 and discussed in further detail within the strategy section of this document.

**Figure 62 Nelson Bay Transport Improvement Framework**



Source: Port Stephens Council Digital Data, 2011

The numbers shown in Figure 62 are directly linked to the themes identified in section 7.1 and associated with the following strategies:

1. Road network management – focus on improving safe and network efficiency;
2. Parking management – focus on better managing parking and accommodating growth;
3. Road network management – focus on optimising town centre access and improving traffic circulation;
4. Public transport – focus on supporting and encourage public transport; and
5. Active transport – focus on supporting and encouraging people to walk and cycle.

This high level transport improvement framework will be described in further detail in the following sections.

## **7.2 Road Network Management Strategy**

The following section outlines the Road Network Management Strategy, which aims to provide an attractive, efficient and safe road network for all users.

### **7.2.1 Local Road Network Issues**

The key road network issues in Nelson Bay relate to:

- ▶ Road hierarchy – defining the hierarchical structure of the town centre street network in the context of improving access to eastern areas of Nelson Bay, Fingal Bay and Shoal Bay, the role of the Nelson Bay as a specialised tourism area, protecting the urban core, and the relationship between Foreshore area and town centre;
- ▶ Road cross-section/layout – assessment of the appropriateness of current road cross-section layouts for the key streets in the town centre in light of changing roles, functions and priorities; and
- ▶ Traffic management – identify measures that would assist in achieving road network development and integrated transport objectives.

### **7.2.2 Road Network Management Task**

The key elements in formulating the Road Network Strategy are provided below:

- ▶ Provides an integrated approach to road network planning and management across the various categories of roads such as local, regional, state and national roads;
- ▶ Recognises the different roles that various roads perform and provides specific controls or objectives for each type of road environment;
- ▶ Understands the function of roads can vary along their length according to movement and access functions, and therefore objectives and tools for management should also vary;
- ▶ Manages the competing demands for access to the road network;
- ▶ Where possible, segregates user classes across the road hierarchy, which will generally aid in

maintaining the efficiency and safety of the road environment for all users; and

- Provides a structured approach to road network development that recognises the changing role of roads within Nelson Bay will play as the centre's economy changes to more consistent tourism related business activity and events.

In order to achieve these goals, it is recommended that Port Stephens Council develop an integrated road network strategy that will ensure important roads serving Nelson Bay are developed and managed in a way that achieves the approach outlined.

### **7.2.3 Road Network Management Principles**

The Road Network Management Strategy has been developed using the following planning principles.

#### **Providing for Economic Activity and Land Use Change**

It is recognised that whilst Nelson Bay has traditionally been the tourism centre for Ports Stephens LGA, its role as a specialised tourism area under the Lower Hunter Regional Strategy requires it to accommodate a proportionate share of targeted increases in population and employment. These target increases and planned improvements in the quality of the product the centre offers will result in changes in the economic framework, day to day activity and land use and as a result will affect the demand for transport, specifically road transport. Economic activity and its relationship with the surrounding catchment in the Tomaree Peninsula will create additional travel demand to and from Nelson Bay as it evolves as a specialised tourism centre.

#### **Providing a Bypass**

The Nelson Bay road network is signposted to function in several different ways, which is driven by previous historical changes to the network and additional needs under seasonal traffic trends. This current arrangement leads to confusion as several routes are signposted as a bypass and travel either through or around the town. This includes the Church Street-Government Road- Victoria Parade bypass, Church Street – Donald Street – Magnus Street high vehicle bypass, and Dowling Street – Fingal Street – Trafalgar Street bypass. A bypass should offer a fast and efficient route and aims to minimise conflict. Due to the level of activity during peak periods and events the Government Road - Victoria Road route option is not available as a bypass during busy periods when the need for a bypass is critical to efficiently managing access to and around the centre.

Most locals are aware of the Dowling Street bypass, which unlike other route options avoids conflict in the town centre and highly conflicting activity along the foreshore. This route forms an efficient bypass around the town centre and enables vehicles to travel east to Fingal Bay and Shoal Bay.

#### **Protecting Core Activity Areas**

In the town centre, it is appropriate to slow traffic to match the surrounding land use environment. This has already resulted in speed restrictions of 10 km/h, 40 km/h and 50 km/h. A range of traffic management tools can be introduced to further slow traffic in the town centre, including narrowed lanes, reduced number of lanes, gateway treatments, provision for kerbside angled parking, and thresholds at intersections as well as speed enforcement strategies.

## **Providing for Pedestrians, Cyclists and Public Transport**

There is now a greater recognition in the community that roads are transport corridors that must provide for a range of uses in addition to private vehicle traffic. Prioritisation of infrastructure for pedestrians, cyclists and public transport is required for a range of reasons including providing for greater equity, lower environmental impacts and creation of sustainable and attractive neighbourhoods.

As roads are upgraded within Nelson Bay, and as traffic growth leads to congestion, the need for alternative facilities for pedestrians, cyclists and public transport will become even more pressing.

## **Maintaining Safety and Amenity on Local Roads**

The traditional role for local government with respect to road transport has been to provide, control and manage local roads. This role is a vitally important part of the integrated transport approach. On local roads, the key objective will be the ability to provide for local accessibility while maintaining a safe and attractive urban environment. This is achieved through a variety of approaches including adequate network planning, maintenance and where required, traffic calming.

### **7.2.4 Road Network Management Improvement Strategy**

This section outlines the Road Network Management improvement options that have been developed for Nelson Bay. The improvement options are designed to assist with the safe and efficient management of traffic flow to car parks within the town centre, to protect high activity areas and support the gradual development and implementation of an integrated transport strategy for Nelson Bay.

#### **Strategy RNM 1 – Revise Road Hierarchy (1)**

Revise the existing road hierarchy based on functional classification and focus on movement efficiency and access and the better integration of land use and the road based transport network.

#### **Approach**

The traditional road hierarchy is based on a functional system that categorises roads in terms of their traffic function. This predicated a focus on vehicular movement and provides for mobility under road categories, which include arterial roads, sub-arterial roads, collector roads and local roads. Together, the functional hierarchy address the vehicular movement requirements for an area.

In general, the higher order roads are deemed to have a predominant 'traffic function' while the lower order roads have a predominant 'access function'. It is important to take a balanced approach in the planning of routes, which should not be solely dominated by satisfying road demand and mobility when planning, designing and managing the road system. This type of approach would be at the expense of other user groups and the accessibility function also played to some extent by the high order road system serving established urban centres. It is just as important in the planning of the road hierarchy to consider the needs of local businesses, cyclists, pedestrians and bus services and to understand access requirements, which will help to deliver a more balanced outcome that can provide an integrated solution and encourage the access by other modes.

The planning of a bypass options is critical to the success of providing an integrated road network and offering improvements in efficiency and safety outcomes. The aim of the route is to provide an efficient,



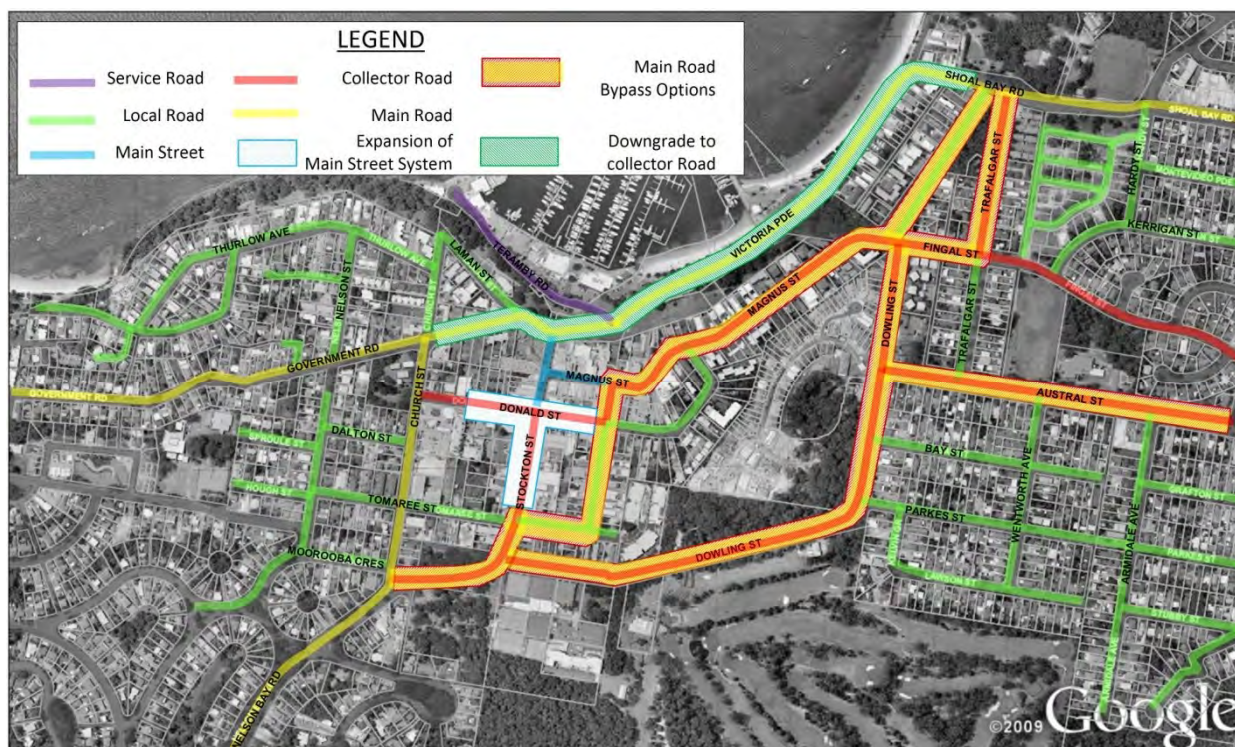
safe, direct and consistent route, which avoids delays that could be encountered in Nelson Bay when travelling east to neighbouring suburbs. Figure 63 provides an understanding of the current options and the basic principles for reducing conflict in high activity areas.

### Strategy RNM 1a – Improve and promote Dowling Street - Trafalgar Street as an interim bypass

**Requirements** - Signpost as the preferred route for traffic travelling to destinations to the east of Nelson Bay town centre. Other associated improvements include:

- Improving critical intersections;
- Introducing traffic management that would aim to complement gateway treatments;
- Investigate and improve access and obstacles to safe and efficient movement along the corridor;
- Remove signage indicating Victoria Parade as a possible through route to destinations in Shoal Bay and Fingal Bay; and
- Undertake a road safety audit along the route to ensure that road safety risks are mitigated, impact on surrounding residential areas is appropriately managed and to ensure that intersections have the optimum layout to support the revised through traffic route and the desired access routes to surrounding areas.

**Figure 63 Road Network Improvement Options**



Source: Port Stephens Council Digital Data, 2011



### **Strategy RNM 1b - Develop Dowling Street and Magnus Street as a permanent bypass.**

**Requirements** – Similar to those mentioned under improvement option 1a. This option would provide enhance the current bypass arrangement by reducing route complexity and conflict by aligning Dowling Street at the intersection with Magnus and Fingal Streets.

As indicated in the results of the SIDRA analysis of event peak flows in Table 20, the Stockton Street with Donald Street and Church Street with Donald Street intersections are critical and perform with a relatively poor level of service during peak periods. These routes are also key access routes to car parks and the town centre main streets. It is essential that a proposed bypass route removes pressure from these intersections by managing and separating traffic flow through the centre.

Preliminary design and associated road development appraisals should be undertaken for the implementation of a town bypass along Magnus Street and Dowling Street. The design should include gateway intersection treatments and wayfinding improvements to promote the new route and to remove traffic pressure from Nelson Bay. The gateway intersections and decision making points are critical treatments for the implementation of this scheme and should be implemented at the intersections of Stockton Road with Nelson Bay Road and Stockton with Dowling Street in the west and in the longer term Shoal Bay Rd with Magnus St in the east. This permanent bypass route requires the realignment of Magnus Street at the eastern end of Dowling Street to make it a continuous through route. This will create a safe, efficient and legible route around the town centre and the planned reconfiguration of the intersection should provide priority to movements along the Magnus Street - Dowling Street bypass route.

In order to implement this scheme and test the appropriateness of intersection it is important to collect additional traffic data, undertake detailed analysis of intersection performance and better understand the performance needs under various seasonal traffic scenarios. Once movement trends and requirements are better understood and managed, it will be necessary to undertake road safety audits to help further advance the development of a preliminary road design concept for the bypass.

**Figure 64 Traffic Control Improvement Options**



Source: Port Stephens Council Digital Data, 2011

### **Strategy RNM 1c - Reprioritise movement at bypass intersections (2)**

**Requirements** – Reprioritise movement at the Trafalgar Street with Shoal Bay Road (interim) and Magnus Street with Shoal Bay Road (permanent) intersections to provide priority for traffic travelling to Shoal Bay and Fingal Bay, and support the operation of the town centre bypass presented in options 1a and 1b.

Upgrade one of the above intersections and install town centre/foreshore gateway treatments to identify destinations and the purpose of the route. This can be achieved through either the installation of a roundabout or redefining the priority movement at the intersection.

### **Strategy RNM 1d - Downgrade Victoria Parade (3)**

**Requirements** – Downgrade Victoria Parade as a through route to Shoal Bay and Fingal Bay, and promote as a route for access to the foreshore only. Use signage and traffic calming measures to discourage traffic and divert it away from Victoria Parade for trips to destinations beyond the foreshore.

Reduce the signposted speed limits along Victoria Parade to Magnus/Trafalgar Street and extend the existing 40km/h speed zone on Government Road to Church Street. This improvement option allows for a safer and more pedestrian friendly environment along the foreshore and helps to reduce the levels of traffic during events that acts as a barrier for pedestrians moving between the foreshore and town centre. This should be implemented and assessed in conjunction with the requirements set in the 'Guide to Identifying and Implementing 40km/h Speed Limits in High Volume Pedestrian Areas'<sup>9</sup> and NSW Speed

<sup>9</sup> 40 km/h speed limits in high volume pedestrian areas: A guide to identifying and implementing 40 km/h speed limits in high volume pedestrian areas. Roads and Maritime Services.

Zoning Guidelines<sup>10</sup>.

### **Strategy RNM 1e – Downgrade Stockton Street (12)**

**Requirement** – Reduce the width of Stockton Street between Tomaree Street and Donald Street to discourage through traffic movement in an area that attracts high levels of activity during event days. The aim is to help to reduce conflict at the intersection of Donald Street and Stockton Street by discouraging the use of Stockton Street as a thoroughfare and offering an opportunity to improve pedestrian amenity and potential increase on-street parking supply. Pedestrian amenity can be improved by reducing traffic levels, widening footpaths, consolidating vehicle access points, decreasing speed limits and offer additional on-street parking supply (through a change from parallel parking to 90 degree or other angled parking arrangements).

### **Strategy RNM 2 - Investigate the feasibility of introducing the Yacaaba Street extension (4)**

**Requirements** – This is proposed to be achieved through the creation of a new road link between the Magnus Street with Yacaaba Street intersection and the Teramby Street with Government Road/Victoria Parade roundabout. An initial appraisal has been undertaken of the available options to identify the functionality needs of this link, which will be used to inform the feasibility of this option. The options assessed included:

- ▶ Improvement Option a – Two way street providing an additional vehicle link between the town centre and foreshore area;
- ▶ Improvement Option b – One way southbound for traffic travelling from foreshore to town centre;
- ▶ Improvement Option c – One way northbound for traffic travelling from town centre to the foreshore;
- ▶ Improvement Option d – Bus only transit link to support a shuttle bus or extension to the existing bus service routes; and
- ▶ Improvement Option e – Shared path only link for pedestrians and cyclists to travel between the foreshore and town centre and as a focal point to encourage other activity.

The finding from the initial appraisal indicates that each of the improvement options provide little short to medium-term benefit to the operation of the town centre road network without significant changes to land use and access. The future arrangement of the town centre and foreshore areas that would both benefit or be impacted by this proposal are not fully developed, nor are its advantages in relation to improvements in public transport or pedestrian connectivity.

The appraisal did identify that there is an opportunity to provide an additional pedestrian, cycle and public transport connection via this corridor between the town centre and foreshore areas, which could also offer access to the existing pedestrian bridge over Victoria Parade. This may offer advantages to commercial development on Yacaaba Street and Magnus Street and offer an opportunity for the Donald Street east car park to better serve users of the town centre and foreshore areas. In reference to the analysis it is currently unknown if the alignment of the corridor would be suited to vehicle or active transport access and this will need to be further investigated as part of developing a preliminary design and feasibility stages of the study.

On the basis of the preliminary analysis, it is recommended that this corridor is protected until the long-

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<sup>10</sup> NSW Speed Zoning Guidelines, Roads and Maritime Services, 2011.

term masterplan for Nelson Bay and its foreshore area is finalised. This will avoid the removal of a future corridor opportunity that could support growth and help to improve connectivity and accessibility in the town centre. It is also recommended that vertical alignment options are developed to better understand how a future link can be connected to the existing road network.

### **Strategy RNM 3 - Investigate upgrade needs for Nelson Bay Road and the Fingal Bypass (5)**

**Requirements** – Previous studies and strategies have identified that improvement of Nelson Bay Road can be achieved through duplication or other capacity enhancements. These proposals are aimed at resolving a peak season capacity deficiency. The alternative to introducing capacity enhancement along Nelson Bay Road is to introduce the Fingal Bypass, which is also acknowledged as an option for resolving capacity issues along Nelson Bay Road. Further investigation of the road corridor reserved for either duplicating Nelson Bay Road or introducing a Fingal Bypass should be supported by continuous data collection and traffic appraisals. This would allow a better understanding of the annual and seasonal traffic growth and peak profiles that would help to justify the scheme and a preferred route option.

A conservative estimate of the future traffic on Nelson Bay Road can be made by assuming an average annual growth rate of 2%. Applying this rate over a period of ten years to the more critical northbound/eastbound peak hour flow of 653 vehicles for a typical weekday (refer Table 14) results in a traffic flow of 718 vehicles per hour in 2021. The volume to capacity ratio in this period ranges between 0.75 to 0.89, or a level of service D. Based on this analysis, Nelson Bay Road has adequate capacity to accommodate typical weekday traffic flows for a period of approximately 10 years. It is also noted peak major event and high season traffic conditions are not addressed under this appraisal and are identified to result in Nelson Bay Road performing unsatisfactory during certain periods.

It is recommended that seasonal traffic conditions and growth is monitored annually to help to obtain a detailed understanding of traffic conditions, peak frequency and performance along Nelson Bay Road. This information is required to develop and appraise the benefit and feasibility of a future bypass for the Tomaree Peninsula and the township of Nelson Bay.

### **Strategy RNM 4 - Reduce signposted speed limits in main streets (11)**

**Requirement** – Reduce the signposted speed limit from 50km/h to 40km/h in the core areas of the town centre, which function as town centre main streets. This includes Stockton Street (between Donald Street and Tomaree Street) and Donald Street (between the Donald Street west car park and Yacaaba Street) and will help to improve pedestrian amenity, manage conflict, discourage through traffic and help to define the boundary of high activity in the town centre road network. This should be implemented and assessed in conjunction with the requirements set in the 'Guide to Identifying and Implementing 40km/h Speed Limits in High Volume Pedestrian Areas'<sup>11</sup> and NSW Speed Zoning Guidelines<sup>12</sup>.

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<sup>11</sup> 40 km/h speed limits in high volume pedestrian areas: A guide to identifying and implementing 40 km/h speed limits in high volume pedestrian areas. Roads and Maritime Services.

<sup>12</sup> NSW Speed Zoning Guidelines, Roads and Maritime Services, 2011.

**Figure 65 Traffic Management Improvement Options**



Source: Port Stephens Council Digital Data, 2011

### **Strategy RNM 5 – Reduce crash rates by upgrading traffic management (13)**

**Requirement** – Investigate options for changes to the intersection controls at the Stockton Street with Tomaree Street intersection. This could be supported by signage that encourages traffic to travel along preferred access routes to parking areas and other town centre destinations.

### **Strategy RNM 6 – Introduce town centre gateway treatments (26)**

**Requirement** – Install gateway treatments on town centre and foreshore area entry points to increase awareness of the function of the road system in this area and to complement planned changes in signposted speeds. This improvement option supports the local transport strategy objective for controlling access, improving safety and supporting growth by improving road network operations in the town centre and foreshore areas.

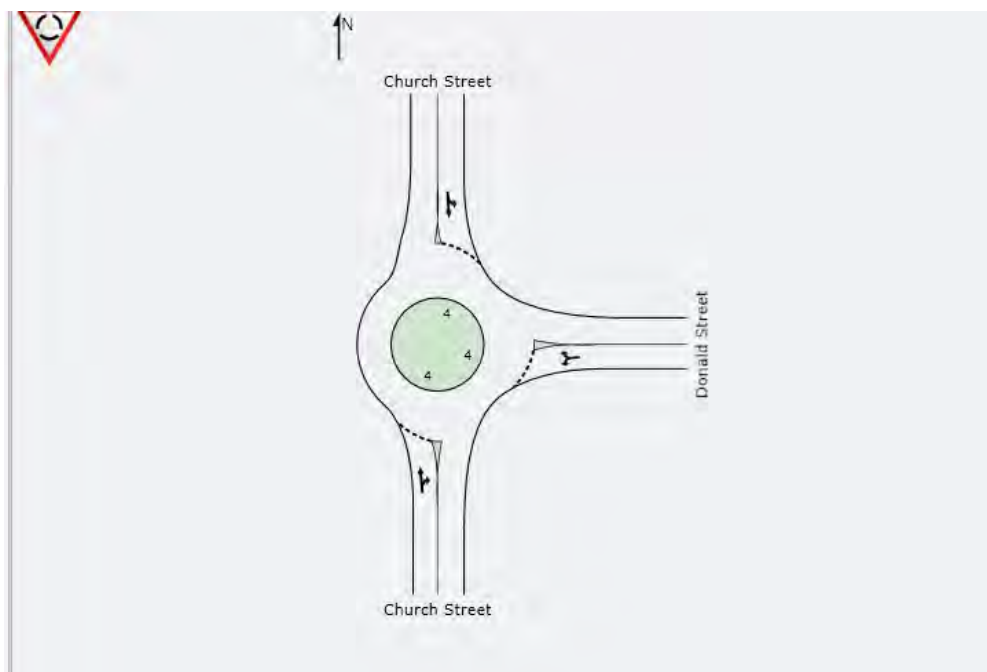
### **Strategy RNM 7 – Upgrade Church St with Donald St to a roundabout (27)**

**Requirement** – Install a roundabout to replace the existing traffic control arrangement at the Church Street with Donald Street intersection to assist bus movement, potential future growth, peak period event day traffic conditions (refer Figure 66). This treatment will help to delineate Donald Street west as the western gateway to the town centre and supports Church Street as a route for bypassing the town centre and foreshore areas. This improvement option supports the local transport strategy objective for controlling access, improving safety and supporting growth by improving road network operations in the



town centre and foreshore areas.

**Figure 66 Proposed Roundabout at Church St / Donald St**



## 7.3 Parking Strategy

This section recognises the competing demands for car parking and sets out a Parking Strategy to manage the use of parking to improve overall accessibility, manage traffic levels and reduce traffic impacts.

### 7.3.1 Local Parking Issues

The key issues relating to parking in Nelson Bay town centre include:

- ▶ Physical configuration of Stockton Street kerbside parking between Tomaree Street and Donald Street may contribute to the perception of high volumes of through traffic and concerns, which impacts on accessibility and pedestrian safety. Even if through traffic is discouraged, the configuration of parking and access arrangements may continue to contribute to relatively high volumes of car movements;
- ▶ The removal of parking in the foreshore area and the redevelopment of the Donald Street west car park. This site is intended to cater for not only the redevelopment of the foreshore area, but also of other existing and new developments in the town centre. The impacts of the traffic generated by this significant car parking area needs to be considered in more detail as design progresses and further details of development and their staging is better understood;
- ▶ The development of a major event and peak season park-and-ride site. This site is intended to cater

for major event parking demand and the impacts from reducing traffic and parking demand on Nelson Bay Road and town centre roads and parking areas needs to be considered in more detail as the concept and design progresses;

- ▶ Opportunities for shared parking need to be investigated to assess the quantum of kerbside car parking spaces that may need to be made redundant if the Donald Street west car park development or external park-and-ride site is implemented; and
- ▶ Future parking strategies need to consider progressive restrictions (time limits, pay parking) if objectives of reducing dependence on private car travel are to be achieved.

### **7.3.2 Parking Task**

The key elements in formulating the Parking Strategy for Nelson Bay are provided below:

- ▶ Establish the basis of local parking needs and the required day to day balance for attracting visitors travelling to Nelson Bay during peak, shoulder peak and non-peak tourist periods;
- ▶ Recognise that as the intensity of development or the number of major events increases it will not be possible to meet unrestrained parking demand in some parts of the town centre;
- ▶ Promote parking as a travel demand management measure and an important part of a package of measures to improve overall accessibility, manage traffic levels and reduce transport impacts; and
- ▶ Extract the highest value out of existing and proposed parking facilities with the recognition that on-street parking is not an entitlement, but rather a resource to be managed and distributed within the community and that the removal of 'free' or discounted parking may improve access.

It will therefore be necessary for Port Stephens Council to develop an area wide parking framework (and associated controls) that will best achieve the transport and accessibility aspirations of Nelson Bay.

### **7.3.3 Parking Principles**

#### **Parking User Types**

The different types of parking users expected to park in Nelson Bay town centre are understood to consist of:

- ▶ Short-term visitor parking

Typically short-term visitor parking is situated on-street or in an off-street car park controlled by Council. This type of facility should cater for vehicles staying up to 2 hours and are typical controlled through time restrictions and parking fees or a combination of the two, and enforced by council's rangers. Legible and direct access to these areas is critical and the user generally presents a characteristic that shows a willingness to pay for locality and convenience.

- ▶ Commercial parking

Commercial parking is typically situated off-street in proximity to a commercial centre and requires good road access. Depending on the on-street parking restrictions, this parking user type can sometimes be supported by on-street parking. The planning of parking for this user group should concentrate on

offering access to available spaces and minimising the need to cruise to identify an available parking bay. The off-street parking facilities are often shared with other surrounding land uses and in the case of Nelson Bay can sometimes conflict with high season demand. This user type can stay up to 6 hours and is typically controlled through pricing and time restrictions, which is either set by Council or a private land owner. These types of facilities and user group will be generated by activity both in the town centre and foreshore area and would ideally be incorporated into future development / re-development in such a way that provides both a high quality urban design and traffic outcome.

► **Commuter or Employee parking.**

Commuter parking is typically provided in an off-street location by the facility it serves and in the case of Nelson Bay this would be generated by employment at local businesses. The demand is all day or long-term and is not highly sensitive to location. As a result, it may be driven to the edge of town centres, due to its perceived value and State Government's desire to control traffic growth by shifting this type of demand towards public and active transport. The adoption of parking controls that shifts parking demand further away from the town centre needs to take into consideration together with its potential impact on surrounding residential areas. The parking itself needs to be highly accessible from key transport corridors and be provided on a consistent basis. Due to the day to day use of this facility and the potential associated cost, commercial parking users are typically attracted to areas that don't have parking controls or fees and are situated within easy walking distance of a centre. User perceptions of safety, security and amenity should be considered in the design of these types of facilities, which are likely to be required during major events and high season.

► **Long-term visitor parking**

Typically long-term visitor parking is situated on-street or in an off-street car park, which is managed by either council or a private land owner. This type of facility should cater for vehicles travelling to the area on a one off basis and staying over 5 hours. The parking itself needs to be highly visible and accessible from key transport corridors and should easily be associated with the facility it serves through signage. The user typically highly values access, however is sensitive to costs and will consider attractive alternatives, if sites within proximity to the town centre and foreshore are promoted to be less desirable (through parking cost and availability). The display of information highlighting the parking arrangement on the day together with enforcement of parking areas within proximity to the centre during major events or high season is critical to successfully managing both congestion and parking demand in Nelson Bay. The enforcement is expected to be undertaken by council's rangers and signage and external parking may be outsourced to providers by the business benefactors.

## **Parking Demand**

The nature of demand for parking is highly dependent on the location and mix of land uses in a particular area. Typically, parking demand is at its highest where higher density mixed use areas exist and in some cases conflict and are in competition for a limited parking supply resource. This can occur in centres with a retail, transport, recreation and local employment function. The parking duration for these land uses vary, and as a result the value of parking should be closely associated with need and usage. In general terms, shopping requires short-term parking (one to two hours duration), while parking at transport nodes, employment areas or tourist destination is typically for the duration of normal business hours, but

in some cases it can extend beyond this period. The presence of (all day) commuter or tourist parking is sometimes at the expense of commercial and retail activity, which typically occurs after commuters have arrived, attracts a higher turnover and requires the availability of short stay parking spaces in proximity to the centre.

Parking must therefore be sensitively located and managed. With these fluctuating demands for parking, a balanced approach is needed that incorporates both local accessibility to nearby shops and other services, whilst also catering for reason levels of demand generated for all-day parking by commuters and tourists.

### **The Benefits and Costs of Parking**

Increasing parking availability can be used as a tool to stimulate activity in centres by improving access to facilities and services. However, widespread car park construction would be costly, add to congestion on the road network and may be to the detriment of nearby centres. Therefore, a common approach is to increase the availability of parking spaces by encouraging greater turnover. This can be achieved by limiting the duration of parking (e.g. to 1-2 hours) or by charging a time-based fee, usually via parking meters.

### **Parking as Part of an Integrated Transport Strategy**

A strategy that focuses on the provision and management of parking facilities is necessary for Nelson Bay to ensure that parking is closely aligned with other transport strategies. Parking should be seen as one part of an integrated system to provide access to centres and services, in conjunction with travel by other modes such including public transport, walking and cycling. The impacts of parking and associated traffic generation should also be understood and managed.

Parking demand needs to be considered in the wider context of the LGA, the roads that provide access to potential parking facilities and the availability of alternatives such as public transport. Therefore, the level of parking provision should depend on the level of road access and the quality of alternative modes of access.

Travellers should be provided with the right information to allow them to modify their travel patterns and to take advantage of other parking options or alternative access modes. In the short to medium term, a reduction in the availability of car parking will encourage the use of alternative modes, resulting in positive effects not only for Nelson Bay, but other nearby centres as well. However, in order to maintain accessibility, this option is only possible if implemented in conjunction with supporting active transport improvements (for shorter distance trips) and high quality public transport alternatives.

### **7.3.4 Parking Management Strategy Improvement Options**

This section outlines the Parking Management improvement options that have been developed for Nelson Bay. The improvement options are designed to assist with the management of traffic flow within the town centre, encourage movement between the town centre and the foreshore, and to increase pedestrian activity within the town centre.

**Figure 67 Parking Management Improvement Options**



Source: Port Stephens Council Digital Data, 2011

### **Strategy P1 – Improve direction signage and access to Donald Street car parks (6)**

**Requirement** - Develop a town centre wayfinding direction parking signage plan to promote direct access to the off-street car parks in Donald Street. This will help to reduce cruising along town centre streets and help to influence decision making by offer clear directions along main road routes that avoid local congestion points within the town centre.

### **Strategy P2 – Provide long-term parking in town centre to promote access to the foreshore (7)**

**Requirement** - This improvement option aims to provide long-term parking in a designated area of the town centre and encourage people to walk to the foreshore via the town centre. This can be achieved in the short-term through signing Donald Street east car park as a designated long stay/all day car park for both the Town Centre and Foreshore areas. In the longer term, it can be achieved through supporting future expansion plans for Donald Street west car park and the provision of designated parking and signage to promote it as a car park that serves the foreshore. Localised road network improvements may be required to support this option and should be further investigated once the project and its scale is better understood.

### **Strategy P3 – Improve town centre off-street parking facilities (8)**

**Requirement** – Upgrade Donald Street east car park to increase its attractiveness to users and in the longer term redevelop Donald Street west car park to consolidate parking and filter visitors of the foreshore via the town centre. Identify funding sources and options for the upgrade of Donald Street east



car park, which includes signing, linemarking, landscaping, entrances, facades, lighting and security monitoring. The level of supporting infrastructure and funding required for Donald Street west car park will be better understood once the scale of redevelopment opportunity is better known.

#### **Strategy P4 – Improve parking enforcement during event days.**

**Requirement** - Improve parking enforcement in the town centre to address identified peak period overstay issues with an aim of optimising the use of existing parking assets by freeing up capacity through encouraging parking turnover during the peak periods. Parking enforcement should be targeted in high valued areas such as the foreshore and in the town centre.

#### **Strategy P5 – Expand paid parking coverage**

**Requirement** - Expand the existing paid parking to town centre during the peak season to help manage parking demand and to encourage parking turnover. After the introduction of better enforcement undertake a paid parking feasibility study to determine need, scheme coverage and required parking fee rates, which would help to better manage traffic demand and parking supply in the foreshore and town centre areas during high season and event days. This option is likely to be linked to a Park-and-Ride facility that is situated external to Nelson Bay and supported by real time parking information signage that informs visitors of parking availability and associated parking fees.

#### **Strategy P6 – Provide a high season/event day parking (Park-and-Ride) (28)**

**Requirement** – This improvement option should be coordinated with improvements in public transport services. The feasibility of implementing a satellite Park-and-Ride car park is reliant on improvement in bus operations or the introduction of a shuttle bus services during event days to help better manage parking supply. The public transport component ensures that a more efficient mode of transport is offered to help reduce traffic levels on approaches to Nelson Bay town centre and foreshore areas. This option will need to be supported by the implementation of parking information signage warning visitors of the lack of parking in Nelson Bay and the alternative option for travelling to Nelson Bay town centre and the foreshore area. It may also support a reduction in the quantum of works associated with the implementation of capacity improvements along Nelson Bay Road or help to delay the project known as the Fingal Bypass through better managing traffic demand along Nelson Bay Road during event days. The use of Tomaree Sports Centre is a possible option for this type of facility and should be further investigated by Council.

#### **Strategy P7 – Provide advance parking information signage (29)**

**Requirement** – Install parking information signage on Nelson Bay Road that informs visitors of the availability of parking in the town centre and foreshore areas. Such signage can also be used to encourage visitors to use certain areas through advertising availability and parking fees, which could help to promote a Park-and-Ride site as an alternative access option for travel into the town centre. This will help to reduce traffic levels in the town centre, influence decision making and encourage visitors to park and catch public transport to the town centre and foreshore areas. This improvement option supports the local transport strategy objective by protecting the town centre during peak periods and supporting growth by increasing parking supply and reducing demand along the town centre and foreshore road network.

### **Strategy P8 – Develop a Town Centre Parking Management Plan**

**Requirement** – Develop a Parking Management Plan for Nelson Bay town centre and its foreshore area, which defines the goals for parking provision that is built on a clearly defined parking management and travel demand management structure. The plan should identify a hierarchy of users, link policies and controls, and consider the impacts of current proposals and high season and event day demand to help identify the quantum of car parking spaces required in the town centre, foreshore area and at an external parking site served by public transport.

The approach to developing the Parking Plan for Nelson Bay needs to consider the principles outlined above:

- ▶ Parking user types – differentiate among the separate types of parking users;
- ▶ A desirable level of parking demand;
- ▶ Benefits and costs of parking;
- ▶ Parking management as an effective land use planning tool to achieve integration with transport planning objectives; and
- ▶ Demand management needs during high season and event days.

As facilities in the town centre, foreshore area and a possible park-and-ride site will provide shared parking facilities and managed through time restrictions and parking fees, consideration will need to be given to day to day operating requirements of these areas, the possibility of rearranging on-street car parking spaces in the town centre, particularly on Stockton Street south of Donald Street, and the need to protect surrounding residential street from parking overspill.

### **Strategy P9 – Alternative Uses for Section 94 Contributions**

Consider allowing Section 94 contributions to fund uses other than for constructing car parks and park-and-ride facilities and services. In line with sustainable transport objectives, an integrated approach to transport and parking improvement needs to be taken. This considers parking management as a crucial tool in implementing an integrated plan, and the blanket provision of car parking supply only serves to reinforce priorities on private car modes.

**Requirement** – Consideration needs to be given, for cash contributions to be used for schemes that would reduce car dependency. Alternatively, this consideration can extend to allow developers to demonstrate that schemes that reduce car dependency (e.g. funding public transport or shuttle bus services) are implemented as part of Conditions of Consent for Development Applications, in lieu of providing parking spaces. These will be subject to agreement with Council. Examples of these measures include funding of public transport improvements or the introduction of community transport services where visitors to a development can access the town centre or foreshore area without a private car, or workplace travel and town centre access plans, which help to minimise or reduce the need to use cars to access centres served by other modes.

### **Strategy P10 – Consider Maximum Car Parking Requirements**

**Requirement** – Consider maximum car parking requirements for new development based on

accessibility to public transport. Car parking requirements for new developments are typically based on satisfying peak demand with limited consideration of the potential for trips to be made by public transport. This premise often leads to many more car parking spaces being built than are required during normal conditions. Therefore, it may be appropriate to consider less car parking for new developments in areas that can be made accessible to public transport during periods of peak demand.

The following steps are recommended to implement this strategy:

- ▶ Identify areas that can be made accessible to day to day and event based public transport services;
- ▶ Consult with other Councils, particularly those designated with the planning of a specialised tourism area to determine current practice regarding parking controls for new development in Nelson Bay;
- ▶ Revise the Development Control Plan on Car Parking as required (e.g. consider a separate DCP chapter specifically for Nelson Bay Car Parking);
- ▶ Consider revising or lowering parking provision rates for certain individual land uses or development types as it applies to Nelson Bay town centre (i.e. parking rates for the town centre may require lesser parking spaces compared with parking provision rates for other areas within Port Stephens LGA); and
- ▶ Consider review of DCP to allow for developments (including residential) to demonstrate opportunities for shared parking to reduce required parking provision.

## **7.4 Public Transport Strategy**

This section outlines the public transport strategy and has the main focus improving the quality of the public transport service, encouraging more people to use public transport and helping to manage traffic growth and vehicle demand within Nelson Bay.

### **7.4.1 Local Public Transport Issues**

Current public transport mode share is low and is not considered to be an attractive option for day to day access to Nelson Bay or travel around the Tomaree Peninsula. Low patronage impacts on service quality and the overall viability of these public transport services. This is a 'vicious cycle' and typically results in a greater dependence on private car travel due to its overall attractiveness and convenience in comparison to its alternatives.

Public transport is a critical component of a sustainable functioning centre. The higher the public transport mode share, the more opportunities there are for accommodating more intense and concentrated activities. With limited public transport use, access and mobility for medium- to long-distance trips are dependent on the private car, which presents issues relating to congestion, constraints in available space for parking, emissions, and safety.

To implement an effective and efficient public transport strategy in an area that is established and doesn't require the facility on a day to day basis is problematic. Residents and day to day commuters are less likely to change travel mode unless the potential benefits are made clear and can be offered on a consistent basis. Travel behaviour change will be hard to implement, as the majority of Nelson Bay

residents and employees are accustomed to travelling by car.

Deterrents to using current bus services exist in Nelson Bay as bus services traverse a circuitous street network with low land use densities, and as a result, travel times cannot compete with access by private vehicle on a day to day basis. Consequently, certain routes are seen to provide an irregular and unreliable service, which is not convenient for its potential user base that have alternative travel options and thus results in low patronage level on services.

#### **7.4.2 Public Transport Task**

The planning and operation of public transport in Nelson Bay will need to be undertaken in such a way that:

- ▶ Informing decision making relating to key public transport corridors and services that is controlled and managed by State Government, unlike roads Port Stephens is not directly responsible for this local service and can only lobby the State for improvements and play a support role;
- ▶ Promote and align local public transport with user needs and help to integrate local needs with the broader public transport network and its seasonal demand trends;
- ▶ Focus on the user of the public transport services, and plan public transport operations to best serve their needs;
- ▶ Structure service provision around both development and activity intensification, as public transport plays a critical role in managing demand and becomes increasingly important when the road network is under pressure from congestion and offers an opportunity to better manage network capacity and assets;
- ▶ Prioritise access by public transport over access by private vehicles and ensure that residents and visitors are aware of this advantage and are not dependent on the private vehicles for mobility for access to Nelson Bay and around the Tomaree Peninsula;
- ▶ Educate business and residents of the advantages of using public transport services for access and their ability to improve network efficiency, safety and community well bring;
- ▶ Support the development and improvement of the public transport network through planning and designing for the integration of land use, the public domain and the transport system and promoting the introduction of high quality pedestrian and cycling environments around key nodes, facilities and public transport corridors;
- ▶ Plan around the value (lowers emissions, reduces infrastructure costs and travel time, maximises existing road space or assets, supports growth, improves urban amenity and is safer) and potential of public transport as a travel demand management measure and its important role in improving overall accessibility and managing transport impacts in Nelson Bay and across the Tomaree Peninsula during high season and major events; and
- ▶ Recognise the planned evolution in the land use at Nelson Bay and around the Tomaree Peninsula and how this will affect the communities' expectations with respect to travelling by public transport.

### **7.4.3 Public Transport Principles**

#### **Integrated Land Use and Public Transport Planning**

In order to inform regional and local planning, the public transport network needs to do more than solely adapt and the planning and provision will only evolve through consultation with stakeholders and users in conjunction with changes in planning policies and development controls. The outer areas of many urban areas suffer from poor public transport and other facilities because planning is often conducted in an incremental or piecemeal process. The benefits of an integrated land use and transport planning process with respect to managing seasonal demand and the redevelopment of urban areas include:

- ▶ Co-location of key community facilities, shops and other trip attractors along bus routes and at central points where several services converge, making it easier to access local facilities for residents;
- ▶ Faster and more efficient bus routes that can efficiently serve residential areas without undue deviations due to limited through road connections; and
- ▶ Earlier introduction, support and promotion of public transport services, rather than relying on passenger demand to naturally grow in the absence of an attractive service or offering a competitive alternative to the car.

The current public transport service must be revised in the context of an integrated transport network and aim to better service key nodes, develop direct high quality and efficient bus corridors and offer a competitive and effective service that minimises delays and costs associated with transferring before entering Nelson Bay or travelling around the Tomaree Peninsula.

#### **Network Features**

The key features of a quality public transport network, which should be considered in the review of Port Stephens and the Tomaree Peninsula services include:

- ▶ Policy frequency and span – the ability of network routes and timetabled services to provide a frequency level across the day from early in the morning to late at night.

The Outer Metropolitan Service Planning Guidelines (NSWTI, 2009) provide guidance on frequencies by route type.

- ▶ High operating speed and reliability – the ability of network routes and timetabled services to provide attractive service speeds and high levels of reliability.

Bus routes should be largely immune from congestion and delays associated with general traffic;

- ▶ Easy connections between lines – the ability of network routes and timetabled services to offer efficient transfers across the public transport network.

The convenience of transfers needs to be maximised through the frequency of services, its timing and also through special attention to the physical facilities at transfer points;

- ▶ Good legibility and usability – the network should be easy to comprehend (at a macro/system level) and easy to navigate (at a micro/user level).
- ▶ The network that links with facilities and centres – the network should support both established and



centres concepts outlined in the Lower Hunter Regional Strategy.

This is the foundation of the Lower Hunter's land use vision. In particular, the network needs to provide the most direct route between any two centres.

- ▶ Promoting accessibility over mobility – the network, and its integration with land use, needs to focus on providing appropriate levels of accessibility without relying on unsustainable levels of mobility.

By clustering a range of land uses along a public transport corridor or network, it will become increasingly useful and attractive to users and help to reduce the overall need to use private vehicles to access everyday services, including employment, retail and commercial activities.

- ▶ Integration with land use – the network would have a two-fold connection with land use.

Firstly, it serves areas with the highest public transport ridership, densities and mix of uses. In this way, higher ridership is rewarded with increased service. Secondly, it should be an important factor in determining land use mechanisms and zoning in Nelson Bay and the surrounding Tomaree Peninsula.

### **Facilities**

Nelson Bay is the specialised tourism centre for the Tomaree Peninsula tourism area. As it is the centre and the focal point for tourism it will need to improve its public transport interchange to ensure that it has the following facilities:

- ▶ Attractive easy to identify shelters promoting information on services, cost and coverage;
- ▶ Comfortable facilities and seating;
- ▶ Access to public toilets;
- ▶ Car passenger drop-off and pick-up zones;
- ▶ Bicycle parking; and
- ▶ Security and safety facilities – including lighting and surveillance.

#### **7.4.4 Public Transport Improvement Options**

This section outlines the public transport strategy with the main aim of managing demand to improve the amenity for public transport users and provide an alternative to car use for trips to Nelson Bay.

##### **Strategy PT1 – Public Transport Service Planning**

Port Stephens Council to engage with bus operators and Transport for NSW in undertaking regular reviews of public transport services for Nelson Bay and the Tomaree Peninsula specialised tourism area, in line with the Outer Metropolitan Service Planning Guidelines.

The key aim is to provide an integrated network of regular, reliable and public transport services and in most cases this is the responsibility of others. Port Stephens Council has limited control over the integration of the land use and public transport provision process, but can influence performance through:

- ▶ Control of the land use process, which can locate density and transit-supportive design along public

transport corridors, dictating future potential public transport ridership;

- Control over some of the streets on which the public transport services will run. On streets it manages, PSC has almost total control over peak and average public transport operating speeds, and largely influences public transport reliability; and
- Control of parking areas and their location and operation.

Port Stephens Council can therefore work with public transport providers to achieve the goals of the public transport strategy and overall road network and parking strategies.

### **Strategy PT2 –Improve the attractiveness of the public transport interchange (15).**

**Requirement** – Provide improved bus stop shelters, including seating, lighting and better service information to support and encourage use of public transport for travel in and around Nelson Bay.

### **Strategy PT3 – Investigate the feasibility of introducing a Park-and-Ride**

**Requirement** – Investigate the feasibility of implementing a satellite Park-and-Ride car park with complementary shuttle bus services during event days to help better manage parking supply and network capacity deficiencies within and on approach to Nelson Bay town centre and foreshore areas. This option will need to be supported by the implementation of parking information signage warning visitors of the lack of parking in Nelson Bay and the alternative option for travelling to Nelson Bay town centre and the foreshore area. It may also support a delay in the implementation of road network upgrades through better managing traffic demand along Nelson Bay Road during event days. The use of Tomaree Sports Centre appears to be an attractive option due to:

- It serving an existing bus service route (No 133 running between Fingal Bay, Shoal Bay, Nelson Bay and Salamander Bay), which potentially could be increased to allow for additional patronage;
- Already having an identity as a site used for event day parking and was previously utilised for this purpose during the new year fireworks event day; and
- It being located on the key road route into Nelson Bay and requires minimal new infrastructure.

The bus system should be designed to offer convenient and frequent services during arrival and departure periods. For instance, a 10 minute frequency would offer a service frequency that is convenient enough not to warrant a timetable (turn up and go concept).

The location of the site and distance away from Nelson Bay is critical and would ensure the following is achieved:

- A convenient point to transfer between modes to access Nelson Bay;
- A point that is visible to the majority of traffic wanting to access Nelson Bay;
- Ability of the bus fleet to cover the bus route within a short time period to support convenient, frequency and reliability – also reduce costs and fleet size;
- Positioned in a location that offers a visible solution to a known problem; and
- Is flexible and can be switched on and off on a needs basis or can be easily operated on a more permanent basis.

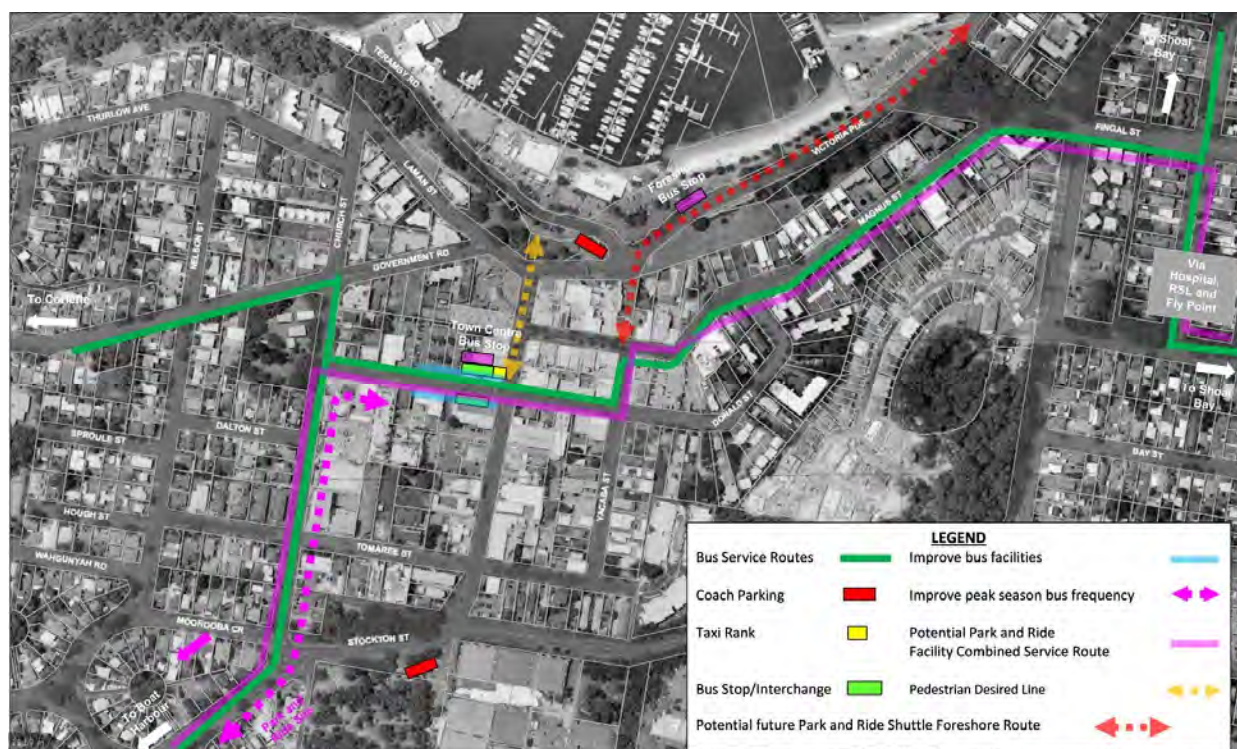
The bus service needs to be designed to offer fast and convenient access to key destinations that are impacted by high levels of activity during a peak event period. It would be direct and have priority over other general traffic movement and obtain access areas that may be restricted to others.

Parking restrictions within the central core need to support the scheme by constraining parking for long periods of time and implement parking fees for the convenience of parking in Nelson Bay or at the Marina.

The time based on-street parking restrictions need to support current off-street schemes by expanding time-based parking restrictions and enforcement to make these locations less convenient and prevent overspill to residential streets within a easily walking distance of the marina and town centre.

Parking and ride fares are required to be significantly lower than parking fees charged at the Marina or in the town centre (in more convenient locations) with group package discounts to reduce the financial impact (up to two children under 16 travelling free when accompanied by a fare-paying adult) and help to realign costs associated with a vehicle with multiple occupants.

**Figure 68 Public Transport Improvement Options**



Source: Port Stephens Council Digital Data, 2011

#### Strategy PT4 – Public Transport Accessibility

**Requirement** – Consider the accessibility needs of disadvantaged user groups who are not currently well served by the existing public transport network, and consider the potential for extension of community transport services or other transport modes to meet their needs.

Disadvantaged public transport users groups such as children, the elderly, women, the unemployed, and those on a low income or without a car can suffer disproportionately from an ineffective public transport network. Consideration of the needs of these user groups and provision of new transport options may lead to better transport provision across a variety of modes and methods.

#### **Strategy PT5 – Fare-Free Zone for Public Transport**

**Requirement** – Consider designating a fare free zone that serves access between a park-and-ride site, the town centre and foreshore area during high season and major event days for bus services.

Integrating the provision of affordable and efficient public transport services within Nelson Bay during high season and on a major event day will be a key factor in ensuring that the town centre and foreshore areas function efficiently during these periods and with planned development in the future growth.

In order to further reduce dependency on private cars, consideration needs to be given to offer free bus services within urban core of the town centre. A system that allows fare-free travel is currently in operation in the inner part of Newcastle for seven days a week. Other urban centres in metropolitan Sydney (e.g. Sydney, Parramatta, Penrith, Bankstown, etc.) are also provided with free shuttle bus services within city centres. These free shuttle buses are operated by the State Government.

### **7.5 Active Transport Strategy**

Sound planning and the provision of high quality facilities for pedestrians and cyclists constitute a critical element of the transport strategy for Nelson Bay. The following improvement options aim to encourage pedestrian and cycling activity in the town centre through access improvements and protecting areas of the town centre from increases in traffic to help improve mode share and the environmental outcomes for the Tomaree Peninsula.

#### **7.5.1 Pedestrian and Cycling Issues**

##### **Barriers to Walking and Cycling**

Walking and cycling are valued as a means of transportation and recreation due to their low cost, low impact, wide suitability and health benefits. However, there are numerous barriers to increasing walking and cycling, namely, a lack of infrastructure, heightened safety concerns, long trip distances and an urban form structured to favour motor vehicle use.

The draft Nelson Bay 2030 Strategy (NBS 2030) provides a framework for encouraging the increased use of alternative modes for travel to, from and around Nelson Bay town centre. It focuses on prioritising infrastructure and designing facilities to help increase the number of trips made by walking and cycling and improving connectivity between the town centre, the foreshore and its surrounding catchment. This will help to break barriers that currently exist, which includes a lack of supporting facilities. Currently, there are no shared paths/cycleways that directly offer access to the town centre from surrounding residential areas. Access within core areas of the town centre are supported by low signposted traffic speeds, however, this is sometimes in conflict with access points and kerbside parking. Cycling facilities beyond the town centre and foreshore areas appear to be limited and in some cases terminate at the periphery of the foreshore area and does travel or offer facilities in the town centre. Pedestrian activity is

encouraged through the provision of widened footpaths, landscaping, street furniture and footpath activity such as roadside dining, however this is isolated and needs to be expanded to better connect the town centre, areas to the west and south, and the foreshore walk and foreshore area. The redevelopment of areas along Stockton, Donald and Yacaaba Streets and the Foreshore area should consider how the pedestrian and cycling environment and connections can be improved through incorporating these needs into the design of buildings and the upgrade of streetscapes.

### **Infrastructure Opportunities**

There is an opportunity to intensify walking and cycling through the provision of a suitable environment within existing and future urban areas. The provision of infrastructure such as walking and cycle paths should be clearly defined and separated from roads and traffic, and on occasion it is also necessary to provide separation between cyclists and pedestrians. Potential conflict areas with traffic can be improved, through upgrading intersections, the installation of traffic signals and pedestrian crossings. Other infrastructure approaches include widening footpaths, improving surfaces and improvements to street lighting, which enhances safety and reduces barriers to walking and cycling to key destinations.

The redevelopment of the Marina and Foreshore area, in conjunction with improvements to Dowling Street, Nelson Bay Road, Stockton Street, Donald Street and a possible extension to Yacaaba Street presents opportunities for establishing a comprehensive walking and cycle environment throughout the Nelson Bay town centre. These network improvements also provide an opportunity to extend the existing shared path network from the foreshore to the town centre and beyond including the Tomaree Sports Complex and Salamander Way.

### **Social Opportunities**

Opportunities to promote walking and cycling should consider a wide range of tools, rather than only infrastructure responses. One approach would be to promote community awareness through encouraging children to walk to school, visitors to walk to the town centre and foreshore area from surrounding hotels, and residents that are situated within a walking catchment of local services and facilities in the town centre. The promotion of access by walking and cycling fosters independence and promotes a healthier more active lifestyle, which is argued to be a key reason for living and visiting Nelson Bay. Other approaches that support and encourage people to use active transport and a means of travel include cycle weeks, the promotion of safe cycle or pedestrian routes and financial incentives for cycling to work.

### **Supporting New Development**

Once the above issues have been identified, the focus shifts to providing appropriate plans and networks in existing and new areas identified for change. One option is incremental provision of walking and cycling paths as areas are expanded and intensified. If facilities are not proposed or in place, then travel choices will be influenced by a lack of facilities and routes and needs to be overcome through the better planning and control of new developments.

### **Integration with Other Transport Modes and Urban Planning**

The planning of improvement to the pedestrian and bicycle environments cannot be considered in isolation as it impacts on all other forms of transport and the design of the urban environment. In order to



successfully achieve a desirable outcome, the planning of the pedestrian and bicycle network needs to be integrated with the accessibility needs of existing and potential bus networks, redeveloped areas and the planning for mixing and intensifying land use. The planning of the land use and supporting infrastructure is particularly important for urban centres, where the locality of facilities and services should be planned around walkable catchments to encourage people to automatically walk or cycle to move around Nelson Bay.

Urban design also plays a key role in achieving satisfactory pedestrian and cycling outcomes. The environment should be planned so that residents find it easier to walk or cycle to shops, and designed with an aim of reducing travel speeds, discouraging direct access by car and providing facilities to support access by walking and cycling.

The layout of Stockton Street, Donald Street and Yacaaba Street will need to be improved in a way that integrates walking and cycling modes with the planned function and design of each road. This should be completed to improve connectivity between areas and serve planned facilities in the centre, such as encouraging access to bus stops.

### **7.5.2 Walking and Cycling Task**

The primary objective of the combined Walking and Cycling Strategy is to encourage greater use of walking and cycling as a means of transport and recreation. Walking and cycling are valued due to their low cost, low impact, wide suitability and health benefits. Safety is also an important element for walking and cycling, which can be supported through improved layouts at intersections and provision of walking and cycling paths that protect users from road traffic. In order to be successful any walking and cycle strategy needs to better integrate with all mode strategies as both parking for private vehicles and public transport requires access by walking to reach their point of destination.

### **7.5.3 Walking and Cycling Principles**

The provision and management of walking and cycling facilities and opportunities in Nelson Bay and the Tomaree Peninsula will be undertaken in such a way that:

- ▶ Understands the key walking and cycling needs in the region;
- ▶ Recognises the role walking and cycling plays in the reduction of car-based trips in Nelson Bay, and how the provision of improved facilities and opportunities can help promote mode change in the future;
- ▶ Understands the need for the separation of pedestrians and cyclists from motor vehicle traffic;
- ▶ Identifies mechanisms for the community to have regular input into the provision of walking and cycling facilities;
- ▶ Recognises that all trips involve walking at either the beginning or end (or both) of the journey, resulting in the need for connections between parking and public transport areas and destinations;
- ▶ Incorporates walking and cycling issues into the planning and improvement of the road network, parking and public transport;

- ▶ Recognise that walking and cycling paths can form key routes between destinations; and
- ▶ Understand that walking and cycling trips perform a variety of functions, not only travel from an origin to a destination, but such trips are also undertaken for recreation and/or health benefits, which can be influenced by the amenity of the route.

It is therefore necessary for Port Stephens Council to develop a walking and cycling framework that will best achieve the aspirations of the Tomaree Peninsula. This may apply not only to Nelson Bay, but should include all other centres within the Port Stephens LGA.

### **Achieving a Positive Walking Environment**

Walking is the simplest form of transportation. It is available to all people (inclusive of those who use mobility aids), is free and has insignificant environmental cost. Furthermore, all trips involve some walking component, if only from the car park to the shop. Planning for pedestrians is therefore of primary importance to transportation planning.

Pedestrians use every part of the public domain, including roads, footpaths, nature strips, shopping centres and other public spaces and that they are particularly vulnerable to cars and other motorised traffic. The provision of pedestrian infrastructure should not only aim to fulfil the requirements of existing users and comply with relevant standards, it should also aim to promote walking for transport, recreation and health and help to increase the number of trips taken by foot in Nelson Bay. Such an outcome would result in fewer car trips, healthier residents and visitors and a more active (and safe) public domain.

A number of goals are required in order to provide a high quality pedestrian environment:

- ▶ Safety – in terms of safe crossing locations, lighting and security;
- ▶ Direct – facilities serving desire lines between major areas of activity;
- ▶ Pleasant – attractive walking environment;
- ▶ Suitable for all users – accommodate the number of pedestrians, continuous paths, free of obstructions, satisfy needs of hearing and vision impaired users; and
- ▶ Feed public transport – offer access to bus stops and remove obstacles to pedestrian use.

### **Achieving a Positive Cycling Environment**

Cycling is a highly efficient, environmentally benign form of transport. As with walking, cyclists are improving their health and contributing to an active environment at a human scale. Cyclists move around the public domain in various ways, largely depending on the trip purpose and rider characteristics. For example, children will tend to use footpaths and cycle at lower speeds, while an adult on the way to work may prefer to ride along the fastest and most direct route available (on or off-road).

Cyclists therefore move through an 'environment' in a similar way to pedestrians, although the speed and distance, which they travel, mean that they identify more with the concept of a network. Attention to cycling facilities should not be confined to one or two 'routes' or 'links' in an area, as trip origins and destinations are diverse. Every street must be a safe route for cyclists and be designed in accordance with the function, traffic volume and width of the street.

Infrastructure for cycling can be designed in a similar way to other vehicles, through consideration of

speed, sight distance, priority at intersections etc. However, bicycles have a degree of manoeuvrability that makes them somewhat unpredictable to motorists and pedestrians. Therefore, the design of both on and off-road facilities should aim to encourage predictability and clear priority at all conflict points. Cyclists needs reflect those for pedestrians and the planning principles of facilities should mirror pedestrians, including safety, directness, pleasantness and suitable for all users. One particular principle that also needs to be considered in planning for cycle facilities are end of trip facilities, such as bicycle parking and the availability of showers and change rooms, particularly for offices. Bicycle users need to know that their bike will be safe from theft while it is not attended. Where appropriate, complementary facilities for staff bike parking also need to be provided. These include change rooms, showers and lockers.

#### **7.5.4 Active Transport Improvement Strategies**

The Active Transport Strategy has been developed and incorporates the following strategy improvement options.

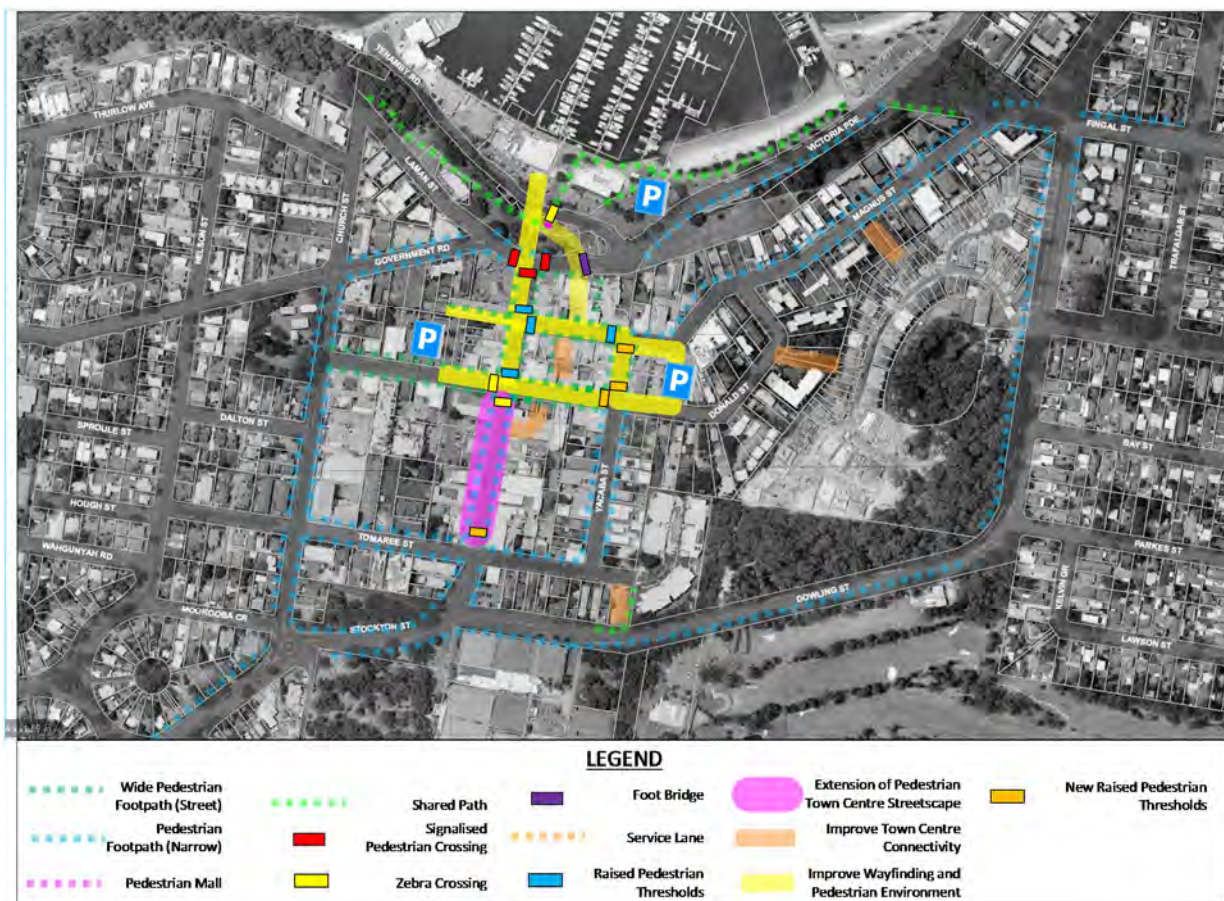
##### **Strategy AT 1 - Improve wayfinding and identification signage (17)**

**Requirement** – Develop a town centre wayfinding pedestrian signage plan to inform and promote access to key destinations by walking or cycling. This will help to reduce traffic levels in the town centre, influence decision making and encourage visitors to walk from off-street car parks to the town centre and foreshore areas. The signage should include directions and walk times to popular destinations and the key transport hubs (car parks, bus stops, and coach parking areas) and may be funded through developer contributions as part of the town centre revitalisation. It is recommended that Council produces a Mobility Map to inform and promote access to key destinations by walking or cycling.

##### **Strategy AT 2 - Provide additional pedestrian crossing facilities (18)**

**Requirement** – Improve pedestrian access and safety within and from the Donald Street east car park. Promote this as a long-term car park for accessing the foreshore and improving connectivity between off-street car parks, the Nelson Bay town centre main street and the foreshore area. Introduce landscaping, marked pedestrian footpaths, lighting, signage and additional pedestrian crossing facilities.

**Figure 69 Pedestrian Facility Improvement Options**



Source: Port Stephens Council Digital Data, 2011

### **Strategy AT 3 - Widen footpaths along Stockton Street to promote and encourage Main Street activities (19)**

**Requirement** – Widen footpaths along Stockton Street between Donald Street and Tomaree Street to provide a streetscape that better suits the level of activity attracted during event days and peak season. The widening of footpaths and changes to streetscape will encourage greater pedestrian amenity and comfort in addition to discouraging this route as a through route for accessing town centre car parks or for land uses that require high vehicle activity frontages. Refer to Figure 69 for typical streetscape treatments.

### **Strategy AT 4 – Develop a PAMP and improve the condition and provision of footpaths (20)**

**Requirement** – Develop an overarching plan and priorities for improving the walking environment in the town centre and to its surrounding catchment. Identify and introduce missing sections of footpaths on Tomaree Street and Yacaaba Street, improve the footpath connection between Dowling Street and Tomaree Street, and support a new direct pedestrian connection between the town centre and residential areas to the east.

**Strategy AT 5 - Close Stockton Street north to traffic during event days and high season periods (21)**

**Requirement** – Review the feasibility of pedestrianizing Stockton Street north between Magnus Street and Government Road to improve pedestrian amenity and encourage streetscape improvements on the key pedestrian corridor used to connect the town centre with the foreshore area. Refer to Figure 69 for typical streetscape treatments.

**Strategy AT 6 - Improve town centre walking environment (22)**

**Requirement** – Encourage new development to open up existing pedestrian shopping malls and provide through connections between town centre streets. This may be achieved through increasing density within town centre blocks and the creation of squares that serve new commercial development and provide access to surrounding streets. Parking and vehicle access to new development should be a key consideration especially for new development that fronts Stockton Street and Donald Street.

**Strategy AT 7 - Increase the visibility of cycling through developing a bike plan and expanding the cycle network (23)**

**Requirement** – - Increase the visibility of cycling through the development of a bike plan for Nelson Bay and the Tomaree Peninsula and encouraging the development of additional cycle routes, as shown on Figure 70. Plan and identify additional cycle routes from areas to the east and south with Nelson Bay Road, Church Road, Donald Street and Austral Street identify as possible new cycle routes to improve access to Nelson Bay town centre from surrounding areas. Investigate the feasibility of:

- ▶ Connecting areas to the east via Austral Street and Donald Street (green broken line) or alternatively with the foreshore (yellow line shown as RTA proposed on-road option); and
- ▶ Connecting areas to the south via the provision of a dedicated shared off-road path along Nelson Bay Road and Church Street.

**Strategy AT 8 - Include a section on bicycle parking in Port Stephens DCP (24)**

**Requirement** – Include a section on the provision of bicycle parking for new development in the Port Stephens DCP. This should be included in Chapter B3, which specifies requirements for parking, traffic and transport arrangements and specify that all proposed development in the town centre and foreshore should consider access by walking and cycling.



**Figure 70 Cycling Infrastructure Improvements**



Source: Port Stephens Council Digital Data, 2011

**Strategy AT 9 - Improve and encourage access by active transport by providing bicycle parking facilities (25)**

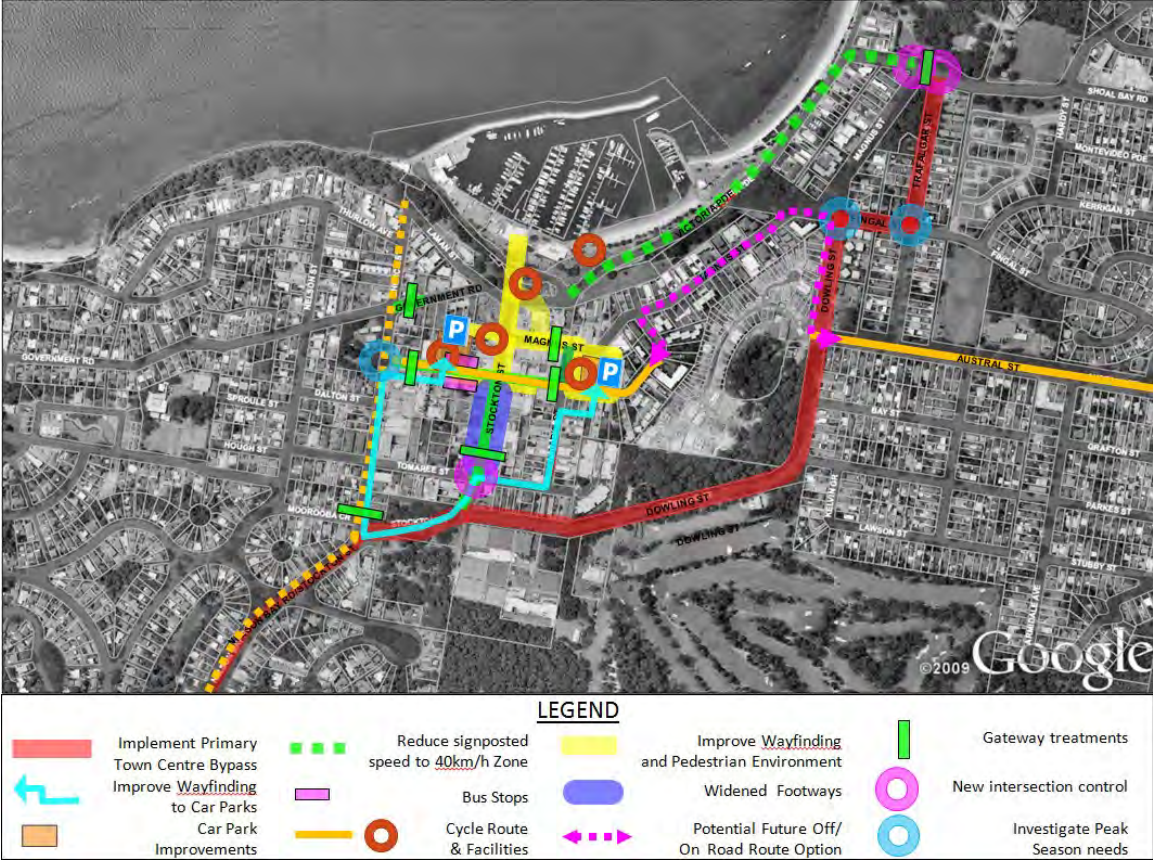
**Requirement** – Plan and identify locations for installing bike stands in the town centre, foreshore area and other high activity areas. This improvement option supports the local transport strategy objective for encouraging greater use of bicycles as a mode of transport within Nelson Bay and across the Tomaree Peninsula.

## 7.6 Improvement Plans

Four action plans have been developed to align with the strategies developed for Nelson Bay. The actions contained in the strategies have been prioritised to reflect the importance in terms of its all year round need, ability to support planned growth and its affordability. These action plans are presented in the following sub sections.

Figure 71 provides a visual representation of high priority improvement measures required to support economic activity, safety and access to Nelson Bay.

Figure 71 Short-Medium-term Improvement Package



Source: Port Stephens Council Digital Data, 2011

7.6.1 Road Network Management Action Plan

Road network management improvements aim to provide a safe and more efficient road network through the delivery of the following strategies.

**Table 23 Road Network Management Action Plan**

<b>Policy No</b>	<b>Description</b>	<b>Delivery Timeframe</b>	<b>Responsibility</b>	<b>Actions</b>
RNM 1a	Dowling Street/Trafalgar Street town centre bypass	Short	Council	<p>Undertake a road safety audit along the route to identify any safety issues associated with designating this route for through-traffic travelling to areas east of Nelson Bay town centre.</p> <p>Implement as part of the gateway treatments, redefining the road hierarchy and improving network efficiency in the town centre.</p> <p>Identify project cost, funding and then implement new infrastructure in coordination with other strategies listed under RNM 1.</p> <p>After completion, monitor seasonal and typical daily peak capacity needs through the continuous collection of consistent traffic data sets.</p> <p>Use data sets to review and refine road network improvement concepts and inform decision making for further route improvements and the need for capacity improvement along Nelson Bay Road or a new Fingal Bay Bypass.</p>
RNM 1b	Dowling Street/Magnus Street realignment	Medium	Council	Refer to 1a for all relevant actions.
RNM 1c	Reprioritising movement at intersection along the Dowling St bypass	Short	Council	<p>Implement as part of the gateway treatments, redefining the road hierarchy and improving network efficiency in the town centre.</p> <p>Refer to 1a for all relevant actions once option 1b is implemented.</p>
RNM 1d	Downgrade Victoria Parade	Short to Medium	Council	<p>Implement as part of the gateway treatments, redefining the road hierarchy and function in the town centre and improving pedestrian amenity in the town centre.</p> <p>Identify project cost, funding and then implement new infrastructure in coordination with the above works.</p>

Policy No	Description	Delivery Timeframe	Responsibility	Actions
RNM 1e	Downgrade Stockton Street	Short to Medium	Council	<p>Implement as part of the gateway treatments, redefining the road hierarchy and function in the town centre and improving pedestrian amenity in the town centre.</p> <p>Identify project cost, funding and then implement new infrastructure in coordination with the above works.</p>
RNM 2	Yacaaba Street extension	Medium to Long	Council	<p>Not identified to be a critical to improve the operation of the road network in Nelson Bay in the short to medium-term.</p> <p>Review after implementation of Options 1a, 2, 3, 6, 14, 16 &amp; 22.</p> <p>A required action will be driven by the need to remove traffic from Victoria Parade and offer direct access to the town centre car parks. Will be influenced by the location of new parking areas for the foreshore and a decision in the long-term of Donald Street east car park and likely pedestrianizing of Stockton Street north (Option 22).</p> <p>Once the above is completed then identify project cost, funding opportunities and coordinate required works with the planned redevelopment of the foreshore and town centre and new identified parking stations.</p>

Policy No	Description	Delivery Timeframe	Responsibility	Actions
RNM 3	Improvement Option 5 – Improve Nelson Bay Road or Fingal Bypass	Medium to Long	Council	<p>Linked to capacity deficiencies identified on Nelson Bay Road, potential impact on travel times to Fingal and Shoal Bay and a need to manage high season travel demand.</p> <p>Further investigation required and should be undertaken after the implementation of the Nelson Bay town centre bypass and the testing of the success of a high season and event Park-and-Ride parking scheme. After completion of the above, monitor seasonal and typical daily peak capacity and performance through the continuous collection of consistent traffic data sets.</p> <p>Use data sets to inform decision making process by identifying the annual performance need, scoping project requirements, revisit previous work undertaken and reviewing conditions of reserved road corridor and other potential options.</p> <p>Once the above is completed then project costs and funding opportunities need to be identified and coordinated with the planned redevelopment of the foreshore, Nelson Bay town centre and any planned activity in Fingal and Shoal Bays.</p>
RNM 4	Reduce the signposted speed limits in town centre Main Streets (Pedestrian amenity)	Short to Medium	Council	<p>Implement as part of the gateway treatments, redefining the road hierarchy and function in the town centre and improving pedestrian amenity in the town centre.</p> <p>Identify project cost, funding and then implement new infrastructure in coordination with the above works</p>
RNM 5	Reduce crash rate by upgrading traffic management	Short	Council	<p>Review traffic management arrangements at the intersection of Stockton Street with Tomaree Street.</p> <p>Reprioritise movement at Stockton Street with Tomaree Street intersection (northern gateway) to support RNM 1e.</p> <p>Change parking station wayfinding signage.</p> <p>Undertake a road safety audit on proposed design arrangement.</p>



Policy No	Description	Delivery Timeframe	Responsibility	Actions
RNM 6	Introduction of Town Centre and Foreshore Gateway Treatments	Short	Council	<p>Develop concept design and undertake road safety audit.</p> <p>Implement as part of the redefining the road hierarchy, improving pedestrian amenity and improving network efficiency in the town centre.</p> <p>Identify project cost, funding and then implement new infrastructure in coordination with the above works.</p>
RNM 7	Upgrade the intersection of Donald Street with Church Street	Short to Medium	Council	<p>Develop concept design and undertake road safety audit.</p> <p>Implement as part of the managing peak demand, redefining the road hierarchy, the western town centre gateway treatment, improving network efficiency in the town centre, supporting bus services and providing future network capacity.</p> <p>Identify preferred scheme, project cost, funding and then implement new infrastructure in coordination with the above works.</p>

### 7.6.2 Parking Management Action Plan

Parking management improvements aim to improve access to parking and the way it is managed through the delivery of the following strategies.

**Table 24 Parking Management Action Plan**

Policy No	Description	Priority	Responsibility	Actions
P 1	Improve wayfinding parking signage strategy	Short	Council	<p>Develop strategy and design requirements and align with the Nelson Bay Parking Management Plan.</p> <p>Identify project cost and funding</p> <p>Implement as part of managing peak demand in the town centre, optimising existing infrastructure and improving network efficiency in the town centre.</p>

Policy No	Description	Priority	Responsibility	Actions
P 2	Provide Long-term Parking in Town Centre	Short to Medium	Council	<p>Develop a signage strategy and parking bays in Donald Street east car park that can be utilised as long-term visitor parking.</p> <p>Identify project cost, funding and then implement new arrangement in coordination with the Nelson Bay Parking Management Plan.</p> <p>In the longer term redevelop Donald Street west car park to consolidate parking and filter visitors travelling to the foreshore via the town centre (day to day activity).</p>
P 3	Upgrade to Donald Street east car park	Short to Medium	Council	<p>Short-term need to optimise the functionality of the asset and offer visible spare capacity to current town centre and foreshore users.</p> <p>Upgrade Donald Street east car park to increase its attractiveness to users and Identify funding sources and options for the upgrade of Donald Street east car park, which includes signing, linemarking, landscaping, entrances, facades, lighting and security monitoring.</p> <p>Identify project cost, funding and then implement new arrangement in coordination with the Nelson Bay Parking Management Plan.</p>
P 4	Improve parking enforcement	Short to Medium	Council	<p>Identify high season demand periods and event days.</p> <p>Consult with parking rangers and identify funding for additional resources to control and protect high valued parking areas during busy periods.</p>
P 5	Expand paid parking in the town centre	Medium	Council	<p>Review after the implementation of better parking enforcement during event days and the high season.</p> <p>Review funding options for improving parking facilities, implementing park-and-ride and improving public transport services.</p> <p>Coordinate with the Nelson Bay Parking Management Plan.</p> <p>Undertaken a feasibility study to identify project cost, funding and how it should be implemented.</p>

Policy No	Description	Priority	Responsibility	Actions
PM 6	Provide high season/ event day parking (Park-and-Ride) south of the town centre	Medium	Council/ TfNSW	<p>Identify location and service and capacity requirements, project cost and possible funding sources.</p> <p>Refine concept and discuss with public transport providers and Transport for NSW.</p>
PM 7	Provide high season and event parking information signage	Medium	Council/ RMS	<p>Identify location and operational requirements for managing parking and traffic demand to the town centre.</p> <p>Identify capacity requirements, project cost and funding sources.</p> <p>Refine concept and discuss with public transport providers and Transport for NSW.</p>
P 8	Develop a Town Centre Parking Management Plan	Short	Council	<p>Use information contained in this strategy to develop a parking management plan for Nelson Bay town centre and the foreshore area</p> <p>Manage potential impacts on surrounding residential areas and develop plan to protect these areas from town centre and foreshore area overspill</p> <p>Protect the town centre from excessive high season and major event parking demand.</p> <p>Consult with key town centre and foreshore stakeholders and the community regarding day to day and event related parking plans.</p>
P 9	Alternative Uses for Section 94 Contributions	Medium	Council	<p>Identify options for reducing parking on the basis of a section 94 contribution.</p> <p>Identify projects requiring additional cross funding.</p> <p>Identify an appropriate contribution levy.</p> <p>Implement as part of Conditions of Consent for Development Applications in lieu of supplying the parking requirement.</p>

Policy No	Description	Priority	Responsibility	Actions
P 10	Consider maximum car parking requirements	Medium	Council	<p>Identify areas that are highly accessible by public and active transport</p> <p>Identify peak demand periods and parking needs.</p> <p>Identify opportunities for shared parking against overall parking supply.</p> <p>Consider opportunity to resolve parking deficiency through adoption of parking and ride sites</p> <p>Review other Council policies.</p> <p>Revise DCP parking requirements.</p>

### 7.6.3 Public Transport Action Plan

The public transport strategy provides an integrated approach to managing travel demand through improving the public transport service and structuring the network to encourage more people to use the system, and will be managed through the implementation of the following strategies.

**Table 25 Public Transport Action Plan**

Policy No	Description	Priority	Responsibility	Actions
PT 1	Public Transport Service Plan	Short to Medium	TfNSW	<p>Support TfNSW in the review of public transport service needs for Nelson Bay and the Tomaree Peninsula under low and high season demand trends.</p> <p>Work with public transport providers to identify ways of improving services and increasing frequencies during events and high season.</p> <p>Review the impact on services from an increase in frequency in major events in Nelson Bay and the redevelopment of the foreshore area.</p>

Policy No	Description	Priority	Responsibility	Actions
PT 2	Improve the attractiveness of the public transport interchange	Short	Council	<p>Review facilities at bus interchange (seating, lighting, access, information)</p> <p>Consult with community regarding needs.</p> <p>Review against TfNSW facility requirements guide.</p> <p>Identify funding sources for improvements</p>
PT 3	Improving public transport services	Medium	Council	<p>Identify sites that can operate as park-and-ride facilities.</p> <p>Develop a concept for operating the site and days in a year that it may be operational.</p> <p>Review conflict with other activities.</p> <p>Undertake a feasibility study.</p> <p>Develop a marketing plan for the service and facility.</p> <p>Consult with TfNSW and promote the scheme and its benefits.</p> <p>Lobby TfNSW for funding and identify funding options for site related improvements.</p> <p>Coordination with other event related improvements.</p>
PT 4	Public Transport accessibility	Short to medium	Council/ TfNSW	<p>Review and develop a market sector plan to capture service needs for disadvantaged groups.</p> <p>Review these needs against current service provision and other community transport service options</p>
PT 5	Fare free route service for public transport	Medium	Council/ TfNSW	<p>Review options and identify the benefits from removing bus fares for travel to and from Nelson Bay during peak demand periods.</p> <p>Identify how this may align with the expansion of parking fees within the town centre and foreshore areas.</p> <p>Lobby TfNSW for funding and to undertake a pilot scheme to measure its potential level of success in managing travel demand.</p>



#### 7.6.4 Access Management

The active transport strategy provides an integrated approach to managing travel demand through implementing treatments to promote safe and efficient access to the town centre, protect high activity areas and encourage more people to walk and cycle, , and will be managed through the implementation of the following strategies.

**Table 26 Active Transport Action Plan**

Policy No	Description	Priority	Responsibility	Actions
AT 1	Improve wayfinding and identification signage for pedestrians	High	Council	Develop and design a wayfinding plan to promote key destinations, guide visitors and promote walking around Nelson Bay. Identify project cost, funding and then implement new infrastructure
AT 2	Provide additional pedestrian crossing facilities in the town access and foreshore area	Short to Medium	Council	Consider as part of improving Donald Street east car park the installation of a pedestrian threshold across Yacaaba Street to facilitate pedestrian access to the town centre. Identify the feasibility of introducing a scrambled crossing at Stockton Street with Government Road. Identify project cost, funding and then implement new infrastructure in coordination with the above works
AT 3	Widen footpaths along Stockton Street	Short to Medium	Council	Consider as part of the downgrading of Stockton Street and potential to fund from the expansion of paid parking area. Develop a concept for expanding footpaths and serving possible future land uses including the Woolworths site proposal. Identify project cost, funding and then implement new infrastructure in coordination with schemes that aim to refine the road hierarchy, better manage peak demand, protect the town centre core and provide direct access to car parks.

Policy No	Description	Priority	Responsibility	Actions
AT 4	Develop a PAMP and improve the condition of footpaths	Medium	Council	<p>Review footpath conditions around the town centre and on access routes to the foreshore area.</p> <p>Develop a plan for reviewing conditions, funding and prioritising improvements and maintaining these assets.</p> <p>Identify missing footpath links in the town centre and on routes to the town centre.</p> <p>Identify if the missing footpaths are fronting vacant land and consider completing as part of early work and obtaining funding through developer contribution.</p> <p>Develop and design a missing link plan, identify project cost, developer contribution funding and then implement new infrastructure.</p>
AT 5	Close Stockton Street north during major events and high season	Medium	Council	<p>Investigate the feasibility of closing the northern section of Stockton Street to traffic during peak season and major events.</p> <p>Develop a scheme and procedure that can facilitate this closure during peak periods.</p> <p>Identify project cost and funding.</p> <p>Align the closure with the implementation of other infrastructure improvements and land use changes including Donald Street west car park, Yacaaba Street extension, protecting the town centre core, widening of footpaths in Stockton Street, park-and-ride shuttle services and the downgrading of Government Road.</p>
AT 6	Improve town centre walking environment	Medium	Council	<p>Consider improve pedestrian environment in town centre by revising current LEP 2000 and developing a Council position on property access points in the Town Centre (Main Streets) and along key transport routes (Main Roads) to the town centre.</p> <p>Use this policy to consider development applications with the intention of reducing conflict points along Main Streets and Main Roads.</p>

Policy No	Description	Priority	Responsibility	Actions
AT 7	Increase visibility of cycling through developing a bike plan and expanding the cycle network	Medium	Council	<p>Review cycle network conditions around the town centre and on access routes to the foreshore area.</p> <p>Develop a plan for reviewing conditions, funding and prioritising improvements and maintaining these assets.</p> <p>Identify missing cycle links in the town centre and on routes to the town centre from key destinations.</p> <p>Improve on-road facilities and provide safe crossing point across the regional road system.</p> <p>Develop a plan that extends the current cycle network into surrounding catchments.</p> <p>Introduce cycle racks in key town centre and foreshore areas (cycle facilities)</p> <p>Develop a Council policy position on end of trip cycle parking supply for new development in the Town Centre and foreshore areas.</p> <p>Include a consideration for the provision of cycle parking facilities in Port Stephens DCP</p> <p>Use this policy to consider cross funding of shared facilities from new development applications and other Government programs.</p>

## 8. Summary and Next Steps

### 8.1 Summary

The development of Nelson Bay is flexible and will be driven by local development and business opportunities that aim to promote Nelson Bay as an all year round destination. This Transport and Parking Study considers both existing peak operational needs and the potential impacts from the revitalising Nelson Bay. Based on these findings, strategies and action plans have been developed to manage travel, and support a future growth strategy for Nelson Bay. These strategies were categorised into the following:

- Road network strategy;
- Parking strategy;
- Public transport strategy; and
- Walking and cycling strategy.

#### 8.1.1 Road Network Strategy

The road network strategy provides an integrated approach to road network planning and management that aims to meet the following requirements:

- Providing for economic activity and land use change;
- Managing seasonal demand and providing a bypass;
- Protecting core activity areas;
- Provide for pedestrians, cyclists and public transport; and
- Maintain safety and amenity.

The following strategies and action plans have been developed for Nelson Bay to help address the above aims:

- RNM1 – Revised road hierarchy, which includes:
  - RNM 1a - Dowling Street Town Centre Bypass (short-term action);
  - RNM 1b - Realignment of Magnus Street with the Dowling Street and Fingal Street intersection (medium-term action);
  - RNM 1c – Reprioritising movement at intersections along the Dowling Street bypass (short-term)
  - RNM 1d – Downgrade Victoria Parade (short to medium-term); and
  - RNM 1e – Downgrade Stockton Street (short to medium-term).
- RNM2 – Investigate the feasibility of Yacaaba Street extension (medium to long-term);
- RNM3 – Investigate the feasibility of upgrading Nelson Bay Road or a new Fingal Bypass (medium to long-term);

- ▶ RNM4 – Reduce signposted speed limit in main streets (short to medium-term);
- ▶ RNM5 – Reduce historical crash rates by upgrading traffic management (short-term);
- ▶ RNM6 – Introduce town centre gateway treatments (short-term); and
- ▶ RNM7 – Construct a roundabout at Church Street with Donald Street (short to medium-term).

### **8.1.2 Parking Strategy**

The road network strategy provides an integrated approach to managing parking, event demand, improving parking operations during higher demand periods and supports growth. The road network strategy aims to meet the following requirements:

- ▶ Serve local parking needs and the required day to day balance for attracting visitors travelling to Nelson Bay during peak, shoulder peak and non-peak tourist periods;
- ▶ Recognise that as development intensifies or the number of major events increases it will not be possible to meet unrestrained parking demand in some parts of the town centre;
- ▶ Promote parking as a travel demand management measure and an important part of a package of measures to improve overall accessibility, manage traffic levels and reduce transport impacts;
- ▶ Extracts the highest value out of existing and proposed parking facilities; and
- ▶ Encourage Port Stephens Council to develop an area wide parking framework that will best achieve the transport and accessibility aspirations of Nelson Bay.

The following strategies and action plans have been developed for Nelson Bay to help address the above aims:

- ▶ P1 – Improve direction signage and access to Donald Street Car Parks (short-term);
- ▶ P2 – Provide for long-term parking in the town centre and promote connectivity with the foreshore (short to medium-term);
- ▶ P3 – Improve town centre off-street parking facilities (short to medium-term);
- ▶ P4 – Improve parking enforcement during high season and major events (short to medium-term);
- ▶ P5 – Expand paid parking coverage (medium-term);
- ▶ P6 – Provide a park-and-ride site for major events and high season (medium-term);
- ▶ P7 – Provide advance warning and parking information signage to better manage event demand (medium-term);
- ▶ P8 – Develop a town centre parking management plan (short-term);
- ▶ P9 – Alternative uses for Section 94 contribution (medium-term); and
- ▶ P10 – Consider maximum car parking requirements (medium-term).

### **8.1.3 Public Transport Strategy**

The public transport strategy provides an integrated approach to managing travel demand through



improving the public transport service and structuring the network to encourage more people to use the system. The public transport strategy aims to meet the following requirements:

- ▶ Playing a support role to inform decision making undertaken by State Government relating to key public transport corridors and services;
- ▶ Promoting and aligning local public transport with user needs and helping to attract and inform users and better integrate with the broader public transport network and its seasonal demand trends;
- ▶ Structuring service provision around both development and activity intensification to relieve pressure from congestion and offer an opportunity to better manage network capacity and assets;
- ▶ Prioritise access by public transport over access by private vehicles and ensure that residents and visitors are aware of its advantages;
- ▶ Educate businesses and residents of the advantages of using public transport services for access, and their ability to improve network efficiency, safety and community well-being; and
- ▶ Support the development and improvement of the public transport network through planning and designing for the integration of land use and the transport system.

The following strategies and action plans have been developed for Nelson Bay to help address the above aims:

- ▶ PT1 – Public Transport Service Plan (short to medium-term);
- ▶ PT2 – Improve the attractiveness of the public transport interchange (short-term);
- ▶ PT3 – Investigate the feasibility of introducing park-and-ride (medium-term);
- ▶ PT4 - Public transport accessibility (short to medium-term); and
- ▶ PT5 – Fare-free route service for public transport (medium-term).

#### **8.1.4 Active Transport Strategy**

The active transport strategy provides an integrated approach to managing travel demand in and around the foreshore and town centre by creating and structuring the urban network so that it is safe and convenient to travel by walking or cycling to key destinations. The active transport strategy aims to meet the following requirements:

- ▶ Recognise the role walking and cycling plays in the reduction of car-based trips in Nelson Bay;
- ▶ Recognises that all trips involve walking at either the beginning or end (or both) of the journey, resulting in the need for connections between parking, the public transport system and key destinations;
- ▶ Incorporates walking and cycling issues into the planning and improvement of the road network, parking and public transport;
- ▶ Understand that walking and cycling trips perform a variety of functions, not only travel from an origin to a destination, but such trips are also undertaken for recreation and/or health benefits, which can be influenced by the amenity of the route;

- Recognises the need to improve the pedestrian environment in the town centre and to its surrounding catchments; and
- Encourages Port Stephens Council to develop a walking and cycling framework that will best achieve the aspirations of Nelson Bay and the Tomaree Peninsula.

The following strategies and action plans have been developed for Nelson Bay to help address the above aims:

- AT1 – Improve wayfinding and identification signage (short-term);
- AT 2 - Provide additional pedestrian crossing facilities (short – medium-term);
- AT 3 - Widen footpaths along Stockton Street to promote and encourage Main Street activities (short to medium-term);
- AT4 – Develop a PAMP and improve the condition and provision of footpaths (medium-term);
- AT5 - Close Stockton Street north to traffic during event days and high season periods (medium-term);
- AT6 - Improve town centre walking environment (medium-term); and
- AT7 - Increase the visibility of cycling through developing a bike plan and expanding the cycle network (medium-term).

### **8.1.5 Integrated Transport Strategy**

These individual strategies, considered collectively, comprise the Integrated Transport Strategy for Nelson Bay.

## **8.2 Next Steps**

The transport and parking strategies and action plans identified for Nelson Bay have been developed both to respond to transport issues and complement the principles outcomes described in the draft Nelson Bay 2030 Strategy.

In addition, the findings of this review necessitate follow-on actions and review, which includes the revision of existing Council policy documents and planning of operational and infrastructure improvements that will help to better manage transport and accommodate future growth in Nelson Bay. These include:

- Identify funding for the collection of detailed traffic and parking data sets that will inform decision making and allow Council to monitor both seasonal trends and the performance of the network over time;
- Monitor the performance of the road network against desirable operating conditions;
- Confirming the land use plans for the eastern side of the town centre and foreshore areas, which will dictate the functionality requirements for a Yacaaba Street extension;
- Undertake a road safety audit of the proposed Dowling Street town centre bypass route;

- ▶ Plan and set up a transport committee for investigating the feasibility of upgrading Nelson Bay Road to a dual carriageway beyond Anna Bay, and introducing a permanent event/high season Park-and-Ride site for accessing Nelson Bay and the Tomaree Peninsula;
- ▶ Review and implement recommended parking code changes identified as part of the benchmark comparison review and include a provision for bicycle parking associated with new town centre and foreshore developments;
- ▶ Review LEP and provide direction for consolidating parking in the town centre and limited access points along town centre Main Streets. These measures should further consider access arrangement needs and potential impacts from the redevelopment of Coles site by Woolworths and the Stockton Street service station;
- ▶ Consolidate off-street parking on the periphery of the town centre, reduce traffic activity on town centre Main Streets and the foreshore and promote Stockton Street and Apex Park as focal points for pedestrian activity;
- ▶ Review of Section 94 contributions for the upgrade of intersections, introduction of gateway treatments and improvements in wayfinding;
- ▶ Further investigate the feasibility of redeveloping Donald Street east and Donald Street west Car Parks; and
- ▶ Develop detailed plans, identify funding mechanisms and plan towards the implementation of short to medium-term improvement options.

## Appendix A

# 2011 Intersection Performance

Peak period performance at critical town centre intersections during a weekend event day in November 2011.

# LANE SUMMARY

Site: Church\_Donald\_IP - give way  
- Conversion

Three-way intersection with 2-lane major road (Give Way)  
Giveaway / Yield (Two-Way)

Lane Use and Performance																
	Demand Flows			Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Lane Length m	SL Type	Cap. Adj. %	Prob. Block. %
	L veh/h	T veh/h	R veh/h													
South: Church Street																
Lane 1	0	356	0	356	0.0	1950	0.182	100	0.0	LOS A	0.0	0.0	500	–	0.0	0.0
Lane 2	0	0	94	94	2.2	975	0.096	100	9.9	LOS A	0.4	2.7	500	–	0.0	0.0
Approach	0	356	94	449	0.5		0.182		2.1	NA	0.4	2.7				
East: Donald Street																
Lane 1	91	0	0	91	0.0	874	0.104	100	9.8	LOS A	0.4	2.6	500	–	0.0	0.0
Lane 2	0	0	175	175	0.0	272	0.641	100	30.8	LOS C	3.8	26.9	500	–	0.0	0.0
Approach	91	0	175	265	0.0		0.641		23.7	LOS B	3.8	26.9				
North: Church Street																
Lane 1	163	206	0	369	0.0	1908	0.194	100	3.6	LOS A	0.0	0.0	500	–	0.0	0.0
Approach	163	206	0	369	0.0		0.194		3.6	NA	0.0	0.0				
Intersection				1084	0.2		0.641		7.9	NA	3.8	26.9				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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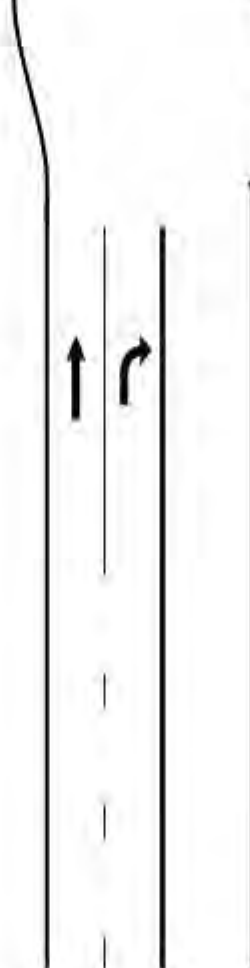
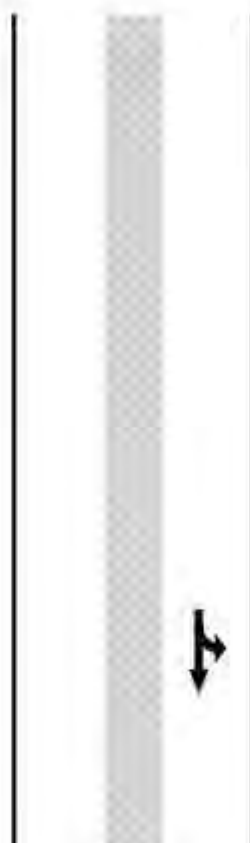
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Church Street



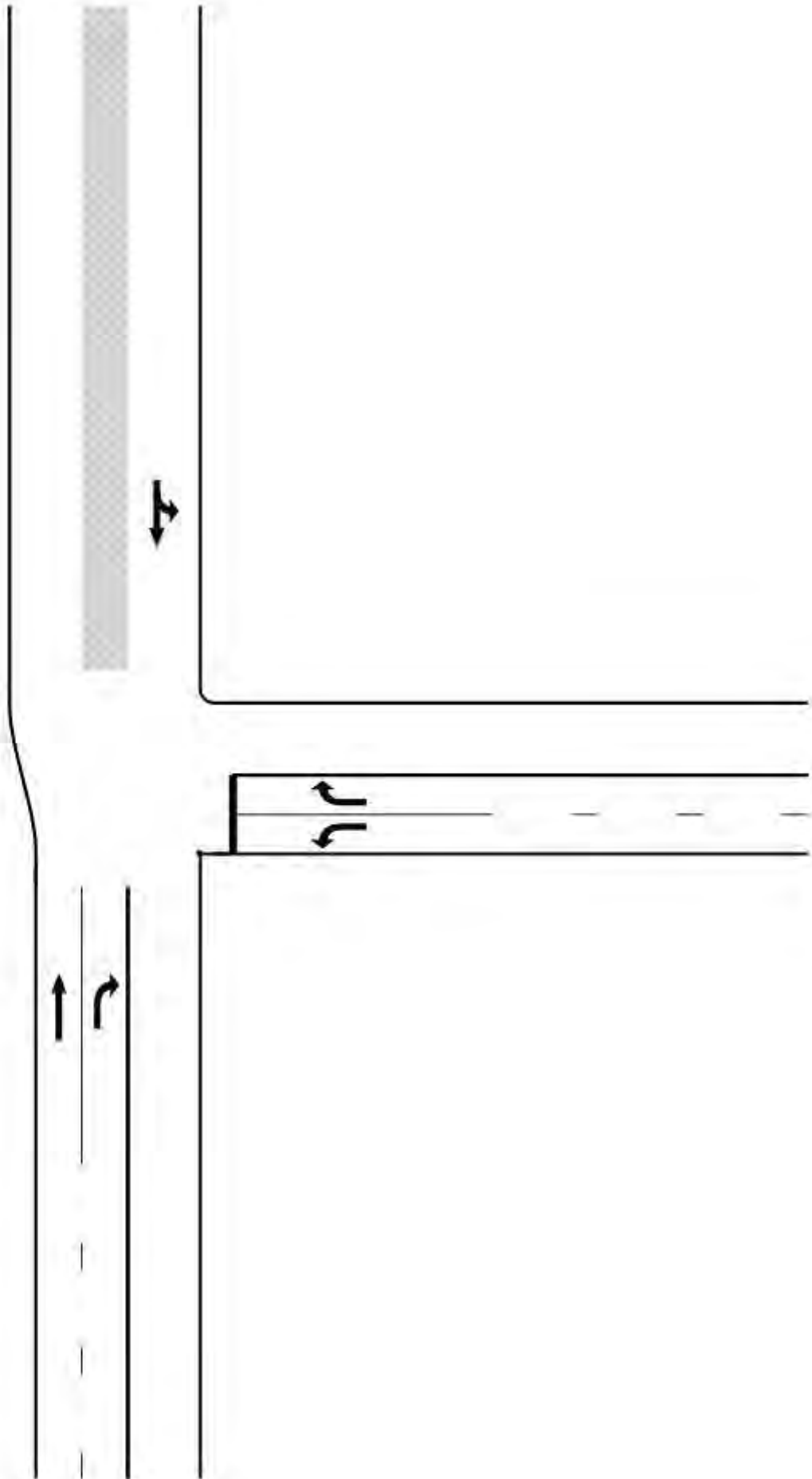
Church Street



Donald Street



Church Street



Church Street

Donald Street

# LANE SUMMARY

Site: Church\_Donald\_IP

Three-way intersection with 2-lane major road (Stop control)  
Stop (Two-Way)

Lane Use and Performance																
	Demand Flows			Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Vehicles Distance veh m	Lane Length m	SL Type	Cap. Adj. %	Prob. Block. %	
	L veh/h	T veh/h	R veh/h													
South: Church Street																
Lane 1	0	356	0	356	0.0	1950	0.182	100	0.0	LOS A	0.0	0.0	500	–	0.0	0.0
Lane 2	0	0	94	94	2.2	763	0.123	100	10.6	LOS A	0.5	3.2	500	–	0.0	0.0
Approach	0	356	94	449	0.5		0.182		2.2	NA	0.5	3.2				
East: Donald Street																
Lane 1	91	0	0	91	0.0	874	0.104	100	12.3	LOS A	0.4	2.6	500	–	0.0	0.0
Lane 2	0	0	175	175	0.0	272	0.641	100	33.4	LOS C	3.8	26.9	500	–	0.0	0.0
Approach	91	0	175	265	0.0		0.641		26.2	LOS B	3.8	26.9				
North: Church Street																
Lane 1	163	206	0	369	0.0	1908	0.194	100	3.6	LOS A	0.0	0.0	500	–	0.0	0.0
Approach	163	206	0	369	0.0		0.194		3.6	NA	0.0	0.0				
Intersection				1084	0.2		0.641		8.6	NA	3.8	26.9				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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# LANE SUMMARY

Site: Stockton\_Donald\_IP - Conversion

Stockton Street - Donald Street

Stop (Two-Way)

Lane Use and Performance																
	Demand Flows															
	L	T	R	Total	HV	Cap.	Deg.	Lane	Average	Level of	95% Back of Queue	95% Back of Queue	Lane	SL	Cap.	Prob.
	veh/h	veh/h	veh/h	veh/h	%	veh/h	Satn	Util.	Delay	Service	Vehicles	Distance	Length	Type	Adj.	Block.
							v/c	%	sec		veh	m	m		%	%
South: Stockton Street (S)																
Lane 1	140	0	0	140	0.7	437	0.320	100	16.2	LOS B	1.3	9.4	25 Turn Bay		0.0	0.0
Lane 2	0	0	126	126	0.0	321	0.392	100	20.9	LOS B	1.9	13.0	500	–	0.0	0.0
Approach	140	0	126	266	0.4		0.392		18.4	LOS B	1.9	13.0				
South East: Zebra Crossing at S																
Lane 1	0	200	0	200	0.0	6000	0.033	100	0.0	LOS A	0.0	0.0	10	–	0.0	0.0
Approach	0	200	0	200	0.0		0.033		0.0	NA	0.0	0.0				
East: Donald Street (E)																
Lane 1	35	90	0	125	1.6	814	0.154	100	2.8	LOS A	0.6	4.2	500	–	0.0	0.0
Approach	35	90	0	125	1.6		0.154		2.8	LOS A	0.6	4.2				
North: Stockton St (N)																
Lane 1	93	99	0	192	0.0	525 <sup>1</sup>	0.366	100	12.6	LOS A	1.5	10.2	15 Turn Bay		0.0	0.0
Lane 2	0	0	103	103	0.0	170	0.607	100	42.9	LOS D	2.8	19.9	500	–	0.0	0.0
Approach	93	99	103	295	0.0		0.607		23.2	LOS B	2.8	19.9				
West: Donald Street (W)																
Lane 1	0	120	45	165	0.0	667	0.247	100	4.5	LOS A	1.0	7.1	500	–	0.0	0.0
Approach	0	120	45	165	0.0		0.247		4.5	LOS A	1.0	7.1				
South West: Zebra Crossing at W																
Lane 1	0	586	0	586	0.0	6000	0.098	100	0.0	LOS A	0.0	0.0	8	–	0.0	0.0
Approach	0	586	0	586	0.0		0.098		0.0	NA	0.0	0.0				
Intersection				1637	0.2		0.607		7.8	NA	2.8	19.9				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

<sup>1</sup> Reduced capacity due to a short lane effect

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Stockton St (N)

15



Donald Street (W)



Donald Street (E)



25



Stockton Street (S)



# LANE SUMMARY

Site: Stockton\_Tomaree\_IP

Four-way intersection with 2-lane major road (Give-Way control)

Giveway / Yield (Two-Way)

Lane Use and Performance																
	Demand Flows			Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Lane Length m	SL Type	Cap. Adj. %	Prob. Block. %
	L veh/h	T veh/h	R veh/h													
South: Stockton Street																
Lane 1	13	191	55	258	0.0	1530	0.169	100	3.8	LOS A	1.1	8.0	500	–	0.0	0.0
Approach	13	191	55	258	0.0		0.169		3.8	NA	1.1	8.0				
East: Tomaree Street																
Lane 1	93	16	20	128	0.0	1189	0.108	100	9.4	LOS A	0.5	3.4	500	–	0.0	0.0
Approach	93	16	20	128	0.0		0.108		9.4	LOS A	0.5	3.4				
North: Stockton Street																
Lane 1	42	181	17	240	0.0	1790	0.134	100	3.2	LOS A	1.0	6.7	500	–	0.0	0.0
Approach	42	181	17	240	0.0		0.134		3.2	NA	1.0	6.7				
West: Tomaree Street																
Lane 1	20	20	9	49	0.0	794	0.062	100	10.4	LOS A	0.3	1.8	500	–	0.0	0.0
Approach	20	20	9	49	0.0		0.062		10.4	LOS A	0.3	1.8				
Intersection				676	0.0		0.169		5.1	NA	1.1	8.0				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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Stockton Street



Stockton Street



Tomaree Street

Tomaree Street

# LANE SUMMARY

Site: Yacaaba\_Donald\_IP

Four-way intersection with 2-lane major road (Stop control)

Stop (Two-Way)

Lane Use and Performance																
	Demand Flows			Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Lane Length m	SL Type	Cap. Adj. %	Prob. Block. %
	L veh/h	T veh/h	R veh/h													
South: Yacaaba Street																
Lane 1	23	53	26	102	0.0	1525	0.067	100	4.4	LOS A	0.4	2.6	500	–	0.0	0.0
Approach	23	53	26	102	0.0		0.067		4.4	NA	0.4	2.6				
East: Donald Street																
Lane 1	32	46	9	87	0.0	1026	0.085	100	11.6	LOS A	0.4	2.6	500	–	0.0	0.0
Approach	32	46	9	87	0.0		0.085		11.6	LOS A	0.4	2.6				
North: Yacaaba Street																
Lane 1	13	40	51	103	0.0	1184	0.087	100	6.2	LOS A	0.4	3.0	500	–	0.0	0.0
Approach	13	40	51	103	0.0		0.087		6.2	NA	0.4	3.0				
West: Donald Street																
Lane 1	206	113	35	354	0.0	1242	0.285	100	11.4	LOS A	1.5	10.7	500	–	0.0	0.0
Approach	206	113	35	354	0.0		0.285		11.4	LOS A	1.5	10.7				
Intersection				646	0.0		0.285		9.5	NA	1.5	10.7				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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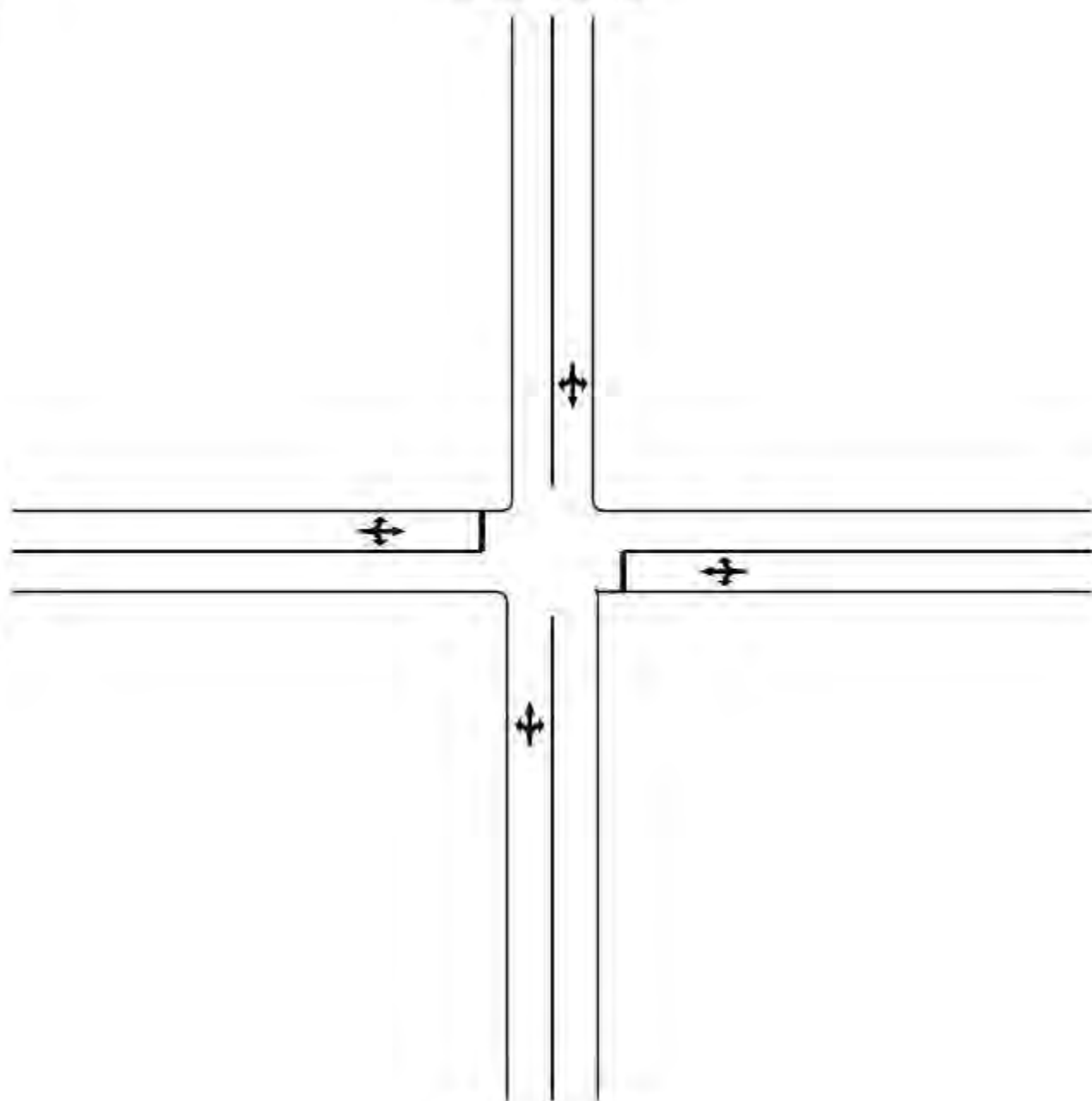


Yacaaba Street

Donald Street

Donald Street

Yacaaba Streert



## LANE SUMMARY

Site: Yacaaba\_Magnus\_IP

Three-way intersection with 2-lane major road (Stop control)  
Stop (Two-Way)

Lane Use and Performance																
	Demand Flows			Total	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Lane Length m	SL Type	Cap. Adj. %	Prob. Block. %
	L veh/h	T veh/h	R veh/h													
South: Yacaaba Street																
Lane 1	86	0	172	258	0.0	1857	0.139	100	8.1	LOS A	0.0	0.0	500	–	0.0	0.0
Approach	86	0	172	258	0.0		0.139		8.1	NA	0.0	0.0				
East: Magnus Street																
Lane 1	100	34	0	134	0.0	1312	0.102	100	13.2	LOS A	0.8	5.7	500	–	0.0	0.0
Approach	100	34	0	134	0.0		0.102		13.2	LOS A	0.8	5.7				
Intersection				392	0.0		0.139		9.9	NA	0.8	5.7				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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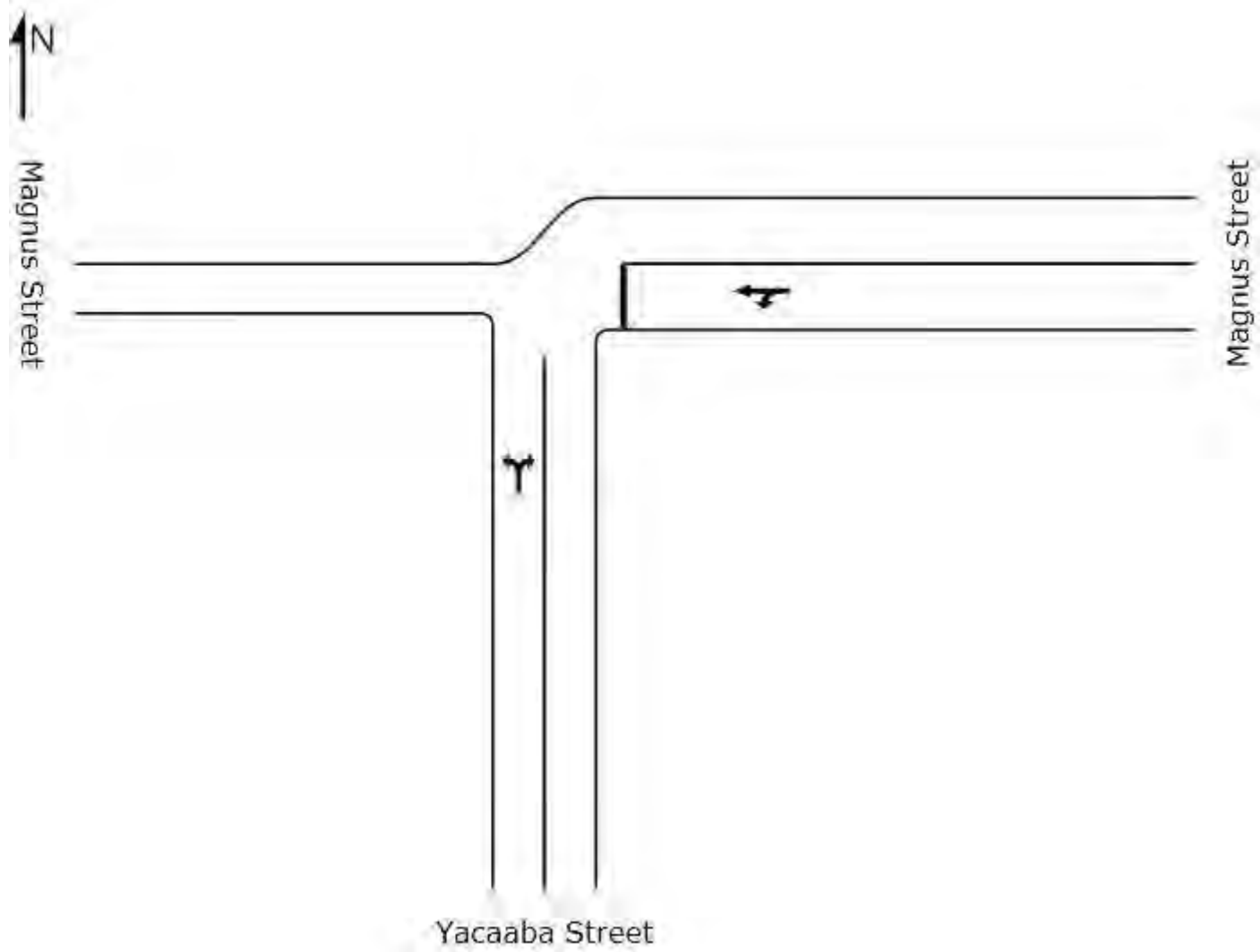
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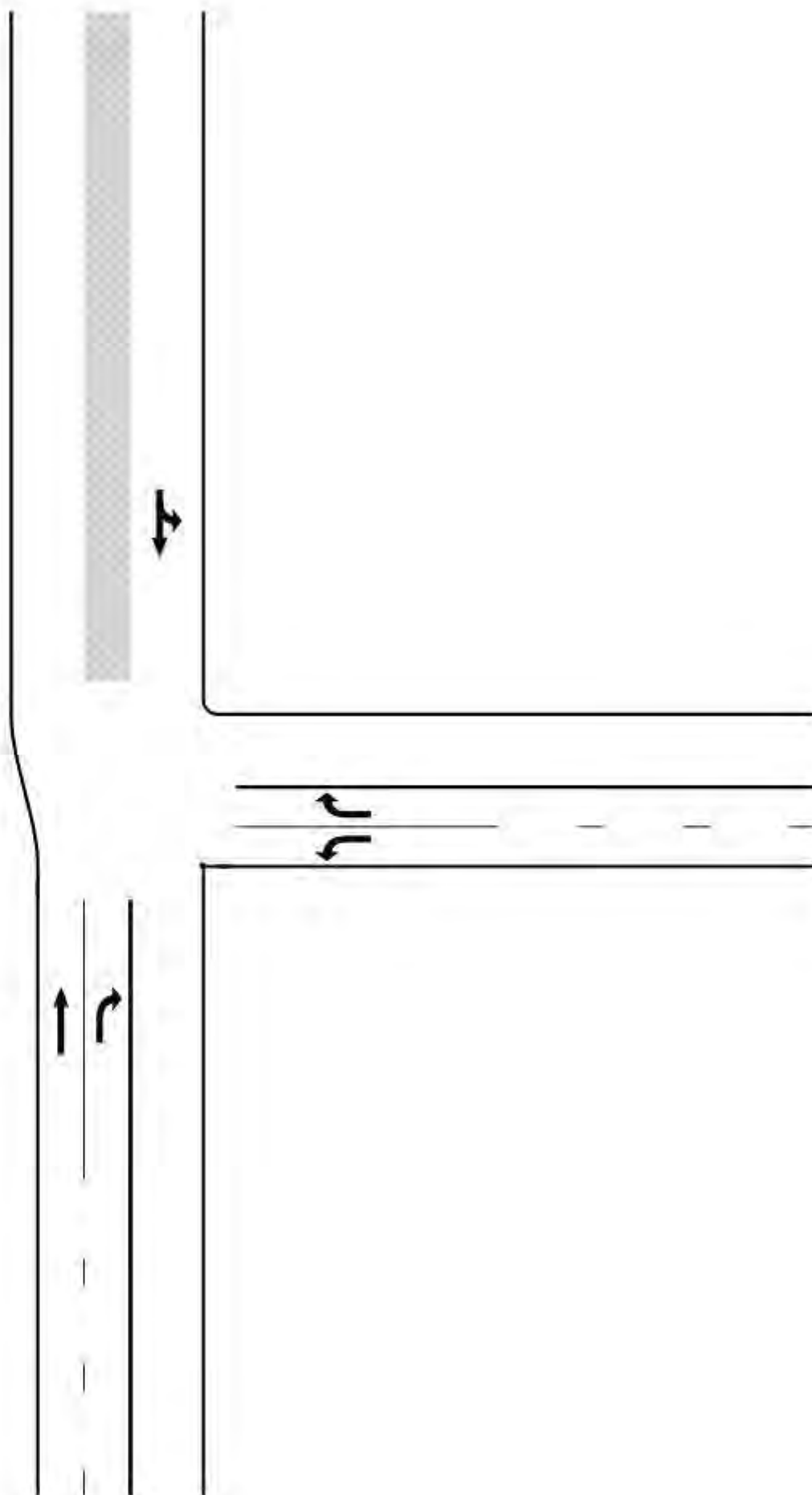
## Appendix B

# Review of Future Traffic Conditions

Assessment of Peak Period Performance Needs and  
Intersection Control Requirements



Church Street



Church Street

Donald Street

# LANE SUMMARY

Site: Church\_Donald\_IP

Three-way intersection with 2-lane major road (Stop control)  
Stop (Two-Way)

Lane Use and Performance																
	Demand Flows			Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Lane Length m	SL Type	Cap. Adj. %	Prob. Block. %
	L veh/h	T veh/h	R veh/h													
South: Church Street																
Lane 1	0	445	0	445	0.0	1950	0.228	100	0.0	LOS A	0.0	0.0	500	–	0.0	0.0
Lane 2	0	0	117	117	2.2	670	0.174	100	11.6	LOS A	0.6	4.6	500	–	0.0	0.0
Approach	0	445	117	562	0.5		0.228		2.4	NA	0.6	4.6				
East: Donald Street																
Lane 1	114	0	0	114	0.0	796	0.143	100	10.4	LOS A	0.5	3.7	500	–	0.0	0.0
Lane 2	0	0	219	219	0.0	191	1.146	100	200.3	LOS F	26.6	185.9	500	–	0.0	0.0
Approach	114	0	219	333	0.0		1.146		135.4	NA	26.6	185.9				
North: Church Street																
Lane 1	204	258	0	462	0.0	1908	0.242	100	3.6	LOS A	0.0	0.0	500	–	0.0	0.0
Approach	204	258	0	462	0.0		0.242		3.6	NA	0.0	0.0				
Intersection				1357	0.2		1.146		35.4	NA	26.6	185.9				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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# LANE SUMMARY

Site: Church\_Donald\_IP - Redist Traffic

Three-way intersection with 2-lane major road (Stop control)  
Stop (Two-Way)

Lane Use and Performance																
	Demand Flows			Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Lane Length m	SL Type	Cap. Adj. %	Prob. Block. %
	L veh/h	T veh/h	R veh/h													
South: Church Street																
Lane 1	0	445	0	445	0.0	1950	0.228	100	0.0	LOS A	0.0	0.0	500	–	0.0	0.0
Lane 2	0	0	174	174	2.2	515	0.337	100	15.0	LOS B	1.5	10.6	500	–	0.0	0.0
Approach	0	445	174	619	0.6		0.337		4.2	NA	1.5	10.6				
East: Donald Street																
Lane 1	85	0	0	85	0.0	631	0.135	100	11.9	LOS A	0.5	3.3	500	–	0.0	0.0
Lane 2	0	0	164	164	0.0	122	1.345	100	386.7	LOS F	32.9	230.4	500	–	0.0	0.0
Approach	85	0	164	249	0.0		1.345		258.6	NA	32.9	230.4				
North: Church Street																
Lane 1	301	369	0	671	0.0	1907	0.352	100	3.7	LOS A	0.0	0.0	500	–	0.0	0.0
Approach	301	369	0	671	0.0		0.352		3.7	NA	0.0	0.0				
Intersection				1539	0.3		1.345		45.2	NA	32.9	230.4				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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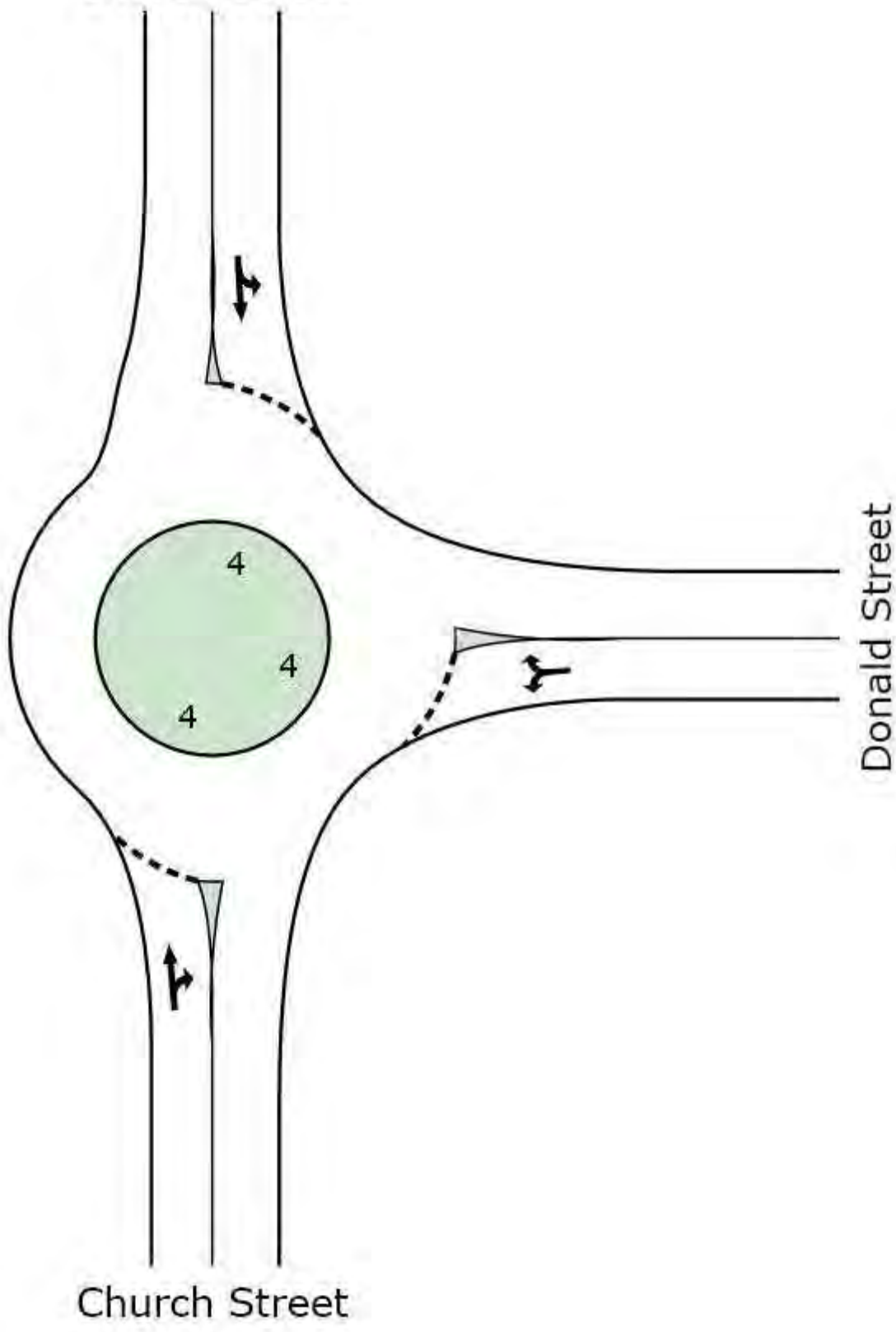
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Church Street



# LANE SUMMARY

Site: Church\_Donald\_IP -  
Conversion

Three-way intersection with 2-lane major road (Stop control)  
Roundabout

Lane Use and Performance																
	Demand Flows			Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Lane Length m	SL Type	Cap. Adj. %	Prob. Block. %
	L veh/h	T veh/h	R veh/h													
South: Church Street																
Lane 1	0	445	117	562	0.5	1101	0.510	100	9.6	LOS A	3.3	23.3	500	–	0.0	0.0
Approach	0	445	117	562	0.5		0.510		9.6	LOS A	3.3	23.3				
East: Donald Street																
Lane 1	114	0	219	333	0.0	1029	0.323	100	11.4	LOS A	1.6	11.4	500	–	0.0	0.0
Approach	114	0	219	333	0.0		0.323		11.4	LOS A	1.6	11.4				
North: Church Street																
Lane 1	204	258	0	462	0.0	1239	0.373	100	8.7	LOS A	1.9	13.3	500	–	0.0	0.0
Approach	204	258	0	462	0.0		0.373		8.7	LOS A	1.9	13.3				
Intersection				1357	0.2		0.510		9.7	LOS A	3.3	23.3				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model used.

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# LANE SUMMARY

Site: Church\_Donald\_IP -  
Conversion - Redist Traffic

Three-way intersection with 2-lane major road (Stop control)  
Roundabout

Lane Use and Performance																
	Demand Flows			Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Lane Length m	SL Type	Cap. Adj. %	Prob. Block. %
	L	T	R													
	veh/h	veh/h	veh/h													
South: Church Street																
Lane 1	0	445	174	619	0.6	1174	0.527	100	9.5	LOS A	3.6	25.5	500	–	0.0	0.0
Approach	0	445	174	619	0.6		0.527		9.5	LOS A	3.6	25.5				
East: Donald Street																
Lane 1	85	0	164	249	0.0	984	0.254	100	11.6	LOS A	1.3	9.0	500	–	0.0	0.0
Approach	85	0	164	249	0.0		0.254		11.6	LOS A	1.3	9.0				
North: Church Street																
Lane 1	301	369	0	671	0.0	1200	0.559	100	9.0	LOS A	3.6	25.0	500	–	0.0	0.0
Approach	301	369	0	671	0.0		0.559		9.0	LOS A	3.6	25.0				
Intersection				1539	0.3		0.559		9.6	LOS A	3.6	25.5				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model used.

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# LANE SUMMARY

Site: Stockton\_Donald\_IP - Conversion

Stockton Street - Donald Street

Stop (Two-Way)

Lane Use and Performance																
	Demand Flows															
	L	T	R	Total	HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Lane Length	SL Type	Cap. Adj.	Prob. Block.
	veh/h	veh/h	veh/h	veh/h	%	veh/h	v/c	%	sec		veh	m	m		%	%
South: Stockton Street (S)																
Lane 1	175	0	0	175	0.7	322	0.543	100	23.8	LOS B	2.6	18.2	25 Turn Bay	0.0	0.0	
Lane 2	0	0	158	158	0.0	238	0.664	100	35.1	LOS C	3.9	27.0	500	–	0.0	0.0
Approach	175	0	158	333	0.4		0.664		29.1	LOS C	3.9	27.0				
South East: Zebra Crossing at S																
Lane 1	0	250	0	250	0.0	6000	0.042	100	0.0	LOS A	0.0	0.0	10	–	0.0	0.0
Approach	0	250	0	250	0.0		0.042		0.0	NA	0.0	0.0				
East: Donald Street (E)																
Lane 1	44	113	0	157	1.6	662	0.237	100	4.4	LOS A	0.9	6.6	500	–	0.0	0.0
Approach	44	113	0	157	1.6		0.237		4.4	LOS A	0.9	6.6				
North: Stockton St (N)																
Lane 1	116	124	0	240	0.0	489 <sup>1</sup>	0.491	100	16.1	LOS B	2.7	19.1	15 Turn Bay	0.0	12.7	
Lane 2	0	0	129	129	0.0	101	1.277	100	596.8	LOS F	41.1	287.7	500	–	0.0	0.0
Approach	116	124	129	369	0.0		1.277		219.1	LOS F	41.1	287.7				
West: Donald Street (W)																
Lane 1	0	150	56	206	0.0	516	0.399	100	8.2	LOS A	1.9	13.2	500	–	0.0	0.0
Approach	0	150	56	206	0.0		0.399		8.2	LOS A	1.9	13.2				
South West: Zebra Crossing at W																
Lane 1	0	732	0	732	0.0	6000	0.122	100	0.0	LOS A	0.0	0.0	8	–	0.0	0.0
Approach	0	732	0	732	0.0		0.122		0.0	NA	0.0	0.0				
Intersection				2047	0.2		1.277		45.4	NA	41.1	287.7				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

<sup>1</sup> Reduced capacity due to a short lane effect

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# LANE SUMMARY

Site: Stockton\_Donald\_IP -  
Conversion - Redist Traffic

Stockton Street - Donald Street

Stop (Two-Way)

Lane Use and Performance																
	Demand Flows															
	L	T	R	Total	HV	Cap.	Deg.	Lane	Average	Level of	95% Back of Queue	95% Back of Queue	Lane	SL	Cap.	Prob.
	veh/h	veh/h	veh/h	veh/h	%	veh/h	Satn	Util.	Delay	Service	Vehicles	Distance	Length	Type	Adj.	Block.
							v/c	%	sec		veh	m	m		%	%
South: Stockton Street (S)																
Lane 1	88	0	0	88	0.7	322	0.273	100	19.4	LOS B	1.0	7.1	25 Turn Bay		0.0	0.0
Lane 2	0	0	79	79	0.0	305	0.259	100	19.5	LOS B	1.0	7.2	500	–	0.0	0.0
Approach	88	0	79	167	0.4		0.273		19.4	LOS B	1.0	7.2				
South East: Zebra Crossing at S																
Lane 1	0	250	0	250	0.0	6000	0.042	100	0.0	LOS A	0.0	0.0	10	–	0.0	0.0
Approach	0	250	0	250	0.0		0.042		0.0	NA	0.0	0.0				
East: Donald Street (E)																
Lane 1	44	113	0	157	1.6	662	0.237	100	4.4	LOS A	0.9	6.6	500	–	0.0	0.0
Approach	44	113	0	157	1.6		0.237		4.4	LOS A	0.9	6.6				
North: Stockton St (N)																
Lane 1	58	62	0	120	0.0	490 <sup>1</sup>	0.245	100	12.8	LOS A	0.8	5.7	15 Turn Bay		0.0	0.0
Lane 2	0	0	64	64	0.0	126	0.509	100	49.6	LOS D	2.0	13.9	500	–	0.0	0.0
Approach	58	62	64	184	0.0		0.509		25.6	LOS B	2.0	13.9				
West: Donald Street (W)																
Lane 1	0	150	42	192	0.0	526	0.365	100	7.6	LOS A	1.7	11.6	500	–	0.0	0.0
Approach	0	150	42	192	0.0		0.365		7.6	LOS A	1.7	11.6				
South West: Zebra Crossing at W																
Lane 1	0	732	0	732	0.0	6000	0.122	100	0.0	LOS A	0.0	0.0	8	–	0.0	0.0
Approach	0	732	0	732	0.0		0.122		0.0	NA	0.0	0.0				
Intersection				1682	0.2		0.509		6.0	NA	2.0	13.9				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

<sup>1</sup> Reduced capacity due to a short lane effect

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Stockton St (N)

15



Donald Street (W)



Donald Street (E)



25



Stockton Street (S)

# LANE SUMMARY

Site: Stockton\_Tomaree\_IP

Four-way intersection with 2-lane major road (Give-Way control)

Giveway / Yield (Two-Way)

Lane Use and Performance																
	Demand Flows			Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Lane Length m	SL Type	Cap. Adj. %	Prob. Block. %
	L veh/h	T veh/h	R veh/h													
South: Stockton Street																
Lane 1	16	238	68	322	0.0	1485	0.217	100	4.5	LOS A	1.6	11.5	500	–	0.0	0.0
Approach	16	238	68	322	0.0		0.217		4.5	NA	1.6	11.5				
East: Tomaree Street																
Lane 1	116	20	25	161	0.0	1071	0.150	100	9.9	LOS A	0.7	4.7	500	–	0.0	0.0
Approach	116	20	25	161	0.0		0.150		9.9	LOS A	0.7	4.7				
North: Stockton Street																
Lane 1	53	226	21	300	0.0	1776	0.169	100	3.6	LOS A	1.3	9.2	500	–	0.0	0.0
Approach	53	226	21	300	0.0		0.169		3.6	NA	1.3	9.2				
West: Tomaree Street																
Lane 1	25	25	12	62	0.0	667	0.093	100	11.6	LOS A	0.4	2.6	500	–	0.0	0.0
Approach	25	25	12	62	0.0		0.093		11.6	LOS A	0.4	2.6				
Intersection				845	0.0		0.217		5.7	NA	1.6	11.5				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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Stockton Street



Stockton Street

Tomaree Street

Tomaree Street

# LANE SUMMARY

Site: Yacaaba\_Donald\_IP

Four-way intersection with 2-lane major road (Stop control)

Stop (Two-Way)

Lane Use and Performance																
	Demand Flows			Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Vehicles Distance veh m	Lane Length m	SL Type	Cap. Adj. %	Prob. Block. %	
	L veh/h	T veh/h	R veh/h													
South: Yacaaba Street																
Lane 1	29	66	33	128	0.0	1517	0.085	100	4.5	LOS A	0.5	3.4	500	–	0.0	0.0
Approach	29	66	33	128	0.0		0.085		4.5	NA	0.5	3.4				
East: Donald Street																
Lane 1	40	58	12	109	0.0	963	0.114	100	11.9	LOS A	0.5	3.5	500	–	0.0	0.0
Approach	40	58	12	109	0.0		0.114		11.9	LOS A	0.5	3.5				
North: Yacaaba Street																
Lane 1	16	51	63	129	0.0	1143	0.113	100	6.6	LOS A	0.6	4.1	500	–	0.0	0.0
Approach	16	51	63	129	0.0		0.113		6.6	NA	0.6	4.1				
West: Donald Street																
Lane 1	258	141	43	442	0.0	1188	0.372	100	11.7	LOS A	2.1	14.9	500	–	0.0	0.0
Approach	258	141	43	442	0.0		0.372		11.7	LOS A	2.1	14.9				
Intersection				809	0.0		0.372		9.8	NA	2.1	14.9				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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SIDRA INTERSECTION 5.1.2.1953

Project: G:\21\21003\Tech\Sidra\25% Growth Models\NB\_Yacaaba\_Donald\_25%.sip

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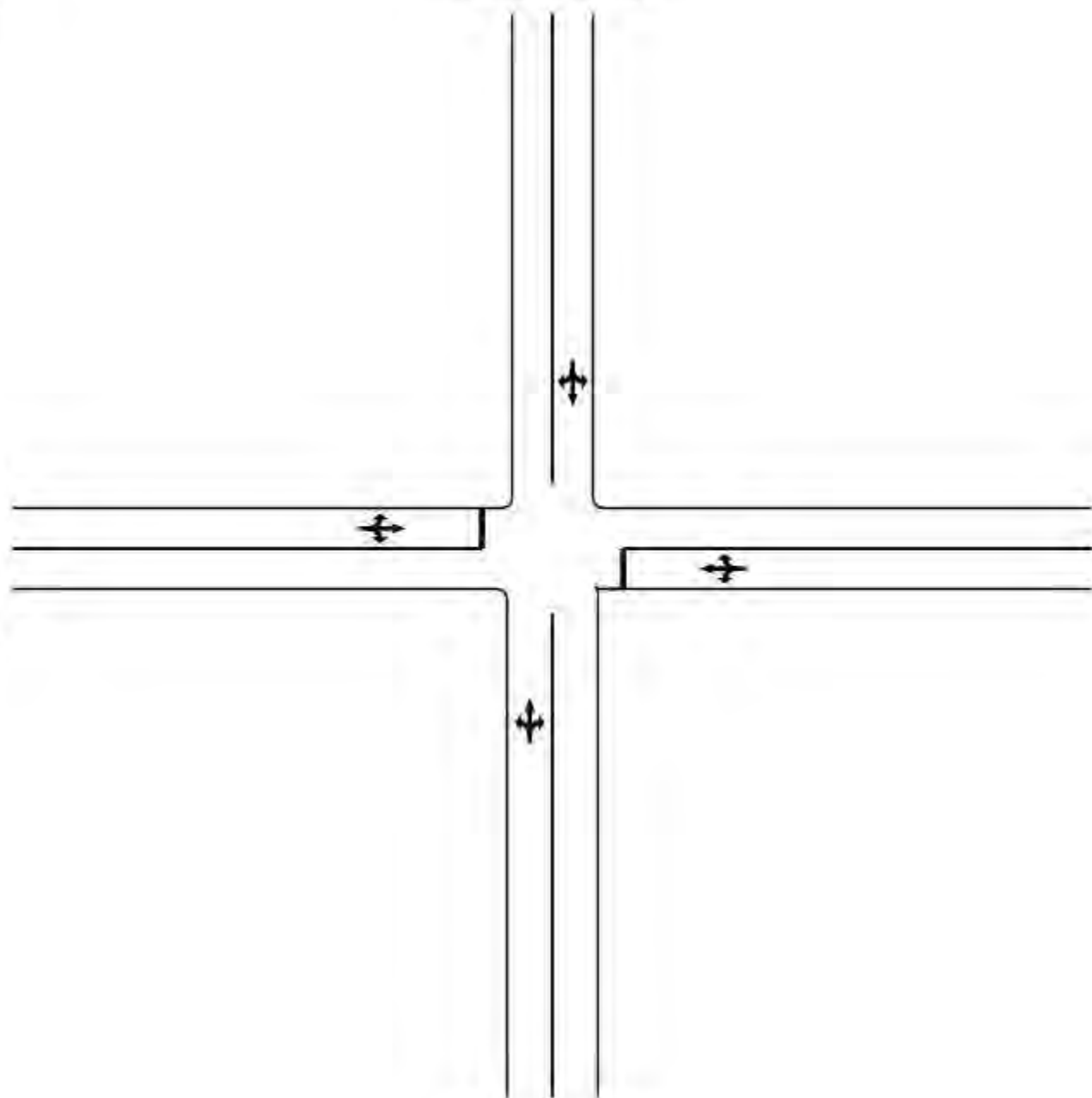


Yacaaba Street

Donald Street

Donald Street

Yacaaba Streert





## LANE SUMMARY

Site: Yacaaba\_Magnus\_IP

Three-way intersection with 2-lane major road (Stop control)  
Stop (Two-Way)

Lane Use and Performance																
	Demand Flows			Total	HV	Cap.	Deg.	Lane	Average	Level of	95% Back	of Queue	Lane	SL	Cap.	Prob.
	L	T	R													
	veh/h	veh/h	veh/h	veh/h	%	veh/h	Satn	Util.	Delay	Service	Vehicles	Distance	Length	Type	Adj.	Block.
							v/c	%	sec		veh	m	m		%	%
South: Yacaaba Street																
Lane 1	108	0	215	323	0.0	1857	0.174	100	8.1	LOS A	0.0	0.0	500	–	0.0	0.0
Approach	108	0	215	323	0.0		0.174		8.1	NA	0.0	0.0				
East: Magnus Street																
Lane 1	125	42	0	167	0.0	1243	0.135	100	14.3	LOS A	1.2	8.2	500	–	0.0	0.0
Approach	125	42	0	167	0.0		0.135		14.3	LOS A	1.2	8.2				
Intersection				491	0.0		0.174		10.3	NA	1.2	8.2				

Level of Service (LOS) Method: Delay (RTA NSW).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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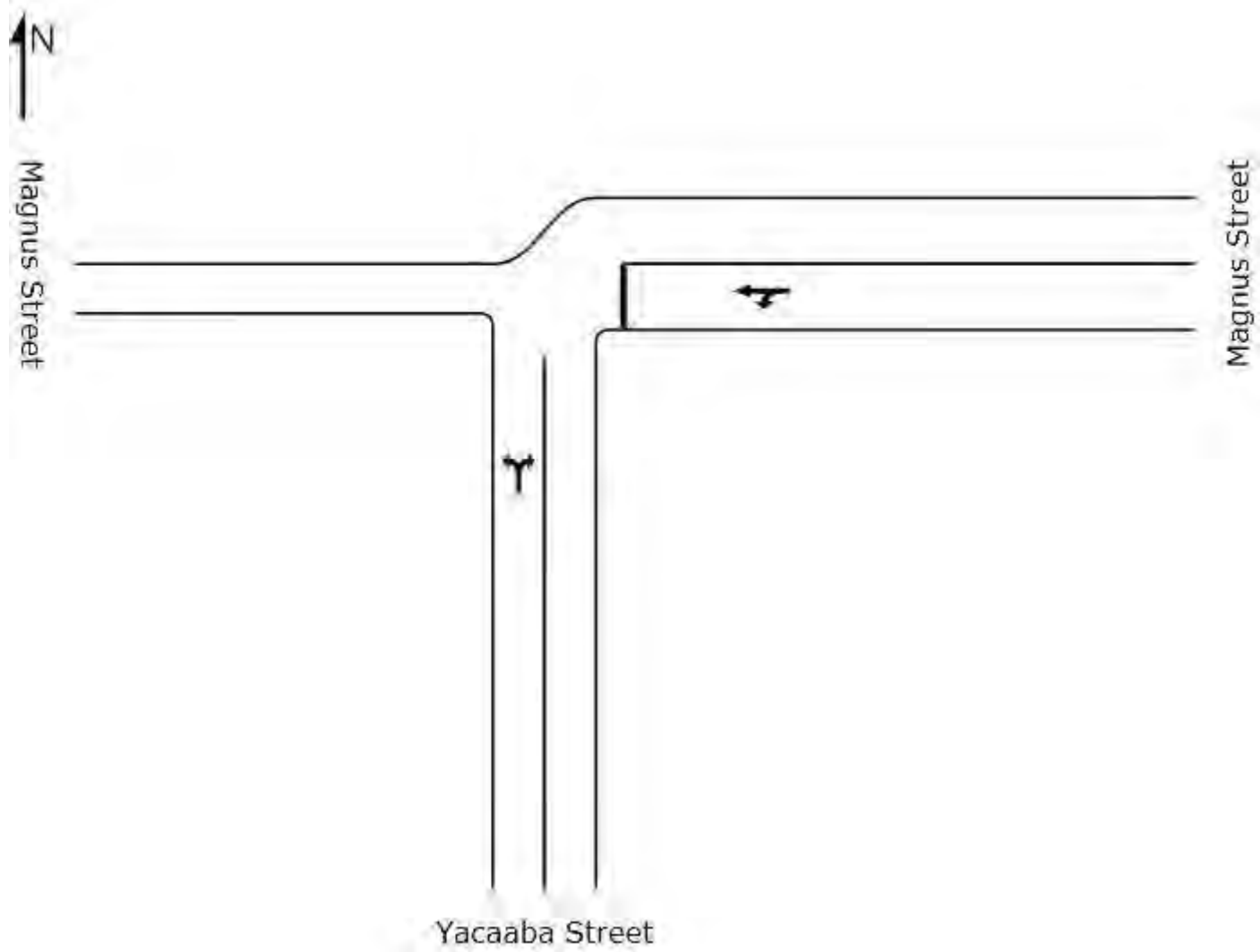
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## Appendix C

# Review of Yacaaba St Extension Options

Qualitative assessment of potential configuration options and functionality needs for the proposed Yacaaba Street Extension between Victoria Parade and Donald Street

# Assessment Scoring System

The qualitative appraisal includes:

- Advantages and disadvantages of each options against doing nothing;
- A review of each option's alignment with planning principles identified in the Draft Nelson Bay 2030 strategy; and
- A review of each option's alignment with key stakeholder needs; and
- The affordability of each option in terms of likely project costs associated with implementation.

The evaluation technique adopted for each of the above qualitative assessment components are described below.

## 7.3 Advantages and Disadvantages of the Proposal

This component of the assessment evaluates each option against its ability to address current known transport network deficiencies. The scoring system adopted as part of this qualitative assessment assigns the score of:

- 3 (positive and coloured green), where it is viewed that its identified that the improvement option has the ability to improve current transport network conditions and these outweigh any potential negative effects.
- 1 (neutral and coloured), where the improvement option has a neutral contribution to improving current transport network deficiencies, and does not have any negative effects.
- 0 (negative and coloured red), where the improvement option has a negative effects on current transport network conditions and these are deemed to outweigh its benefits.

## 7.4 Aligns with draft NBS 2030 Planning Principles

The assessment will evaluate each option against its ability to support the above planning principle objectives, a identified in section 7.1. The scoring system adopted as part of this qualitative assessment is as follows with each improvement options assigned a score of:

- 3 (coloured green and reflecting a positive contribution), where it is viewed to support the planning principle objective or an overall of more than 9 when evaluated against all six planning principles;
- 1 (coloured amber and reflecting a neutral contribution), where it neither supports or has a negative impact on a principle planning objective, or an overall of between 5 and 9 when evaluated against all six planning principles.
- 0 (coloured red and reflecting a negative contribution), where it is deemed not to support a planning principle objective, or an overall of less than 5 when evaluated against all six planning principles.

The scoring used in Appendix D indicates that when the six selected NBS 2030 planning principles are grouped, the total combined scores can range between 0 and 18 with the total scores ranked as follows:

- Over 11 (positive and coloured green), where it is viewed to have mostly positive contribution to achieving the goals of the NBS 2030 (over three positives planning principles met);

- ▶ 6 to 10 (neutral and coloured), where it is identified to have a combination of mostly neutral with some positive planning principle alignment; or
- ▶ 0 to 5 (negative and coloured red), where the scheme does not align with the goals of the NBS 2030.

## 7.5 High Level Review of Potential Scheme Costs

This section evaluates each option against the potential costs of implementation. The scoring system adopted as part of this qualitative assessment is as follows with each improvement options assigned a score of:

- ▶ 3 meaning a relatively low cost project (represented by \$ and coloured green), where it is viewed that the cost could be accounted for by either a standard replacement maintenance item or within the current minor works capital budget;
- ▶ 1 indicating a medium cost project (represented by \$\$ and coloured orange), where it is viewed that the cost could not be accounted for as a standard replacement maintenance item or within a current minor works capital budget and therefore adjustments and increases to the capital works budget are required;
- ▶ 0 identifies that the costs associated with this project are significant (represented by \$\$\$ and coloured red), where it is viewed that the cost could not be accounted for in a council capital works budget and requires additional funding from developers, State or Federal Government or a combination of the above.

Refer to Appendix C and Appendix D for a detailed understanding of the individual improvement option scores against the merits of each scheme, affordability, its ability to align with both draft NBS 2030 planning principles and key community needs.

## 7.6 Total Scores Summary

This section provides the summary score ranges, which will be used to evaluate each improvement options, The score ranges consist of:

- ▶ 15 and above (preferred scheme and coloured green), where it is viewed that the improvement option offers significant merits, addresses current and future needs, and is deemed to be affordable.
- ▶ 10 to 14 (not a priority and coloured orange), where it is viewed that the improvement option offers some benefit but it is not a key priority at this moment in time and probably falls outside of the current 5 year improvement works program and funding.
- ▶ 0 to 9 (a low priority and coloured red), where it is viewed that the improvement options benefits are not at this point in time fully understood and would definitely not form part of the current 5 year capital works program or local funding streams.



# Stage 1 – Options Appraisal Process

## Road Network Improvement Options

Description	Pros	Cons	+/-	Cost
<b>Option 4a –Yacaaba Street extension (two way)</b>	<ul style="list-style-type: none"> <li>Completes a missing link between foreshore from the town centre</li> <li>May assist reduce conflict at Government Rd/ Stockton St</li> <li>May assist high season temp closure of Government Rd at Stockton St</li> <li>May assist high season temp/ perm closure of Stockton St north</li> </ul>	<ul style="list-style-type: none"> <li>Availability of funding, land and constructability issues</li> <li>Poor alignment and gradient issues</li> <li>Conflict with activity and movement along Magnus Street (west)</li> <li>Potential safety issues and impact on town centre accessibility</li> <li>May result in higher congestion levels in the town centre.</li> </ul>	Negative	\$\$\$\$\$
<b>Option 4b –Yacaaba Street extension (one way south/ town centre bound)</b>	<ul style="list-style-type: none"> <li>Completes a missing link between foreshore from the town centre</li> <li>May assist reduce conflict at Government Road/ Stockton St</li> <li>May assist high season temp closure of Government R at Stockton St</li> <li>May assist high season temp/ perm closure of Stockton St north</li> <li>Help to remove traffic from foreshore &amp; promote parking in the town centre</li> <li>Narrower road corridor in comparison to two way option</li> <li>May support bus service route improvements &amp; Park &amp; Ride</li> </ul>	<ul style="list-style-type: none"> <li>Availability of funding, land and constructability issues</li> <li>Poor alignment and gradient issues</li> <li>Conflict with activity and movement along Magnus Street (west)</li> <li>Potential safety issues and impact on town centre accessibility</li> <li>May result in higher congestion levels in the town centre.</li> </ul>	Neutral	\$\$\$\$

# Stage 1 – Options Appraisal Process

## Road Network Improvement Options

Description	Pros	Cons	+/-	Cost
<b>Option 4c –Yacaaba Street extension (one way north/ foreshore bound)</b>	<ul style="list-style-type: none"> <li>Completes a missing link between foreshore from the town centre</li> <li>May assist reduce conflict at Government Road/ Stockton St</li> <li>Narrower road corridor in comparison to two way option</li> </ul>	<ul style="list-style-type: none"> <li>Availability of funding, land and constructability issues</li> <li>Poor alignment and gradient issues</li> <li>Conflict with Magnus Street (west)</li> <li>Potential safety issues and impact on town centre accessibility</li> <li>Congestion in the town centre.</li> <li>Limited opportunity to support road closures.@ Stockton St/ Govt Rd</li> <li>Additional traffic on Donald St .</li> <li>Does not help to remove traffic from Victoria Parade</li> </ul>	Negative	\$\$\$\$
<b>Option 4d –Yacaaba Street extension (transit link only)</b>	<ul style="list-style-type: none"> <li>Completes a missing link between foreshore from the town centre</li> <li>May support bus service route improvements &amp; Park &amp; Ride</li> <li>Potential to serve coach movement between town centre and foreshore</li> <li>Reduces potential conflicting movement generate from a new link</li> </ul>	<ul style="list-style-type: none"> <li>Availability of funding, land and constructability issues</li> <li>Poor alignment and gradient issues</li> <li>Potential safety issues and impact on town centre accessibility</li> <li>Limited opportunity to support road closures.@ Stockton St/ Govt Rd</li> <li>Does not help to remove traffic from Victoria Parade</li> </ul>	Neutral	\$\$\$\$\$

# Stage 1 – Options Appraisal Process

## Road Network Improvement Options

Description	Pros	Cons	+/-	Cost
Option 4e–Yacaaba Street extension (active transport connection only)	<ul style="list-style-type: none"> <li>Completes a missing link between foreshore from the town centre</li> <li>Serves an existing pedestrian desire line</li> <li>Reduces potential conflicting movement generate from a new link</li> <li>Narrower road alignment</li> <li>Opportunity for additional active frontages &amp; focal point</li> </ul>	<ul style="list-style-type: none"> <li>Availability of funding, land and constructability issues</li> <li>Poor alignment and gradient issues</li> <li>Potential safety issues</li> <li>Limited opportunity to support road closures.@ Stockton St/ Govt Rd</li> <li>Does not help to remove traffic from Victoria Parade</li> <li>May remove pedestrian activity from Apex Park and town centre</li> <li>Requires supporting improvements @ Teremby/Govt Rd/ Victoria Pde</li> </ul>	Neutral	\$\$\$\$

# Example of Stage 2 – Options Appraisal Process

## Road Network Improvement Options

Description	Economic	Connectivity	Access and Circulation	Amenity & Safety	Funding	Sense of Place	Total Score
Option 4a –Yacaaba Street extension (two way)	1	3	3	1	0	1	9
Option 4b –Yacaaba Street extension (one way south/ town centre bound)	1	3	3	1	0	3	11
Option 4c –Yacaaba Street extension (one way north/ foreshore bound)	1	1	1	1	0	0	4
Option 4d –Yacaaba Street extension (transit link only)	1	1	1	1	0	1	5
Option 4e–Yacaaba Street extension (active transport connection only)	1	3	3	1	0	1	9

# Road Network Improvement Options

Description	Pros & Cons	Costs	Alignment with Principles
Option 4a –Yacaaba Street extension (two way)	Negative	\$\$\$\$\$	9
Option 4b –Yacaaba Street extension (one way south/ town centre bound)	Neutral	\$\$\$\$	11
Option 4c –Yacaaba Street extension (one way north/ foreshore bound)	Negative	\$\$\$\$	4
Option 4d –Yacaaba Street extension (transit link only)	Neutral	\$\$\$\$\$	5
Option 4e–Yacaaba Street extension (active transport connection only)	Neutral	\$\$\$\$	9

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



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3	ML	GH		GH		23/04/13
4	JT	GH		SK		23/05/13



## **Appendix 10 – Nelson Bay Traffic and Parking Study Update 2017**

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# Port Stephens Council

## Nelson Bay Traffic and Parking Study Update

September 2017

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## Appendices

### Appendix A – Parking Survey Results

# 1. Introduction

## 1.1 Overview

In 2011, GHD was engaged by Port Stephens Council (PSC) to undertake a traffic and parking study of the Nelson Bay Town Centre. The aim of this study was to gain a detailed understanding of the current and future needs within the area, and use this information to inform the draft Nelson Bay 2030 Strategy. To achieve this, the study reviewed the existing traffic and car parking, identified network issues and provided recommendations for addressing the issues identified.

Currently, PSC is reviewing the development strategy for Nelson Bay. The transportation network is a key concern for the community and it is appropriate that the current traffic and parking data be used to inform decisions about the future capacity of the Town Centre.

The purpose of this investigation is to review the GHD Traffic and Parking Study (finalised in 2013), confirm that the information provided is still relevant and assess whether the recommendations outlined will support the planned future growth of the town centre.

## 1.2 Objectives

The key objectives of the Nelson Bay Transport and Parking Study Update are:

- To investigate the capability of the road and transport network under a typical peak traffic conditions
- To identify deficiencies in the transport network and parking limitations
- To confirm that demographic projections are based on the latest available data
- To identify any significant changes in the transport network since the 2013 report was prepared, that may have affected the findings of the previous report
- To assess whether the transport measure strategies recommended in the 2013 report are still relevant

## 1.3 Previous report

The Nelson Bay Town Centre Traffic and Parking Study was finalised by GHD in 2013, and included surveys of traffic volumes and parking activity of the Town Centre from November 2011. Analysis of this data was used to develop key strategies and improvement options that considered both existing operational needs and potential impacts from the revitalising of Nelson Bay. These were developed with a focus on managing travel and supporting the future growth of Nelson Bay. Four strategies were developed, with associated recommendations as follows:

- Road network strategy
- Parking strategy
- Public transport strategy
- Walking and cycling strategy



### 1.3.1 Road network strategy

The road network strategy aims to provide an attractive, efficient and safe road network for all. It aims to provide for economic activity and land use change, manage seasonal demand, protect core activity areas, provide for pedestrians, cyclists and public transport, and maintain safety and amenity. The following strategies and action plans were developed for Nelson Bay:

- RNM 1 – Revised road hierarchy, which includes:
  - RNM 1a – Dowling Street Town Centre Bypass
  - RNM 1b – Realignment of Magnus Street with the Dowling Street and Fingal Street intersection
  - RNM 1c – Reprioritising movement at intersections along the Dowling Street bypass;
  - RNM 1d – Downgrade Victoria Parade
  - RNM 1e – Downgrade Stockton Street
- RNM 2 – Investigate the feasibility of Yacaaba Street extension
- RNM 3 – Investigate the feasibility of upgrading Nelson Bay Road or a new Fingal Bypass
- RNM 4 – Reduce signposted speed limit in the main streets
- RNM 5 – Reduce historical crash rates by upgrading traffic management
- RNM 6 – Introduce town centre gateway treatments
- RNM 7 – Construct a roundabout at Church Street with Donald Street

### 1.3.2 Parking strategy

The aim of the parking strategy is to assist with the management of traffic flow within the town centre, encourage movement between the town centre and the foreshore, improve parking operations during higher demand periods and increase pedestrian activity within the town centre. The following strategies and action plans were developed for Nelson Bay to address the above aims:

- P 1 – Improve direction signage and access to Donald Street car parks
- P 2 – Provide for long-term parking in the town centre and promote connectivity with the foreshore
- P 3 – Improve town centre off-street parking facilities
- P 4 – improve parking enforcement during high season and major events
- P 5 – expand paid parking coverage
- P 6 – Provide a park-and-ride site for major events and high seasons
- P 7 – Provide advance warning and parking information signage to better manage event demand
- P 8 – Develop a town centre parking management plan
- P 9 – Alternative uses for Season 94 contribution
- P 10 – Consider maximum car parking requirements

### 1.3.3 Public transport strategy

The main focus of the public transport strategy is to improve the quality of public transport service to encourage more people to use the system, and help manage traffic growth and vehicle demand within Nelson Bay. The public transport strategy aims to meet the following requirements:

- PT 1 – Public Transport Service Plan
- PT 2 – Improve the attractiveness of the public transport interchange
- PT 3 – Investigate the feasibility of introducing park-and-ride
- PT 4 – Public transport accessibility
- PT 5 – Fare-free route service for public transport

### 1.3.4 Active transport strategy

The active transport strategy aims to encourage pedestrian and cycling activity in the town centre through access improvements, by creating and structuring the urban network so that it is safe and convenient to travel by walking or cycling, and by protecting areas of the town centre from an increase in traffic in order to help improve mode share for the Tomaree Peninsula. The following strategies and action plans were developed for Nelson Bay to help address the above aims:

- AT 1 – Improve wayfinding and identification signage
- AT 2 – Provide additional pedestrian crossing facilities
- AT 3 – Widen footpaths along Stockton Street to promote and encourage Main Street activities
- AT 4 - Develop a PAMP and improve the condition and provision of footpaths
- AT 5 - Close Stockton Street north to traffic during event days and high season periods
- AT 6 - Improve town centre walking environment
- AT 7 – Increase the visibility of cycling through developing a bike plan and expanding the cycle network

## 2. Local and regional context

### 2.1 Planning policy and strategy

The following section outlines some of regional and local planning strategies that have been adopted since the previous study was prepared.

#### 2.1.1 Nelson Bay Town Centre and Foreshore Strategy 2012

The Nelson Bay Town Centre and Foreshore Strategy aims to guide the future growth of Nelson Bay by further developing the town centre and foreshore area. It is hoped that this development will stimulate and diversify job growth, offer improvements in the quality of the environment, spread the level of business activity across the year, and make Nelson Bay more attractive to tourists, the business community and residents.

The development of the Strategy involved extensive community consultation. This consultation provided much of the basis of the Strategy, and helped to identify a number of key issues, including traffic management and parking arrangements during high season, as well as the need for a holistic approach for the future planning of Nelson Bay.

The Strategy document provides a multidisciplinary analysis that results in a vision for change and details the key initiatives and strategies that will guide the Town Centre and Foreshore. The Strategy not only recommends planning controls for future developments and guidance for the revitalisation of the public domain, it also identifies the critical stages and considerations in delivering the Strategy's vision.

#### 2.1.2 Port Stephens Development Control Plan 2014

A new Port Stephens Development Control Plan (DCP) was released in 2014, replacing the previous DCP (2007).

Parts B9 'Road Network and Parking' and D5 'Nelson Bay Centre' are particularly relevant for considering traffic and parking issues in Nelson Bay. Part B9 outlines controls for the provision of transport infrastructure and parking. This part requires new development to:

- Ensure that the impacts of traffic generating development are considered, and that the road networks existing level of service is maintained.
- Provide adequate on-site parking, loading and servicing spaces where possible. When these cannot be provided, alternative off-site arrangement must be sought, including:
  - Parking provision on another site in proximity
  - Change of use
  - Making a contribution towards development of public parking spaces
- Encourage active lifestyles through convenient and accessible public transport options.
- Adhere to design standards for access to developments, internal roads and circulation aisles, and parking areas.

Part D5 outlines controls for the development of Nelson Bay town centre including a focus on pedestrian access, mobility and streetscape controls. This part requires new development to:

- Encourage pedestrian movement throughout the entire centre without discontinuity
- Maintain and enhance important views

- Promote interconnected streets and avoid terminating arcades, which is identified to be particularly desirable within the core town centre area
- To design town centre streetscapes that allows for attractive, safe and functional outdoor environments

### 2.1.3 Port Stephens Local Environmental Plan 2013

The Port Stephens Local Environmental Plan (LEP) is the primary legal document for controlling land use in the LGA. It describes what is permissible in each of the land use zones of the LGA, and the development controls that apply. Figure 2-1 describes the land use zones in the Nelson Bay Town Centre and Foreshore.



Figure 2-1 Port Stephens LEP Zone Map 2013 – Nelson Bay Town Centre and Foreshore

Source: Port Stephens LEP Zone Map, LZN\_055D

There are five main zones within Nelson Bay:

- The Nelson Bay Town Centre and Marina are predominantly zoned as a Local Centre (B2). They are characterised by a mix of business, retail, entertainment, and community uses.
- The area surrounding the Town Centre is zoned for medium density residential (R3). Here, there is a mixture of dwelling houses, dual occupancy housing, and higher density residential development and tourist accommodation.
- Further from the town centre lies a low density residential land (R2). This zone is characterised by a mix of one and two storey dwelling houses, as well as dual occupancies.
- Outside the medium density residential zone (R3), and along the foreshore, the areas are zoned for public recreation (RE1). This is characterised by active and passive recreation areas, and generally relates to land reserved for the public.

- Close to the foreshore, land is zoned as Environmental Conservation (E2). This area has high ecological, scientific, cultural or aesthetic value outside national parks and nature reserves.
- Other areas in Nelson Bay have been zoned as Environmental Management (E3), Special Activities (SP1) and Infrastructure (SP2).
  - E3 land has special ecological, scientific, cultural or aesthetic attributes or environmental hazards/process that require careful consideration/management.
  - Areas classified as SP1 provides for special land activities, such as the established public and private infrastructure not provided for in other zones.
  - SP2 is a 'special purpose' zone used to both provide infrastructure and protect infrastructure from development that is not compatible with or that may detract from the provision of the infrastructure.

## 2.2 Demographic data

### 2.2.1 Demographic projections

Travel zones are small geographic areas defined by the Bureau of Transport Statistics (BTS), which range in size across the metropolitan area due to land use densities. The BTS produces population, employment and traffic forecasts at the travel zone level, which is what has been used to obtain Nelson Bay demographic projections.

The demographic projections made for Nelson Bay in 2009 used '2006 NSW travel zones'. As the density of urban areas change over time, new travel zone systems need to be implemented to accommodate these. In this current update, two '2011' travel zones were used to obtain demographic projections. These zones were the most similar to the 2006 travel zones used previously.

Any difference between the 2009 and 2014 population forecasts, employment forecasts and travel patterns should not be solely contributed to the new data release, but also due to the changed Nelson Bay boundary.

## 2.3 Population

The 2016 Census of Population and Housing<sup>1</sup> indicated that the total number of people usually resident in Port Stephens in 2016 was 69,556. This represents an increase of 9,072 people (15%) from the 2006 total of 60,484 people.

### 2.3.1 Population forecasts

Population forecast data for the Nelson Bay Town Centre has been collated from information provided in 'Population Forecasts – September 2014 Release, Bureau of Transport Statistics' and is provided in Figure 2-2. This data indicates that the population for Nelson Bay in 2011 was 5,561, and was expected to grow to 7,105 people by 2031, an increase of 1.2% per annum.

From Figure 2-2 it can be seen that the 2014 population forecast is similar, although slightly lower, to that predicted in 2009. However, the rate of growth into the future is lower than what was assumed previously. Comparison of these forecasts with actual Census population counts for 2011 and 2016 indicates that the actual number of people may be slightly less than previously anticipated, but that growth trends are consistent.

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<sup>1</sup> Port Stephens Council, *Community Profile*, <http://www.communityprofile.com.au/portstephens/population/age>, Accessed 23/06/17

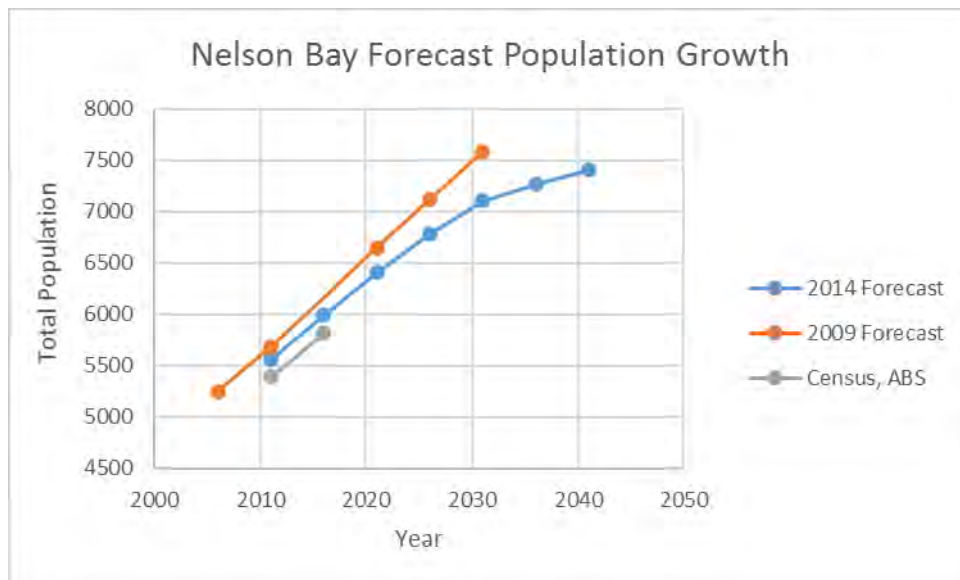


Figure 2-2 Nelson Bay Forecast Population Growth

Source: *Population Forecasts – September 2014 Release, Bureau of Transport Statistics (BTS), Population Forecasts – October 2009 Release, BTS, and 2011 and 2016 Census of Population and Housing, the Australian Bureau of Statistics*

## 2.4 Employment

### 2.4.1 Employment Forecasts

Employment data for the Nelson Bay Town Centre has been collated from information provided in 'Employment Forecasts – September 2014 Release, Bureau of Transport Statistics (BTS)' and is provided in Figure 2-3.

This data indicates that 2,138 jobs were available in Nelson Bay in 2011, and 2,252 jobs in 2016. This is expected to grow to 2,743 jobs by 2036, an increase of 1.1% per annum.

The 'Lower Hunter Regional Strategy' (NSW Department of Planning, 2006) predicted that by 2031, 1500 jobs would be created in the Tomaree Peninsula and Nelson Bay – with approximately 50% of these predicted jobs being created in Nelson Bay. The more recent Hunter Regional Plan (2016) does not include these specific predictions.

The majority of new employment is currently linked to normal weekday job creation, which may not necessarily result in growth in current seasonal peaks. As an outcome, planned growth may not require increases in network capacity, which is typically associated with seasonal traffic demand. These estimates of growth are consistent with those made in the 2013 GHD report, shown in Figure 2-3, although delayed.



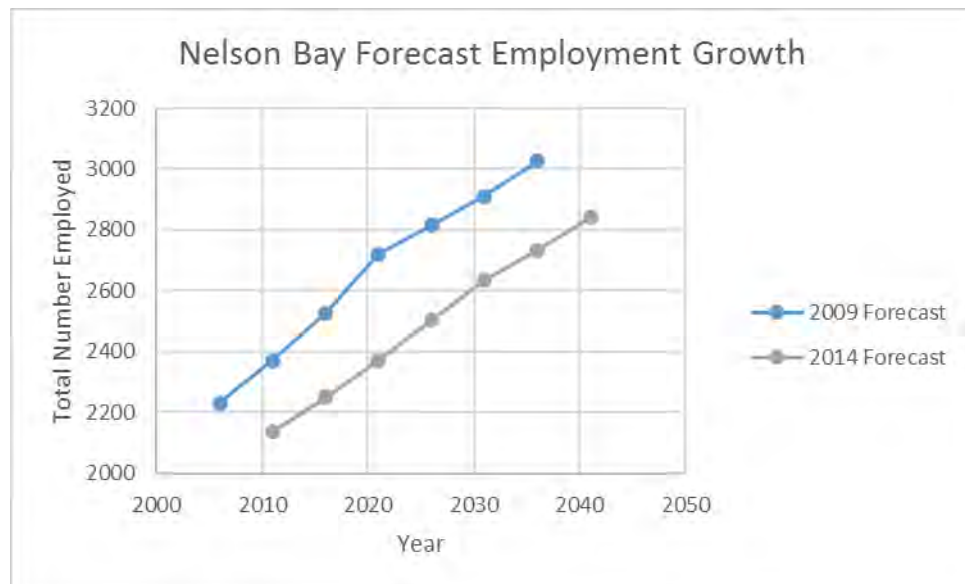


Figure 2-3 Nelson Bay Forecast Employment Growth

Source: *Employment Forecasts – September 2014 Release, Bureau of Transport Statistics (BTS), and Employment Forecasts – October 2009 Release, BTS*

## 2.5 Travel characteristics

The travel characteristics of people who reside in Nelson Bay have been assessed based on information available from the Bureau of Transport Statistics and census data.

### 2.5.1 Travel patterns

Figure 2-4 provides a summary of the place of work for residents of Nelson Bay. The data indicates that around 32% of the population in Nelson Bay live and work in Nelson Bay. Although this has decreased by 8% since 2006, these findings still highlight that with a balanced growth in residents and employment there is potential for a proportion of Nelson Bay residents to choose not travel to work by private vehicle, and instead select an alternative travel mode.

Other notable journey to work trends from Nelson Bay include trips to Corlette or Salamander Bay Shopping Centre (9%), Salamander Bay (8%), Shoal Bay (7% identified as Zenith Beach in the survey information), Williamtown RAAF Base (6%) and Anna Bay (3%). The majority of these locations are within a 5 km radius of Nelson Bay or in the case of Anna Bay within 10 km, and are served by existing bus services. It is also acknowledged that public transport is an option, however there is significant convenience and journey travel time advantages from travel by private vehicle in comparison to public transport.

It is noted that the objectives of both the HRP 2016 and Nelson Bay Town Centre and Foreshore Strategy 2012 are to encourage more people to access Nelson Bay by walking or cycling and as a result minimise the impact on parking or road upgrades. This data set indicates that there is potential to manage growth through creating jobs and encouraging population growth within Nelson Bay, which may reduce the overall need to supply additional infrastructure.

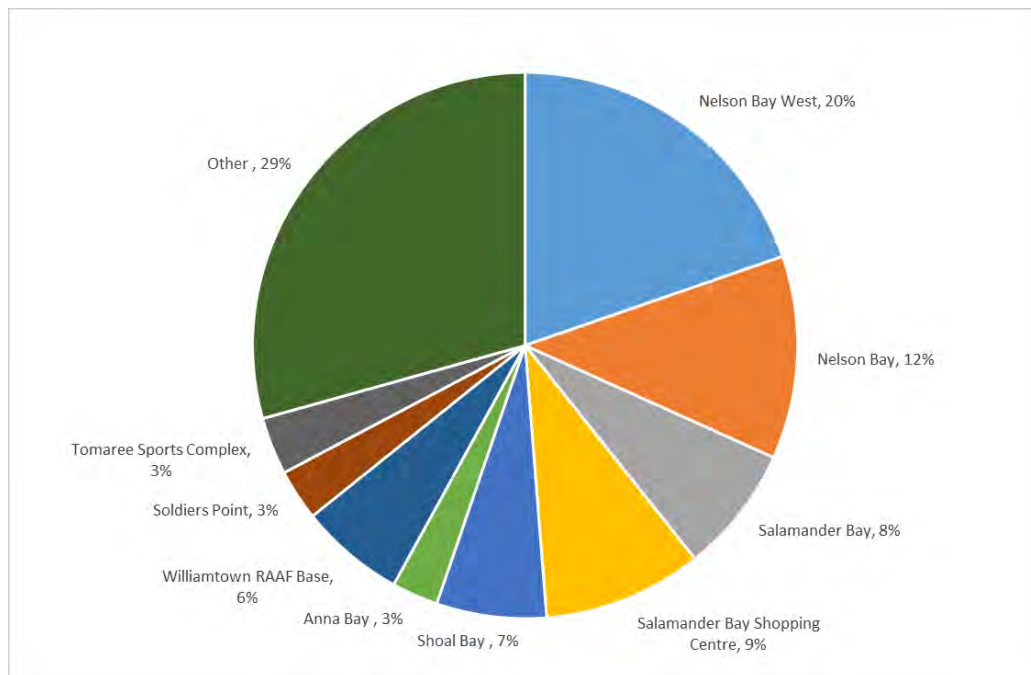


Figure 2-4 Employment Destinations for Nelson Bay Residents

Source: Bureau of Transport Statistics, Journey to Work (travel zones 6510 and 6512), 2011

#### 2.5.2 Mode choice

Figure 2-5 provides a summary of the Journey-to-Work (JTW) travel modes for people residing in Nelson Bay (at the time of preparation of this report, 2016 census JTW data was not available).

- The data indicates that approximately 71% of people who live in Nelson Bay travel to work using a private vehicle (either as a passenger or driver). This is a 5% increase from 2006.
- The proportion of commuters travelling to work via public transport decreased by 1%.
- There was a 3% decline in commuters travelling to work via 'other modes', such as bicycle and walking.

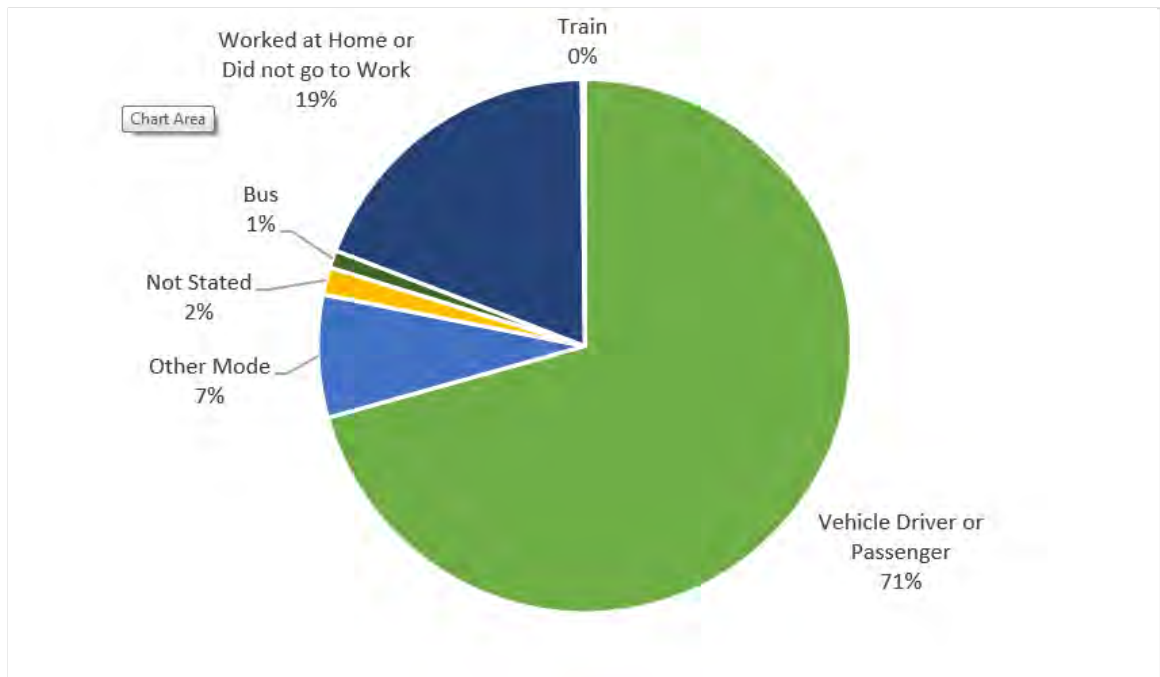


Figure 2-5 Nelson Bay Journey-to-Work Travel Mode

Source: Australian Bureau of Statistics (*Method of Travel to Work*), 2011

Like the 2006 data, this information confirms the dominance of private cars for travel by Nelson Bay residents.

## 2.6 Network demand

Nelson Bay is an urban centre that is heavily reliant on the tourism industry, and as a result, seasonal traffic patterns and associated land use expansion and change will influence how the network is required to perform. Traffic volumes and parking activity are subject to significant seasonal influences, with peaks in late December/early January, at Easter, and when events occur during other school holiday periods.

The Port Stephens Tourist Plan 2030 indicated that parking and access are major issues for the peak season and when major events are held in Nelson Bay. It indicated that demand exceeds supply during these periods and recommends that a traffic management plan should be adopted to help prioritise movement and address access and parking needs for local businesses and residents.

### 2.6.1 Peak demand

Easter attracts a higher than normal traffic demand in Nelson Bay and the surrounding area. This demand is in excess of that generated during the normal commuter peak periods, and its timing is unlikely to impact on the commuter peak period. Obtaining information from this period provides a good understanding of the capacity limitations of the current network and the location of over and underutilised infrastructure.

For this current engagement, traffic and parking surveys were undertaken at various times before and during the Easter period, as described in Section 3.

## 3. Data sources

### 3.1 Data collection

A range of new traffic and parking data was collected by Port Stephens Council for the purpose of this assessment.

#### 3.1.1 Traffic surveys

Classified 'tube count' surveys were undertaken at various mid-block locations from Tuesday 4 – Saturday 22 April 2017. This period encompassed the Easter school Holiday period (8 – 25 April), as well as the four-day Easter Weekend (14 April - 17 April). The tube counts recorded traffic activity continuously at Church Street, Government Road, Dowling Street, Magnus Street, Stockton Street, and Victoria Parade. The locations of the traffic surveys are shown in Figure 3-1.



Figure 3-1 Traffic Survey Locations

Source: Port Stephens Council, 2017

#### 3.1.2 Parking Surveys

Parking surveys were undertaken on Wednesday 12 April 2017 and Saturday 15 April 2017, as representative of school holidays and the Easter weekend respectively. This weekend was chosen in order to gain an understanding of the utilisation of parking resources in Nelson Bay during periods of increased demand, such as an event weekend or school holiday period.

A parking survey was also undertaken on Wednesday 2 August 2017. This day was chosen in order to gain an understanding of the utilisation of parking resources in Nelson Bay during a typical weekday. Parking surveys were undertaken by recording the number of vehicles parked in each location every hour, which was then compared to the capacity of each area. In the Town Centre, surveys were taken at following locations:

- Donald Street
- Stockton Street
- Magnus Street



- Yacaaba Street
- Tomaree Street
- Donald Street Car Park East (multi-storey car park)
- Donald Street Car Park West (open car park)
- Donald Street Woolworths Car Park
- Donald Street Cinema Car Park
- Stockton Street Bowling Club Car Park
- Yacaaba Temporary Car Park
- Government Road Temporary Car Park

The location of the town centre parking surveys are shown in Figure 3-2.



Figure 3-2 Parking Survey Coverage Town Centre

Source: Parking survey locations obtained from the Port Stephens Council, 2017.

At the Foreshore, surveys were taken at the following locations:

- Laman Street
- Victoria Parade
- Teramby Road
- Teramby Street Marina Car Park (East)
- Teramby Street Marina Car Park (West)
- Teramby Street Fisherman's Co-Op Car Park
- Teramby Street Public Wharf Car Park

The location of these parking surveys are shown in Figure 3-3.



Figure 3-3 Parking Survey Coverage Foreshore

Source: Parking survey locations obtained from the Port Stephens Council, 2017.

### 3.2 Parking survey changes

The key differences between the 2017 parking survey and the survey from November 2011 used in the 2013 report have been highlighted below:

- The 2017 study broadened the area of the parking survey undertaken. Rather than just assessing the utilisation of parking in the town centre, it also assessed the utilisation of the foreshore area.
- Since the 2011 parking survey was undertaken, the capacity of the Donald Street East multi-storey car park reduced from 174 spaces to 60, due to structural problems in the car park building.
- To replace the capacity lost at Donald Street East, two new temporary car parks were introduced into the town centre – one located in Yacaaba Street, and other in Government Road. These car parks provide an additional 121 car spaces, a net increase in 7 off-street spaces.
- Additional parking supply has been provided in the Woolworths carpark associated with the redevelopment of that site. Some 130 additional spaces are now available in that location, although the car park now services a much larger supermarket facility than existed previously.
- The 2017 on-street parking survey had minor differences to the one undertaken in 2011. However the surveys are considered comparable for the purpose of this study.



### 3.3 Tube count locations

The 2017 Dowling Street and Church Street traffic survey locations were different to those taken in 2011.

The 2011 count for Dowling Street was taken east of the entrance to the golf course. The 2017 survey was taken between Church Street and Stockton Street, where traffic volumes are naturally higher due to the additional land uses in this area.

In 2011, the count for Church Street was taken between Stockton Street and Tomaree Street, while in 2017 it was taken between Tomaree Street and Donald Street. This may impact the ability to compare the results, although the difference in volumes between these two locations is expected to be low.

## 4. Network evaluation

The performance of critical sections of the Nelson Bay town centre road network have been assessed based on traffic data obtained during the survey period and compared to similar data reported in the 2013 report.

### 4.1 Traffic volumes

This section provides a comparison of total daily traffic volumes and the daily traffic profile for a weekend event day.

#### 4.1.1 Daily traffic volume data

Table 4-1 provides a comparison of the total daily traffic volumes from April 2017 for a typical weekday and the Easter weekend. Table 4-2 and Table 4-3 provide a comparison of these volumes, against similar data from 2011.

Table 4-1 Daily Two-way Traffic Flows April 2017

Road	Typical Weekday	Easter Weekend	School Holidays
<b>Government Road</b>	7996	-	10056 (+26%)
<b>Church Street</b>	7171	9225 (+29%)	7788 (+9%)
<b>Magnus Street</b>	3282	4142 (+26%)	3565 (+9%)
<b>Dowling Street</b>	8605	10137 (+18%)	8678 (+1%)
<b>Stockton Street</b>	7848	9223 (+18%)	7986 (+2%)
<b>Victoria Parade</b>	7901	11390 (+44%)	9072 (+15%)

The above information indicates that daily traffic levels were significantly higher over the Easter weekend than for a typical working day.

Table 4-2 Typical Weekday Daily Traffic Flow - 2011 and 2017 Comparison

Road	Typical Weekday (2011)	Typical Weekday (2017)	Difference
<b>Government Road</b>	8320	7996	- 4%
<b>Church Street</b>	6218	7171	+15%
<b>Magnus Street</b>	2827	3282	+16%
<b>Dowling Street</b>	5713	8605	+51%
<b>Victoria Parade</b>	-	7848	-

The above information indicates that traffic volumes on Dowling Street are significantly higher than observed in 2011, although some of this increase would be due to the different location for the 2017 count (see Section 3.3). The changes in volume on Church Street and Magnus Street is most likely associated with general growth in traffic activity in the area and changes made to Victoria Parade.

Table 4-3 Event Daily Traffic Flow – 2011 and 2017 Comparison

Road	Saturday Event (2011)	Sunday Event (2011)	Easter Saturday (2017)	Easter Sunday (2017)
<b>Government Road</b>	11806	11271	-	-
<b>Church Street</b>	7700	7503	11198 (+45%)	9675 (+29%)
<b>Magnus Street</b>	3548	2901	5441 (+53%)	4247 (+20%)
<b>Dowling Street</b>	-	-	12457	10575
<b>Victoria Parade</b>	-	-	13852	11324

Table 4-3 indicates that both Easter Saturday and Sunday 2017 were significantly busier than the special event weekend (Tastes at the Bay) surveyed in November 2011.

#### 4.1.2 Peak hour traffic flows

Table 4-4 provides a comparison of the peak hour traffic volumes from April 2017. Table 4-5 and Table 4-6 provide a comparison of this data against similar surveys from 2011.

Table 4-4 Peak Hour Two-way Traffic Flows (April 2017)

Road	Typical Weekday	Easter Weekend	School Holidays
<b>Government Road</b>	703	-	946 (+35%)
<b>Church Street</b>	641	949 (+48%)	742 (+16%)
<b>Magnus Street</b>	316	438 (+38%)	336 (+6%)
<b>Dowling Street</b>	771	1102 (+43%)	791 (+3%)
<b>Stockton Street</b>	691	1035 (+50%)	774 (+12%)
<b>Victoria Parade</b>	697	1102 (+58%)	839 (+20%)

The above information indicates that peak hour volumes on Easter Saturday were significantly higher (up to 58%) than for a typical working day. School holiday volumes were up to 35% higher than a typical weekday in some locations, although the increase in traffic was not spread evenly across the study area.

Table 4-5 Typical Weekday Peak Hour Traffic Flow – 2011 and 2017 Comparison

Road	Typical Weekday (2011)	Typical Weekday (2017)	Difference
<b>Government Road</b>	709	703	-1%
<b>Church Street</b>	493	641	+23%
<b>Magnus Street</b>	284	316	+10%
<b>Dowling Street</b>	567	771	+36%
<b>Stockton Street</b>	-	691	-
<b>Victoria Parade</b>	-	697	-

The above information indicates that peak hourly volumes have not increased directly in proportion to the daily volumes reported in Table 4-2, although the differences are broadly similar.

Table 4-6 Event Day Peak Hour Traffic Flow – 2011 and 2017 Comparison

Road	Daily Traffic Flow			
	Saturday Event (2011)	Saturday Event (2011)	Easter Saturday (2017)	Easter Sunday (2017)
<b>Government Road</b>	1102	1040	-	-
<b>Church Street</b>	814	684	1280 (+57%)	941 (+38%)
<b>Magnus Street</b>	312	351	600 (+92%)	470 (+34%)
<b>Dowling Street</b>	-	-	1463	1188
<b>Stockton Street</b>	-	-	2396	2280
<b>Victoria Parade</b>	-	-	962	1395

The 2017 Easter Weekend peak hour volumes are again substantially higher than the peak hour volumes from the 2011 event. This may be reflective of the nature of the 2011 event, with more defined start and end times and a specific activity, compared to the Easter Weekend with more people “coming and going” rather than attending a specific event in the town.

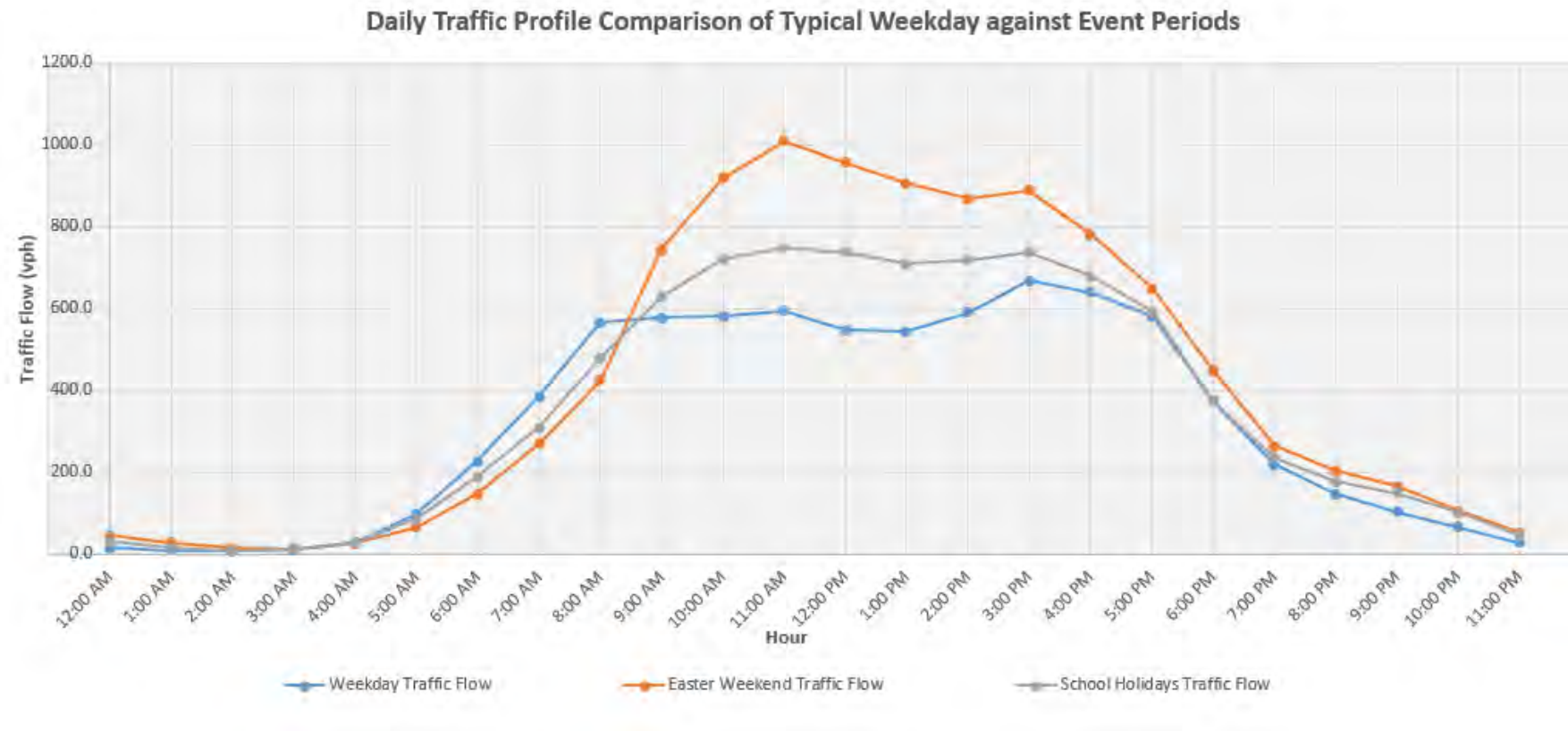


Figure 4-1 Daily Traffic Profiles April 2017

*Note: Traffic profile displays the average two way traffic volume at four separate locations and is presented for each hour of the day. Each profile represents an average of the data collected.*

Figure 4-1 shows that on a typical weekday the profile of traffic is relatively flat, with only a small afternoon peak. During school holidays the volume of traffic increases, although the peak is less pronounced. The Easter Weekend profile shows a noticeable peak in the late morning, with a smaller peak in the mid-afternoon.

## 4.2 Intersection operation

The operation of key intersections in the town centre was reviewed, with reference to turn movement counts undertaken in 2011, and estimated growth in traffic volumes to 2017, as discussed in Section 4.1. For several of the intersections, a direct comparison of volumes was not possible, and so a uniform growth rate has been applied to all intersection approaches. Note that the intersection operation assessed previously was for the event weekend in November 2011. Whilst a comparison with Easter Saturday conditions is most appropriate in this context, it is expected that this is not representative of “normal” conditions.

Table 4-7 Intersection Operation

Intersection	Control	2011 LOS	Assumed growth 2011 to 2017	2017 LOS	2017 Average Delay (sec)
Church Street/ Donald Street	Give Way	B	57% (all approaches)	F	>200
Stockton Street/ Donald Street	Stop	D	57% (all approaches)	F	>200
Stockton Street/ Tomaree Street	Give Way	A	57% (all approaches)	B	17
Yacaaba Street/ Donald Street	Stop	A	57% (all approaches)	A	12
Yacaaba Street/ Magnus Street	Stop	A	92% (Magnus St), 57% (Yacaaba St)	C	29

The intersections of Church Street and Stockton Street with Donald Street were modelled as experiencing significant delays for turning movements under 2017 peak conditions. The nature of these intersections, with give way and stop sign control respectively, is such that the ability to accommodate large volumes of traffic is limited, with few gaps in through traffic available for turning traffic to use. It may be appropriate to consider alternative intersection controls, such as traffic signals, at these locations, due to their ability to accommodate both high volumes of turning traffic and pedestrians.

## 4.3 Road safety

Road crash information for the Nelson Bay town centre was analysed using the data provided by Port Stephens Council for the five year period (2011 – 2016). A summary of the data is provided in Figure 4-2.

The key features observed from the data are as follows:

- 35 crashes occurred during the five-year study period on the town centre road network.
- 57% of the recorded crashes resulted in an injury, but no fatalities were recorded during this period.
- 66% of crashes occurred at intersections.
- 37% (13) of all crashes occurred in Donald Street.
- 26% (9) of all crashes occurred in Stockton Street.



- 20% (7) of all crashes occurred at the Donald Street/Magnus Street intersection.
- 3 of the crashes (9%) involved pedestrians, with crashes recorded at the intersections of Stockton Street with Donald Street, Teramby Road with Victoria Parade, and Victoria Parade with Shoal Bay Road.
- 31 (89%) of all crashes occurred during daylight.



Figure 4-2 Town Centre Crash History (2011-2016)

When comparing this crash data against data reviewed in the 2013 report (obtained from 2005-2010), a number of trends are observed:

- There is still a significantly high proportion of crashes occurring at intersections, although this has decreased from 80% to 66%.
- A high proportion of crashes are occurring on Stockton Street, although this has been reduced from 50% to 26%.
- The number of pedestrians involved in crashes has reduced from 6 (20%) crashes to 3 (9%). No cyclists were involved in crashes during 2011 - 2016, compared to a single cyclist crash during the 2005 – 2010 period.
- The number of crashes occurring on Donald Street has increased from 5 (10%) to 13 (37%). Where previously there were no crashes recorded at the Donald Street/Magnus Street intersection, there were seven crashes in the most recent 5-year period.
- This data indicates that the number of crashes occurring at the Tomaree Street and Stockton Street intersection declined from 7 crashes (2005 – 2010) to 2 crashes (2011 – 2016). This data suggests that reviewing the traffic management arrangements at the Stockton Street with Tomaree Street intersection, a recommendations of the 2013 report, has been effective at improving safety.

#### 4.4 Parking

This section presents the results of parking utilisation survey data and assesses key differences from 2011.

#### 4.4.1 Parking utilisation

Parking surveys undertaken at Easter 2017 and August 2017 have been analysed to understand parking utilisation rates in key parking locations that support the town centre and foreshore of Nelson Bay. The following results show the average and maximum (peak) utilisation rates for various locations.

#### 4.4.2 Town centre parking

Table 4-8 Analysis of Parking Survey Counts - Town Centre

	On-Street Parking					
Location	% Average Utilisation – School Holidays	% Average Utilisation – Easter Weekend	% Average Utilisation – Typical Weekday	% Maximum Utilisation – School Holidays	% Maximum Utilisation – Easter Weekend	% Maximum Utilisation – Typical Weekday
Donald Street	84%	83%	64%	100%	100%	78%
Magnus Street	79%	92%	64%	104%	104%	78%
Stockton Street	88%	86%	70%	100%	100%	89%
Yacaaba Street	74%	78%	69%	98%	102%	90%
Tomaree Street	70%	59%	59%	100%	100%	100%
<b>Total</b>	<b>78%</b>	<b>80%</b>	<b>65%</b>	<b>100%</b>	<b>101%</b>	<b>87%</b>

Source: Parking surveys obtained from Port Stephens Council, undertaken on an event day (Easter Weekend – Saturday April 15, 2017), on a school holiday (Wednesday April 12, 2017), and on a typical weekday (Wednesday August 2, 2017)

Note: Utilisation is based on parking occupancy surveys undertaken every hour between 08:30 to 16:30.

Table 4-9 Analysis of Parking Survey Counts - Town Centre

Location	Off-Street Parking					
	% Average Utilisation – School Holidays	% Average Utilisation – Easter Weekend	% Average Utilisation – Typical Weekday	% Maximum Utilisation – School Holidays	% Maximum Utilisation – Easter Weekend	% Maximum Utilisation – Typical Weekday
Donald Street East	87%	86%	82%	99%	100%	93%
Donald Street West	88%	90%	77%	100%	100%	99%
Woolworths Car Park	86%	92%	59%	96%	100%	85%
Cinema Car Park	52%	63%	44%	79%	92%	58%
Bowling Club Car Park	23%	45%	30%	36%	80%	45%
Yacaaba Temporary Car Park	91%	93%	72%	100%	100%	87%
Government Road Temporary Car Park	87%	78%	78%	100%	102%	100%
<b>Total</b>	<b>73%</b>	<b>78%</b>	<b>63%</b>	<b>87%</b>	<b>96%</b>	<b>81%</b>

Source: Parking surveys obtained from Port Stephens Council, on an event day (Easter Weekend – Saturday April 15, 2017), on a school holiday (Wednesday April 12, 2017) and on a typical weekday (Wednesday August 2, 2017).

Note: Utilisation is based on parking occupancy surveys undertaken every hour between 08:30 to 16:30 during the above event and typical week day.

In summary the parking appraisal indicated the following:

- During the school holiday day, Donald Street, Stockton Street, Magnus Street, Tomaree Street, Donald Street Car Park West, Yacaaba temporary car park, and Government Road temporary car park all reached capacity. Other locations were close to capacity.
- During the Easter Weekend, Magnus Street, Donald Street West car park, Woolworths car park, Yacaaba car park, and Stockton Street were the most popular parking areas. During peak demand periods, the only car parking areas that didn't reach capacity were the Donald Street Cinema car park and Stockton Street Bowling Club bowling club.
- On-street car parking in Donald, Stockton, Magnus and Yacaaba Street recorded high average utilisation rates due to their proximity to town centre facilities.
- During a typical weekday, Tomaree Street and Government Road temporary car park reached capacity, while the Donald Street Car Park West was close to capacity.

Note that a utilisation rate over 100% indicates some informal and/or illegal parking in non-marked areas.

#### 4.4.3 Town Centre Parking – 2011 and 2017 Comparison

Table 4-10 and Table 4-11 provide a comparison of parking surveys taken on peak days in both 2011 and 2017.

Table 4-10 Analysis of 2011 and 2017 On-Street Parking Survey Counts

Location	% Average Utilisation – 2011 – Tastes at the Bay	% Average Utilisation – 2017 - Easter Weekend	% Maximum Utilisation – 2011 – Tastes at the Bay	% Maximum Utilisation – 2017 - Easter Weekend
Donald Street	76%	83% (+7%)	95%	100% (+5%)
Magnus Street	81%	92% (+11%)	92%	104% (+12%)
Stockton Street	75%	86% (+11%)	89%	100% (+11%)
Yacaaba Street	62%	78% (+16%)	82%	102% (+20%)
Tomaree Street	-	59%	-	100%
<b>Total</b>	<b>73%</b>	<b>80% (+7%)</b>	<b>88%</b>	<b>101% (+13%)</b>

Source: Parking surveys undertaken on Easter Weekend – Saturday April 15 2017, and the Tastes at the Bay – Saturday 5 November 2011.

Note: Utilisation is based on parking occupancy surveys undertaken every hour between 09:00 to 17:00 during the 5 November 2011, and between 08:30 and 16:30 on 15 April 2017. (+13%) represents the percentage increase in between 2011 and 2017.

Table 4-11 Analysis of 2011 and 2017 Off-Street Parking Survey Counts

Location	% Average Utilisation – 2011 – Tastes at the Bay	% Average Utilisation – 2017 - Easter Weekend	% Maximum Utilisation – 2011 – Tastes at the Bay	% Maximum Utilisation – 2017 - Easter Weekend
Donald Street East	45%	86 (+41%)	74 %	100 (+26%)
Donald Street West	86%	90 (+4%)	100%	100 (0%)
Woolworths Car Park	-	92%	-	100%
Cinema Car Park	-	63%	-	92%
Bowling Club Car Park	-	45%	-	80%
Yacaaba Temporary Car Park	-	93%	-	100%
Government Road Temporary Car Park	-	78%	-	102%
<b>Total</b>	<b>65%</b>	<b>78% (+13%)</b>	<b>86%</b>	<b>96% (+10%)</b>

Source: Parking surveys undertaken on Easter Weekend – Saturday April 15 2017, and the Tastes at the Bay – Saturday 5 November 2011.

Note: Utilisation is based on parking occupancy surveys undertaken every hour between 09:00 to 17:00 during the 5 November 2011, and between 08:30 and 16:30 on 15 April 2017. (+10%) represents the percentage increase in between 2011 and 2017.

The above information indicates that in 2017, all parking areas in the town centre are busier than they were in 2011, and for a longer period of time. It is noted that due to the reduction in capacity of the Donald Street East car park, a direct comparison of the utilisation of this location should be treated with caution.

#### 4.4.4 Foreshore parking

Table 4-12 Analysis of Parking Survey Counts - Foreshore

Location	On-Street Parking					
	% Average Utilisation – School Holidays	% Average Utilisation – Easter Weekend	% Average Utilisation – Typical Weekday	% Maximum Utilisation – School Holidays	% Maximum Utilisation – Easter Weekend	% Maximum Utilisation – Typical Weekday
Laman Street	72%	97%	51%	91%	100%	77%
Victoria Parade (Magnus to Teramby Road)	53%	60%	53%	80%	100%	100%
Victoria Parade (Teramby Road to Shoal Bay Rd)	3%	90%	4%	5%	101%	8%
Teramby Road	62%	86%	40%	79%	104%	71%
<b>Total</b>	<b>48%</b>	<b>83%</b>	<b>37%</b>	<b>64%</b>	<b>101%</b>	<b>64%</b>

Source: Parking surveys obtained from Port Stephens Council, on an event day (Easter Weekend – Saturday April 15, 2017), school holidays (Wednesday April 12, 2017) and typical weekday (Wednesday August 2, 2017)

Note: Utilisation is based on parking occupancy surveys undertaken every hour between 09:00 to 16:00 during the above event day; and from 09:00 to 15:00 on the typical weekday.

Utilisation of parking in Victoria Parade between Teramby Road and Shoal Bay Road was very low during the ordinary school holiday survey, due to there being capacity at the Marina car park. On the Easter Weekend, when the Marina car park was full, overflow parking occurred on Victoria Parade.

Table 4-13 Analysis of Parking Survey Counts - Foreshore

	Off-Street Parking					
Location	% Average Utilisation – School Holidays	% Average Utilisation – Easter Weekend	% Average Utilisation – Typical Weekday	% Maximum Utilisation – School Holidays	% Maximum Utilisation – Easter Weekend	% Maximum Utilisation – Typical Weekday
<b>Marina Car Park</b>	30%	94%	27%	46%	101%	43%
<b>Marina Car Park (East)</b>	55%	91%	55%	83%	100%	87%
<b>Marina Car Park (West)</b>	61%	90%	16%	79%	100%	40%
<b>Public Wharf Car Park</b>	29%	85%	20%	49%	102%	31%
<b>Fisherman's Co-op Car Park</b>	55%	89%	57%	80%	100%	78%
<b>Total</b>	<b>46%</b>	<b>90%</b>	<b>35%</b>	<b>67%</b>	<b>101%</b>	<b>56%</b>

Source: Parking surveys obtained from Port Stephens Council, on an event day (Easter Weekend – Saturday April 15, 2017), on school holidays (Wednesday April 12, 2017) and on a typical weekday (Wednesday August 2, 2017)

Note: Utilisation is based on parking occupancy surveys undertaken every hour between 09:00 to 16:00 during the above event day; and from 09:00 to 15:00 on the typical weekday.

In summary the parking appraisal indicated the following:

- On the school holiday day, foreshore parking had spare capacity both on-street and off-street. No parking areas reached capacity during the survey period. However, during the Easter Weekend, all parking areas reached capacity.
- Laman Street, Teramby Road, and the Marina West car park were the most highly utilised parking areas on the school holiday day. On the Easter weekend, Laman Street, Marina car park, and Victoria Parade (Teramby to Shoal Bay Rd) were the most highly utilised.
- There is spare capacity on-street in Victoria Parade, from Magnus Street to Teramby Road during peak demand periods. This may reflect the shorter time restrictions that apply to these spaces.
- During the typical weekday, Victoria Parade (Magnus Street to Teramby Road) reached capacity. There was spare capacity off-street.



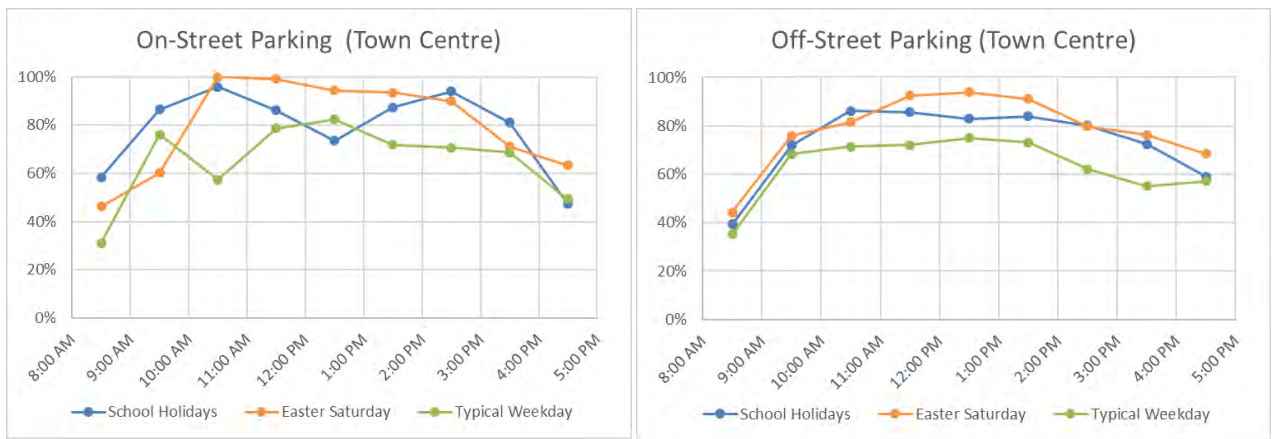


Figure 4-3 Daily Off and On-Street Parking Utilisation Rates – Town Centre

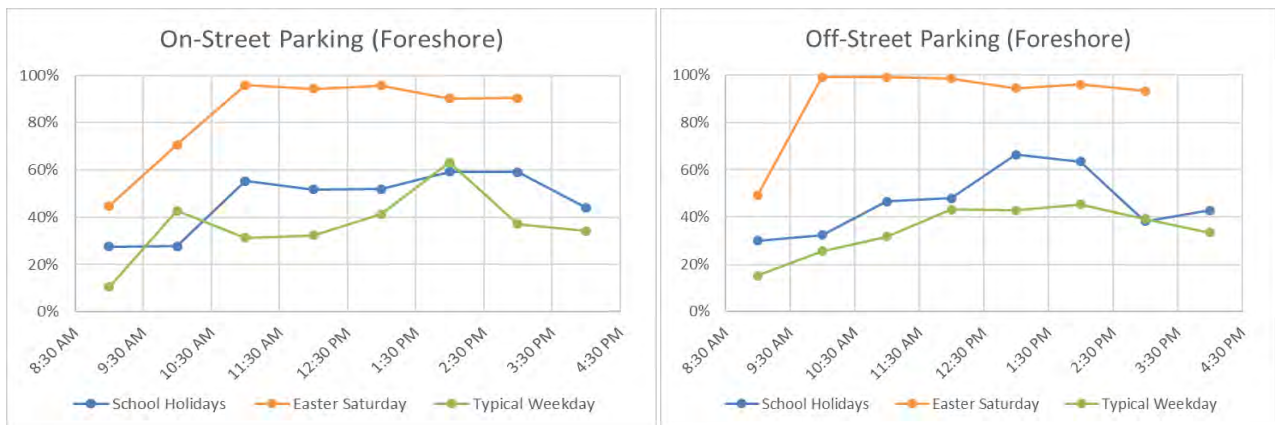


Figure 4-4 Daily Off and On-Street Parking Utilisation Rates – Foreshore

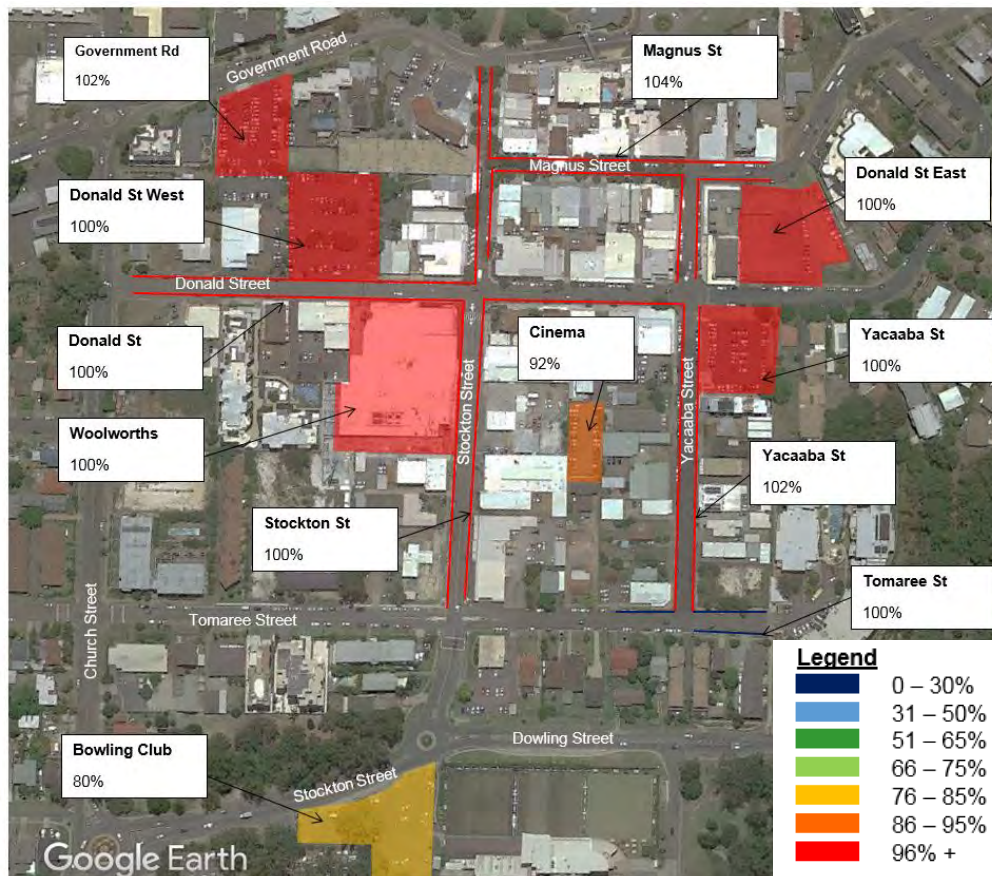


Figure 4-5 Maximum Parking Utilisation Rates – Town Centre

Source: Parking surveys provided Port Stephens Council undertaken on Easter Weekend, April 15, 2017.



Figure 4-6 Maximum Parking Utilisation Rates – Foreshore

Source: Parking surveys provided by Port Stephens Council undertaken on Easter Weekend, April 15, 2017.



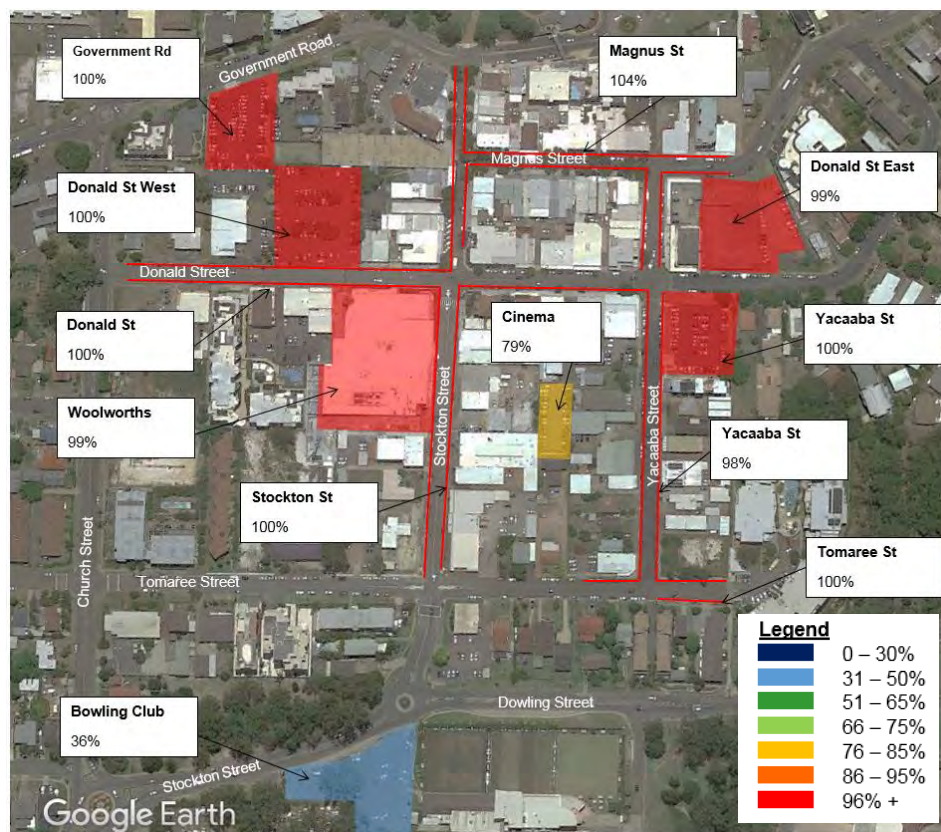


Figure 4-7 Maximum Parking Utilisation Rates – Town Centre

Source: Parking surveys provided by Port Stephens Council undertaken on April 12, 2017.



Figure 4-8 Maximum Parking Utilisation Rates – Foreshore

Source: Parking surveys provided by Port Stephens Council undertaken on April 12, 2017.



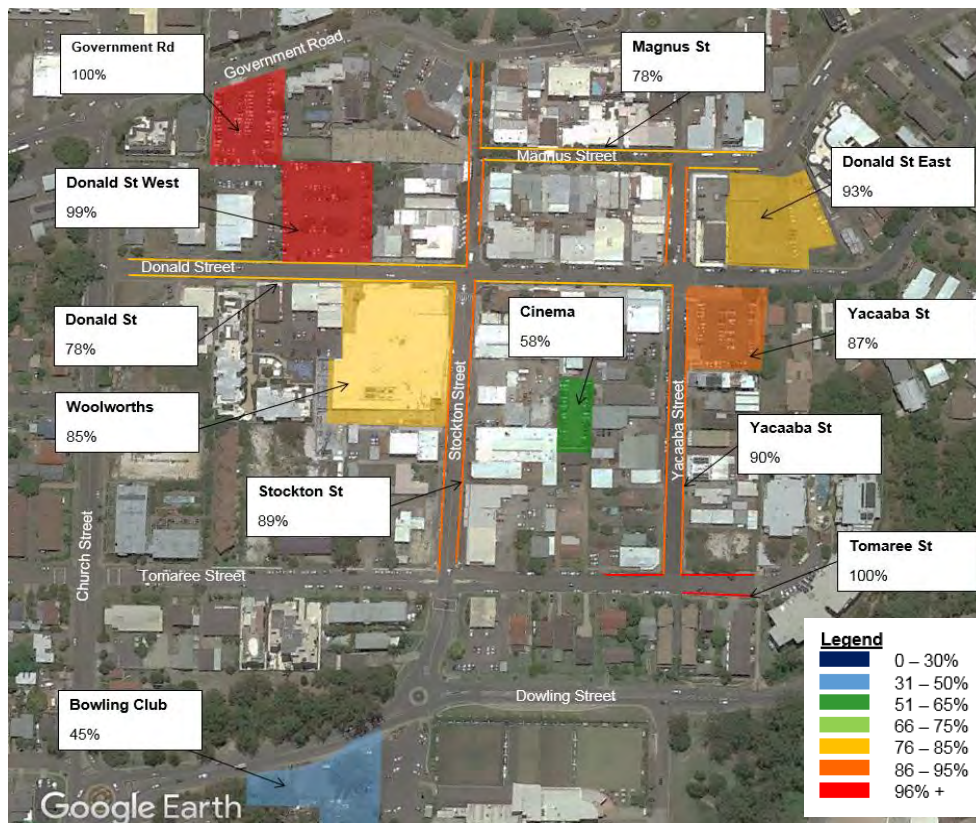


Figure 4-9 Maximum Parking Utilisation Rates – Town Centre

Source: Parking surveys provided by Port Stephens Council undertaken on August 2, 2017.



Figure 4-10 Maximum Parking Utilisation Rates – Foreshore

Source: Parking surveys provided by Port Stephens Council undertaken on August 2, 2017.

## 4.5 Summary

Based on the surveys and analysis undertaken, the following key points were noted:

- Road Network
  - When comparing typical weekday traffic flows from 2011 and 2017, the only road that didn't have an increase in daily traffic, or peak hour traffic, was Government Road.
  - Easter weekend increased the daily traffic flow and peak hour flow for all roads in Nelson Bay when compared to a typical weekday.
  - Intersection operation in 2017 was significantly worse than in 2011 in some locations. Alternative intersection controls could be considered at some locations to better accommodate high volumes.
- Crash History
  - Donald Street and Stockton Street recorded the highest crash rates in Nelson Bay town centre, representing approximately 63% of all crashes.
  - Approximately 20% of all crashes occurred at the intersection between Donald Street and Magnus Street.
- Parking
  - During the Easter Weekend, spare capacity was only available at all times for the Cinema and Bowling Club car parks. All other parking areas in the town centre, and all areas near the foreshore reached maximum capacity.
  - During the Easter Weekend in the town centre, Magnus Street, Donald Street West car park, Woolworths car park, and the Yacaaba temporary car park had an average utilisation of 90% or above. Similarly, on the foreshore, Laman Street, the Marina car park, and the Marina East car park, performed with an average utilisation rate of 91% or above.
  - During the school holidays, spare capacity was identified at all times for each parking area in the foreshore.
  - During the school holidays, Stockton Street, Donald Street, and the Yacaaba Street car park were the most highly utilised parking destinations in the town centre, with an average utilisation level of 88% or above.
  - Laman Street, Teramby Road and the Marina West car park were identified to be the most highly utilised parking areas in the Foreshore on a school holiday, performing with an average utilisation level of 61% or above.
  - During a typical weekday, Victoria Parade (between Magnus Street and Teramby Road), was the only location in the Foreshore to reach maximum capacity.
  - During a typical weekday, Tomaree Street and the Government Road temporary car park reached maximum capacity. For all other parking areas in the town centre, spare capacity was available at all times.

## 5. The strategy

This section outlines whether improvement options proposed in the 2013 GHD report are still relevant, and if necessary, provides new recommendations for traffic and parking in Nelson Bay.

### 5.1 Transport improvement framework

The strategic planning principles and local regional transport objectives for supporting the future growth and transformation of Nelson Bay are highlighted and summarised below:

Table 5-1 Transport Improvement Strategies

GHD Strategy (2013)	Objective	Comment
<b>Parking Management Strategy Improvement Options</b>	Assist with the management of traffic flow within the town centre, encourage movement between the town centre and the foreshore, and increase pedestrian activity within the town centre.	
<b>Strategy P 1</b>	Improve direction signage and access to Donald Street Car Parks.	Still relevant.
<b>Strategy P 2</b>	Provide long-term parking in town centre to promote access to foreshore.	Still relevant. Additional permanent capacity is required to replace the Donald Street (East) car park.
<b>Strategy P 3</b>	Improve town centre off-street parking facilities.	Still relevant. Additional permanent capacity is required to replace the Donald Street (East) car park.
<b>Strategy P 4</b>	Improve parking enforcement during event days.	Still relevant.
<b>Strategy P 5</b>	Expand paid parking coverage.	Still relevant.
<b>Strategy P 6</b>	Provide a high season/event day parking (Park-and-Ride).	Still relevant.
<b>Strategy P 7</b>	Provide advance parking information signage.	Still relevant.
<b>Strategy P 8</b>	Develop a Town Centre Parking Management Plan.	Still relevant.
<b>Strategy P 9</b>	Alternative Uses for Section 94 Contributions.	Still relevant.
<b>Strategy P 10</b>	Consider Maximum Car Parking Requirements.	Still relevant.



GHD Strategy (2013)	Objective	Comment
<b>Road Network Management</b>	These improvements aim to provide an attractive, efficient and safe road network for all users.	
<b>Strategy RNM 1</b>	Revise Road Hierarchy.	Still relevant.
<b>Strategy RNM 1a</b>	Improve and promote Dowling Street – Trafalgar Street as an interim bypass.	Still relevant.
<b>Strategy RNM 1b</b>	Develop Dowling Street and Magnus Street as a permanent bypass.	Still relevant.
<b>Strategy RNM 1c</b>	Reprioritise movement at bypass intersections.	Still relevant.
<b>Strategy RNM 1d</b>	Downgrade Victoria Parade.	Recent changes to Victoria Parade have reduced speed and volume of traffic using it as evidence by traffic count data.
<b>Strategy RNM 1e</b>	Downgrade Stockton Street.	Still relevant.
<b>Strategy RNM 2</b>	Investigate the feasibility of introducing the Yacaaba Street extension.	Yacaaba Street extension has progressed beyond investigation and planning is well underway with expected delivery in the next few years.
<b>Strategy RNM 3</b>	Investigate upgrade needs for Nelson Bay Road and the Fingal Bypass.	Still relevant.
<b>Strategy RNM 4</b>	Reduce signposted speed limits in main streets.	Still relevant.
<b>Strategy RNM 5</b>	Reduce crash rates by upgrading traffic management.	Crash profile has changed, but overall action still relevant.
<b>Strategy RNM 6</b>	Introduce town centre gateway treatments.	Still relevant.
<b>Strategy RNM 7</b>	Upgrade intersection of Church St with Donald St to a roundabout.	Still relevant.
<b>Public Transport Strategy</b>	The main focus of this strategy is to improve the quality of public transport service, encouraging more people to use public transport and help manage traffic growth and vehicle demand within Nelson Bay.	

GHD Strategy (2013)	Objective	Comment
<b>Strategy PT 1</b>	Public Transport Service Planning.	Still relevant.
<b>Strategy PT 2</b>	Improve the attractiveness of the public transport interchange.	Still relevant.
<b>Strategy PT 3</b>	Investigate the feasibility of introducing a Park-and-Ride.	Increased importance for peak holiday periods.
<b>Strategy PT 4</b>	Public transport accessibility.	Still relevant.
<b>Strategy PT 5</b>	Fare-free zone for public transport.	Still relevant.
<b>Active Transport Strategy</b>	These improvements aim to encourage pedestrian and cycling activity in the town centre through access improvements and protecting areas of the town centre from increase in traffic to help improve mode share and the environmental outcomes for the Tomaree Peninsula.	
<b>Strategy AT 1</b>	Improve wayfinding and identification signage.	Still relevant.
<b>Strategy AT 2</b>	Provide additional pedestrian crossing facilities.	Still relevant.
<b>Strategy AT 3</b>	Widen footpaths along Stockton Street to promote and encourage Main Street activities.	Still relevant.
<b>Strategy AT 4</b>	Develop a PAMP and improve the condition and provision of footpaths.	PAMP revision is currently underway.
<b>Strategy AT 5</b>	Close Stockton Street north to traffic during event days and high season periods.	Still relevant.
<b>Strategy AT 6</b>	Improve town centre walking environment.	Still relevant.
<b>Strategy AT 7</b>	Increase the visibility of cycling through developing a bike plan and expanding the cycle network.	Still relevant.
<b>Strategy AT 8</b>	Include a section on bicycle parking in Port Stephens DCP.	Still relevant.

GHD Strategy (2013)	Objective	Comment
<b>Strategy AT 9</b>	Improve and encourage access by active transport by providing bicycle parking facilities.	Still relevant.

# Appendices

# Appendix A – Parking Survey Results

						Number of Spaces Occupied																
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces Available	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30
Laman	North	End to Government	90° Angle	Unrestricted	24		6		13		14		20		23		22		22		14	
Laman	North	End to Government	Parallel	Unrestricted	7		7		8		8		9		5		6		6		3	
Laman	South	End to Government	Parallel	Unrestricted	16		6		8		9		8		13		15		15		9	
Victoria	North	Magnus to Teramby	1/4P	Loading Zone 5-8am	3		1		1		1		0		1		0		0		2	
Victoria	South	Magnus to Teramby	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5		1		0		4		3		2		4		4		3	
Teramby	North	Victoria to End	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	2		0		0		2		2		2		0		2		2	
Teramby	North	Victoria to End	4P	8.30am-4.30pm	13		3		4		6		4		10		6		4		4	
Teramby	North	Victoria to End	Loading Zone	6am-6pm			0		1		1		1		1		0		0		1	
Teramby	North	Victoria to End	4P - 90° angle	8.30am-4.30pm	13		11		9		12		12		10		11		11		11	
Victoria	North	Teramby to Shoal Bay Road	Motorbike		4		0		0		0		0		0		0		0		0	
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	19		0		0		1		2		3		5		0		0	
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	6		0		0		1		0		0		1		1		0	
Victoria	North	Teramby to Shoal Bay Road	Motorbike		4		1		0		0		0		0		0		0		0	
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	15		0		2		1		1		0		0		0		0	
Victoria	North	Teramby to Shoal Bay Road	Bus Zone				0		1		1		3		2		2		5		0	
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	17		0		1		2		0		0		1		0		0	
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	14		0		2		0		2		0		1		0		1	
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	31		0		0		1		0		0		1		0		0	
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	30		0		0		1		0		0		0		2		0	
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	28		0		0		0		0		0		0		0		0	
Victoria	South	Shoal Bay Road to Teramby	4P - 60° angle	8.30am-4.30pm	22		0		0		0		2		0		0		0		0	
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	5		0		0		0		0		0		0		4		0	
Marina Car Park	South		4P - 90° angle	8.30am-4.30pm	25		5		2		2		3		4		5		1		1	
Marina Car Park	West		4P - 90° angle	8.30am-4.30pm	10		0		2		2		3		2		2		13		3	
Marina Car Park	North		4P - 90° angle	8.30am-4.30pm	18		0		9		12		14		15		16		0		0	
Marina Car Park	East		Mobility		2		1		1		0		0		0		0		0		0	
Marina Car Park	East		4P - 90° angle	8.30am-4.30pm	9		4		4		3		4		5		5		7		1	
Marina Car Park	South	Centre	4P - 90° angle	8.30am-4.30pm	15		4		0		1		1		4		4		0		2	
Marina Car Park	West	Centre	4P - 90° angle	8.30am-4.30pm	7		1		1		0		1		2		3		1		2	
Marina Car Park	North	Centre	4P - 90° angle	8.30am-4.30pm	15		1		9		8		7		14		11		11		2	
Marina Car Park	East	Centre	4P - 90° angle	8.30am-4.30pm	5		1		2		1		3		3		2		3		0	
Public Wharf Car Park	North		Mobility		2		1		1		2		2		2		2		2		6	
Public Wharf Car Park	North		8P - 90° angle	8.30am-4.30pm	31		9		7		9		13		15		12		11		0	
Public Wharf Car Park	South		8P - 90° angle	8.30am-4.30pm	26		3		2		3		5		12		12		8		0	
Teramby		Marina Car Park (east)	4P ticket	8.30am-4.30pm	30		11		10		12		13		24		22		15		25	
Teramby		Marina Car Park (west)	4P ticket	8.30am-4.30pm	52		23		24		40		36		40		41		12		36	
Teramby		Fishermans Co-op car park			54		17		20		35		32		43		41		26		22	
Total					525	0	100	0	124	0	160	0	174	0	214	0	212	0	160	0	128	0
% Capacity						0.0%	19.0%	0.0%	23.6%	0.0%	30.5%	0.0%	33.1%	0.0%	40.8%	0.0%	40.4%	0.0%	30.5%	0.0%	24.4%	0.0%
Sub-Total					54	0	17	0	20	0	35	0	32	0	43	0	41	0	26	0	22	0
% of Sub-Total Capacity						0.0%	31.5%	0.0%	37.0%	0.0%	64.8%	0.0%	59.3%	0.0%	79.6%	0.0%	75.9%	0.0%	48.1%	0.0%	40.7%	0.0%
% of Total Capacity						0.0%	20.2%	0.0%	24.9%	0.0%	33.7%	0.0%	35.6%	0.0%	44.4%	0.0%	43.7%	0.0%	32.1%	0.0%	25.9%	0.0%



						Number of Spaces Occupied																	
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	
Donald	North	Church to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	14	5		11		14		12		11		12		13		14		12	
Donald	North	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	8	7		7		8		5		7		7		8		8		7	
Donald	North	Stockton to Yacaaba	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	1	1		1		1		1		1		1		1		1		1	
Donald	South	Yacaaba to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	6	6		5		6		5		6		6		6		6		4	
Donald	South	Yacaaba to Stockton	Loading Zone		2	1		0		1		0		2		0		2		0		2	
Donald	South	Stockton to Church	1/2P	8.30am-5pm all days	7	0		4		7		5		3		7		7		6		7	
Donald	South	Stockton to Church	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	2		2		4		3		2		4		4		4		3	
Stockton	West	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	7		18		18		16		12		17		17		16		16	
Stockton	East	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	16	9		15		16		13		13		14		16		15		12	
Stockton	West	Donald to Magnus	1P	8.30am-6pm, M-F,	7	7		7		7		7		7		7		6		7		5	
Stockton	East	Donald to Magnus	1/4P	8.30am-6pm, M-F,	4	2		3		4		3		4		4		4		4		2	
Stockton	West	Donald to Victoria	Mobility		1	0		1		1		0		1		3		4		4		0	
Stockton	West	Magnus to Victoria	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	5	4		4		5		5		4		5		4		5		2	
Stockton	East	Victoria to Magnus	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	6	6		4		6		6		5		5		4		6		5	
Magnus	North	Stockton to Yacaaba	Loading Zone		5	0		2		2		0		1		1		0		1		0	
Magnus	North	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat		4		5		5		5		5		5		4		5		3	
Magnus	South	Stockton to Yacaaba	Mobility			0		2		2		0		2		2		2		2		0	
Magnus	South	Stockton to Yacaaba	1/4P	8.30am-6pm, M-F, 9am-4pm Sat-Sun		2	0		2		2		2		2		2		2		2		0
Magnus	South	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	7	6		7		7		6		6		7		6		6		5	
Magnus	North	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	3	2		3		4		1		4		4		4		3		1	
Magnus	South	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	2		4		4		2		1		0		0		1		1	
Yacaaba	East	Magnus to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5	5		6		5		5		6		6		5		6		1	
Yacaaba	West	Magnus to Donald	Loading Zone			0		1		0		0		1		2		0		1		0	
Yacaaba	West	Magnus to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	4		4		4		4		3		4		4		4		3	
Yacaaba	East	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	9		12		13		18		15		16		17		7		8	
Yacaaba	West	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	21	6		10		14		19		20		19		21		11		5	
Tomaree	North	Yacaaba to end	Loading Zone	5am-8am M&F	4	0		1		3		3		1		2		2		1		0	
Tomaree	South	Yacaaba to end	Loading Zone	5am-8am M&F	2	0		2		2		2		0		0		1		0		0	
Tomaree	North	Yacaaba to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	3	2		3		3		3		1		2		3		2		0	
Government	South	Donald Street Car park (east)	Unrestricted		90	51		88		89		88		83		86		85		71		61	
		Donald Street Car park (west)	3P	8.30am-6pm, M-F	94	42		81		93		92		93		94		93		86		67	
		Temporary car park	Unrestricted		61	55		57		61		60		61		60		61		53		29	
		Temporary car park	Unrestricted		60	25		55		60		59		57		58		58		55		45	
Donald		Woolworths car park	3P		190	76		177		181		183		182		181		175		166		158	
Donald		Cinema car park			24	0		5		19		18		18		17		15		12		9	
Stockton		Bowling Club car park	Unrestricted		75	1		15		23		27		17		23		12		15		23	
Total					484	270	0	427	0	471	0	450	0	440	0	462	0	464	0	413	0	307	
% Capacity						55.8%	0.0%	88.2%	0.0%	97.3%	0.0%	93.0%	0.0%	90.9%	0.0%	95.5%	0.0%	95.9%	0.0%	85.3%	0.0%	63.4%	
Sub-Total					289	77	0	197	0	223	0	228	0	217	0	221	0	202	0	193	0	190	
% of Sub-Total Capacity						26.6%	0.0%	68.2%	0.0%	77.2%	0.0%	78.9%	0.0%	75.1%	0.0%	76.5%	0.0%	69.9%	0.0%	66.8%	0.0%	65.7%	
% of Total Capacity						44.9%	0.0%	80.7%	0.0%	89.8%	0.0%	87.7%	0.0%	85.0%	0.0%	88.4%	0.0%	86.2%	0.0%	78.4%	0.0%	64.3%	

						Number of Spaces Occupied																	
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces Available	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	
Laman	North	End to Government	90° Angle	Unrestricted	24		6		13		14		20		23		22		22		14		
Laman	North	End to Government	Parallel	Unrestricted	7		7		8		8		9		5		6		6		3		
Laman	South	End to Government	Parallel	Unrestricted	16		6		8		9		8		13		15		15		9		
Victoria	North	Magnus to Teramby	1/4P	Loading Zone 5-8am																			
Victoria	South	Magnus to Teramby	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5		1		0		4		3		2		4		4		3		
Teramby	North	Victoria to End	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	2		0		0		2		2		2		0		2		2		
Teramby	North	Victoria to End	4P	8.30am-4.30pm	13		3		4		6		4		10		6		4		4		
Teramby	North	Victoria to End	Loading Zone	6am-6pm																			
Teramby	North	Victoria to End	4P - 90° angle	8.30am-4.30pm	13		11		9		12		12		10		11		11		11		
Victoria	North	Teramby to Shoal Bay Road	Motorbike																				
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	19		0		0		1		2		3		5		0		0		
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	6		0		0		1		0		0		1		1		0		
Victoria	North	Teramby to Shoal Bay Road	Motorbike																				
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	15		0		2		1		1		0		0		0		0		
Victoria	North	Teramby to Shoal Bay Road	Bus Zone																				
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	17		0		1		2		0		0		1		0		0		
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	14		0		2		0		2		0		1		0		1		
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	31		0		0		1		0		0		1		0		0		
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	30		0		0		1		0		0		0		2		0		
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	28		0		0		0		0		0		0		0		0		
Victoria	South	Shoal Bay Road to Teramby	4P - 60° angle	8.30am-4.30pm	22		0		0		0		2		0		0		0		0		
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	5		0		0		0		0		0		0		4		0		
Marina Car Park	South		4P - 90° angle	8.30am-4.30pm	25		5		2		2		3		4		5		1		1		
Marina Car Park	West		4P - 90° angle	8.30am-4.30pm	10		0		2		2		3		2		2		13		3		
Marina Car Park	North		4P - 90° angle	8.30am-4.30pm	18		0		9		12		14		15		16		0		0		
Marina Car Park	East		Mobility		2		1		1		0		0		0		0		0		0		
Marina Car Park	East		4P - 90° angle	8.30am-4.30pm	9		4		4		3		4		5		5		7		1		
Marina Car Park	South	Centre	4P - 90° angle	8.30am-4.30pm	15		4		0		1		1		4		4		0		2		
Marina Car Park	West	Centre	4P - 90° angle	8.30am-4.30pm	7		1		1		0		1		2		3		1		2		
Marina Car Park	North	Centre	4P - 90° angle	8.30am-4.30pm	15		1		9		8		7		14		11		11		2		
Marina Car Park	East	Centre	4P - 90° angle	8.30am-4.30pm	5		1		2		1		3		3		2		3		0		
Public Wharf Car Park	North		Mobility		2		1		1		2		2		2		2		2		6		
Public Wharf Car Park	North		8P - 90° angle	8.30am-4.30pm	31		9		7		9		13		15		12		11		0		
Public Wharf Car Park	South		8P - 90° angle	8.30am-4.30pm	26		3		2		3		5		12		12		8		0		
Teramby		Marina Car Park (east)	4P ticket	8.30am-4.30pm	30		11		10		12		13		24		22		15		25		
Teramby		Marina Car Park (west)	4P ticket	8.30am-4.30pm	52		23		24		40		36		40		41		12		36		
Teramby		Fishermans Co-op car park	Unrestricted		54		17		20		35		32		43		41		26		22		
Total					514	0	98	0	121	0	157	0	170	0	210	0	210	0	155	0	125	0	
% Capacity						0.0%	19.1%	0.0%	23.5%	0.0%	30.5%	0.0%	33.1%	0.0%	40.9%	0.0%	40.9%	0.0%	30.2%	0.0%	24.3%	0.0%	
Sub-Total					54	0	17	0	20	0	35	0	32	0	43	0	41	0	26	0	22	0	
% of Sub-Total Capacity						0.0%	31.5%	0.0%	37.0%	0.0%	64.8%	0.0%	59.3%	0.0%	79.6%	0.0%	75.9%	0.0%	48.1%	0.0%	40.7%	0.0%	
% of Total Capacity						0.0%	20.2%	0.0%	24.8%	0.0%	33.8%	0.0%	35.6%	0.0%	44.5%	0.0%	44.2%	0.0%	31.9%	0.0%	25.9%	0.0%	

						Number of Spaces Occupied																	
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces Available	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	
Donald	North	Church to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	14	5		11		14		12		11		12		13		14		12	
Donald	North	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	8	7		7		8		5		7		7		8		8		7	
Donald	North	Stockton to Yacaaba	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	1	1		1		1		1		1		1		1		1		1	
Donald	South	Yacaaba to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	6	6		5		6		5		6		6		6		6		4	
Donald	South	Yacaaba to Stockton	Loading Zone																				
Donald	South	Stockton to Church	1/2P	8.30am-5pm all days	7	0		4		7		5		3		7		7		6		7	
Donald	South	Stockton to Church	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	2		2		4		3		2		4		4		4		3	
Stockton	West	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	7		18		18		16		12		17		17		16		16	
Stockton	East	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	16	9		15		16		13		13		14		16		15		12	
Stockton	West	Donald to Magnus	1P	8.30am-6pm, M-F,	7	7		7		7		7		7		7		6		7		5	
Stockton	East	Donald to Magnus	1/4P	8.30am-6pm, M-F,	4	2		3		4		3		4		4		4		4		2	
Stockton	West	Donald to Victoria	Mobility		1	0		1		1		0		1		3		4		4		0	
Stockton	West	Magnus to Victoria	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	5	4		4		5		5		4		5		4		5		2	
Stockton	East	Victoria to Magnus	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	6	6		4		6		6		5		5		4		6		5	
Magnus	North	Stockton to Yacaaba	Loading Zone																				
Magnus	North	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5	4		5		5		5		5		5		4		5		3	
Magnus	South	Stockton to Yacaaba	Mobility		2	0		2		2		0		2		2		2		2		0	
Magnus	South	Stockton to Yacaaba	1/4P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	2	0		2		2		2		2		2		2		2		0	
Magnus	South	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	7	6		7		7		6		6		7		6		6		5	
Magnus	North	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	3	2		3		4		1		4		4		4		3		1	
Magnus	South	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	2		4		4		2		1		0		0		1		1	
Yacaaba	East	Magnus to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5	5		6		5		5		6		6		5		6		1	
Yacaaba	West	Magnus to Donald	Loading Zone																				
Yacaaba	West	Magnus to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	4		4		4		4		3		4		4		4		3	
Yacaaba	East	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	9		12		13		18		15		16		17		7		8	
Yacaaba	West	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	21	6		10		14		19		20		19		21		11		5	
Tomaree	North	Yacaaba to end	Loading Zone	5am-8am M&F																			
Tomaree	South	Yacaaba to end	Loading Zone	5am-8am M&F																			
Tomaree	North	Yacaaba to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	3	2		3		3		3		1		2		3		2		0	
Government	South	Donald Street Car park (east)	Unrestricted		90	51		88		89		88		83		86		85		71		61	
		Donald Street Car park (west)	3P	8.30am-6pm, M-F	94	42		81		93		92		93		94		93		86		67	
		Temporary car park	Unrestricted		61	55		57		61		60		61		60		61		53		29	
		Temporary car park	Unrestricted		60	25		55		60		59		57		58		58		55		45	
Donald	Yacaaba	Woolworths car park	3P		76		177		181		183		182		181		175		166		158		
Donald		Cinema car park	Unrestricted		0		5		19		18		18		17		15		12		9		
Stockton		Bowling Club car park	Unrestricted		75	1		15		23		27		17		23		12		15		23	
Total						476	269	0	421	0	463	0	445	0	435	0	457	0	459	0	410	0	305
% Capacity							56.5%	0.0%	88.4%	0.0%	97.3%	0.0%	93.5%	0.0%	91.4%	0.0%	96.0%	0.0%	96.4%	0.0%	86.1%	0.0%	64.1%
Sub-Total						289	77	0	197	0	223	0	228	0	217	0	221	0	202	0	193	0	190
% of Sub-Total Capacity							26.6%	0.0%	68.2%	0.0%	77.2%	0.0%	78.9%	0.0%	75.1%	0.0%	76.5%	0.0%	69.9%	0.0%	66.8%	0.0%	65.7%
% of Total Capacity							45.2%	0.0%	80.8%	0.0%	89.7%	0.0%	88.0%	0.0%	85.2%	0.0%	88.6%	0.0%	86.4%	0.0%	78.8%	0.0%	64.7%

						Number of Spaces Occupied																
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces Available	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30
Laman	North	End to Government	90° Angle	Unrestricted	27		27		27		27		27		25		26		25			
Laman	North	End to Government	Parallel	Unrestricted	7		7		7		7		7		7		7		7			
Laman	South	End to Government	Parallel	Unrestricted	16		15		16		16		16		14		13		16			
Victoria	North	Magnus to Teramby	1/4P	Loading Zone 5-8am			0		1		3		3		0		2		3			
Victoria	South	Magnus to Teramby	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5		0		0		4		4		5		4		4			
Teramby	North	Victoria to End	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	2		1		1		2		2		1		1		1			
Teramby	North	Victoria to End	4P	8.30am-4.30pm	13		0		10		14		12		12		12		13			
Teramby	North	Victoria to End	Loading Zone	6am-6pm			0		1		0		1		1		2		1			
Teramby	North	Victoria to End	4P - 90° angle	8.30am-4.30pm	13		8		13		13		13		13		13		13			
Victoria	North	Teramby to Shoal Bay Road	Motorbike		6		0		2		3		6		3		3		3			
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	19		14		18		19		19		19		18		17			
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	6		5		6		6		7		6		6		6			
Victoria	North	Teramby to Shoal Bay Road	Motorbike		4		0		0		0		4		0		0		0			
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	15		16		16		15		15		15		15		15			
Victoria	North	Teramby to Shoal Bay Road	Bus Zone		5		0		0		5		8		5		8		0			
Victoria	North	Teramby to Shoal Bay Road													1		1		1			
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	17		4		17		17		17		17		17		15			
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	14		4		14		14		14		14		14		14			
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	31		6		26		31		31		28		29		26			
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	30		7		30		30		30		29		27		22			
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	28		23		28		28		28		27		26		26			
Victoria	South	Shoal Bay Road to Teramby	4P - 60° angle	8.30am-4.30pm	22		12		21		22		22		22		22		20			
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	5		0		5		5		5		5		4		5			
Marina Car Park	South		4P - 90° angle	8.30am-4.30pm	25		11		25		25		25		25		24		25			
Marina Car Park	West		4P - 90° angle	8.30am-4.30pm	10		3		10		10		10		9		10		10			
Marina Car Park	North		4P - 90° angle	8.30am-4.30pm	18		15		18		18		18		18		18		18			
Marina Car Park	East		Mobility		2		2		2		1		2		2		1		1			
Marina Car Park	East		4P - 90° angle	8.30am-4.30pm	9		7		9		9		9		9		9		8			
Marina Car Park	South	Centre	4P - 90° angle	8.30am-4.30pm	15		6		16		15		15		15		15		17			
Marina Car Park	West	Centre	4P - 90° angle	8.30am-4.30pm	7		3		7		7		7		7		7		7			
Marina Car Park	North	Centre	4P - 90° angle	8.30am-4.30pm	15		15		15		15		15		15		15		15			
Marina Car Park	East	Centre	4P - 90° angle	8.30am-4.30pm	5		5		5		5		5		5		5		5			
Public Wharf Car Park	North		Mobility		1		0		2		1		1		1		1		1			
Public Wharf Car Park	North		8P - 90° angle	8.30am-4.30pm	31		12		31		31		30		31		30		24			
Public Wharf Car Park	South		8P - 90° angle	8.30am-4.30pm																		
Public Wharf Car Park	South		8P - 90° angle	8.30am-4.30pm	26		11		26		26		23		23		21		19			
Teramby		Marina Car Park (east)	4P ticket		30		14		30		30		30		28		30		30			
Teramby		Marina Car Park (west)	4P ticket		52		22		52		52		52		50		50		50			
Teramby		Fishermans Co-op car park			54		29		50		52		54		48		52		51			
				Total	531	0	275	0	507	0	526	0	533	0	507	0	506	0	483	0	0	0
				% Capacity		0.0%	51.8%	0.0%	95.5%	0.0%	99.1%	0.0%	100.4%	0.0%	95.5%	0.0%	95.3%	0.0%	91.0%	0.0%	0.0%	0.0%
				Sub-Total	54	0	29	0	50	0	52	0	54	0	48	0	52	0	51	0	0	0
				% of Sub-Total Capacity		0.0%	53.7%	0.0%	92.6%	0.0%	96.3%	0.0%	100.0%	0.0%	88.9%	0.0%	96.3%	0.0%	94.4%	0.0%	0.0%	0.0%
				% of Total Capacity		0.0%	52.0%	0.0%	95.2%	0.0%	98.8%	0.0%	100.3%	0.0%	94.9%	0.0%	95.4%	0.0%	91.3%	0.0%	0.0%	0.0%

						Number of Spaces Occupied																
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30
Donald	North	Church to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	14	7		13		14		13		14		14		12		10		8
Donald	North	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	8	3		6		8		8		8		8		8		8		8
Donald	North	Stockton to Yacaaba	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	1	1		1		1		1		1		1		1		1		1
Donald	South	Yacaaba to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	6	4		5		6		6		6		6		6		4		4
Donald	South	Yacaaba to Stockton	Loading Zone		2	1		2		2		2		2		2		1		0		2
Donald	South	Stockton to Church	1/2P	8.30am-5pm all days	7	3		3		7		7		7		5		7		4		2
Donald	South	Stockton to Church	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	1		0		4		4		4		4		4		2		4
Stockton	West	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	10		12		18		18		18		16		17		16		14
Stockton	East	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	16	3		8		16		15		16		15		11		14		12
Stockton	West	Donald to Magnus	1P	8.30am-6pm, M-F,	7	7		6		7		7		7		6		7		7		7
Stockton	East	Donald to Magnus	1/4P	8.30am-6pm, M-F,	4	4		4		4		4		3		3		3		4		3
Stockton	West	Donald to Victoria	Mobility		1	0		1		1		1		1		1		1		0		0
Stockton	West	Magnus to Victoria	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	5	5		6		5		5		5		4		4		5		4
Stockton	East	Victoria to Magnus	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	6	6		6		6		6		6		5		6		4		5
Magnus	North	Stockton to Yacaaba	Loading Zone			1		3		2		0		2		3		2		2		0
Magnus	North	Stockton to Yacaaba		1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5	3		5		5		5		5		4		4		4	
Magnus	South	Stockton to Yacaaba	Mobility		2	2		1		2		2		2		1		1		1		1
Magnus	South	Stockton to Yacaaba		1/4P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	2	2		2		2		2		2		2		2		2	
Magnus	South	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	7	4		7		7		7		7		6		7		7		7
Magnus	North	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	3	3		3		3		3		4		3		2		4		4
Magnus	South	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	4		3		4		4		4		4		4		4		1
Yacaaba	East	Magnus to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5	4		5		6		5		6		6		6		5		5
Yacaaba	West	Magnus to Donald	Loading Zone			1		0		1		2		2		1		1		1		2
Yacaaba	West	Magnus to Donald		1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	3		4		4		4		4		4		4		4	
Yacaaba	East	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	7		10		18		18		18		17		16		12		9
Yacaaba	West	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	21	7		12		20		21		21		20		13		11		8
Tomaree	North	Yacaaba to end	Loading Zone	5am-8am M&F	4	2		2		4		4		4		4		3		2		2
Tomaree	South	Yacaaba to end		Loading Zone	5am-8am M&F	2	0		1		2		2		2		2		2		2	
Tomaree	North	Yacaaba to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	3	0		0		3		3		2		3		3		1		1
		Donald Street Car park (east)	Unrestricted		90	36		76		88		90		88		89		84		78		67
		Donald Street Car park (west)	3P	8.30am-6pm, M-F	94	47		90		94		94		94		91		89		88		77
Government	South	Temporary car park	Unrestricted		61	48		58		60		60		61		60		55		56		50
Yacaaba	West	Temporary car park	Unrestricted		60	25		51		60		60		61		59		43		35		28
Donald		Woolworths car park	3P		190	96		190		190		190		184		179		186		182		181
Donald		Cinema car park			24	7		12		13		22		22		17		14		15		13
Stockton		Bowling Club car park	Unrestricted		75	15		15		15		43		52		60		39		33		34
				Total	484	254	0	406	0	484	0	483	0	487	0	469	0	429	0	398	0	347
				% Capacity		52.5%	0.0%	83.9%	0.0%	100.0%	0.0%	99.8%	0.0%	100.6%	0.0%	96.9%	0.0%	88.6%	0.0%	82.2%	0.0%	71.7%
				Sub-Total	289	118	0	217	0	218	0	255	0	258	0	256	0	239	0	230	0	228
				% of Sub-Total Capacity		40.8%	0.0%	75.1%	0.0%	75.4%	0.0%	88.2%	0.0%	89.3%	0.0%	88.6%	0.0%	82.7%	0.0%	79.6%	0.0%	78.9%
				% of Total Capacity		48.1%	0.0%	80.6%	0.0%	90.8%	0.0%	95.5%	0.0%	96.4%	0.0%	93.8%	0.0%	86.4%	0.0%	81.2%	0.0%	74.4%

Number of Spaces Occupied																						
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces Available	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30
Laman	North	End to Government	90° Angle	Unrestricted	27		27		27		27		27		25		26		25			
Laman	North	End to Government	Parallel	Unrestricted	7		7		7		7		7		7		7		7			
Laman	South	End to Government	Parallel	Unrestricted	16		15		16		16		16		14		13		16			
Victoria	North	Magnus to Teramby	1/4P	Loading Zone 5-8am																		
Victoria	South	Magnus to Teramby	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5		0		0		4		4		5		4		4			
Teramby	North	Victoria to End	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	2		1		1		2		2		1		1		1			
Teramby	North	Victoria to End	4P	8.30am-4.30pm	13		0		10		14		12		12		12		13			
Teramby	North	Victoria to End	Loading Zone	6am-6pm																		
Teramby	North	Victoria to End	4P - 90° angle	8.30am-4.30pm	13		8		13		13		13		13		13		13			
Victoria	North	Teramby to Shoal Bay Road	Motorbike																			
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	19		14		18		19		19		19		18		17			
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	6		5		6		6		7		6		6		6			
Victoria	North	Teramby to Shoal Bay Road	Motorbike																			
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	15		16		16		15		15		15		15		15			
Victoria	North	Teramby to Shoal Bay Road	Bus Zone																			
Victoria	North	Teramby to Shoal Bay Road	Unrestricted												1		1		1			
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	17		4		17		17		17		17		17		15			
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	14		4		14		14		14		14		14		14			
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	31		6		26		31		31		28		29		26			
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	30		7		30		30		30		29		27		22			
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	28		23		28		28		28		27		26		26			
Victoria	South	Shoal Bay Road to Teramby	4P - 60° angle	8.30am-4.30pm	22		12		21		22		22		22		22		20			
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	5		0		5		5		5		5		4		5			
Marina Car Park	South		4P - 90° angle	8.30am-4.30pm	25		11		25		25		25		25		24		25			
Marina Car Park	West		4P - 90° angle	8.30am-4.30pm	10		3		10		10		10		9		10		10			
Marina Car Park	North		4P - 90° angle	8.30am-4.30pm	18		15		18		18		18		18		18		18			
Marina Car Park	East		Mobility		2		2		2		1		2		2		1		1			
Marina Car Park	East		4P - 90° angle	8.30am-4.30pm	9		7		9		9		9		9		9		8			
Marina Car Park	South	Centre	4P - 90° angle	8.30am-4.30pm	15		6		16		15		15		15		15		17			
Marina Car Park	West	Centre	4P - 90° angle	8.30am-4.30pm	7		3		7		7		7		7		7		7			
Marina Car Park	North	Centre	4P - 90° angle	8.30am-4.30pm	15		15		15		15		15		15		15		15			
Marina Car Park	East	Centre	4P - 90° angle	8.30am-4.30pm	5		5		5		5		5		5		5		5			
Public Wharf Car Park	North		Mobility		1		0		2		1		1		1		1		1			
Public Wharf Car Park	North		8P - 90° angle	8.30am-4.30pm	31		12		31		31		30		31		30		24			
Public Wharf Car Park	South		8P - 90° angle	8.30am-4.30pm																		
Public Wharf Car Park	South		8P - 90° angle	8.30am-4.30pm	26		11		26		26		23		23		21		19			
Teramby		Marina Car Park (east)	4P ticket		30		14		30		30		30		28		30		30			
Teramby		Marina Car Park (west)	4P ticket		52		22		52		52		52		50		50		50			
Teramby		Fishermans Co-op car park	Unrestricted		54		29		50		52		54		48		52		51			
				Total	516	0	275	0	503	0	515	0	511	0	498	0	491	0	476	0	0	0
				% Capacity		0.0%	53.3%	0.0%	97.5%	0.0%	99.8%	0.0%	99.0%	0.0%	96.5%	0.0%	95.2%	0.0%	92.2%	0.0%	0.0%	0.0%
				Sub-Total	54	0	29	0	50	0	52	0	54	0	48	0	52	0	51	0	0	0
				% of Sub-Total Capacity		0.0%	53.7%	0.0%	92.6%	0.0%	96.3%	0.0%	100.0%	0.0%	88.9%	0.0%	96.3%	0.0%	94.4%	0.0%	0.0%	0.0%
				% of Total Capacity		0.0%	53.3%	0.0%	97.0%	0.0%	99.5%	0.0%	99.1%	0.0%	95.8%	0.0%	95.3%	0.0%	92.5%	0.0%	0.0%	0.0%



						Number of Spaces Occupied																	
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces Available	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	
Donald	North	Church to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	14	7		13		14		13		14		14		12		10		8	
Donald	North	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	8	3		6		8		8		8		8		8		8		8	
Donald	North	Stockton to Yacaaba	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	1	1		1		1		1		1		1		1		1		1	
Donald	South	Yacaaba to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	6	4		5		6		6		6		6		6		4		4	
Donald	South	Yacaaba to Stockton	Loading Zone																				
Donald	South	Stockton to Church	1/2P	8.30am-5pm all days	7	3		3		7		7		7		5		7		4		2	
Donald	South	Stockton to Church	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	1		0		4		4		4		4		4		2		4	
Stockton	West	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	10		12		18		18		18		16		17		16		14	
Stockton	East	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	16	3		8		16		15		16		15		11		14		12	
Stockton	West	Donald to Magnus	1P	8.30am-6pm, M-F,	7	7		6		7		7		7		6		7		7		7	
Stockton	East	Donald to Magnus	1/4P	8.30am-6pm, M-F,	4	4		4		4		4		3		3		3		4		3	
Stockton	West	Donald to Victoria	Mobility		1	0		1		1		1		1		1		1		0		0	
Stockton	West	Magnus to Victoria	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	5	5		6		5		5		5		4		4		5		4	
Stockton	East	Victoria to Magnus	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	6	6		6		6		6		6		5		6		4		5	
Magnus	North	Stockton to Yacaaba	Loading Zone																				
Magnus	North	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5	3		5		5		5		5		4		4		4		5	
Magnus	South	Stockton to Yacaaba	Mobility		2	2		1		2		2		2		1		1		1		1	
Magnus	South	Stockton to Yacaaba	1/4P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	2	2		2		2		2		2		2		2		2		2	
Magnus	South	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	7	4		7		7		7		7		6		7		7		7	
Magnus	North	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	3	3		3		3		3		4		3		2		4		4	
Magnus	South	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	4		3		4		4		4		4		4		4		1	
Yacaaba	East	Magnus to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5	4		5		6		5		6		6		6		5		5	
Yacaaba	West	Magnus to Donald	Loading Zone																				
Yacaaba	West	Magnus to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	3		4		4		4		4		4		4		4		2	
Yacaaba	East	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	7		10		18		18		18		17		16		12		9	
Yacaaba	West	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	21	7		12		20		21		21		20		13		11		8	
Tomaree	North	Yacaaba to end	Loading Zone	5am-8am M&F																			
Tomaree	South	Yacaaba to end	Loading Zone	5am-8am M&F																			
Tomaree	North	Yacaaba to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	3	0		0		3		3		2		3		3		1		1	
Donald Street Car park (east)					Unrestricted	90	36		76		88		90		88		89		84		78		67
Donald Street Car park (west)					3P	94	47		90		94		94		94		91		89		88		77
Government	South	Temporary car park	Unrestricted		61	48		58		60		60		61		60		55		56		50	
Yacaaba	West	Temporary car park	Unrestricted		60	25		51		60		60		61		59		43		35		28	
Donald		Woolworths car park	3P		190	96		190		190		190		184		179		186		182		181	
Donald		Cinema car park	Unrestricted		24	7		12		13		22		22		17		14		15		13	
Stockton		Bowling Club car park	Unrestricted		75	15		15		15		43		52		60		39		33		34	
Total					476	249	0	398	0	473	0	473	0	475	0	457	0	420	0	391	0	339	
% Capacity						52.3%	0.0%	83.6%	0.0%	99.4%	0.0%	99.4%	0.0%	99.8%	0.0%	96.0%	0.0%	98.2%	0.0%	82.1%	0.0%	71.2%	
Sub-Total					289	118	0	217	0	218	0	255	0	258	0	256	0	239	0	230	0	228	
% of Sub-Total Capacity						40.8%	0.0%	75.1%	0.0%	75.4%	0.0%	88.2%	0.0%	89.3%	0.0%	89.6%	0.0%	92.7%	0.0%	79.6%	0.0%	78.9%	
% of Total Capacity						48.0%	0.0%	80.4%	0.0%	90.3%	0.0%	95.2%	0.0%	95.8%	0.0%	93.2%	0.0%	86.1%	0.0%	81.2%	0.0%	74.1%	

						Number of Spaces Occupied																
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces Available	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30
Laman	North	End to Government	90° Angle	Unrestricted	24		3		12		16		14		12		19		7		3	
Laman	North	End to Government	Parallel	Unrestricted	7		3		5		6		7		4		4		4		4	
Laman	South	End to Government	Parallel	Unrestricted	16		5		8		8		8		9		13		8		8	
Victoria	North	Magnus to Teramby	1/4P	Loading Zone 5-8am	3		0		0		0		0		1		1		0		0	
Victoria	South	Magnus to Teramby	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5		0		4		1		2		2		5		3		4	
Teramby	North	Victoria to End	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	2		1		2		2		0		1		1		0		1	
Teramby	North	Victoria to End	4P	8.30am-4.30pm	13		3		4		4		5		6		13		3		2	
Teramby	North	Victoria to End	Loading Zone	6am-6pm			0		0		3		1		2		2		0		0	
Teramby	North	Victoria to End	4P - 90° angle	8.30am-4.30pm	13		1		4		5		2		11		6		9		3	
Victoria	North	Teramby to Shoal Bay Road	Motorbike		4		0		0		0		0		0		0		0		0	
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	19		0		2		0		2		7		0		5		5	
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	6		0		0		0		0		0		2		0		0	
Victoria	North	Teramby to Shoal Bay Road	Motorbike		4		0		0		0		0		0		5		0		0	
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	15		0		1		0		1		0		0		0		1	
Victoria	North	Teramby to Shoal Bay Road	Bus Zone				0		0		3		3		4		0		5		0	
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	17		0		0		0		0		0		1		0		1	
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	14		0		0		3		0		5		1		0		0	
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	31		0		0		0		0		0		1		0		0	
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	30		1		0		1		2		0		2		2		0	
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	28		0		0		0		0		1		0		1		0	
Victoria	South	Shoal Bay Road to Teramby	4P - 60° angle	8.30am-4.30pm	22		0		0		0		0		2		0		0		0	
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	5		0		0		0		0		0		2		2		0	
Marina Car Park	South		4P - 90° angle	8.30am-4.30pm	25		0		0		0		0		2		5		3		1	
Marina Car Park	West		4P - 90° angle	8.30am-4.30pm	10		0		1		1		2		4		15		15		1	
Marina Car Park	North		4P - 90° angle	8.30am-4.30pm	18		8		5		0		10		14		1		1		5	
Marina Car Park	East		Mobility		2		0		1		7		2		0		5		4		3	
Marina Car Park	East		4P - 90° angle	8.30am-4.30pm	9		8		0		1		3		5		3		1		1	
Marina Car Park	South	Centre	4P - 90° angle	8.30am-4.30pm	15		0		0		3		1		4		4		4		1	
Marina Car Park	West	Centre	4P - 90° angle	8.30am-4.30pm	7		2		1		0		0		3		11		9		8	
Marina Car Park	North	Centre	4P - 90° angle	8.30am-4.30pm	15		2		2		0		7		11		2		3		2	
Marina Car Park	East	Centre	4P - 90° angle	8.30am-4.30pm	5		0		2		5		2		2		0		0		0	
Public Wharf Car Park	North		Mobility		2		0		0		2		1		0		8		7		4	
Public Wharf Car Park	North		8P - 90° angle	8.30am-4.30pm	31		6		10		8		10		8		0		0		0	
Public Wharf Car Park	South		8P - 90° angle	8.30am-4.30pm	26		4		4		4		7		3		3		5		1	
Teramby		Marina Car Park (east)	4P ticket	8.30am-4.30pm	30		4		12		12		13		26		26		21		18	
Teramby		Marina Car Park (west)	4P ticket	8.30am-4.30pm	52		10		18		19		21		0		0		0		0	
Teramby		Fishermans Co-op car park			54		4		10		23		41		36		42		37		42	
				Total	525	0	65	0	108	0	137	0	167	0	185	0	161	0	122	0	77	0
				% Capacity		0.0%	12.4%	0.0%	20.6%	0.0%	26.1%	0.0%	31.8%	0.0%	35.2%	0.0%	30.7%	0.0%	23.2%	0.0%	14.7%	0.0%
				Sub-Total	54	0	4	0	10	0	23	0	41	0	36	0	42	0	37	0	42	0
				% of Sub-Total Capacity		0.0%	7.4%	0.0%	18.5%	0.0%	42.6%	0.0%	75.9%	0.0%	66.7%	0.0%	77.8%	0.0%	68.5%	0.0%	77.8%	0.0%
				% of Total Capacity		0.0%	11.9%	0.0%	20.4%	0.0%	27.6%	0.0%	35.9%	0.0%	38.2%	0.0%	35.1%	0.0%	27.5%	0.0%	20.6%	0.0%

						Number of Spaces Occupied																
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces Available	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30
Donald	North	Church to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	14	3		10		11		11		14		11		10		13		12
Donald	North	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	8	7		5				7		4		5		8		6		4
Donald	North	Stockton to Yacaaba	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	1	1		1				1		0		1		1		0		1
Donald	South	Yacaaba to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	6	5		5				5		5		6		5		3		2
Donald	South	Yacaaba to Stockton	Loading Zone		2	0		1				1		0		0		1		0		0
Donald	South	Stockton to Church	1/2P	8.30am-5pm all days	7	0		2		4		2		5		5		1		3		5
Donald	South	Stockton to Church	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	1		1		2		2		3		3		1		3		3
Stockton	West	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	7		12				13		16		16		16		17		14
Stockton	East	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	16	8		11				13		13		14		14		11		14
Stockton	West	Donald to Magnus	1P	8.30am-6pm, M-F,	7	5		6		7		7		7		5		6		5		6
Stockton	East	Donald to Magnus	1/4P	8.30am-6pm, M-F,	4	2		3		3		2		4		4		1		1		4
Stockton	West	Donald to Victoria	Mobility		1	0		0		0		0		0		1		1		1		0
Stockton	West	Magnus to Victoria	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	5	3		4		5		2		4		5		5		2		4
Stockton	East	Victoria to Magnus	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	6	3		5		5		2		5		6		2		4		3
Magnus	North	Stockton to Yacaaba	Loading Zone			1		0		0		2		1		1		1		1		2
Magnus	North	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5	0		3		4		4		4		4		5		3		4
Magnus	South	Stockton to Yacaaba	Mobility		2	0		1		1		1		0		0		1		1		1
Magnus	South	Stockton to Yacaaba	1/4P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	2	0		1		1		1		1		1		1		1		1
Magnus	South	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	7	0		5		6		4		6		6		7		5		4
Magnus	North	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	3	4		3		2		3		3		2		3		3		3
Magnus	South	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	2		3		2		2		2		3		1		2		1
Yacaaba	East	Magnus to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5	4		4		3		6		5		3		1		5		2
Yacaaba	West	Magnus to Donald	Loading Zone			0		2		0		1		1		1		0		0		0
Yacaaba	West	Magnus to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	3		3		3		3		4		3		3		4		4
Yacaaba	East	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	6		13		13		16		15		17		12		11		5
Yacaaba	West	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	21	5		18		16		18		14		20		15		13		8
Tomaree	North	Yacaaba to end	Loading Zone	5am-8am M&F	4	0		0		2		4		2		0		0		0		0
Tomaree	South	Yacaaba to end	Loading Zone	5am-8am M&F	2	1		2		3		2		2		1		1		1		0
Tomaree	North	Yacaaba to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	3	0		3		2		3		3		1		2		2		0
		Donald Street Car park (east)	Unrestricted		90	38		80		84		83		83		82		75		75		64
		Donald Street Car park (west)	3P	8.30am-6pm, M-F	94	30		82		82		74		93		89		76		56		73
Government	South	Temporary car park	Unrestricted		61	36		53		52		52		49		47		39		34		31
Yacaaba	West	Temporary car park	Unrestricted		60	14		54		60		59		59		57		52		36		30
Donald		Woolworths car park	3P		190	110		114		121		161		124		133		82		76		88
Donald		Cinema car park			24	7		11		11		9		13		11		9		11		14
Stockton		Bowling Club car park	Unrestricted		75	2		14		18		21		27		28		29		31		34
			Total		484	189	0	396	0	373	0	406	0	427	0	420	0	367	0	322	0	305
			% Capacity			39.0%	0.0%	81.8%	0.0%	77.1%	0.0%	83.9%	0.0%	88.2%	0.0%	86.8%	0.0%	75.8%	0.0%	66.5%	0.0%	63.0%
			Sub-Total		289	119	0	139	0	150	0	191	0	164	0	172	0	120	0	118	0	136
			% of Sub-Total Capacity			41.2%	0.0%	48.1%	0.0%	51.9%	0.0%	66.1%	0.0%	56.7%	0.0%	59.5%	0.0%	41.5%	0.0%	40.8%	0.0%	47.1%
			% of Total Capacity			39.8%	0.0%	69.2%	0.0%	67.7%	0.0%	77.2%	0.0%	76.5%	0.0%	76.6%	0.0%	63.0%	0.0%	56.9%	0.0%	57.1%

						Number of Spaces Occupied																
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces Available	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30
Donald	North	Church to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	14	3		10		11		11		14		11		10		13		12
Donald	North	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	8	7		5				7		4		5		8		6		4
Donald	North	Stockton to Yacaaba	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	1	1		1				1		0		1		1		0		1
Donald	South	Yacaaba to Stockton	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	6	5		5				5		5		6		5		3		2
Donald	South	Yacaaba to Stockton	Loading Zone																			
Donald	South	Stockton to Church	1/2P	8.30am-5pm all days	7	0		2		4		2		5		5		1		3		5
Donald	South	Stockton to Church	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	1		1		2		2		3		3		1		3		3
Stockton	West	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	7		12				13		16		16		16		17		14
Stockton	East	Tomaree to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	16	8		11				13		13		14		14		11		14
Stockton	West	Donald to Magnus	1P	8.30am-6pm, M-F,	7	5		6		7		7		7		5		6		5		6
Stockton	East	Donald to Magnus	1/4P	8.30am-6pm, M-F,	4	2		3		3		2		4		4		1		1		4
Stockton	West	Donald to Victoria	Mobility		1	0		0		0		0		0		1		1		1		0
Stockton	West	Magnus to Victoria	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	5	3		4		5		2		4		5		5		2		4
Stockton	East	Victoria to Magnus	1P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	6	3		5		5		2		5		6		2		4		3
Magnus	North	Stockton to Yacaaba	Loading Zone																			
Magnus	North	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5	0		3		4		4		4		4		5		3		4
Magnus	South	Stockton to Yacaaba	Mobility		2	0		1		1		1		0		0		1		1		1
Magnus	South	Stockton to Yacaaba	1/4P	8.30am-6pm, M-F, 9am-4pm Sat-Sun	2	0		1		1		1		1		1		1		1		1
Magnus	South	Stockton to Yacaaba	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	7	0		5		6		4		6		6		7		5		4
Magnus	North	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	3	4		3		2		3		3		2		3		3		3
Magnus	South	Yacaaba to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	2		3		2		2		2		3		1		2		1
Yacaaba	East	Magnus to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5	4		4		3		6		5		3		1		5		2
Yacaaba	West	Magnus to Donald	Loading Zone																			
Yacaaba	West	Magnus to Donald	1P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	4	3		3		3		3		4		3		3		4		4
Yacaaba	East	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	18	6		13		13		16		15		17		12		11		5
Yacaaba	West	Donald to Tomaree	2P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	21	5		18		16		18		14		20		15		13		8

Number of Spaces Occupied																						
STREET	SIDE OF STREET	SECTION	Parking Restriction	Time Restrictions	Number of Spaces Available	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30
Laman	North	End to Government	90° Angle	Unrestricted	24		3		12		16		14		12		19		7		3	
Laman	North	End to Government	Parallel	Unrestricted	7		3		5		6		7		4		4		4		4	
Laman	South	End to Government	Parallel	Unrestricted	16		5		8		8		8		9		13		8		8	
Victoria	North	Magnus to Teramby	1/4P	Loading Zone 5-8am																		
Victoria	South	Magnus to Teramby	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	5		0		4		1		2		2		5		3		4	
Teramby	North	Victoria to End	1/4P	8.30am-6pm, M-F, 8.30am-12.30pm Sat	2		1		2		2		0		1		1		0		1	
Teramby	North	Victoria to End	4P	8.30am-4.30pm	13		3		4		4		5		6		13		3		2	
Teramby	North	Victoria to End	Loading Zone	6am-6pm																		
Teramby	North	Victoria to End	4P - 90° angle	8.30am-4.30pm	13		1		4		5		2		11		6		9		3	
Victoria	North	Teramby to Shoal Bay Road	Motorbike																			
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	19		0		2		0		2		7		0		5		5	
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	6		0		0		0		0		0		2		0		0	
Victoria	North	Teramby to Shoal Bay Road	Motorbike																			
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	15		0		1		0		1		0		0		0		1	
Victoria	North	Teramby to Shoal Bay Road	Bus Zone																			
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	17		0		0		0		0		0		1		0		1	
Victoria	North	Teramby to Shoal Bay Road	4P - 60° angle	8.30am-4.30pm	14		0		0		3		0		5		1		0		0	
Victoria	North	Teramby to Shoal Bay Road	4P - Parallel	8.30am-4.30pm	31		0		0		0		0		0		1		0		0	
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	30		1		0		1		2		0		2		2		0	
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	28		0		0		0		0		1		0		1		0	
Victoria	South	Shoal Bay Road to Teramby	4P - 60° angle	8.30am-4.30pm	22		0		0		0		0		2		0		0		0	
Victoria	South	Shoal Bay Road to Teramby	4P - Parallel	8.30am-4.30pm	5		0		0		0		0		0		2		2		0	
Marina Car Park	South		4P - 90° angle	8.30am-4.30pm	25		0		0		0		0		2		5		3		1	
Marina Car Park	West		4P - 90° angle	8.30am-4.30pm	10		0		1		1		2		4		15		15		1	
Marina Car Park	North		4P - 90° angle	8.30am-4.30pm	18		8		5		0		10		14		1		1		5	
Marina Car Park	East		Mobility		2		0		1		7		2		0		5		4		3	
Marina Car Park	East		4P - 90° angle	8.30am-4.30pm	9		8		0		1		3		5		3		1		1	
Marina Car Park	South	Centre	4P - 90° angle	8.30am-4.30pm	15		0		0		3		1		4		4		4		1	
Marina Car Park	West	Centre	4P - 90° angle	8.30am-4.30pm	7		2		1		0		0		3		11		9		8	
Marina Car Park	North	Centre	4P - 90° angle	8.30am-4.30pm	15		2		2		0		7		11		2		3		2	
Marina Car Park	East	Centre	4P - 90° angle	8.30am-4.30pm	5		0		2		5		2		2		0		0		0	
Public Wharf Car Park	North		Mobility		2		0		0		2		1		0		8		7		4	
Public Wharf Car Park	North		8P - 90° angle	8.30am-4.30pm	31		6		10		8		10		8		0		0		0	
Public Wharf Car Park	South		8P - 90° angle	8.30am-4.30pm	26		4		4		4		7		3		3		5		1	
Teramby		Marina Car Park (east)	4P ticket	8.30am-4.30pm	30		4		12		12		13		26		26		21		18	
Teramby		Marina Car Park (west)	4P ticket	8.30am-4.30pm	52		10		18		19		21		0		0		0		0	
Teramby		Fishermans Co-op car park			54		4		10		23		41		36		42		37		42	
			Total		514	0	65	0	108	0	131	0	163	0	178	0	153	0	117	0	77	0
			% Capacity			0.0%	12.6%	0.0%	21.0%	0.0%	25.5%	0.0%	31.7%	0.0%	34.6%	0.0%	29.8%	0.0%	22.8%	0.0%	15.0%	0.0%
			Sub-Total		54	0	4	0	10	0	23	0	41	0	36	0	42	0	37	0	42	0
			% of Sub-Total Capacity			0.0%	7.4%	0.0%	18.5%	0.0%	42.6%	0.0%	75.9%	0.0%	66.7%	0.0%	77.8%	0.0%	68.5%	0.0%	77.8%	0.0%
			% of Total Capacity			0.0%	12.1%	0.0%	20.8%	0.0%	27.1%	0.0%	35.9%	0.0%	37.7%	0.0%	34.3%	0.0%	27.1%	0.0%	21.0%	0.0%

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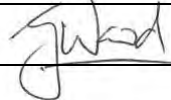
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Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	A. Luttrell	T. Bickerstaff		G. Wood		7/09/17



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## **Appendix 11 – Pedestrian Access and Mobility Plan**

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# Port Stephens Pedestrian Access and Mobility Plan

Tomaree Planning District

Cardno reference: 80017083



Prepared for  
Port Stephens Council

25 October 2017

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## Document Information

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## Document History

Version	Effective Date	Description of Revision	Prepared by:	Reviewed by:
1	14 Jul 2017	Draft Report	Bahman Mehrpour Rachel Kohan Elizabeth Muscat Asith Nagodavithane	Koosha Dehghan Larissa Miller Mitchell Lee
2	4 Aug 2017	Revised Draft Report	Bahman Mehrpour	Koosha Dehghan
3	25 Oct 2017	Final Report	Bahman Mehrpour	Koosha Dehghan

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## Executive Summary

To improve the health, liveability and sustainability of its community, Port Stephens Council commissioned a revision to its Pedestrian Access and Mobility Plan (PAMP). The purpose of the PAMP is to plan for walking across eight planning districts representing the Council Local Government Area (LGA).

This plan covers Stage 1 (Tomaree Planning District) of the PAMP revision process, incorporating the towns of Anna Bay, Boat Harbour, Corlette, Fingal Bay, Fishermans Bay, Nelson Bay, One Mile, Salamander Bay, Shoal Bay, Soldiers Point and Taylors Beach.

Council's vision to promote walking in the area has arisen due to several identified needs; these include:

- > To support future growth of the Tomaree Planning District;
- > To increase capacity and reduce congestion in the overall transport network;
- > To reduce environmental impacts caused by vehicle congestion;
- > To improve public health; and
- > To improve community wellbeing and social inclusion.

This was achieved by assessing the existing walking networks, understanding community preferences and recommending infrastructure improvements to deliver safe and accessible walking networks for the residents and visitors of the Tomaree Planning District.

### Community and stakeholder consultation

Feedback from stakeholder organisations included Port Stephens Council, Roads and Maritime Services (RMS), hospitals and schools, medical centres, transport service providers, child care facilities, sporting facilities, aged care facilities and retirement villages.

Additionally, all residents were encouraged to comment via a community survey and an online mapping tool where they could identify locations of concern. The majority of issues identified in the consultation process were concentrated around the Anna Bay, Corlette and Shoal Bay areas.

A lack of path facilities and poor quality of the existing paths were the issues raised most regularly both through the key stakeholder consultation and the community survey / online map. Respondents cited these as the main reasons why they were discouraged from walking in their local area.

A lack of crossing facilities and concern for pedestrian safety was also raised as an issue by respondents, citing high vehicle speeds and volumes. The interaction between vehicles and pedestrians was also identified as a safety concern at key locations including along Bagnall Beach Road near the Salamander Bay Shopping Centre and around schools across the Tomaree Planning District.

### Network development

The pedestrian network in the Tomaree Planning District was developed with consideration of the following factors:

- > **Building on the existing networks:** The existing pedestrian network was analysed and new routes were identified to enhance the network to reinforce the coherence of the existing routes and maintain network legibility.
- > **Connection to key land uses:** Routes were proposed to connect to pedestrian-generating land uses, such as residential areas, retirement villages, schools, retail and business, parks and recreation, and health services to provide safe and direct access for pedestrians accessing them.
- > **Connection to public transport:** The network addresses pedestrian desire lines (the most direct and frequently used routes) to access bus stops across the ten towns.
- > **Cater for vulnerable communities:** The proposed network aims to deliver improved connectivity and safety benefits for vulnerable demographic groups that rely on compliant pedestrian facilities for their walking trips.

- > **Stakeholder and community comments:** Stakeholder and community comments on missing pedestrian links in the network were considered and incorporated, where possible, into the network development process.
- > **Cater for demand:** The network was planned to cater for current and future demand including connections to recreational routes and future land uses and developments.

### Site audit

Following the development of the pedestrian network, a site audit was undertaken to address the following items:

- > **Identification and recording of pedestrian infrastructure:** Every pedestrian facility and its condition was recorded by the site auditors. These facilities included footpaths, kerb ramps, pedestrian refuges, zebra crossings, signalised pedestrian crossings and shared path facilities.
- > **Assessment of pedestrian infrastructure for issues and non-compliance against design standards:** Every non-compliance associated with the existing pedestrian facilities was recorded by the site auditors.
- > **Facility width measurements:** The width of all existing pedestrian paths and lanes were measured by site auditors.

The site audit phase of the PAMP was completed during the week of 26<sup>th</sup> June to 30<sup>th</sup> June 2017. The audits were conducted by a combination of walking and driving along the proposed pedestrian network.

### Key issues

The pedestrian network developed for the Tomaree Planning District covers 161.6 kilometres of existing and proposed paths (covering both footpaths and shared paths). The site audit found that of this 161.6 kilometres, 107 kilometres of paths were missing, 39.1 kilometres comprised of existing footpaths and 15.5 kilometres comprised of existing shared paths.

Of the existing footpath facilities, 22.6 kilometres were audited as having a compliant width (at least 1.2 metres wide) and 15 kilometres having a minor non-compliant width (between 1.1 metres and 1.2 metres wide). 1.5 kilometres of the existing footpaths were deemed to be of non-compliant width (less than 1.1 metres wide). Footpath provision and widths were generally very good within town centres but less consistent in the surrounding residential areas.

Of the existing shared path facilities, 10.1 kilometres were audited as having a compliant width (at least 2.5 metres wide), 3.5 kilometres had a minor non-compliant width (between 2.4 metres and 2.5 metres wide) and 1.9 kilometres had a non-compliant width (less than 2.4 metres wide).

In addition to auditing the presence and width of path facilities, the site audit also assessed the pedestrian routes for a number of specific path issues which affect safety and amenity. These issues included:

- > Hazards or obstructions;
- > Poor path condition;
- > Steep grades;
- > Potential pedestrian/cyclist conflict on shared paths;
- > No delineation on shared paths; and
- > Personal security.

The site audit assessed 1,038 locations for kerb ramps on the pedestrian and shared path network. Of these locations, there were 535 missing kerb ramps, 310 compliant kerb ramps and 193 non-compliant kerb ramps.

The site audit assessed 58 existing pedestrian refuges for compliance. Of these, the majority (48) were found to have either insufficient waiting space for pedestrians, or they were too narrow or too short. 10 pedestrian refuges were found to be compliant.



The site audit assessed 14 zebra crossings across the Tomaree Planning District. It found that six of the crossings had various defects including faded line markings, narrow crossing widths, lack of signage or tactiles. Eight of the zebra crossings were found to be compliant.

68 locations across the Tomaree Planning District were identified as potentially hazardous crossing locations, including at roundabouts, along high speed roads or wide carriageways.

### **Recommended improvements**

For the issues identified across the pedestrian network, improvements were recommended to eliminate or mitigate the issues (where possible), as described in **Section 9** of this report.

The infrastructure improvements recommended in this report are also supplemented by behavioural change and educational initiatives. These incentives can help to increase knowledge and understanding of the active travel choices available, develop skills and confidence, and provide motivation and encouragement to make travel behaviour changes towards sustainable transport modes.

A cost estimate was prepared for the recommended improvement works based on estimated unit costs. The total cost for the Tomaree Planning District PAMP was estimated as \$23,542,430. The recommended improvement works to address each identified issue were prioritised against a range of criteria agreed with Port Stephens Council. Works were prioritised to provide best value for money in accordance with the following implementation timeframe:

- > **High priority:** 0 – 2 years;
- > **Medium priority:** 2 – 5 years; and
- > **Low priority:** 5 – 15 years.

A cost breakdown of all recommended improvement works is provided in **Section 10.2**.

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# 1 Introduction

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Port Stephens Council has identified the need to prepare an update to its Pedestrian Access and Mobility Plan (PAMP) to improve the community's health, liveability and sustainability. The plan will also help to address the existing and future transport needs of the Tomaree Planning District.

The PAMP revision will occur in phases, with the first phase focused on the Tomaree Planning District. PAMP reports for other planning districts will occur in future phases.

## 1.1 PAMP purpose

The purpose of Phase 1 of the Port Stephens PAMP is to plan for walking in the Tomaree Planning District to support continued growth. This was achieved by assessing the existing pedestrian network, understanding community preferences and recommending infrastructure improvements to deliver a safe and accessible walking network for the residents and visitors to the Tomaree Planning District. This plan also aims to support walking across the community to:

- > Support future growth of the Tomaree Planning District;
- > Increase capacity and reduce congestion in the overall transport network;
- > Reduce environmental impacts caused by vehicle congestion;
- > Improve public health; and
- > Improve community wellbeing and social inclusion.

The built environment is critical to achieving mode shift to active transport. The provision of safe, connected and comfortable walking infrastructure is shown to be the key factor to enable more people to walk more often.

The PAMP identifies improvements to address issues with the current and future pedestrian networks, and provides cost estimates and a ranking of works so that implementation can be staged according to Council's priorities.

The Port Stephens LGA is likely to experience development and growth in the medium to long term, and Council has prepared a number of key planning documents, such as the Medowie Planning Strategy and Nelson Bay Town Centre & Foreshore Strategy, to manage the expected population growth and set the future direction for the LGA. This PAMP builds on the work completed within these strategic documents to provide soft and hard infrastructure solutions for the Tomaree Planning District.

## 1.2 Study area

The Tomaree Planning District currently has 25,100 residents living in the towns of Anna Bay, Boat Harbour, Bobs Farm, Corlette, Fingal Bay, Fishermans Bay, Nelson Bay, One Mile, Salamander Bay, Shoal Bay, Soldiers Point and Taylors Beach. In addition, the many beaches and leisure activities available in the area attract many tourists every year.

Nelson Bay is the largest town in the Tomaree Planning District, with a large range of shops, cafes and tourist attractions. The other towns have mainly residential land uses with leisure facilities and holiday accommodation. Salamander Bay Shopping Centre is located in Salamander Bay, and contains a number of supermarkets and over 60 specialty stores. This is a popular destination for shoppers in the Tomaree Planning District and attracts many pedestrian trips.

The Anna Bay, Fingal Bay, Shoal Bay and Soldiers Point town precincts comprise of smaller town centres with mixed residential and recreational land uses. Tourist and leisure facilities are also located in the Boat Harbour and One Mile precincts. The Corlette precinct is predominately residential with recreational facilities, and Taylors Beach is a key commercial and industrial hub.

The Tomaree Planning District is presented in **Figure 1-1**. All towns in the Tomaree Planning District have been assessed as part of this Pedestrian Access and Mobility Plan, with the exception of Bobs Farm.



The map displays the Tomaree Planning District, outlined in red. It includes the following areas: Soldiers Point, Shoal Bay, Salamander Bay, Nelson Bay, Fingal Bay, Tylors Beach, Anna Bay, Fishermans Bay, and Boat Harbour. Other labeled locations include Tanilba Bay, Malabar Park, Lemon Tree Passage, Bobs Farm, and One Mile. The map also shows surrounding areas like Pindima, Myall Lakes National Park, and various nature reserves. A legend indicates the Tomaree Planning District boundary (red line), Suburb Boundary (grey line), and LGA Boundary (dashed line). A scale bar shows 1:80,000 Scale at A3, with a scale of 0 to 3,000 metres. The map is produced by Cardno NSW/ACT Pty Ltd (SYD) and includes a north arrow.

## 2 Policy and planning framework

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The policy and planning documentation frameworks provide the strategic transport context and future direction from a State and Local government perspective, to which the PAMP will align. Several relevant policy and planning documents were reviewed to inform the development of the pedestrian network for the Tomaree Planning District, network audit criteria, the prioritised recommendations, and works schedule. The review of these documents is presented in the following sections.

### 2.1 State Government policies and plans

#### 2.1.1 Transport plans

##### 2.1.1.1 *Long Term Transport Master Plan, Transport for NSW*

The *NSW Long Term Transport Master Plan* (Master Plan), released in 2012, details the NSW Government's strategic objectives, challenges and actions for delivering a modern, customer focused and integrated transport system in NSW over the next 20 years.

A key focus of the Master Plan is to increase walking and integrate active transport with public transport modes. This will involve extending and improving walking networks, and improving signage and new transport interchanges that are community activity hubs.

Key active transport actions identified in the Master Plan include:

- > Developing Regional Transport Plans with local communities to integrate land use and transport planning, and identify areas where infrastructure is needed most;
- > Investing in improved footpath networks in consultation with councils, with a focus on enhancing connectivity and accessibility in regional centres to encourage increased walking trips; and
- > Enhance road safety for all users through improved driver behaviour, vehicles and targeted upgrades to the road network.

The Master Plan recommends that new pedestrian connections should address personal safety and security, footpath width capacity requirements, safe and convenient road crossings, access to public transport stations and stops, good signage and wayfinding.

##### 2.1.1.2 *Hunter Regional Transport Plan, Transport for NSW*

The *Hunter Regional Transport Plan* (The Plan), released in 2014, documents the challenges and actions specifically for the Hunter region, and includes outcomes from the consultation period following the release of the *NSW Long Term Transport Master Plan*.

The Plan identifies the transport challenges facing the region including an ageing population, high private vehicle mode share and balancing freight and passenger transport needs. Pedestrian crash clusters have also been identified in the Nelson Bay area.

The Plan recognises that regional towns in NSW are ideal for walking as a transport mode. Almost 90 percent of people live within a comfortable two kilometre walking distance or five kilometre cycling distance of a local centre with access to shops, schools and workplaces. The Plan identifies several actions to support walking within the major towns and cities of the Hunter region, these include:

- > Ensuring provision for walking infrastructure is considered for all major transport and land development projects;
- > Assisting local councils to incorporate advocacy for active travel into their respective Community Strategic Plans;
- > Delivering the Walking Communities Program, which involves state infrastructure investments and support for local council initiatives to increase walking mode share, and dedicated funding for walking infrastructure within a two-kilometre catchment of centres and transport interchanges; and

- > Delivering improved customer information on active travel, and assisting local councils with developing guidelines and resources for trip planning and wayfinding.

### **2.1.1.3 Disability Action Plan 2012-2017, Transport for NSW**

The *Disability Action Plan 2012-2017*, released in 2012, aims to ensure that the needs of all customers are placed at the centre of planning and decision-making for the transport system. This requires improvements to the design of transport infrastructure, customer service and customer information systems.

The aims of the Disability Action Plan, considered for the development of the PAMP, are to:

- > Eliminate, as far as practicable, direct and indirect discrimination in the provision of transport services to NSW residents and visitors;
- > Reduce transport disadvantage experienced by people with disability;
- > Inform public transport planning and infrastructure development to ensure that compliance with the DDA Standards is met or exceeded within agreed timeframes; and
- > Provide leadership in the development and implementation of initiatives that contribute towards inclusive environments, in partnership with other NSW Government agencies and local councils.

To achieve these aims, the Disability Action Plan has several actions specifically relating to active transport:

- > Prepare pedestrian mobility plans to achieve walkability and safe road crossings in the planning and design phase of new public transport;
- > Improve pedestrian crossing safety, shared path interaction and review traffic signal phasing for pedestrians;
- > Increase pedestrian traffic signal phasing around health and disability services and in areas with a high proportion of older people; and
- > Ensure that all new pedestrian infrastructure is accessible and DDA compliant.

### **2.1.2 Land use plans**

#### **2.1.2.1 Hunter Regional Plan 2036, Department of Planning and Environment**

The *Hunter Regional Plan 2036 (HRP)*, released in 2016, provides a strategic policy, planning and decision making framework which strives for sustainable growth over the next 20 years. The plan follows a period of consultation with stakeholders in 2014, and includes social, economic and environmental considerations.

The HRP focuses on four key goals, which are defined by a series of strategic directions and actions developed to guide the implementation of more detailed land use plans, development proposals and infrastructure projects. The directions linked to Goal 3: Thriving communities considered for the PAMP include:

- > Enhancing neighbourhoods through integrating active transport into the design of new communities to encourage increased physical activity;
- > Expanding recreational walking trails to form a 'green-grid' across the region; and
- > Integrating recreational walking routes with commuter connections to local centres and the public transport network to increase active and public transport mode share, and reduce congestion.

The HRP outlines the key growth indicators for each Council within the Hunter region. For the Port Stephens Local Government Area (LGA), the growth to 2036 includes:

- > A population increase of 18,550;
- > 11,050 new dwellings; and
- > 5,665 new jobs.

The HRP also details specific priorities for each Council, based on the region-wide goals and strategic directions and the individual needs of the respective local communities. For Port Stephens Council, the relevant priorities include:



- > Designation of Raymond Terrace and Nelson Bay as Strategic Centres, which are areas considered as regionally significant and targeted for population and economic growth over the next 20 years;
- > In Nelson Bay, investigating opportunities for high-density residential dwellings, balancing permanent and tourist accommodation, and maintaining the area as a primary tourist and activity centre; and
- > Designation of Anna Bay, Salamander Bay Medowie, Karuah, Tanilba Bay, Lemon Tree Passage, Fern Bay, Hinton, Woodville and Seaham as centres of local significance. These centres serve to provide jobs and local services (shopping, dining, entertainment, health and personal services) for the local community.

## **2.2 Port Stephens Council policies and plans**

### **2.2.1 Strategic planning**

#### **2.2.1.1 *Port Stephens Integrated Plans 2013-2023***

The *Port Stephens Integrated Plans 2013-2023* (The Integrated Plan), released in 2012, bring together three strategic documents which detail the program of delivery for Council's long term goals. The Integrated Plans include:

- > The *Community Strategic Plan 2013-2023*, which identify the long-term goals, developed in consultation with the community;
- > The *Delivery Program 2015-2019*, which details the initiatives proposed by Council to deliver on the goals identified in the Community Strategic Plan; and
- > The *Operational Plans 2015-2019*, which details the budget requirements and individual actions required to implement the initiatives outlined in the Delivery Program.

Key goals include:

- > Promote sustainable and improved, accessible and flexible transport modes;
- > Identify and plan for the future needs of an ageing population; and
- > Make future provision for people with disabilities, their families and carers.

The key initiatives supporting these goals include:

- > Provide facilities for senior citizens to use for association meetings and general recreational use;
- > Implement the Ageing Strategy and Disability Inclusion Action Plan;
- > Prepare and review strategic land use strategies, policies and plans;
- > Attract and enable investment in Nelson Bay;
- > Conduct road safety programs with Roads and Maritime Services;
- > Align Council's infrastructure planning with the Hunter Council's Regional Transport Plan;
- > Facilitate land acquisition and leasing services to enable existing and new infrastructure projects;
- > Deliver the Capital Works Program; and
- > Complete the roads asset maintenance program.

Investment in each of the initiatives outlined above is proposed to continue annually through 2020.

#### **2.2.1.2 *Pathways Plan***

The Port Stephens Pathways Plan, released in 2016, details the existing footpath and shared path network across the Port Stephens LGA, and outlines preferred locations for new path facilities to be implemented progressively as funding becomes available.

The proposed paths considered during the development of the PAMP for the Tomaree Planning District are presented in **Table 2-1**.

Table 2-1 Proposed paths

Town	Proposed works
<b>Anna Bay</b>	<u>Shared path</u> <ul style="list-style-type: none"> <li>Port Stephens Drive, Nelson Bay Road, Gan Gan Road, Old Main Road, Morna Point Road, Davidson Street, Margaret Street and Cromart Crescent.</li> </ul> <u>Footpath</u> <ul style="list-style-type: none"> <li>Robinson Avenue, Campbell Avenue, Fitzroy Street, Pacific Avenue and Fisherman's Bay Road.</li> </ul>
<b>Boat Harbour</b>	<u>Shared path</u> <ul style="list-style-type: none"> <li>Road 1036, Castaway Close, Koala Place and Gan Gan Road.</li> </ul> <u>Footpath</u> <ul style="list-style-type: none"> <li>Graham Street, Boat Harbour Road, Kingsley Drive and Noamunga Street.</li> </ul>
<b>Bobs Farm</b>	<u>Shared path</u> <ul style="list-style-type: none"> <li>Marsh Road from Nelson Bay Road (west) to Nelson Bay Road (east).</li> </ul>
<b>Corlette</b>	<u>Shared path</u> <ul style="list-style-type: none"> <li>Sandy Point Road, Spinnaker Way, Foreshore Drive, Bagnall Beach Road, Government Road and Purser Street.</li> </ul> <u>Footpath</u> <ul style="list-style-type: none"> <li>Sandy Point Road, Bonito Street and Marlin Street.</li> </ul>
<b>Fingal Bay</b>	<u>Shared path</u> <ul style="list-style-type: none"> <li>Farm Road and Marine Drive.</li> </ul> <u>Footpath</u> <ul style="list-style-type: none"> <li>Rocky Point Road, Coral Street, Boulder Bay Road, Tuna Crescent, Market Street, Pacific Drive, Short Street and Marine Drive.</li> </ul>
<b>Fisherman's Bay</b>	<u>Shared path</u> <ul style="list-style-type: none"> <li>Fisherman's Bay Road and Park Street</li> </ul>
<b>Nelson Bay</b>	<u>Shared path</u> <ul style="list-style-type: none"> <li>Mooroba Crescent, Galoola Drive, Nelson Street, Government Road, Christmas Bush Avenue, Victoria Parade, Fingal Street, Austral Street, Trevally Street, Shoal Bay Road, Dixon Drive, Beach Road, Harwood Avenue and Dowling Street.</li> </ul> <u>Footpath</u> <ul style="list-style-type: none"> <li>Norburn Avenue, Ajax Avenue, Gowrie Avenue, Achilles Street, Shoal Bay Road, Trafalgar Street, Austral Avenue, Armidale Avenue, Stubby Street, Parkes Street, Magnus Street, Donald Street, Church Street, Sproule Street, Tomaree Street, Galoola Drive, Wallawa Road, Taree Street, Burbong Street and Seaham Street.</li> </ul>
<b>One Mile</b>	<u>Shared path</u> <ul style="list-style-type: none"> <li>Hannah Parade, Gan Gan Road and Frost Road.</li> </ul>
<b>Salamander Bay</b>	<u>Shared path</u> <ul style="list-style-type: none"> <li>Salamander Way, Town Centre Circuit, Sandy Point Road, Nelson Bay Road and Bagnall Beach Road.</li> </ul>
<b>Shoal Bay</b>	<u>Shared path</u> <ul style="list-style-type: none"> <li>Government Road, Shoal Bay Road, Sylvia Street, Peterie Street, and Fingal Link Road</li> </ul> <u>Footpath</u> <ul style="list-style-type: none"> <li>Tomaree Road, Verona Road, Garden Place, Peterie Road, Fingal Street, Rigney Street, Ocean Beach Road, Bullecourt Street and Government Road.</li> </ul>
<b>Soldiers Point</b>	<u>Shared path</u> <ul style="list-style-type: none"> <li>Sunset Boulevard and Soldiers Point Road, connecting to the foreshore area to the south-east;</li> <li>New facility in parkland areas, connecting: <ul style="list-style-type: none"> <li>Diemars Road and Cromarty Bay Road</li> <li>Cromarty Bay Road and Kent Gardens;</li> <li>Bayview Street and Brown Avenue; and</li> <li>Ridgeway Avenue and Mitchell Street.</li> </ul> </li> </ul> <u>Footpath</u>

Town	Proposed works
	<ul style="list-style-type: none"> <li>Ridgeway Avenue, Elk Street, Bennett Lane, Fern Avenue, Ash Street, and between: <ul style="list-style-type: none"> <li>Ford Street and Soldiers Point Road; and</li> <li>Vista Avenue and Soldiers Point Road.</li> </ul> </li> </ul>
Taylors Beach	<u>Shared path</u> <ul style="list-style-type: none"> <li>Port Stephens Drive.</li> </ul>

### 2.2.1.3 Port Stephens Ageing Strategy

The *Port Stephens Ageing Strategy* (The Strategy), released in 2016 outlines the goals and actions needed to address the needs of the ageing population in the Port Stephens Local Government Area for 2016 to 2019, and enhance social inclusion and liveability for the community. The Strategy aligns with the outcomes of the Integrated Plans 2015-2025, and aims to also integrate with those outlined in State and Federal plans. The Strategy identifies five key themes, each of which is accompanied by goals and actions:

- > Ongoing analysis and planning;
- > Housing, neighbourhood and land use planning;
- > Transport connectivity and accessibility;
- > Health and community services; and
- > Social inclusion and participation.

A key goal considered for the PAMP is to provide “a connected network of public transport, pedestrian and cycle ways that provide access to desirable locations and increase social connectivity and opportunities.”

The Strategy emphasises improving access to public and active transport options that are well connected, promoting these as a viable alternative to driving, and encouraging healthier lifestyles through improved physical and mental health. The Strategy aims to enable new developments to contribute to expanding the walking and cycling network to further encourage active transport for shorter trips. The specific actions developed to achieve this goal include:

- > Prioritise actions within Council’s Pathways Plan to improve safety, connectivity and accessibility to meet the needs of the ageing population;
- > Review and gain endorsement of the Pedestrian Access and Mobility Plan (PAMP) in accordance with legislative requirements. The focus of the PAMP as outlined in the Strategy includes ensuring:
  - Pavements are free of obstacles or uneven surfaces;
  - Kerb ramps and provided; and
  - Wider paths are provided to improve safety and accommodate mobility scooters.

### 2.2.1.4 Disability Action Plan

The *Disability Action Plan* (The Plan), adopted by Port Stephens Council in 2014, outlines the initiatives aimed at eliminating disability discrimination from Council’s provision of goods, services and facilities for 2014 to 2018; it also aligns with the legislative requirements of the Disability Discrimination Act 1992.

The Plan follows a review of the actions and achievements from the Disability Action Plan 2006-2010, and consultation with Council staff in 2011 and the community in 2012. The relevant achievements from the 2006-2010 Plan included:

- > A process to investigate access complaints, and scheduling remedial works into Council’s Forward Works Program;
- > Accessibility upgrades to high-use bus stops across the LGA; and
- > Rollout of Tactile Ground Surface Indicators (TGSIs) on kerb ramps across town centres in the LGA.

The key outcomes from the community consultation in 2012 of relevance to the PAMP include:

- > Footpaths were generally considered inaccessible due to a lack of connectivity and uneven surfaces;



- > Shopping centres, pedestrian crossings and car parks were generally considered accessible; and
- > The community was generally unaware of access upgrades implemented by Council across the LGA.

Improved physical access to land uses and services was listed as the highest priority by community respondents when developing actions for future implementation. Four objectives with specific actions were presented; two are relevant for the PAMP:

- > Objective 1: Accessible facilities and services;
  - Ensure Council's tree pruning is maintained along footpaths to increase accessibility;
  - Ongoing appraisal of civil infrastructure to improve access;
  - Ensure upgrades to bus stops are in line with the requirements of the Disability Standards for Accessible Public Transport (DSAPT);
  - Audit of outdoor dining areas along footpaths and investigations for installation of warning TGSI;
  - Encourage community participation in reporting access issues and improvement opportunities directly to Council's Community Planner; and
  - Investigate funding for a new Pedestrian Access and Mobility Plan (PAMP).
- > Objective 2: Advocacy
  - Further liaise with local transport providers to improve access to public transport in the Port Stephens area and identify high needs areas.

## **2.2.2      Development planning**

### **2.2.2.1      *Port Stephens Council Local Environmental Plan 2013***

A Local Environmental Plans (LEP) must be prepared by each local Council in accordance with the NSW Standard Instrument. LEPs guide local development and growth through development standards and land use zoning. LEPs also identify state and local items of heritage and conservation areas within a particular LGA.

The Port Stephens Council Local Environmental Plan 2013 (Port Stephens LEP 2013) notes the following objectives of land use Zones B2 (Local Centre) and B3 (Commercial Core):

- > To maximise public transport patronage and encourage walking and cycling.

Zone R2 (Low Density Residential):

- > To enable other land uses that provide facilities or services that meet the day to day needs of residents.

Zone B4 (Mixed Use):

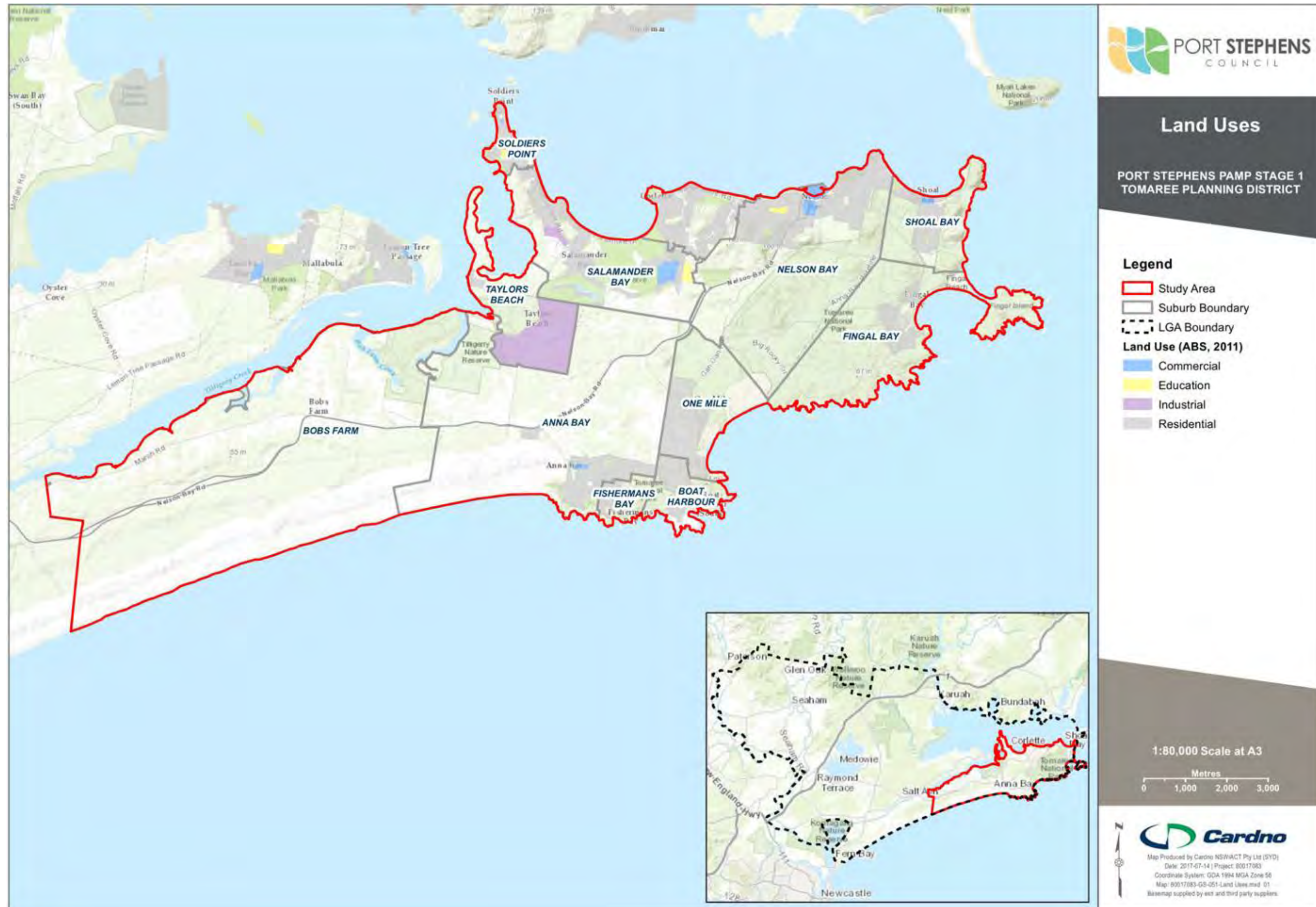
- > To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.

For development planned along coastal zones across the Port Stephens LGA, an objective considered during the preparation of the PAMP is:

- > To provide opportunities for pedestrian public access to and along the coastal foreshore.

In the Tomaree Planning District, the town centres of Nelson Bay, Shoal Bay and Anna Bay are classed as B2 Local Centre, and mostly surrounded by R2 Low Density Residential and RE1 Public Recreation. In Nelson Bay and Shoal Bay, the B2 Local Centre zones are surrounded by R3 Medium Density Residential zones. The Salamander Bay Shopping Centre is classed as zone B3 Commercial Core, with R3 Medium Density Residential to the north and R2 Low Density Residential to the east. The activity centres in Corlette, Fingal Bay, Soldiers Point, are classed as B1 Neighbourhood Centre. The town centre in Taylors Beach is classed as zone B5 Business Development. In the towns of Fisherman's Bay, Boat Harbour and One Mile, zones combine residential, recreational, rural and conserved land. A map demonstrating the land use zones in the Tomaree Planning District is presented in **Figure 2-1**.

Figure 2-1 Tomaree Planning District land use zones



#### **2.2.2.2 Port Stephens Council Development Control Plan 2014**

The Port Stephens Development Control Plan (DCP) 2014 was prepared by Council in accordance with the Environmental Planning and Assessment Act 1979 Section 74C and the Environmental Planning and Assessment Regulation 2000 Part 3. The Plan also runs in conjunction with the Port Stephens LEP 2013 and applies to all the land within the Port Stephens LGA.

The Port Stephens DCP aims to promote high quality and sustainable development with good urban design outcomes. Key areas to consider for the PAMP include:

##### **Road network and parking (DCP Section B9)**

DCP objectives:

- > To ensure the impacts of traffic generating development are considered and that the existing level of service of the road network is maintained;
- > To ensure driveways have adequate site distances for traffic and pedestrians on footpaths; and
- > To encourage more active lifestyles and ecologically sustainable development by providing convenient and accessible public transport options.

Requirements and performance criteria:

- > A Statement of Environmental Effects (SEE) is to be prepared for each traffic generating development, and must include details of street features (including footpaths) and anticipated impacts to pedestrian movements and accessibility for mobility impaired persons;
- > Driveways should provide a 2.5 metre minimum site distance to view approaching pedestrians;
- > Car parks that provide accessible spaces must be linked to a continuous and accessible path of travel;
- > New developments of 20 or more dwellings must be linked to by a continuous and accessible footpath to an accessible bus stop (new or upgrade of an existing stop) within a 400 metre catchment; and
- > Crossing points adjacent to public transport stops must be designed to follow pedestrian desire lines.

##### **Development in Nelson Bay centre (including Salamander Bay Shopping Centre) (DCP Section D5)**

DCP objectives:

- > To ensure development contributes to the existing compact and interconnected street pattern;
- > To facilitate development that is safe and secure for pedestrians by incorporating principles of Crime Prevention Through Environmental Design (CPTED);
- > To encourage the establishment of a pedestrian network that will integrate with established and future pedestrian circulation patterns; and
- > To provide planning principles to guide the further development of the Salamander Bay Shopping Centre precinct.

Requirements and performance criteria:

- > The street network is to be interconnected to provide a grid-like structure;
- > Where new developments are proposed along an activated street frontage, they should provide continuity of the area through street-facing premises and direct footpath access;
- > Stockton and Magnus Streets are designated as the main shopping streets in the Nelson Bay centre;
- > The Nelson Bay town centre, foreshore and transition areas should be interconnected and facilitate easy pedestrian movement between them;
- > To ensure an integrated pedestrian and vehicular network in the Salamander Bay Shopping Centre precinct which promotes improved connectivity between developments; and
- > To ensure new developments in the Salamander Bay Shopping Centre precinct are designed with the safety of users and neighbours are considered.



## **Subdivisions and commercial developments (DCP Section C1 and C2)**

DCP objectives:

- > To ensure local streets are well-connected to the street network with obvious pedestrian and cycle links to higher order streets;
- > To ensure priority is provided to residents' needs when designing local streets to encourage usability;
- > To ensure pathways follow desire lines;
- > To ensure street activation and passive surveillance through active street frontage;
- > To facilitate development that is safe and secure for pedestrians by incorporating CPTED principles; and
- > To ensure continuous awnings along pathways to provide shelter where most pedestrian activity occurs.

Requirements and performance criteria:

- > Driveways and footpaths are provided as part of new subdivisions;
- > Footpaths and dual-use paths follow desire lines;
- > The street layout is interconnected to provide a grid-like structure, and is informed by street connections for future subdivisions on adjacent lands;
- > The street layout must ensure public access to open space/s is maintained and encouraged;
- > New developments must provide a paved link to the public footpath; and
- > Awnings must be provided over pedestrian paths, and must be of the same dimensions, alignment and materials of adjacent awnings along the street.

### **2.2.3 Transport Planning**

#### **2.2.3.1 *Nelson Bay Pedestrian Access and Mobility Plan***

A Pedestrian Access and Mobility Plan was prepared for the Nelson Bay area in 2004. The aim of the PAMP was to identify issues relating to pedestrian safety and equitable access to community facilities. The PAMP documented the issue locations across the study area, which included the main town centre, marina and foreshore, and links to surrounding residential and recreational areas.

The prioritised route network was developed for the study area, with high priority routes designated along Stockton, Church, Dowling, Fingal, Magnus, Donald and Nelson Streets, Government Road and Victoria Parade.

The common issues included:

- > Missing or steep footpaths, particularly along busier streets including Stockton, Yacaaba and Church Streets;
- > Missing or non-compliant kerb ramps;
- > Lack of safe crossing opportunities (pedestrian refuge islands were recommended for implementation);
- > Non-compliant bus stop design; and
- > Lack of ground tactiles at raised pedestrian crossings.

This PAMP has reviewed the approach and recommendations of the Nelson Bay Pedestrian Access and Mobility Plan, assessing its relevance, and considered similarities where applicable.

#### **2.2.3.2 *Salamander Bay Pedestrian Access and Mobility Plan***

A Pedestrian Access and Mobility Plan was prepared for the Salamander Bay area in 2004. With similar aims to the Nelson Bay PAMP, this one focused on the Salamander Bay Shopping Centre, and links to surrounding residential and recreational areas.

The prioritised route network designated Sandy Point Road, Bagnall Beach Road, Salamander Way and Town Centre Circuit as high priority routes.

The common issues included:

- > Missing footpaths, particularly along Town Centre Circuit;
- > Missing or non-compliant kerb ramps; and
- > Non-compliant pedestrian crossings (includes a misaligned pedestrian refuge island, and missing tactiles at raised pedestrian crossings).

This PAMP has reviewed the approach and recommendations of the Salamander Bay Pedestrian Access and Mobility Plan, assessing its relevance, and considered similarities where applicable.

## **2.3 Summary of policy and planning framework**

The Port Stephens Council PAMP takes into consideration the planned and recommended initiatives and improvements outlined in the background review. For the Tomaree Planning District, these include:

### Long Term Transport Master Plan

- > Improving footpath networks in consultation with councils to enhance connectivity and accessibility in regional centres to encourage increased walking trips;
- > Providing improved community transport services for the elderly and disadvantaged; and
- > Enhancing road safety for all users through improvements on the road and pedestrian networks.

### Hunter Regional Transport Plan

- > New walking facilities included as part of all new developments;
- > Assisting Councils with advocating for active transport in their respective Community Strategic Plans;
- > Delivering the Walking Communities Program, which includes dedicated funding for walking infrastructure within a two-kilometre catchment of centres and transport interchanges; and
- > Delivering improved customer information on active travel, and assisting local councils with developing guidelines and resources for trip planning and wayfinding.

### NSW Disability Action Plan

- > Prepare pedestrian mobility plans to achieve walkability and safe road crossings in the planning and design phase of new public transport;
- > Improve pedestrian crossing safety, shared paths interaction and review traffic signal phasing for pedestrians;
- > Ensure that all new pedestrian and cycling infrastructure is accessible and DDA compliant.

### Hunter Regional Plan 2036

- > Integrating recreational walking routes with commuter connections to local centres and the public transport network to increase active and public transport mode share, and reduce congestion.

### Port Stephens Integrated Plans 2013-2023

- > Promote sustainable and improved, accessible and flexible transport modes;
- > Identify and plan for the future needs of an ageing population; and
- > Make future provision for people with disabilities, their families and carers.

### Pathways Plan

- > New footpath and shared path facilities proposed in towns across the Tomaree Planning District to link in with existing infrastructure.

### Ageing Strategy

- > Prioritise actions within Council's Pathways Plan to improve safety, connectivity and accessibility to meet the needs of the ageing population;

- > Ensuring the outcomes of the PAMP include:
  - Pavements that are free of obstacles or uneven surfaces;
  - Kerb ramps are provided; and
  - Wider paths are provided to improve safety and accommodate mobility scooters.

#### Port Stephens Council Disability Action Plan

- > Delivering on, and planning initiatives that ensure equitable access to land uses, community services and public transport.

#### Port Stephens Council LEP 2013

- > To maximise public transport patronage and encourage walking and cycling; and
- > To provide opportunities for pedestrian public access to and along the coastal foreshore.

#### Port Stephens Council DCP 2014

- > Promoting high quality and sustainable development with good urban design outcomes, with a focus on promoting active transport and accessibility to public transport services.

#### Nelson Bay PAMP

- > High priority routes were designated within the Nelson Bay town centre; and
- > Key issues included missing footpaths and kerb ramps, lack of crossings and tactiles.

#### Salamander Bay PAMP

- > The study area focused on the Salamander Bay Shopping Centre
- > Key issues included missing footpaths on Town Centre Circuit, missing kerb ramps and non-compliant refuge crossings.



## 3 People and movement

The Tomaree Planning District's population characteristics, travel behaviours and trends are established in the following sections, and are based on data obtained from the Australian Bureau of Statistics (ABS) census, the NSW Government's Transport Performance and Analytics (TPA) division and Port Stephens Council.

### 3.1 People

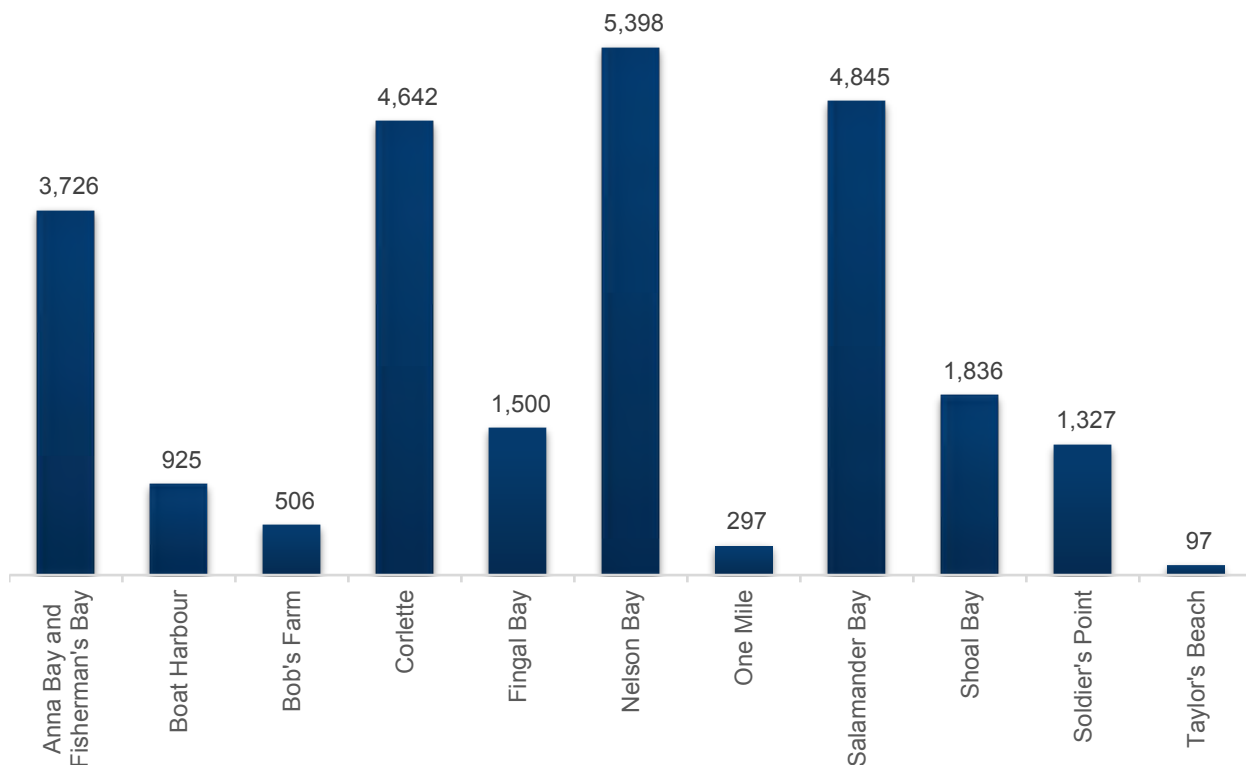
The Tomaree Planning District comprises of the following towns: Anna Bay, Bobs Farm, Boat Harbour, Corlette, Fingal Bay, Nelson Bay, One Mile, Salamander Bay, Shoal Bay, Soldiers Point and Taylors Beach. Information on each town's demographics and travel behaviour is presented in the sections below.

#### 3.1.1 Population

The Tomaree Planning District is a key tourist and regional hub in NSW, and in 2015 had a population of more than 25,000 people (*Source: Australian Bureau of Statistics – Region Summary for Anna Bay and Nelson Bay peninsula*).

The breakdown of population in the Tomaree Planning District by town is given in **Figure 3-1**. Nelson Bay has the biggest population, with 5,398 people, followed by Salamander Bay with 4,845 people. Taylors Beach and One Mile have the smallest populations, with 97 and 297 people respectively.

**Figure 3-1 Tomaree Planning District population by town**



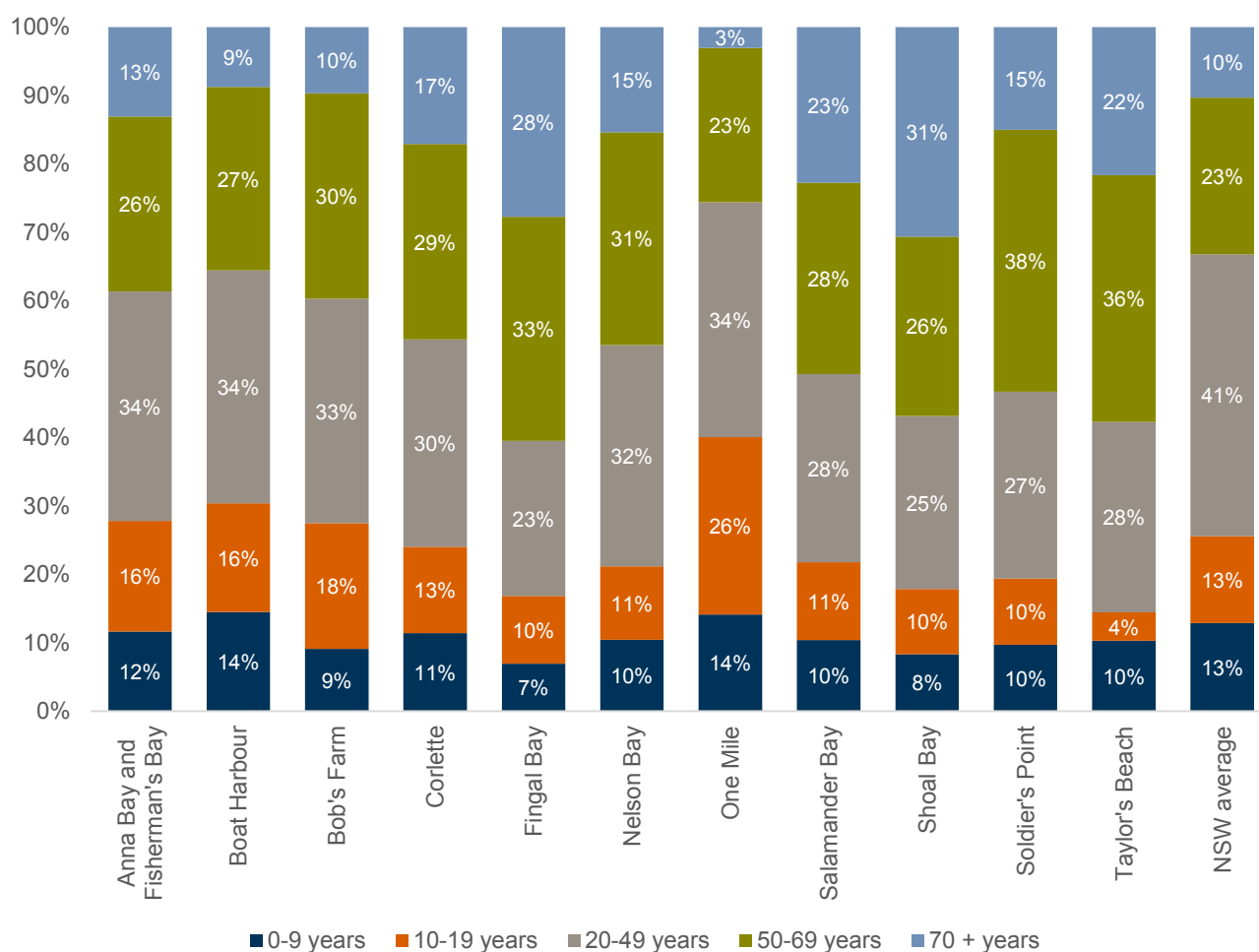
### 3.1.2 Age profile

A breakdown of the age groups per town is presented in **Figure 3-2**, with comparisons also provided against the NSW state average. The statistics are drawn from the 2011 census as the timeframe aligns with Port Stephens Council vulnerable communities data, discussed in **Section 3.1.4**.

The breakdown shows that Fingal Bay has the largest proportion of residents over the age of 50 at approximately 61 per cent, followed by Taylors Beach at 58 per cent. Collectively across the 12 towns, there are a higher proportion of residents aged between 20 and 49 years compared to other age groups. The data also shows there is a significant proportion of Tomaree residents aged between ten and 19 years.

Given the high proportions of elderly residents in Port Stephens with generally lower mobility, it is necessary to improve accessibility and provision of active transport infrastructure.

**Figure 3-2 Age profile for Tomaree Planning District towns**



Source: ABS Census Data 2011. Statistics were not reported separately for Fishermans Bay, and were instead combined into the Anna Bay profile.

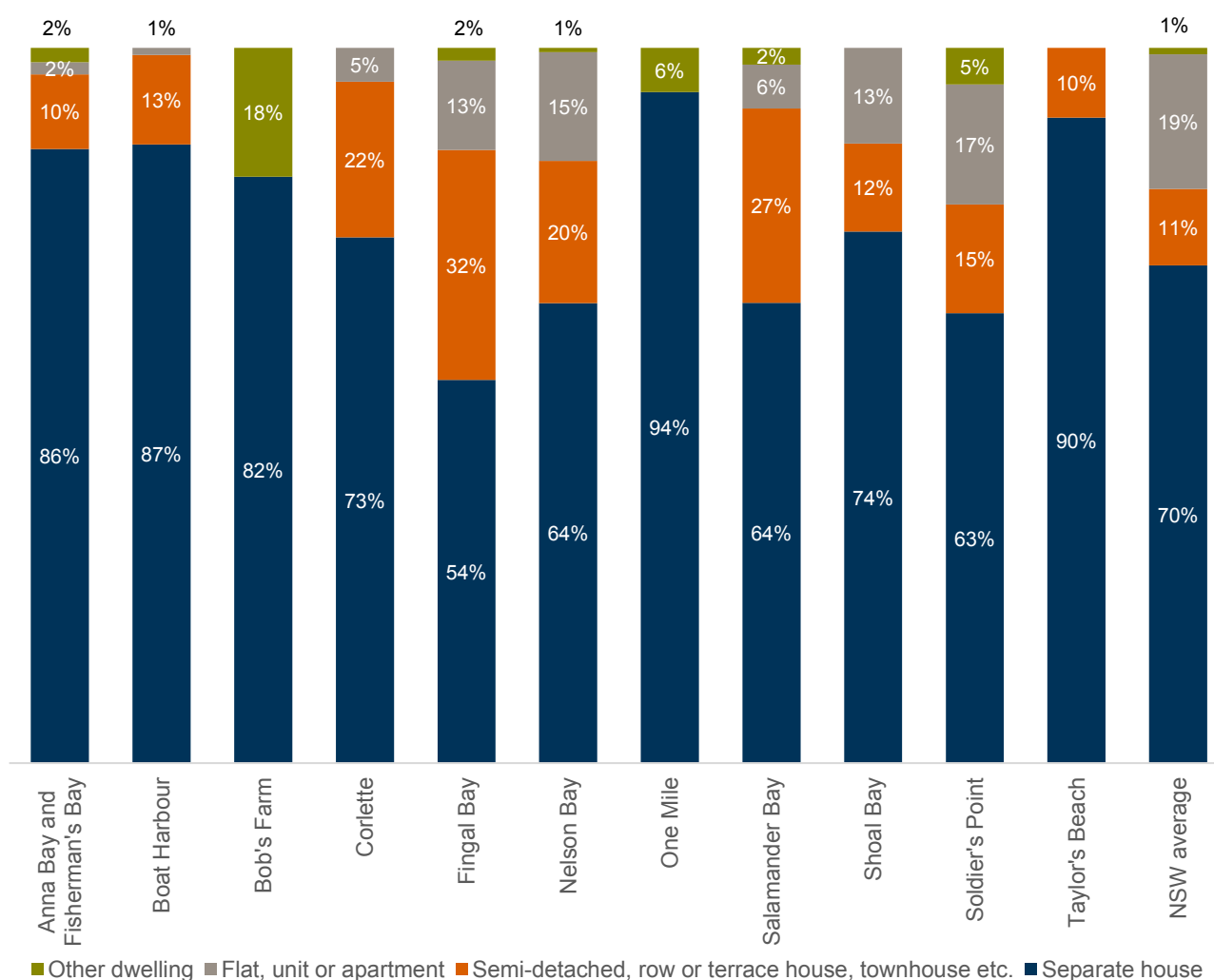
### 3.1.3 Dwelling type

Across the 12 towns in the Tomaree Planning District, separate houses represent a majority proportion of the dwelling types. Variances in dwelling types are higher in Fingal Bay, with 32 per cent of dwellings classified as semi-detached. Similarly, semi-detached structure represent 27 per cent and 22 per cent of all dwellings in Salamander Bay and Corlette respectively. The proportion of flats, units or apartments is highest in the Nelson Bay area, representing 20 per cent of all dwellings, higher than the NSW state average of 19 per cent.

As most dwellings in the Tomaree Planning District are separate houses, block sizes are likely to be larger, causing walking distances and times to become longer. This encourages residents to use private vehicles for shorter trips.

A breakdown of the dwelling types for each town in the Tomaree Planning District is presented in **Figure 3-3**. The statistics are drawn from the 2011 census as the timeframe aligns with Port Stephens Council vulnerable communities data, discussed in **Section 3.1.4**.

**Figure 3-3 Dwelling type for Tomaree Planning District towns**



Source: ABS Census Data 2011. Statistics were not reported separately for Fishermans Bay, and were instead combined into the Anna Bay profile.

#### **3.1.4 Vulnerable communities**

Vulnerable communities are those that require special considerations due to health, age and mobility status. The identification of vulnerable communities is an initiative of Port Stephens Council, which aims to understand the distribution of key demographic groups at risk of disadvantage and isolation across the LGA. These groups are more likely to rely heavily on pedestrian facilities to safely travel around their respective local area. They stand to benefit the most from targeting improvements in the walking network to prioritise the areas where the vulnerable community population proportions are highest.

Density heat maps developed by Council detail the proportion of the population that are:

- > In need of assistance;
- > Over the age of 55 years; and
- > Between the ages of zero and four years.

The mapping drew on 2011 Census data provided by the Australian Bureau of Statistics. Densities of each community were allocated at a Statistical Area 1 (SA1) level and mapping of all three vulnerable community groups for the Tomaree Planning District is presented in **Figure 3-4**, **Figure 3-5** and **Figure 3-6**.



Figure 3-4 Vulnerable communities – Need for assistance

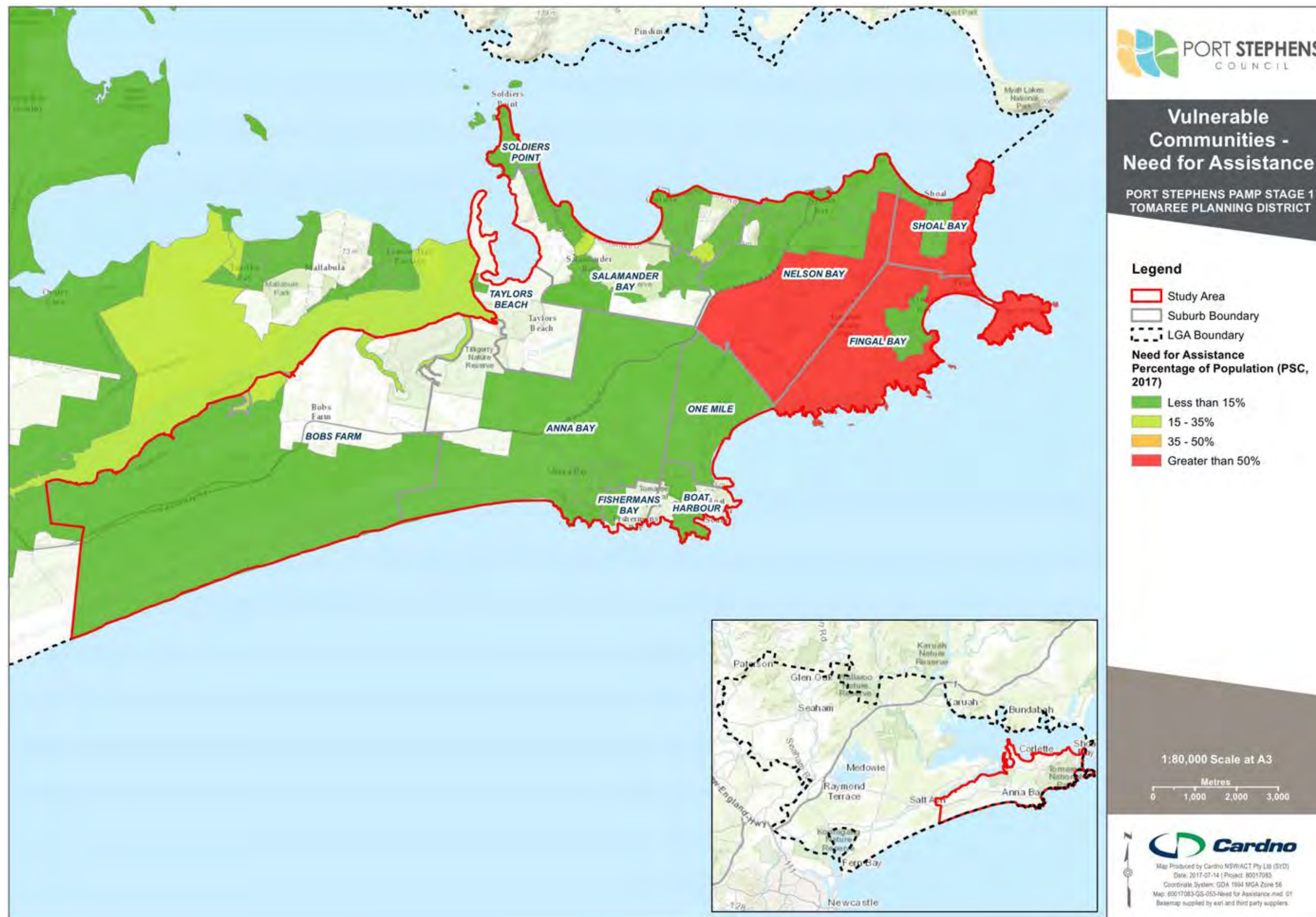




Figure 3-5 Vulnerable communities – Over 55 years

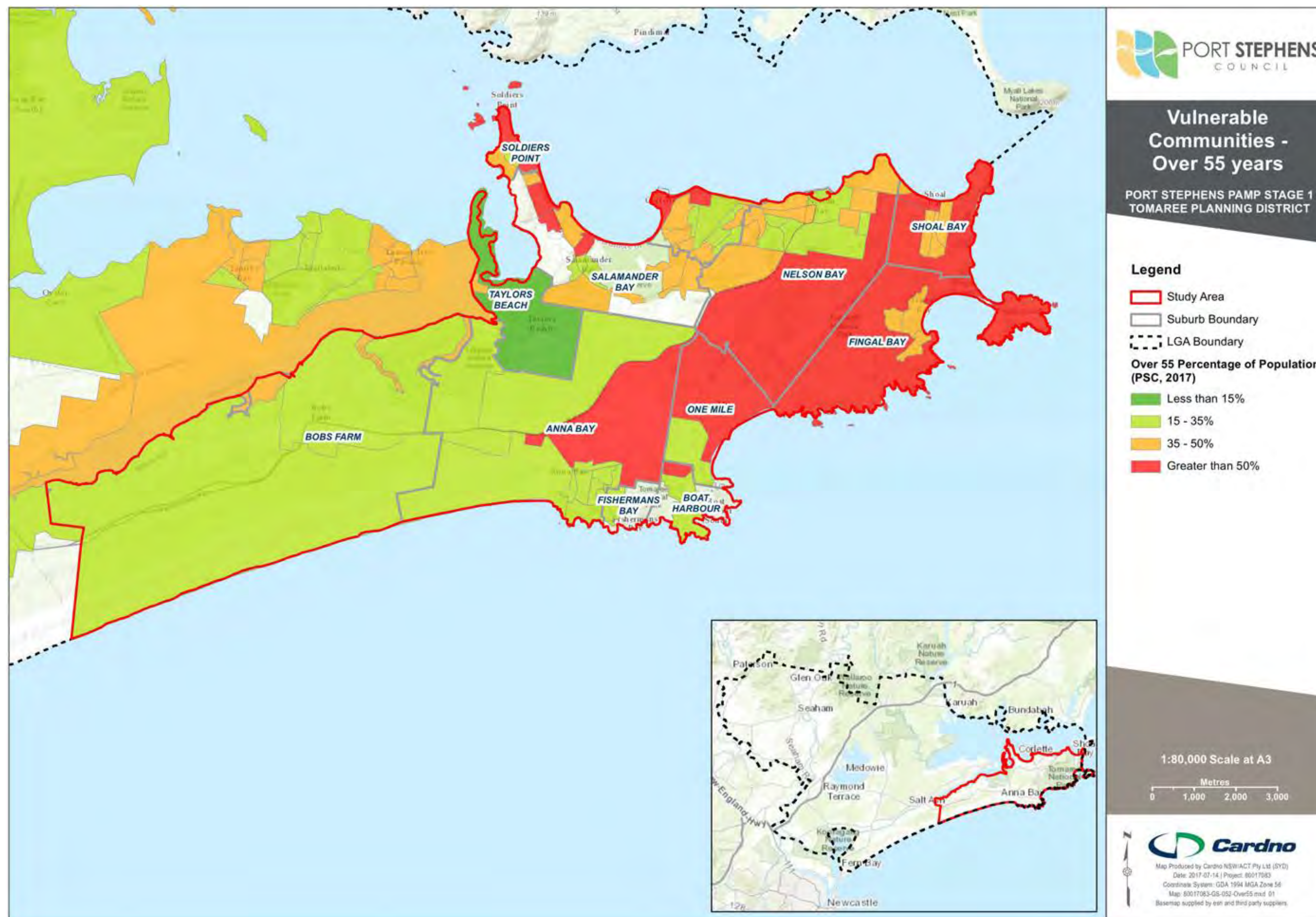
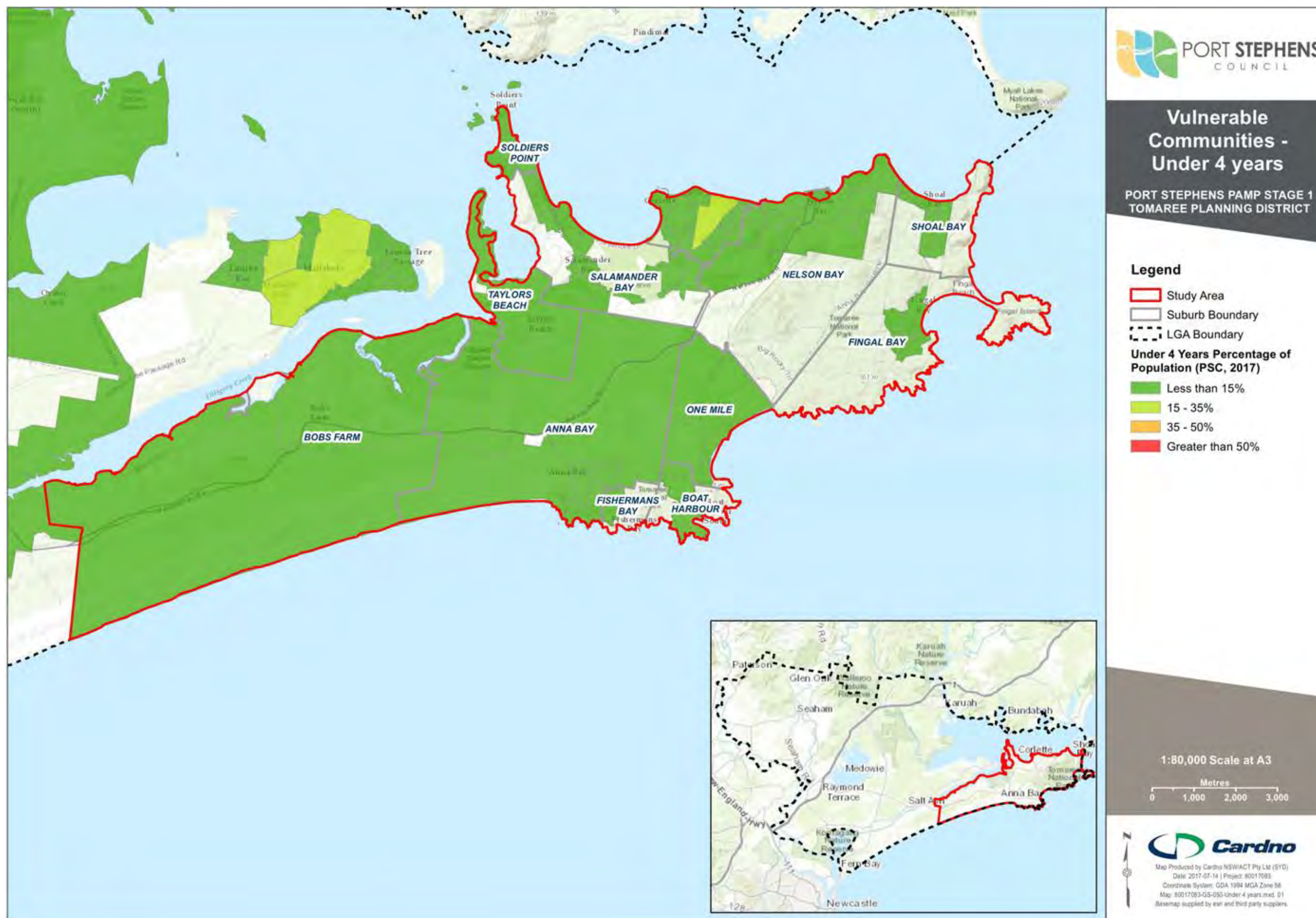




Figure 3-6 Vulnerable communities – Children aged 0-4 years



## 3.2 Movement

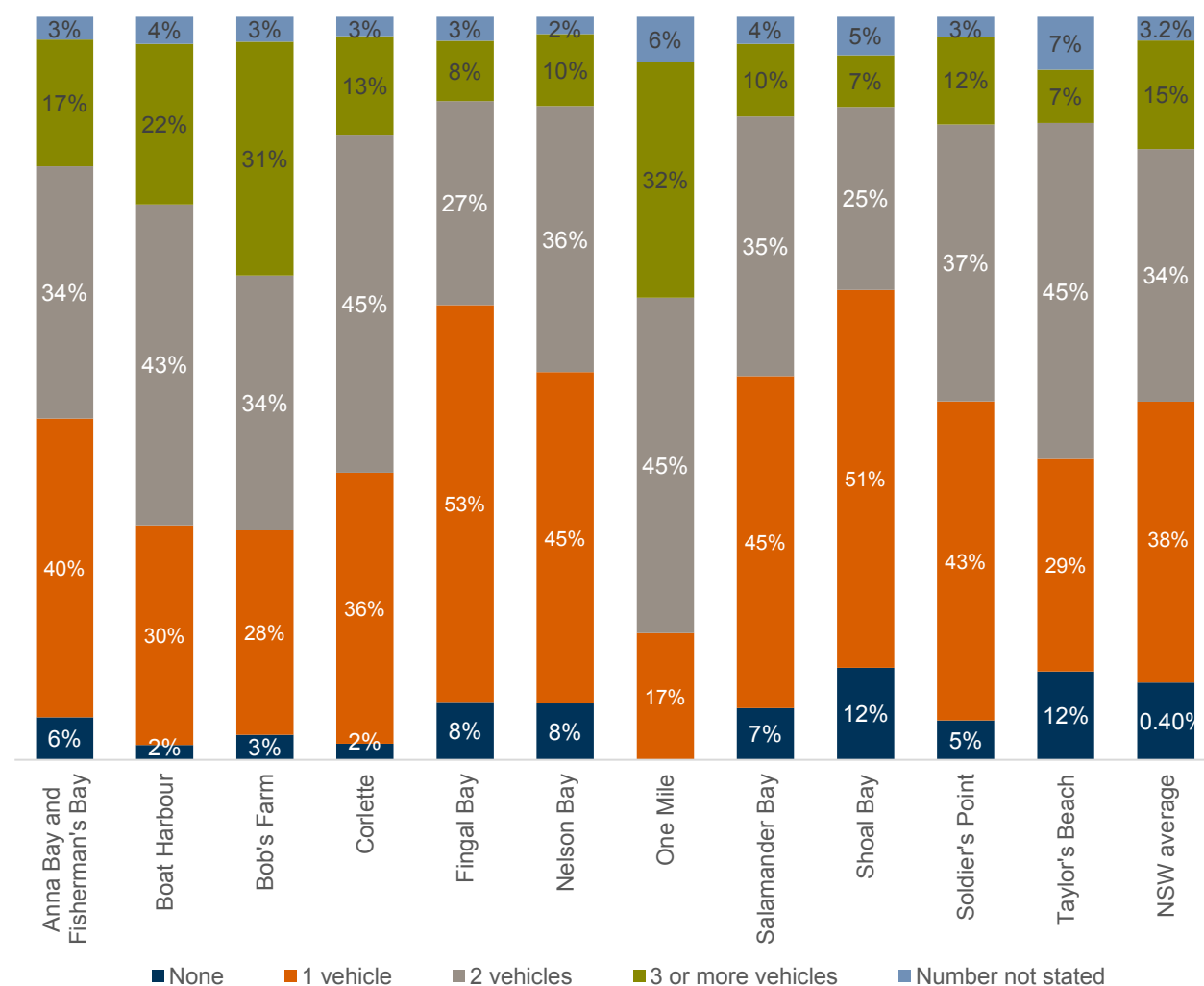
### 3.2.1 Vehicle ownership

Ownership of motor vehicles in the Tomaree Planning District is proportionally higher than the NSW State average, with most households across the 12 towns owning at least one vehicle. The ownership rate is highest in Corlette, with more than 95 per cent of households owning at least one vehicle, and lowest in Taylors Beach at 81 per cent.

Owning a private vehicle has both convenience and comfort benefits, and in towns with limited pedestrian accessibility and high ownership of one or two private vehicles, residents are more likely to drive than to walk.

A breakdown of the vehicle ownership rates for each town in the Tomaree Planning District is presented in **Figure 3-7**. The statistics are drawn from the 2011 census as the timeframe aligns with Port Stephens Council vulnerable communities data, discussed in **Section 3.1.4**.

**Figure 3-7 Vehicle ownership rates for Tomaree Planning District towns**

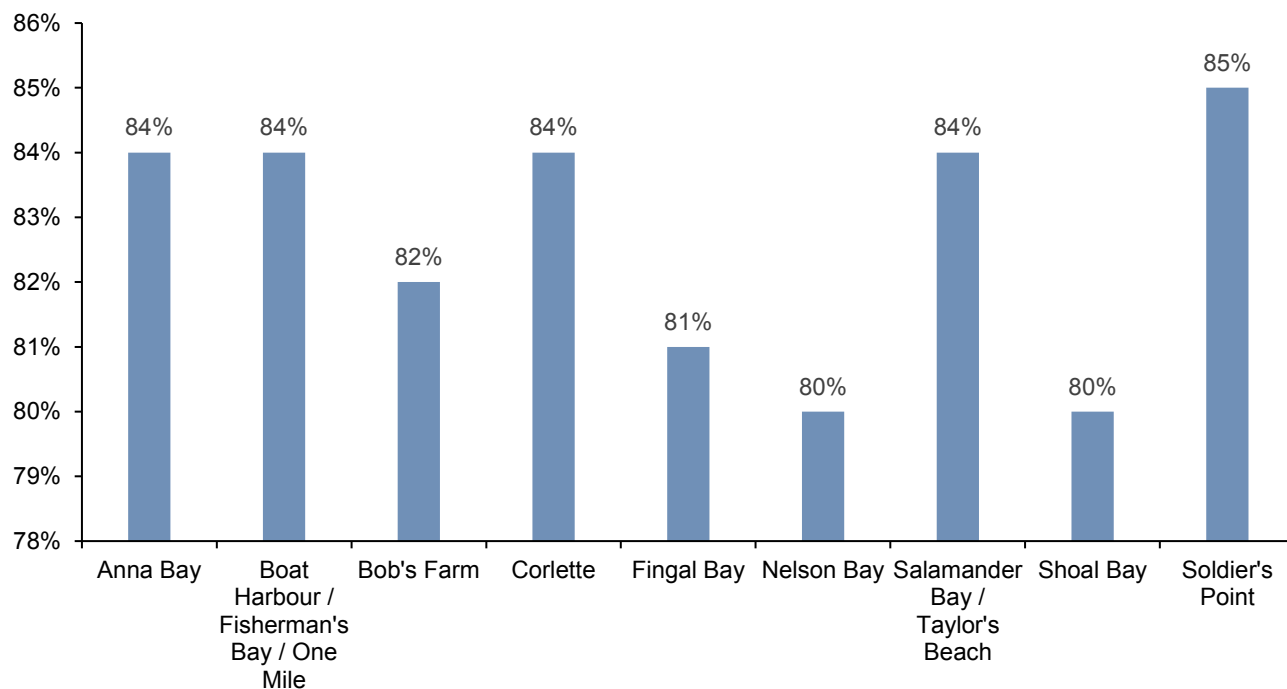


Source: ABS Census Data 2011. Statistics were not reported separately for Fishermans Bay, and were instead combined into the Anna Bay profile.

### 3.2.2 Journey to Work

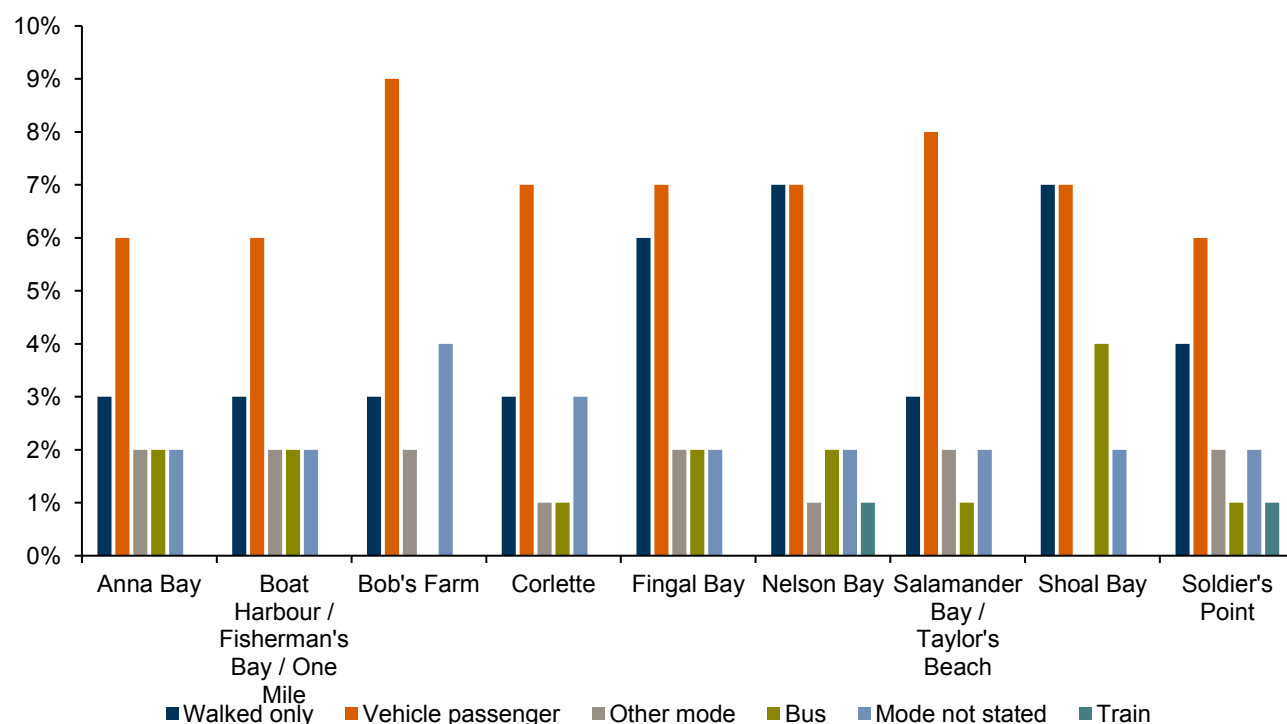
Transport for NSW's Transport Performance and Analytics (TPA) Division provides information on the Journey to Work (JtW) travel patterns for NSW residents and workers. The data, collected in 2011 as part of the census, shows reliance on private vehicles is high across the towns in the Tomaree Planning District, with more than 80 per cent of all commuting trips completed either as a driver or passenger, shown in **Figure 3-8**. The walking mode share is highest in Nelson Bay and Shoal Bay, each representing 7% of all JtW trips for the area. The mode share for walking and other modes is shown in **Figure 3-9**.

**Figure 3-8 JtW private vehicle travel patterns for Tomaree Planning District**



Source: Journey to Work 2011 - Transport for NSW (Transport Performance and Analytics Division)

**Figure 3-9 JtW alternative mode travel patterns for Tomaree Planning District**



Source: Journey to Work 2011 - Transport for NSW (Transport Performance and Analytics Division)



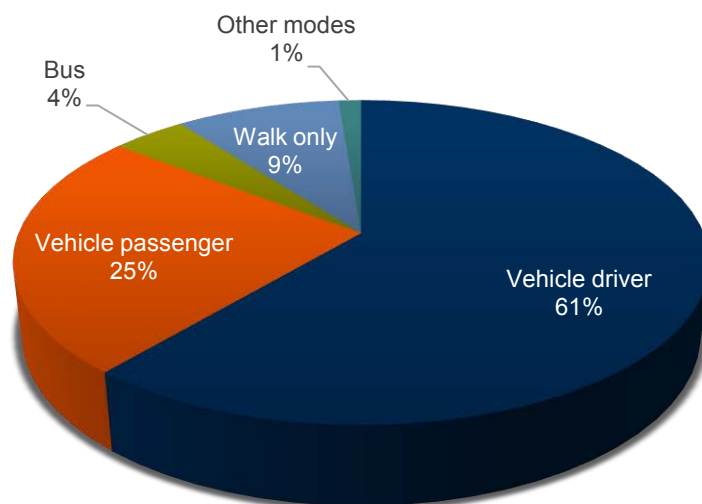
### 3.2.3 Household travel survey

The Household Travel Survey (HTS), prepared by the Transport for NSW TPA Division, details travel attributes such as mode, distance and travel time for residents at a Local Government Area (LGA) level, and includes all trip purposes, not just commuting trips. Data from the last available HTS, completed in 2012-13, is presented in the following sections.

#### 3.2.3.1 Mode share

The mode share for all trips in the Port Stephens LGA is provided in **Figure 3-10**. This shows a significant reliance on motor vehicles for trips by residents compared to other modes; more than 85 per cent of trips taken daily as either a driver or passenger. Nine per cent of walking trips were completed daily by residents across the LGA.

**Figure 3-10 HTS mode share for Port Stephens**

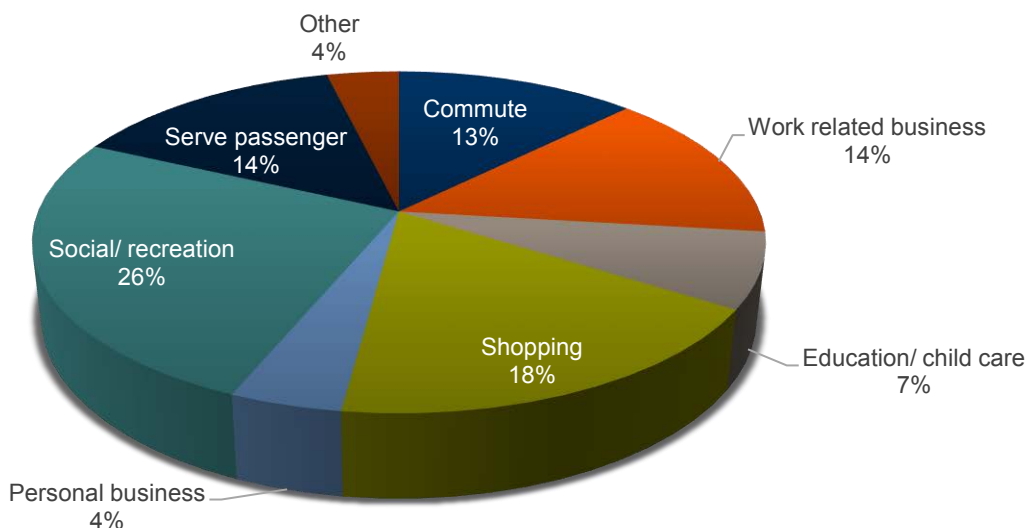


Source: Household Travel Survey (HTS) 2012-13 – Transport for NSW

#### 3.2.3.2 Trip purpose

The highest proportion of trips were completed for social / recreation purposes, representing 26 per cent of daily trips across the LGA. This was followed by trips for shopping and work-related business, representing 18 and 14 per cent of trips respectively. Commuting only represented 13 per cent of all trips. A breakdown of household trips by purpose is provided in **Figure 3-11**.

**Figure 3-11 Household trip purpose in Port Stephens**



Source: Household Travel Survey (HTS) 2012-13 – Transport for NSW

### 3.2.4 Public transport

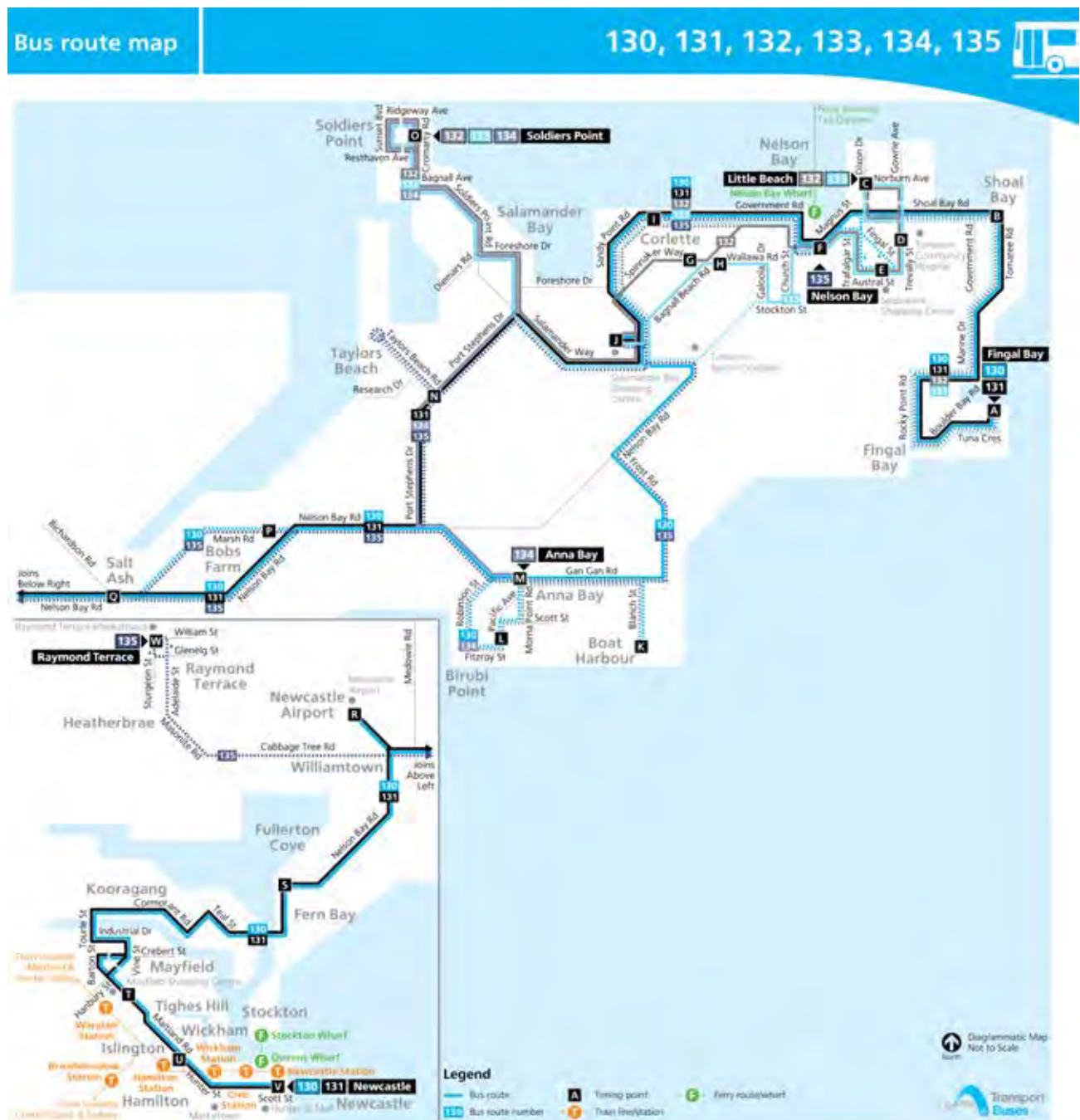
In the Tomaree Planning District, bus services connect across all study towns to destinations including Raymond Terrace, Heatherbrae, Williamtown Airport and the Newcastle CBD. Travel on these services, operated by Port Stephens Coaches, is covered under the Opal card network. A separate bus service connecting the Tomaree Planning District with Sydney (Central Station) is also available, and must be booked by customers prior to travel.

A summary of the bus services that operate within the Tomaree Planning District is presented in **Table 3-1**, and a route map is provided in **Figure 3-12**.

**Table 3-1 Bus service information in Tomaree Planning District**

Route number	Route (Origin and Destination)	Service frequency	Hours of operation
130	Fingal Bay to Newcastle via Gan Gan Road	Once per hour	Monday to Friday: 5:25am - 9:53pm Saturday, Sunday and Public Holidays: 7:05am – 8:55pm
131	Fingal Bay to Newcastle (Express)	Three times per day on weekdays	Monday to Friday: 10:10am – 6:15pm Saturday, Sunday and Public Holidays: Does not operate
132	Fingal Bay to Soldiers Point via Corlette and Salamander Bay	Once per two hours	Monday to Friday: 8:28am – 7:40pm Saturday, Sunday and Public Holidays: 8:20am – 7:38pm
133	Fingal Bay to Soldiers Point via Corlette and Salamander Bay	Monday to Friday: Once per hour during am and pm peak periods, and once per two hours during other times Saturday, Sunday and Public Holidays: Once per two hours	Monday to Friday: 7:05am – 9:10pm Saturday, Sunday and Public Holidays: 6:20am – 8:25pm
134	Anna Bay to Soldiers Point	Monday to Friday: Once per hour in am and pm peak periods Saturday, Sunday and Public Holidays: One service per day	Monday to Friday: 6:25am – 5:07pm Saturday, Sunday and Public Holidays: 6:50am – 7:05am
135	Nelson Bay to Raymond Terrace	Monday to Friday: Once at 9:00am and once at 3:55pm	Monday to Friday: 9:00am – 4:20pm Saturday, Sunday and Public Holidays: Does not operate

Figure 3-12 Bus service routes in Tomaree Planning District



Source: Transport for NSW



### **3.3 Crash analysis**

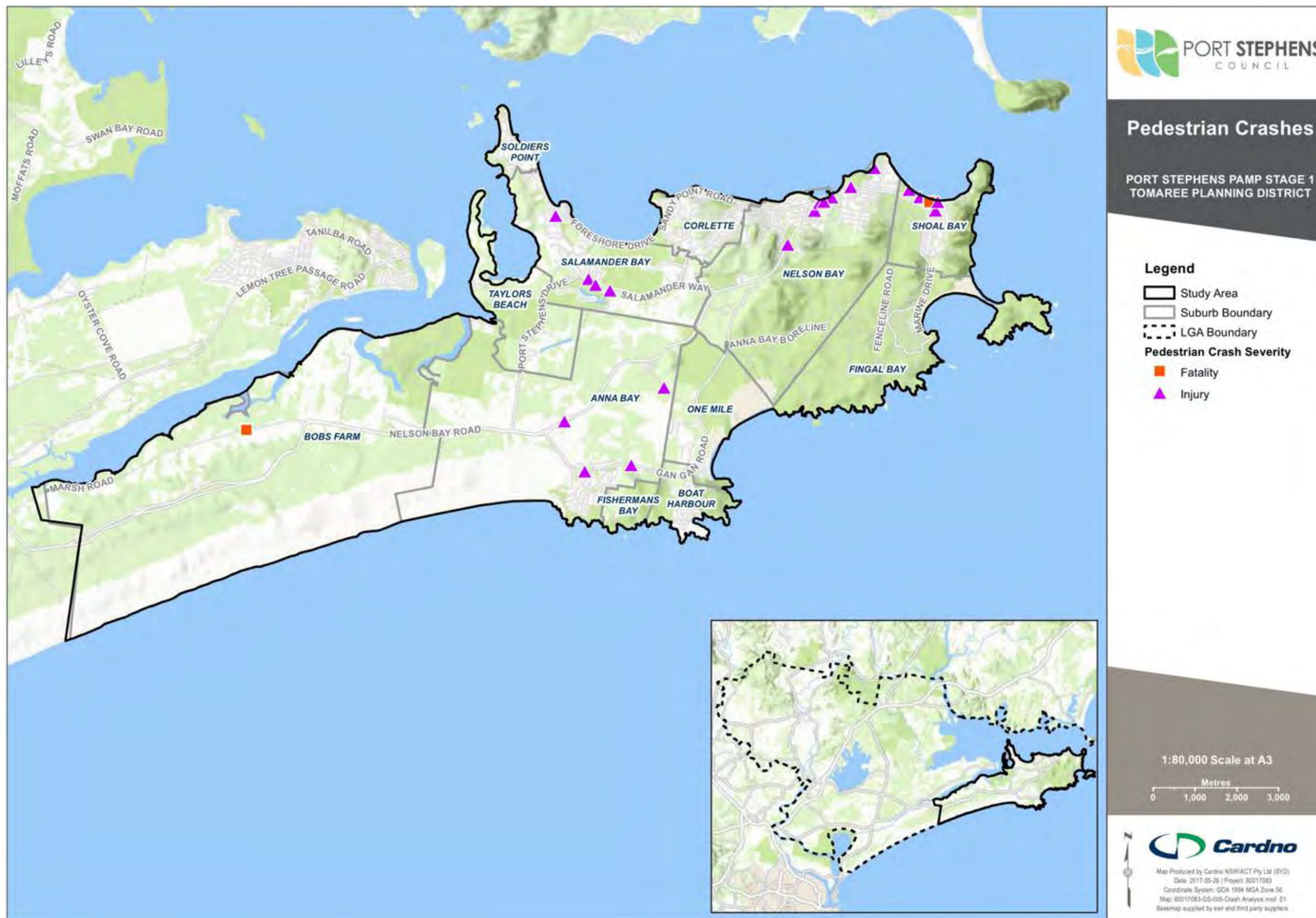
#### **3.3.1 Summary of crashes**

There were a total of 23 crashes involving pedestrians reported within the Tomaree Planning District during the most recent six year period of recorded data from 2010 to 2016. Of these:

- > Two crashes involved a fatality; and
- > 21 crashes involved an injury.

Crashes were clustered around the Nelson Bay and Shoal Bay centres. Five crashes were reported along Shoal Bay Road, and two crashes each along Beach Road, Gan Gan Road, Salamander Way and Victoria Parade. The distribution of pedestrian crashes by location is presented in **Figure 3-13**.

Figure 3-13 Pedestrian crashes in Tomaree Planning District



### 3.3.1 Crash types

One of the basic tools for understanding what happened in a crash is the road user movement or crash type, previously referred to as a Road User Movement (RUM) code (now also referred to as a Definitions for Coding Accidents (DCA) code).

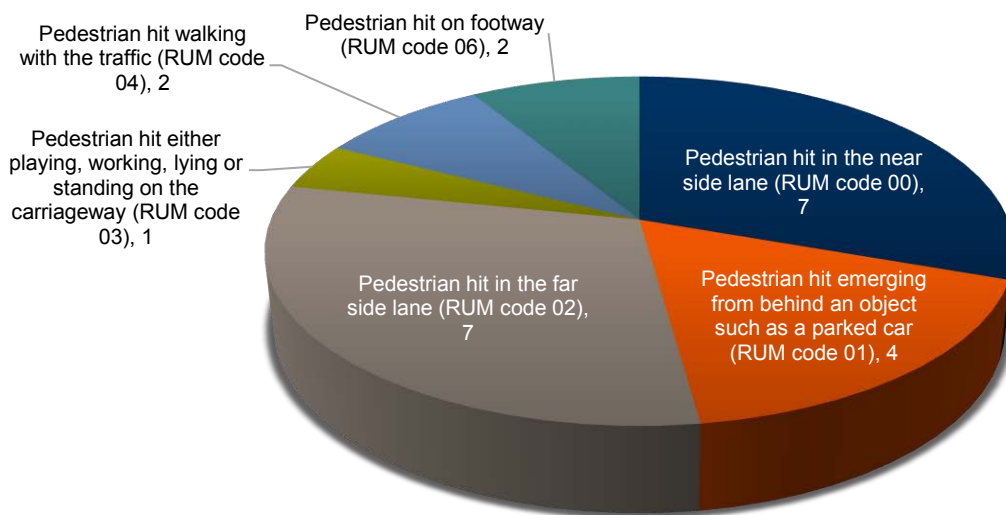
The crash types which involve pedestrians are identified in the RMS accident database under RUM codes 00 to 09; these are described in **Table 3-2**.

**Table 3-2 Definition of crash types involving pedestrians (RUM codes)**

RUM Code	Description
00	Pedestrian hit in the near side lane
01	Pedestrian hit emerging from behind an object such as a parked car
02	Pedestrian hit in the far side lane
03	Pedestrian hit either playing, working, lying or standing on the carriageway
04	Pedestrian hit walking with the traffic
05	Pedestrian hit walking facing the traffic
06	Pedestrian hit on footway
07	Pedestrian hit in driveway
09	Other

In the Tomaree Planning District, the most frequent crash types occurred when a pedestrian was attempting to cross the road. Seven of the reported crashes were classified as RUM 00 (where a pedestrian is hit in the near side lane), indicating that there may be a lack of safe footpaths and crossing locations. The second most common crash type was RUM 02 (where a pedestrian is hit in the far side lane). The distribution of pedestrian crashes in the Tomaree Planning District, based on RUM code, is presented in **Figure 3-14**.

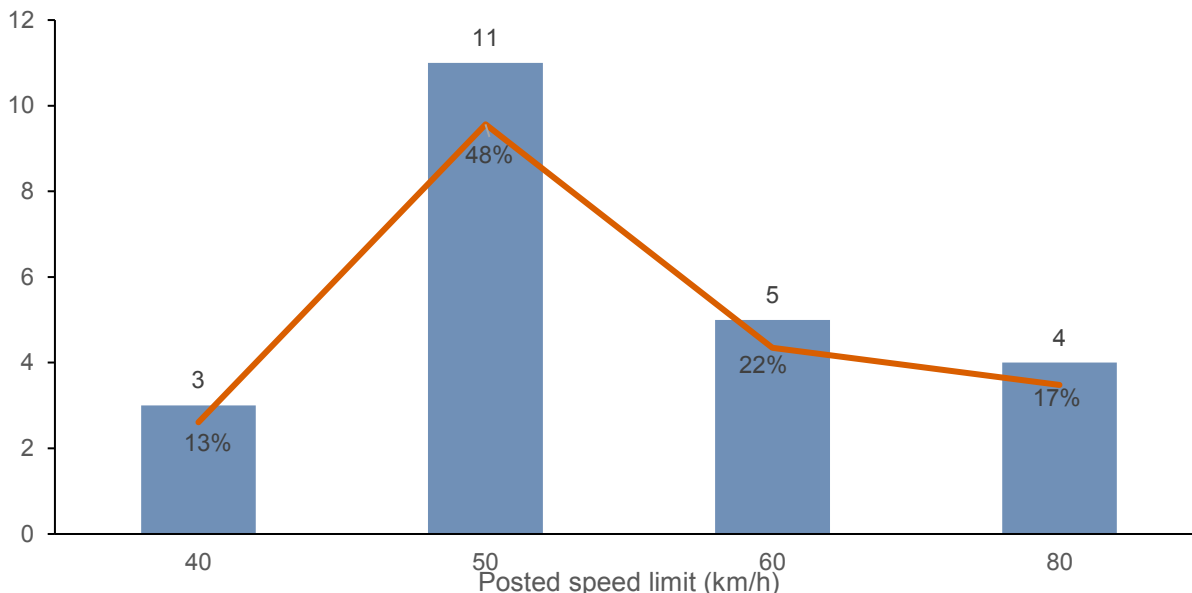
**Figure 3-14 Distribution of pedestrian crashes in the Tomaree Planning District**



### 3.3.2 Speed

The highest proportion of pedestrian crashes in the Tomaree Planning District occurred along streets with a posted speed limit of 50 kilometres per hour, accounting for 11 crashes. Roads with a speed limit of 60 kilometres per hour had five crashes, with four crashes along roads with an 80 kilometre per hour speed limit. Roads with a speed limit of 40 kilometres per hour had the lowest proportion of reported crashes. The distribution of pedestrian crashes based on the posted speed limit of the adjacent road and percentage of all crashes is presented in **Figure 3-15**.

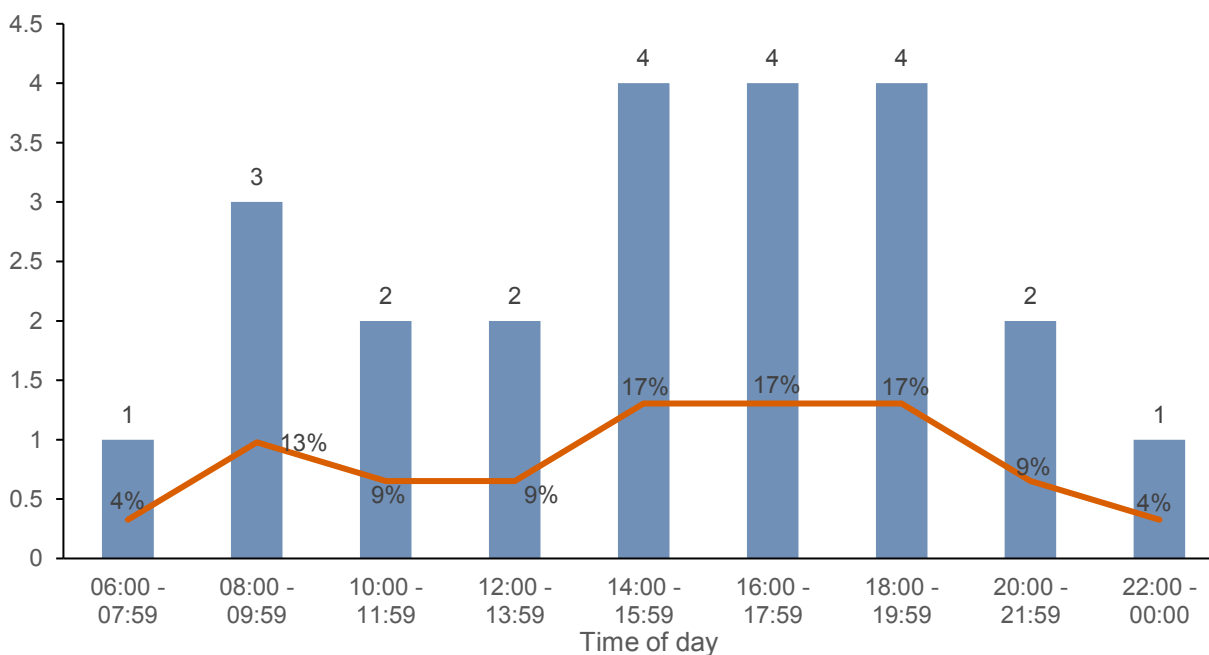
**Figure 3-15 Distribution of pedestrian crashes based on speed limits**



### 3.3.3 Time of day

The majority of pedestrian crashes occurred in the late afternoon and early evening period, accounting for 12 crashes between 2:00pm and 8:00pm. Three crashes were reported in the morning period between 8:00am and 10:00am. No crashes involving pedestrians were reported during between midnight and 6:00am. The distribution of pedestrian crashes based on the time of day and the percentage of all crashes is presented in **Figure 3-16**.

**Figure 3-16 Distribution of pedestrian crashes based on time of day**

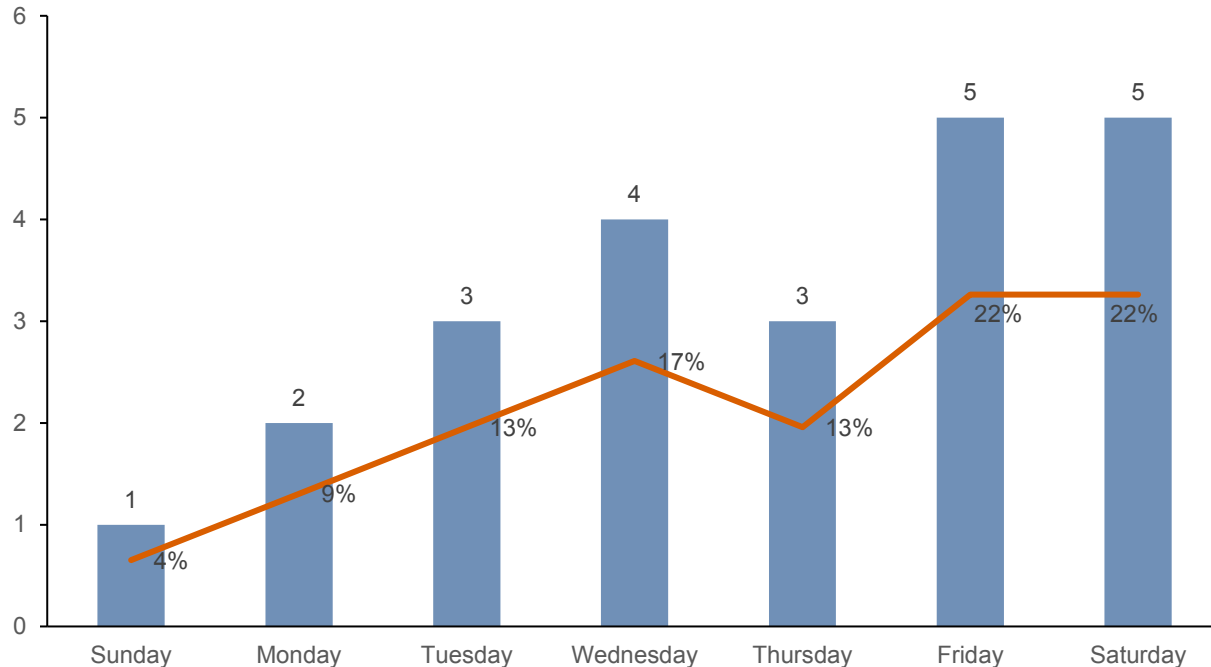




### 3.3.4 Day of week

More pedestrian crashes occurred towards the end of the week, with five crashes reported each on Friday and Saturday. Data on the number of crashes based on the day of the week and the percentage of all crashes is given in **Figure 3-17**.

**Figure 3-17 Pedestrian crashes based on day of week**



## 3.4 Summary of people and movement

The specific characteristics of the residents of the Tomaree Planning District have been considered in the development of this PAMP, including special consideration for vulnerable communities. Understanding current travel behaviour and the locations of pedestrian crashes is essential to developing a safe and convenient network of key pedestrian routes. Building upon the Port Stephens Pathways Plan, the proposed infrastructure improvements are tailored to the specific needs of the community.

## 4 Community and stakeholder consultation

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### 4.1 Consultation aims and principles

Engagement was essential in Stage 1 of the Port Stephens Council PAMP to capture local knowledge of the pedestrian network. The community and stakeholder engagement process aimed to:

- > Understand current community behaviour and attitudes towards walking in the Tomaree Planning District;
- > Identify specific issues relating to walking in the Tomaree Planning District;
- > Identify key pedestrian routes and desire lines; and
- > Understand the community issues and concerns to be taken into account in the development of the PAMP.

The following consultation principles were adopted during the projects stakeholder engagement.

- > All stakeholder consultation was approved by Port Stephens Council;
- > All material prepared for stakeholder consultation was reviewed by Port Stephens Council personnel; and
- > Community members were given the opportunity to give feedback on ideas and issues related to walking in the Tomaree Planning District.

### 4.2 Consultation activities

The consultation tools and techniques used included:

- > Study announcements, both prior to and during the official survey period from Wednesday 24<sup>th</sup> May 2017 to Sunday 25<sup>th</sup> June 2017 via the Port Stephens Council website, Informe Newsletter, in the Community section of issues of The Examiner and social media;
- > An official media release from Port Stephens Council on Thursday 25<sup>th</sup> May, titled “Feedback sought from Tomaree walkers;”
- > A study-specific email address for the community to send through any issues with the pedestrian network;
- > An online community survey hosted by Cardno using the SurveyMonkey platform (a paper copy of the survey was also available to users without internet access at the Council office in Raymond Terrace, the visitor information centre and the Tomaree Library). The survey was completed from Wednesday 24<sup>th</sup> May 2017 to Sunday 25<sup>th</sup> June 2017, and a copy of the survey questions is attached in **Appendix A**.
- > An online map hosted by Cardno for users to pin-point locations of issues in the Tomaree Planning District, and provide comments. The map was open to responses in conjunction with the survey from Wednesday the 24<sup>th</sup> May 2017 to Sunday 25<sup>th</sup> June 2017; and
- > Phone interviews with key stakeholders including schools, Tomaree Hospital, aged-care facilities, Port Stephens Coaches, day-care centres, medical centres and sporting grounds / facilities.



### 4.3 Key stakeholder interviews

The stakeholder organisations listed in **Table 4-1** were contacted to contribute to the development of the PAMP. The key issues raised by these groups via both phone calls and emails are provided in the table.

**Table 4-1 Stakeholder details**

Stakeholder group	Name of stakeholder	Key issues raised regarding pedestrian network
Council	Port Stephens Council	<ul style="list-style-type: none"> <li>Key focus areas included the streets surrounding the Salamander Bay Shopping Centre and Tomaree High School – safety concerns raised for pedestrian movements between these two key land uses.</li> <li>Improvements are under construction at Shoal Bay (intersection of Government Road and Shoal Bay Road) and at Salamander Bay (between the Shopping Centre and KFC).</li> <li>A pedestrian crossing at Shoal Bay Road is an item of concern due to poor motorist and pedestrian sight lines.</li> </ul>
	Anna Bay Public School	<ul style="list-style-type: none"> <li>There is no footpath facility along Old Main Road, to the rear of the school. Parents and carers prefer to use Old Main Road for pick-up and set-down as it is quieter than Gan Gan Road with less through traffic.</li> <li>Old Main Road is very dark at night, and the existing lighting facilities are insufficient.</li> <li>The shared path network along Gan Gan Road connecting Anna Bay with Boat Harbour is incomplete, with missing links and designated crossing facilities to connect the two areas.</li> </ul>
	Shoal Bay Public School	<ul style="list-style-type: none"> <li>There is no footpath along Rigney Street northbound from the school towards the Shoal Bay town centre. Many students travel in this direction, and often walk along the verge or on the road.</li> <li>Traffic speeds along Rigney Street are sometimes high, causing safety concerns.</li> <li>Street lighting in the area is generally good.</li> </ul>
	St Phillips Christian College	<ul style="list-style-type: none"> <li>The area out of the front of the Uniting Church on Salamander Way and also on the opposite side of the road does not have footpaths however the road does have a safe area for pedestrians to cross.</li> <li>Concerns have been raised for the safety of pedestrians when cars are attempting to turn right into Narnia Early Learning Centre (across a white line median strip). At the moment vehicles will often move around cars making the right-hand turn resulting in them driving along the gravel next to the road.</li> <li>Additional flashing lights / speed notification signs would be beneficial along Salamander Way near the school crossing to raise awareness of the crossing and the need for increased alertness when travelling in this area. Additional safety measures should also be considered at the intersection of Salamander Way and Bagnall Beach Road, where significant congestion occurs.</li> </ul>
Aged care facility	Tomaree Public School	<ul style="list-style-type: none"> <li>There is no footpath along Salamander Way past the Salamander Bay Shopping Centre.</li> <li>Crossing opportunities along Bagnall Beach Road are limited, with concerns raised for students leaving the school and accessing the Corlette area due to the high traffic volumes and speeds along the road.</li> <li>It is difficult for vehicles leaving Leisure Drive to turn right into Salamander Way.</li> </ul>
	Uniting Salamander Bay	<ul style="list-style-type: none"> <li>The bus stop on Port Stephens Drive to the east of the centre is located far away from the pedestrian refuge crossing providing access to Muller Street.</li> <li>There are no designated crossing facilities along Soldiers Point Road, presenting safety concerns. Currently footpath links are provided to kerb ramps, but no pedestrian priority given.</li> </ul>
	Anna Bay Village Retreat	<ul style="list-style-type: none"> <li>There is no footpath facility available to link visitors and clients to the Anna Bay town centre.</li> <li>Street lighting in the area is inadequate.</li> </ul>
	Middle Rock Home Village	<ul style="list-style-type: none"> <li>There is no footpath, or kerb and gutter along Gan Gan Road.</li> </ul>

Stakeholder group	Name of stakeholder	Key issues raised regarding pedestrian network
Day-care centre		<ul style="list-style-type: none"> <li>The connection of the Holiday Park to Hannah Parade was suggested.</li> </ul>
	Harbourside Haven	<ul style="list-style-type: none"> <li>There is a pedestrian refuge at the front of the town centre, which allows for pedestrians to cross Shoal Bay Road.</li> </ul>
	Salamander Childcare Centre	<ul style="list-style-type: none"> <li>There is no pedestrian crossing connecting the community centre with the Salamander Bay Shopping Centre.</li> <li>There are inconsistencies in the footpath network in the area with gaps and missing facilities observed along Community Close.</li> <li>Vehicle speeds are high along Community Close and Town Centre Circuit, speed limits are not signposted in the area.</li> <li>The intersection layout of Salamander Way and Community Close has recently changed, and accidents have been reported with vehicles attempting to turn out from Community Close.</li> </ul>
	Karingal Pre-School	<ul style="list-style-type: none"> <li>There is no footpath facility along Norburn Avenue – parents and carers use this street for pick-up and set-down – desire lines are visible where the grass has eroded away.</li> <li>Tree roots in the area at the front of the centre pose a tripping hazard for pedestrians.</li> <li>A raised threshold is suggested for Norburn Avenue for buses travelling in the area.</li> <li>Residents have complained about vehicles speeding down the hill along Norburn Avenue.</li> </ul>
	Goodstart Childcare Centre Nelson Bay	<ul style="list-style-type: none"> <li>The footpath heading eastbound along Shoal Bay Road from the centre is in poor condition.</li> <li>The bus stop servicing the Wests Nelson Bay Diggers Club (Shoal Bay Road northern side) is in a poor location. Passengers travelling to the centre need to walk back along Shoal Bay Road, cross Dixon Drive, cross Shoal Bay Road at the designated crossing and then proceed back east towards the centre.</li> </ul>
	Nelson Bay Preschool	<ul style="list-style-type: none"> <li>The pedestrian refuge facility allowing crossings across Church Street near the intersection of Dalton Street is not safe.</li> </ul>
Medical centre	Salamander Gumnuts	<ul style="list-style-type: none"> <li>There is no footpath provided along Salamander Way – this makes access for parents or carers pushing prams difficult. Some clients or visitors access the centre by bus, and there is no footpath link provided from the stops on Salamander Way.</li> <li>There are no formal crossings in the vicinity of the centre.</li> <li>Street lighting in the area is poor at night.</li> <li>The speed limit of 50km/h is too high in this area, pedestrian signage is needed</li> </ul>
	Anna Bay and Shoal Bay Medical Centre	<ul style="list-style-type: none"> <li>Outside the Anna Bay Medical Centre, the pedestrian zebra crossing across Gan Gan Road is in a poor location; drivers sometimes do not see pedestrians as they approach the crossing.</li> <li>Outside the Shoal Bay Medical Centre, the pedestrian refuge crossing across Government Road is in a poor location; drivers sometimes do not see pedestrians as they approach the crossing.</li> <li>Lighting around the Shoal Bay centre is good.</li> </ul>
Sporting facility	Tomaree Aquatic Centre	<ul style="list-style-type: none"> <li>The intersection of Salamander Way and Leisure Drive becomes very congested and busy during school times, as the access road to the centre is shared with access to the Tomaree High School and TAFE. There is difficulty with vehicles attempting to enter and leave the area as the intersection is a Give-Way only.</li> <li>Along Foreshore Drive, the shared path ends past the last house on the eastern side (197 Foreshore Drive).</li> </ul>
Transport Operator	Port Stephens Coaches	<ul style="list-style-type: none"> <li>Drivers reported accessibility issues for customers wanting to access bus services from the two stops on Tomaree Road, after Victor Parade (Transit Stop Numbers 231577 and 231522).</li> </ul>

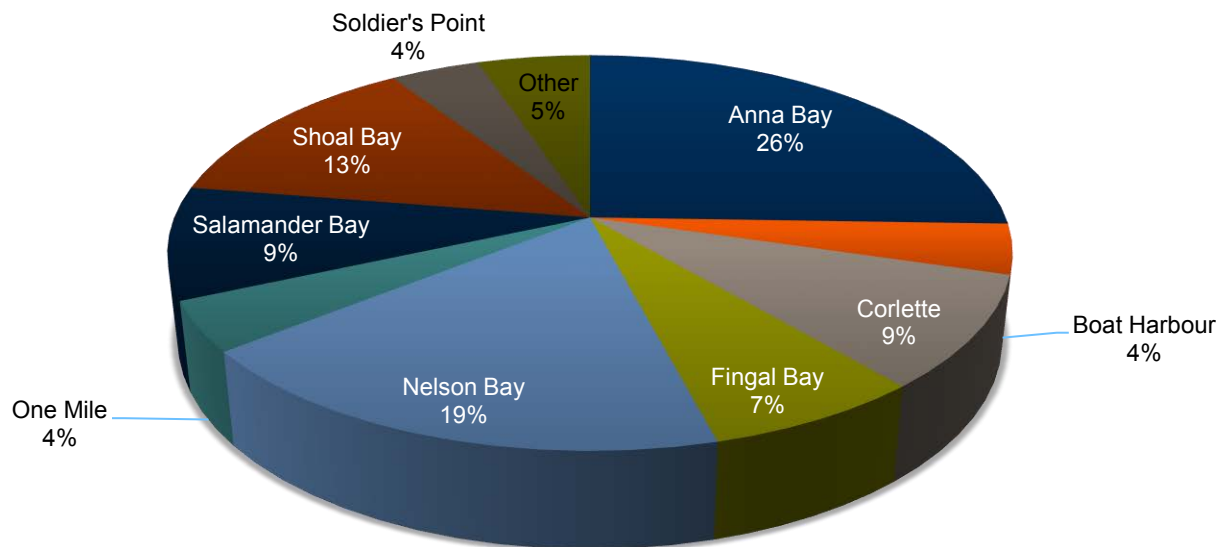
## 4.4 Online questionnaire survey

The Survey Monkey platform was used to obtain community feedback on pedestrian issues and community characteristics. A total of 68 online responses and 31 paper copies were collected during the survey period between 22 May and 25 June 2017.

### 4.4.1 Demographics

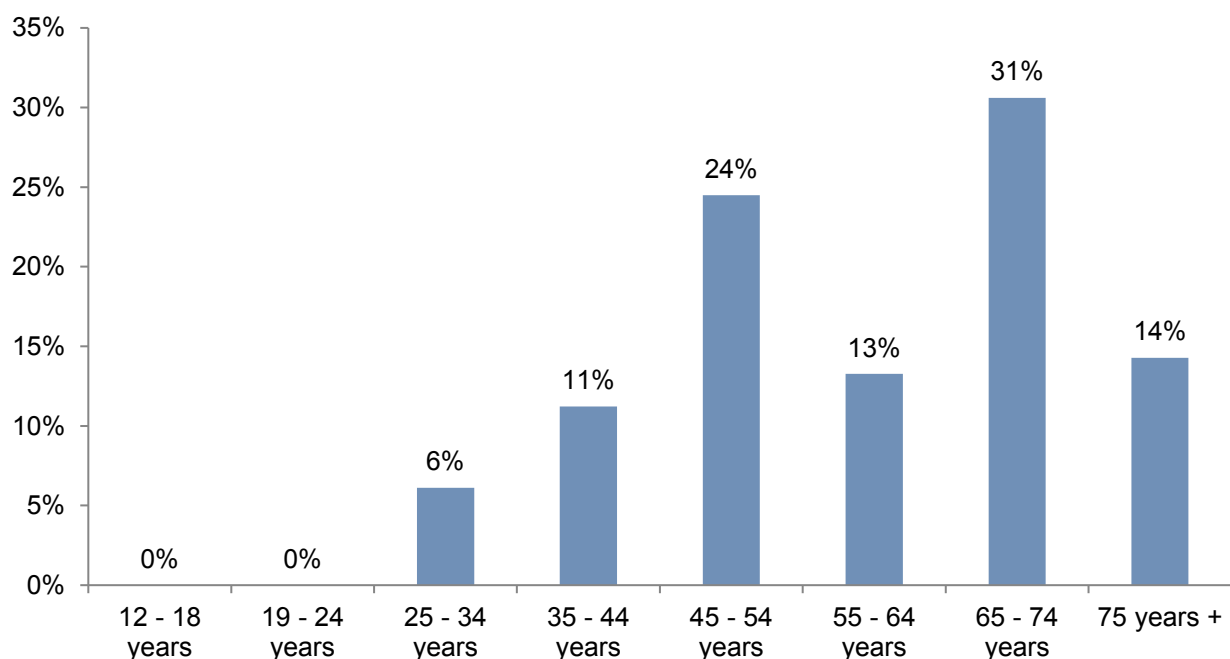
Survey respondents were asked to indicate the town in which they reside, shown in **Figure 4-1**, with 45 per cent indicating that they live in Nelson Bay and Anna Bay.

**Figure 4-1** Survey responses to question: “Where do you reside?”



The most common age group was 65 to 74 years, shown in **Figure 4-2**. Zero respondents indicated that they were between 12 to 24 years.

**Figure 4-2** Survey responses to question: “What is your age group?”



21 survey respondents indicated that they belonged to a group/ club that regularly walks in Port Stephens. These groups included:

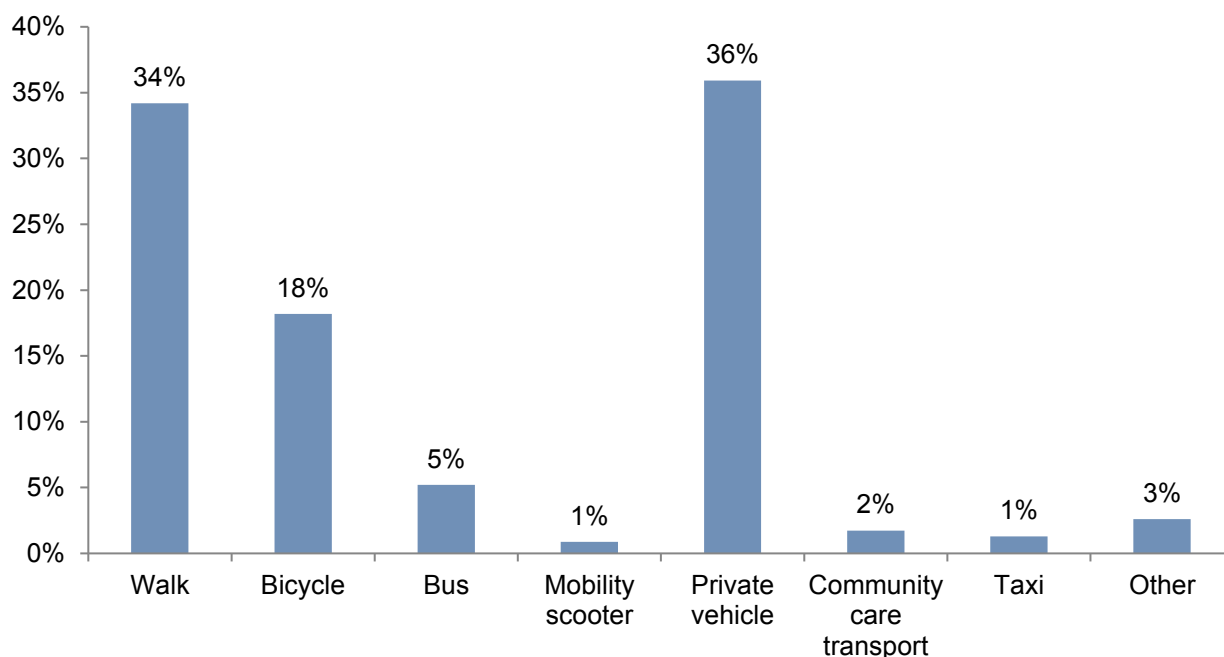
- > Wednesday Walkers with Maree;
- > Gateway Presbyterian Church;
- > Birubi Sands Walking Group;
- > Heart Foundation Group;
- > Shoal Bay Community Association Inc.; and
- > Fingal Haven Retirement Village.

17 respondents indicated that they are the primary caregiver of children under 12 years of age, and eight people take primary care of an adult with an impairment. Nine respondents indicated that they, or someone they care for, are mobility impaired. The majority of survey respondents indicated that they did not require walking aids when travelling in the study area, however, 11 people indicated that they pushed a pram, six used a walking stick, and two people used a mobility scooter.

#### 4.4.2 Mode of travel

When asked about the modes of transport that residents generally use in their local area, the proportion of people who generally drove was relatively the same as the proportion of those who generally walked, at 36 and 34 per cent respectively. 18 per cent of people generally cycle, as shown in **Figure 4-3**.

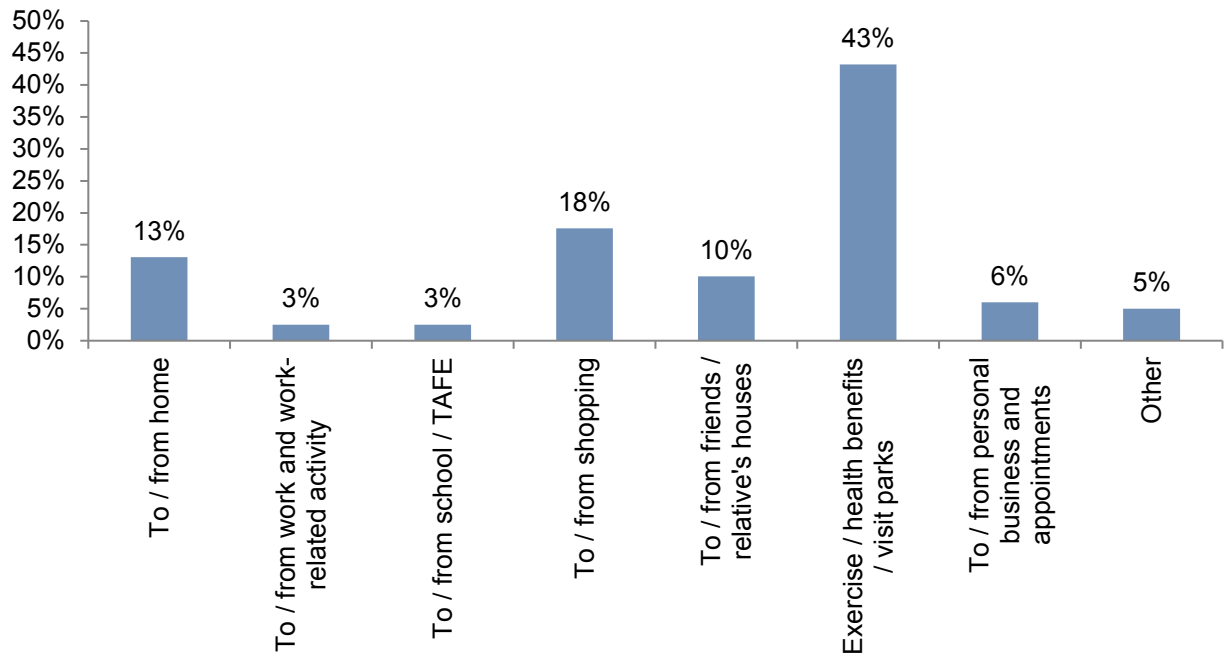
**Figure 4-3 Survey responses to question: “How do you generally travel in your local area? Choose all that apply”**



45 per cent of residents walk every day, 47 per cent walk a few times per week and five per cent walk only once per week. Nine per cent of survey respondents indicated that they do not regularly walk in their local area.

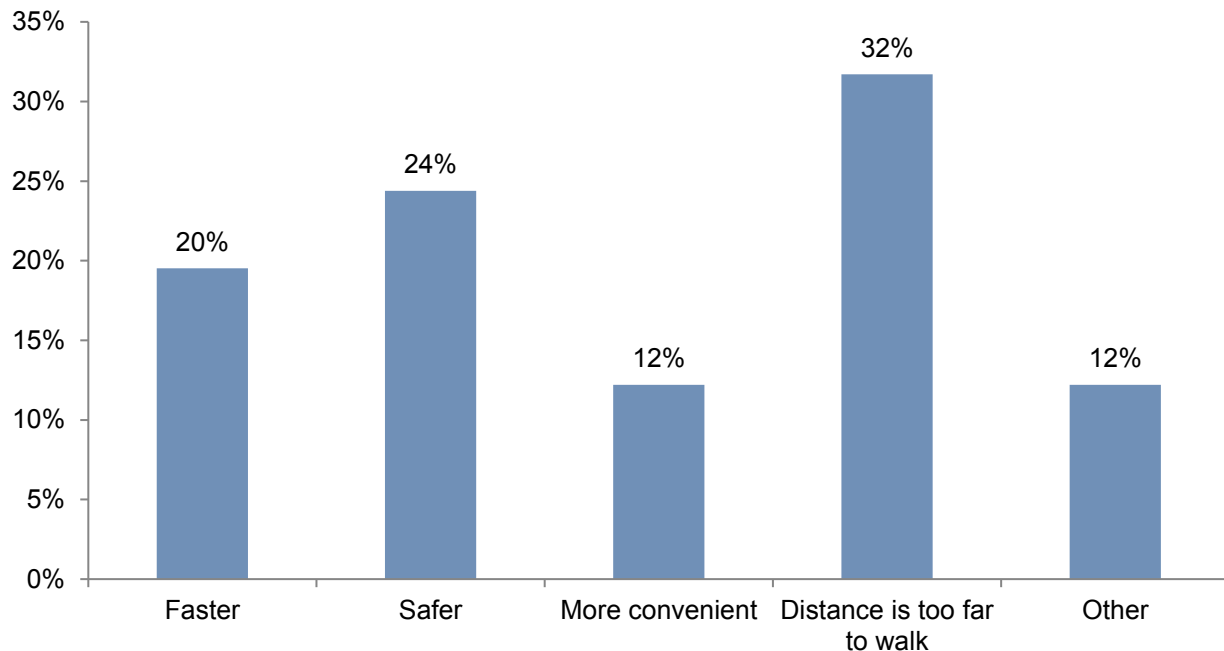
The main reasons for walking trips are for exercise and health, to and from home and shopping, and to friends and relatives homes, as shown in **Figure 4-4**.

**Figure 4-4** Survey responses to question: “If you do walk, what are the main purposes of your walking trips? Choose all that apply”



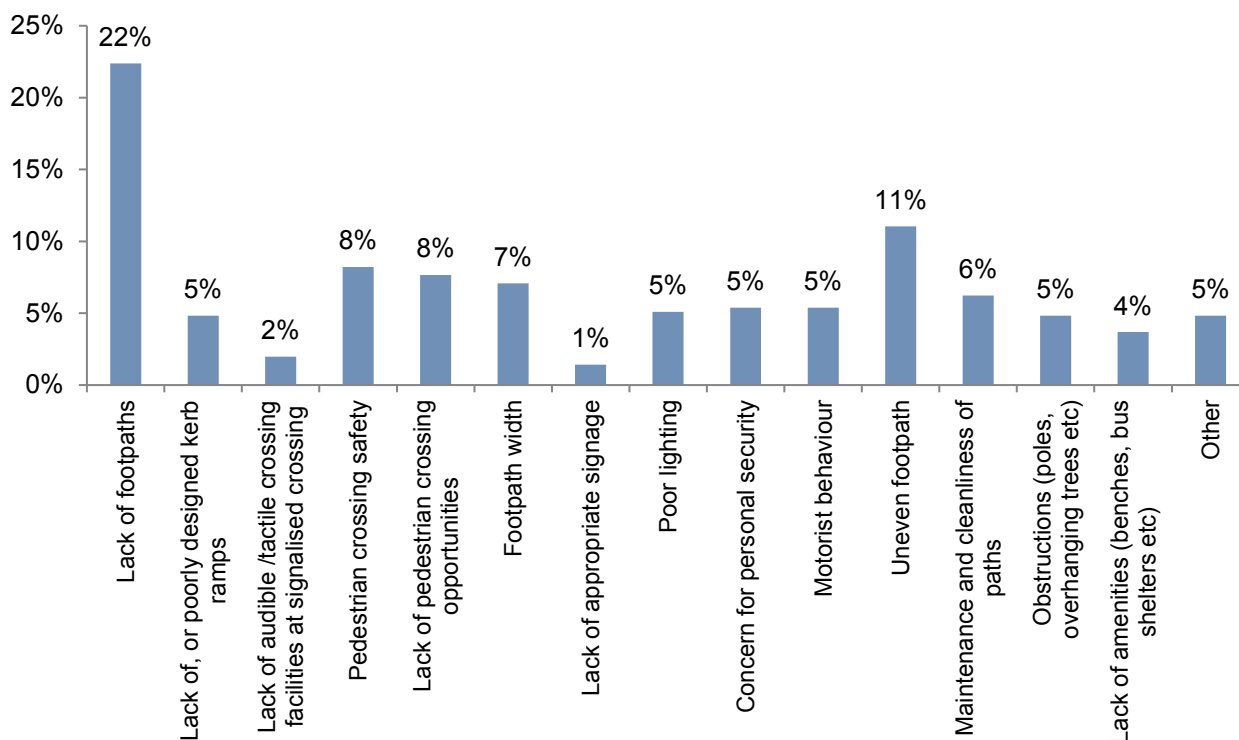
The main reasons that inhibit walking in Port Stephens and make residents choose alternative modes of transport are shown in **Figure 4-5**. 324 per cent of respondents said that other transport modes are safer.

**Figure 4-5** Survey responses to question: “If you don’t walk, what are the main reasons for choosing another mode of transport? Choose all that apply”



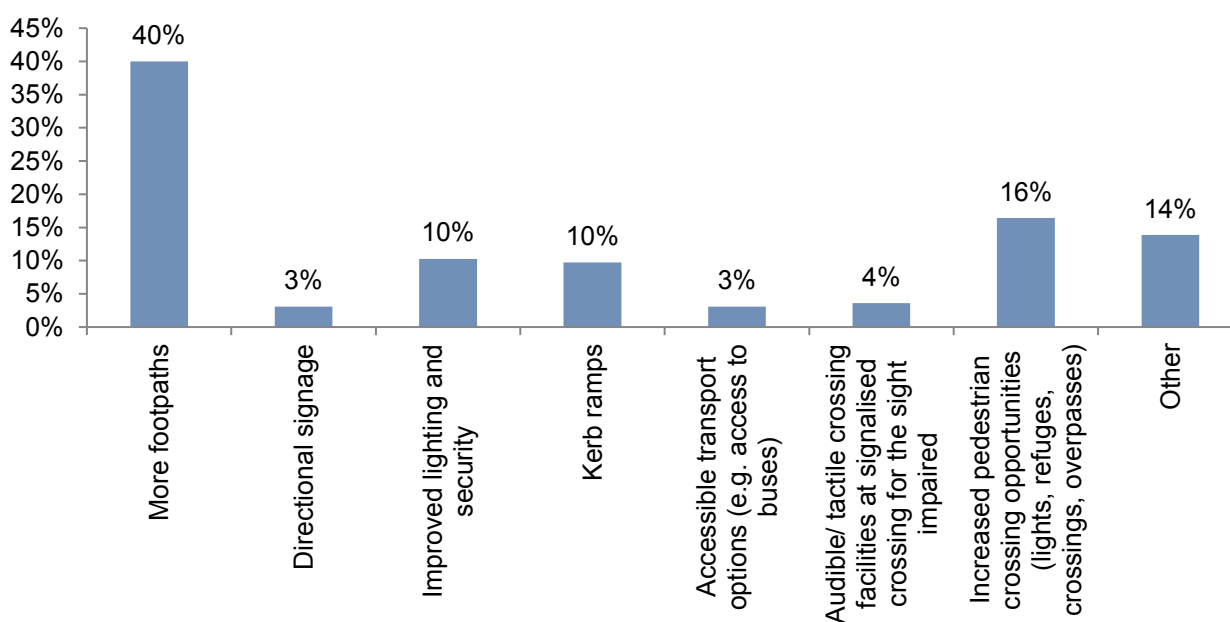
The main issues with walking in the study area range from the maintenance of pathways to dangerous crossings and poor lighting. When asked about these main issues, the community deemed the lack of footpaths and uneven footpaths to be the main issues that discourages walking in Port Stephens. The results of this question are shown in **Figure 4-6**. Ground tactiles, audible pedestrian crossings and wayfinding signage were considered to be least inhibiting issues.

**Figure 4-6 Survey responses to question: “What are the main issues with walking in the study area? Choose all that apply”**



The pedestrian network improvements that the community would like to see are shown in **Figure 4-7**. Constructing footpaths on streets that have none was reported to be the most important, nominated by 40 per cent of responses. More crossings were also considered important. Improved access to buses was the least important improvement, with two per cent.

**Figure 4-7 Survey responses to question: “What types of improvements to pedestrian facilities are most important to you? Choose all that apply”**





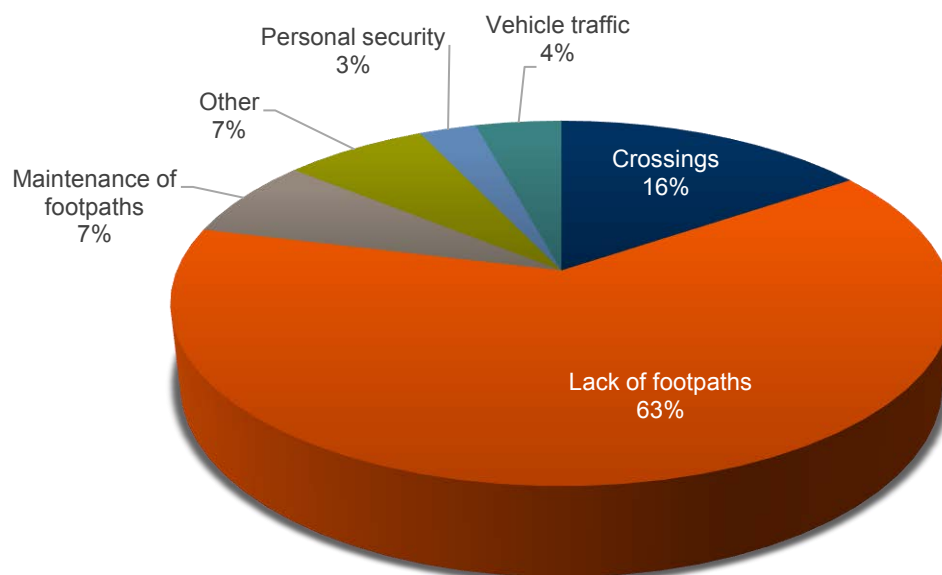
## 4.5 Online map

After completing the online questionnaire survey, respondents were redirected to an online map in which they could pin point specific issues in the pedestrian network and leave a comment. Each comment is characterised by whether it is a 'like', 'dislike' or an 'idea or suggestion', and the type of infrastructure issues it refers to, including:

- > Lack of footpaths;
- > Maintenance of footpaths;
- > Kerb ramps;
- > Crossings;
- > Personal security; and
- > Vehicular traffic.

28 dislikes, 43 ideas / suggestions and zero likes were received in the map comments, totalling 71 comments. The proportion of comments related to each infrastructure issue is shown in **Figure 4-8**. The lack of footpaths was the most commonly reported issue/suggestions with 63 per cent, followed by crossing issues/suggestions with 16 per cent. Kerb ramp issues were not identified by respondents.

**Figure 4-8 Classification of pedestrian infrastructure issues**



### 4.5.2 Reported issues

A map showing the locations of reported issues and the type of infrastructure that they refer to is presented in **Figure 4-9**. The following specific issues were reported:

- > Unsafe crossings to Salamander Bay Shopping Centre;
- > Lack of footpath along Foreshore Drive, Shoal Bay Road, Sandy Point Road, Tomaree Road, Bagnall Beach Road, Boulder Bay Road, Government Road, Gan Gan Road, Victoria Parade, Blanch Street and at Nelson Bay Marina;
- > Missing shared paths / footpaths between Anna Bay and Nelson Bay, Anna Bay and Iris Moore Reserve, Anna Bay and Salamander Bay, Fingal Beach and Barry Park, Roy Wood Reserve and Corlette Headland, and between Boat Harbour and Anna Bay;
- > Lack of crossings on Shoal Bay Road;
- > Lack of crossings in Corlette to Karralika Park;
- > Lack of footpaths in Shoal Bay;

- > Anna Bay shared path is too narrow;
- > Lack of wayfinding to Corlette Beach;
- > Uneven footpath on Donald Street; and
- > Beach Road is dangerous for pedestrians at night.

## **4.6 Summary of community and stakeholder consultation**

Key findings from community and stakeholder interviews are:

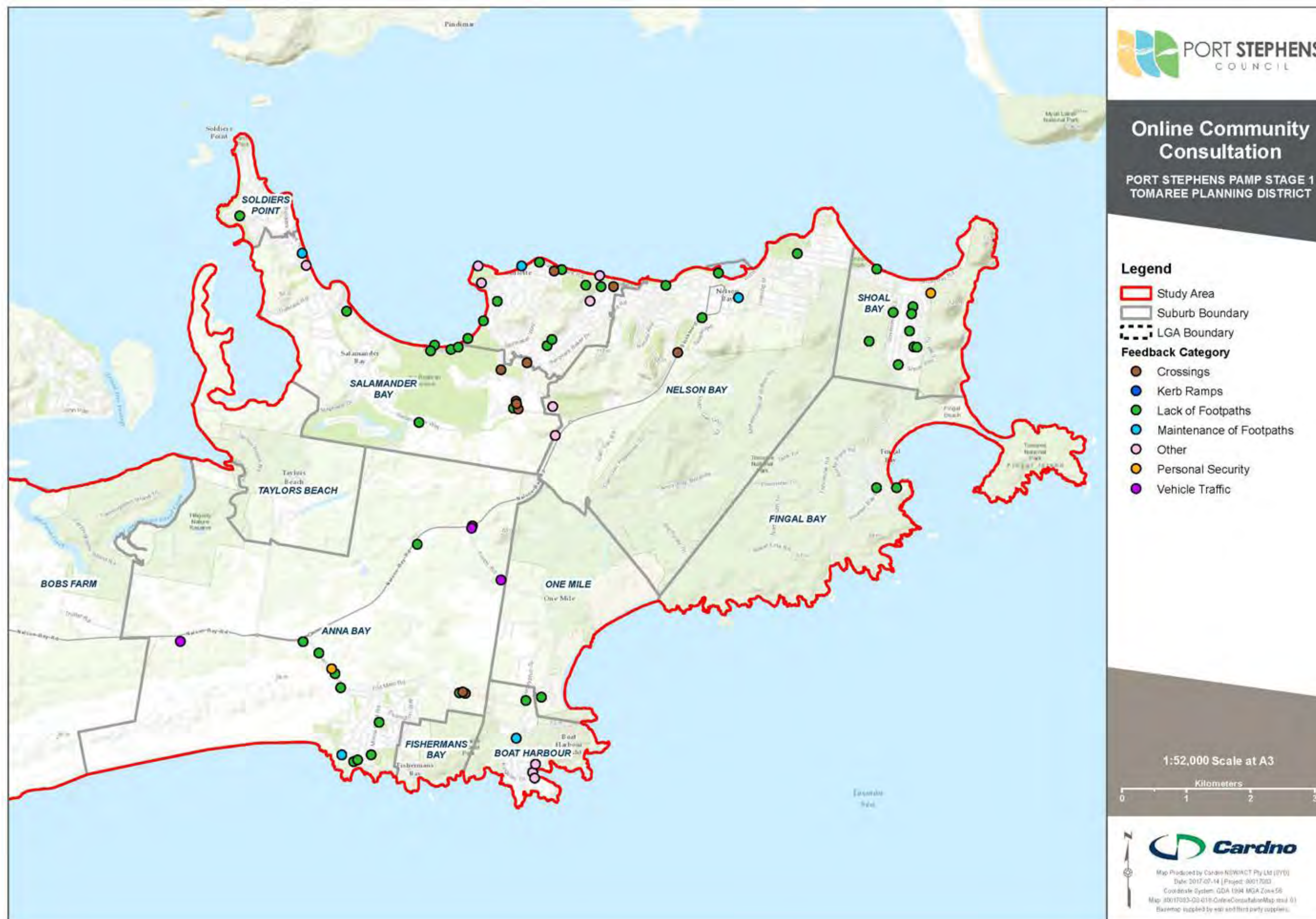
- > Schools, childcare facilities and aged care facilities are vulnerable and require improved pedestrian accessibility;
- > The local streets in the Salamander Bay Shopping Centre precinct is in need of improved pedestrian accessibility and safety;
- > The shared path network is disconnected;
- > Street lighting is inadequate in some areas;
- > Pedestrian infrastructure is necessary along high speed roads; and
- > Pedestrian accessibility to bus services is in need of improvement.

Key findings from the online questionnaire survey respondents are:

- > The most common forms of transport is by private vehicle and by walking;
- > The most common reason for walking is for exercise, health and leisure reasons;
- > The main reason for choosing another mode of transport is because walking is less safe;
- > The lack of footpaths is the main issue with walking in the Tomaree Planning District; and
- > The most important improvements to pedestrian facilities is the provision of more footpaths.

The most commonly reported issue regarding pedestrian infrastructure on the online map is the lack of footpaths.

Figure 4-9 Online community consultation map



## 5 Land uses and key destinations

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### 5.1 Current land use

The predominate land use in the Tomaree Planning District is residential. However, to support these residential communities, there are areas of mixed land uses. These include educational institutions, retirement villages, retail centres, open public spaces, community centres and medical centres. These land uses can generate or attract pedestrian trips for all kinds of pedestrian groups, including vulnerable or disadvantaged residents. Therefore, it is important to address any gaps in the network, accessibility and connectivity to key land uses during the development of the PAMP. A summary of some of the key land uses in each village is provided below, and presented in **Figure 2-1**.

#### **Anna Bay and Fishermans Bay**

- > Various restaurants and supermarkets;
- > Beaches;
- > Anna Bay Public School;
- > Goodstart Early Learning Centre;
- > Hospitality services – Bed and breakfasts;
- > Recreational facilities – Anna Bay Skate park; and
- > Bay Village Retreat (Retirement Village).

#### **Fingal Bay**

- > Fingal Bay Oval; and
- > Beaches;
- > Fingal Haven Retirement Village; and
- > Bill King Aged Care Facility.

#### **Salamander Bay**

- > Salamander Bay Shopping Centre;
- > Salamander Sports Complex;
- > Beaches; and
- > Medical Centre.

#### **Taylors Beach**

- > Commercial and retail warehouses; and
- > Beaches.

#### **Soldiers Point**

- > Soldiers Point Road Medical Centre; and
- > Beaches.

#### **One Mile**

- > Middle Rock Holiday Resort; and
- > Beaches.

#### **Corlette**

- > Beaches; and



- > Tomaree Aquatic Centre.

**Nelson Bay**

- > Retail, commercial and recreational centre; and
- > Beaches.

**Shoal Bay**

- > Harbourside Haven Nursing Home and Hostel;
- > Beaches;
- > Bill Strong Oval; and
- > Shoal Bay Medical Centre.

**Boat Harbour**

- > Parks, headlands, beaches and nature reserves; and
- > Holiday accommodations.

## 5.2 Future land use

The Salamander Bay Shopping Centre precinct is to be redeveloped to include an additional seven lots, a new bus interchange and associated improvements to the road network. The project includes the installation of traffic lights and pedestrian crossings at the intersection of Bagnall Beach Road and Town Centre Circuit, as well as a second access road for the Salamander Bay Shopping Centre. Council's aspirations are to support the existing shopping centre and make this location the dominant retail precinct in the Tomaree Planning District.

## 5.3 Population growth

The Hunter Regional Plan states that the Port Stephens LGA can expect by 2036:

- > A population increase of 18,550;
- > 11,050 new dwellings; and
- > 5,665 new jobs.

If this growth were to be distributed according to the current breakdown between planning districts, the Tomaree Planning District would receive over a third (over 6,000) more residents.

## 6 Network development

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### 6.1 Principles of network development

Development of the new pedestrian network for Port Stephens is centred around completing missing links both within and between the existing pedestrian network to ensure connectivity with key land uses and bus stops. The new network links to the key land uses in each town such as schools, aged care facilities and the activity centres, and is generally within 400 metres of all residential areas. All streets in each town centre (where pedestrian concentrations are highest) were included in the network, along with key routes within a two kilometre catchment of the town centre. Six key principles guided the network development process:

- > **Build on the existing networks:** The existing pedestrian network was analysed and new routes were identified to enhance the network. This reinforces the coherence of the existing routes and maintains network legibility.
- > **Connect to key land uses:** The proposed routes connect to pedestrian-generating land uses; such as: residential areas, retirement villages, schools, retail and business, parks and recreation, and health services; providing safe and direct access for pedestrians accessing them.
- > **Connection to public transport:** The network addresses pedestrian desire lines (the most direct and frequently used routes) to access bus stops across the ten towns.
- > **Cater for vulnerable communities:** The proposed network aims to deliver improved connectivity and safety benefits for vulnerable demographic groups that rely on compliant pedestrian facilities for their walking trips.
- > **Stakeholder and community comments:** Stakeholder and community comments on missing pedestrian links in the network were considered and incorporated, where possible, into the network development process.
- > **Cater for demand:** The network was planned to cater for current and future demand including connections to recreational routes and future land uses and developments.

These principles align with the pedestrian network factors listed in the RMS 'How to Prepare a PAMP Guidelines' which focus on the key areas of coherence, directness, safety, comfort, attractiveness and accessibility.

The pedestrian network for the Tomaree Planning District is attached in **Appendix B** and described in **Section 6.2**.

### 6.2 Pedestrian networks

Pedestrian routes for each town are described in this section.

#### 6.2.1 Anna Bay and Fishermans Bay pedestrian network

The Anna Bay and Fishermans Bay pedestrian network contains 14 routes, with a total length of 18.1 kilometres. These routes connect to a number of restaurants, schools, child care centres, hotels, recreational facilities and a retirement village.

#### 6.2.2 Boat Harbour pedestrian network

The Boat Harbour pedestrian network contains ten routes, with a total length of 6.9 kilometres. These routes connect to a number of holiday accommodations.

#### 6.2.3 Corlette pedestrian network

The Corlette pedestrian network contains ten routes, with a total length of 14.4 kilometres. These routes connect to the Tomaree Aquatic Centre.



**6.2.4 Fingal Bay pedestrian network**

The Fingal Bay pedestrian network contains 16 routes, with a total length of 10.2 kilometres. These routes connect to Fingal Bay Oval, Fingal Haven Retirement Village and Bill King Aged Care facility.

**6.2.5 Nelson Bay pedestrian network**

The Nelson Bay pedestrian network contains 27 routes, with a total length of 40.9 kilometres. These routes connect to the retail, commercial and recreational land uses in the town centre.

**6.2.6 One Mile pedestrian network**

The One Mile pedestrian network contains two routes, with a total length of 2.4 kilometres. These routes connect to Middle Rock Holiday Resort.

**6.2.7 Salamander Bay pedestrian network**

The Salamander Bay pedestrian network contains 16 routes, with a total length of 32.7 kilometres. These routes connect to the Salamander Bay Shopping Centre, the Salamander Bay Sports Complex and the Medical Centre.

**6.2.8 Shoal Bay pedestrian network**

The Shoal Bay pedestrian network contains 13 routes, with a total length of 13 kilometres. These routes connect to the Harbourside Haven Nursing Home and Hostel, Bill Strong Oval and the Shoal Bay Medical Centre.

**6.2.9 Soldiers Point pedestrian network**

The Soldiers Point pedestrian network contains 11 routes, with a total length of 10.7 kilometres. These routes connect to the Soldiers Point Road Medical Centre.

**6.2.10 Taylors Beach pedestrian network**

The Taylors Beach pedestrian network contains six routes, with a total length of 4.3 kilometres. These routes connect to commercial and retail warehouses.

## 7 Network assessment

### 7.1 Audit guidelines and standards

The pedestrian network audits collected data in three ways:

1. Identification and recording of pedestrian infrastructure.
  - > Every pedestrian facility and its condition was recorded by the site auditors. These facilities included footpaths, kerb ramps, pedestrian refuges, zebra crossings, signalised pedestrian crossings and shared path facilities.
2. Assessment of pedestrian infrastructure for issues and non-compliance against design standards.
  - > Every non-compliance associated with the existing pedestrian facilities was recorded by the site auditors.
3. Facility width measurements.
  - > The width of all existing pedestrian paths and lanes were measured by site auditors.

The following sections provide a summary of the features that were assessed, the non-compliances that were recorded, the standards against which they were audited and the typical recommended improvement to address each non-compliance.

### 7.2 Pedestrian infrastructure assessment

#### 7.2.1 Audit of crossings

Crossings include all facilities pedestrians use to cross roads or inaccessible property (e.g. the rail corridor). This includes:

- > Zebra crossings and raised zebra crossings;
- > Signalised crossings;
- > Pedestrian refuges;
- > Kerb ramps; and
- > Kerb extensions.

##### 7.2.1.1 Zebra and raised zebra crossings

Zebra crossings provide pedestrians with prioritised road crossing opportunities; vehicles must give way to pedestrians who are walking across a zebra crossing. Specific non-compliances assessed for zebra crossings and raised zebra crossings are summarised in **Table 7-1** along with the standards against which they were assessed and the recommended improvements.

**Table 7-1 Zebra and raised zebra crossings assessment and improvements**

Non-compliance	Standard	Requirement for compliance	Recommended improvement
Painted crossing width less than 3.6 metres	AS 1742.10-2009 Pedestrian control and protection with reference to RMS supplement and TDT	Crossing should be 3.6 metres wide (minimum)	Widen crossing to 3.6 meters wide
Poor sight lines for pedestrians	2001/04b Traffic calming devices as pedestrian crossings	Focus is given to crests and obstructions that may restrict the clear view of approaching vehicles	Investigate safe crossing operation

Non-compliance	Standard	Requirement for compliance	Recommended improvement
Faded line markings		Pavement markings should be clearly visible by pedestrians and vehicle drivers.	Re-paint line marking
Lack of signage		Signage should be installed as per Figure 1 of AS1742.10-2009	Install signage

### 7.2.1.2 Signalised pedestrian crossing

Signalised pedestrian crossings provide pedestrians with green traffic light signal priority to cross a street. Specific non-compliances assessed for signalised intersections are summarised in **Table 7-2** along with the standards against which they were assessed and the recommended improvements.

**Table 7-2 Signalised intersection assessment and improvements**

Non-compliance	Standard	Requirement for compliance	Recommended improvement
Missing crossing leg	AS 1742.10-2009 Pedestrian control and protection with reference to RMS supplement and TDT 2002/12c Stopping and Parking restrictions at intersections and crossings.	Pedestrian crossing on all intersection legs	Investigate provision of additional crossing leg
Delineated crossing width less than 3.3 metres		Crossing width 3.3 metres	Adjust line marking to provide 3.3 metre wide pedestrian crossing zone
No audio indicator		Audio indicator at crossing	Provide an audio indicator button
No pedestrian lantern		A green / red lantern should be visible to pedestrians from both sides of the crossing	Provide pedestrian lantern

### 7.2.1.3 Pedestrian refuges

Pedestrian refuges allow pedestrians to cross one direction of vehicle traffic at a time, providing a safe place in the middle of the road carriageway to wait before completing the second leg of the road crossing. Specific non-compliances assessed for pedestrian refuges are summarised in **Table 7-3** along with the standards against which they were assessed and the recommended improvements.

**Table 7-3 Pedestrian refuges assessment and improvements**

Non-compliance	Standard	Requirement for compliance	Recommended improvement
Refuge dimensions less than 3m (parallel) x 2m (perpendicular)	AS 1742.10-2009 Pedestrian control and protection with reference to RMS supplement and TDT 2011/01a	3.0 metres parallel to the road direction of travel (minimum)	Reconstruct refuge to provide compliant waiting space
Unsafe crossing distance to refuge		2.0 metres perpendicular to the road direction of travel (minimum)	
		The crossing distance required to reach the refuge area should be reasonable considering the subject road conditions and prevailing traffic speeds and volumes	Investigate safe crossing operation

### 7.2.1.4 Kerb ramps

Kerb ramps are used to assist pedestrians, particularly those who are less mobile, to enter and exit the roadway safely to cross the street at a designated point. Specific non-compliances assessed for kerb ramps are summarised in **Table 7-4** along with the standards against which they were assessed and the recommended improvements.

**Table 7-4 Kerb ramp assessment and improvements**

Non-compliance	Standard	Requirement for compliance	Recommended improvement
Missing	AS1428.1-2009 and AS1428.4.1 – 2009 Design for Access and Mobility, and RMS Standard Drawing R0300-11	Kerb ramps should be provided where possible.	Construct kerb ramp
None (Path level with road)		Where there is no difference between height in the footpath and roadway TGSi is required.	Investigate provision of tactile ground surface indicators (TGSi)
Misaligned with opposite kerb ramp		Kerb ramps must be directly facing each other, and aligned with the adjacent property boundary or wall.	Reconstruct kerb ramp
DDA non-compliant dimensions and grades		Kerb ramps should be wide, graded appropriately and allow for the safe movement of wheelchairs, prams, mobility aids.	Reconstruct kerb ramp
Damaged / poor condition		Kerb ramps should be in a good condition to avoid trip hazards.	Reconstruct kerb ramp

### 7.2.1.5 Kerb extensions

Kerb extensions narrow the crossing distance of a street for pedestrians by extending the alignment of the kerb towards the centre of the adjacent roadway. This makes crossing the road at this point safer and easier for pedestrians and also acts as a traffic calming device, slowing traffic by restricting the carriageway width. Specific non-compliances assessed for kerb extensions are summarised in **Table 7-5** along with the standards against which they were assessed and the recommended improvements.

**Table 7-5 Kerb extension assessment and improvements**

Non-compliance	Standard	Requirement for compliance	Recommended improvement
Reduced width (Perpendicular to road)	AustRoads Guide to Road Design Part 4 Section 8.2.2	2.0 metres (minimum)	Replace kerb extension
Reduced length (Parallel with road)		6.0 metres (minimum)	Replace kerb extension

### 7.2.1.6 Hazardous crossing location

Regular road crossings allow pedestrians to access their destinations safely. This is particularly important in areas of high vehicle volumes and speeds or where the crossing distance is large. Issues associated with a lack of crossing opportunities were assessed as part of the site audits. The criteria used to audit these is summarised in **Table 7-6**.

**Table 7-6 Lack of crossing infrastructure assessment and improvements**

Non-compliance	Requirement for compliance	Recommended improvement
Hazardous crossing location / no formal crossing facility	Crossing facilities along key pedestrian desire lines.	Investigate provision of a crossing facility

## 7.2.2 Paths

All footpaths and shared paths along the proposed pedestrian network were assessed for their existence, width, condition and other issues.

Specific issues assessed for footpath presence and width are summarised in **Table 7-7** and for shared paths in **Table 7-8**. A general path condition assessment was also undertaken for pedestrian facilities, using the criteria in **Table 7-9**.

**Table 7-7 Footpath assessment and improvements**

Facility	Standard	Assessment	Recommended improvement
Footpath width (Block length average)	Australian Standards AS1428.2 (1992) r2015 Clause 6.4 with reference to AustRoads GTRD Part 6a Figure 6.1.	1. No footpath	Provide a concrete footpath 1.2 metres wide
		2. Non-compliant footpath (<1.1m)	Replace with a concrete footpath 1.2 metres wide
		3. Minor non-compliant footpath (>=1.1m-1.2m wide)	None
		4. Compliant footpath (>=1.2m)	None

**Table 7-8 Shared path assessment and improvements**

Facility	Standard	Assessment	Recommended improvement for compliance
Shared path width (Block length average)	RMS NSW Bicycle guidelines state a minimum width of 2.5 metres, with reference to Austroads Guide to Traffic Engineering Practice - Part 14 Bicycles Table 6-3.	No shared path	Provide shared path 2.5 metres wide
		Non-compliant shared path (<2.4m)	Replace with shared path 2.5 metres wide
		Minor non-compliant shared path (>=2.4m - 2.5m wide)	None
		Compliant (>= 2.5m wide)	None

**Table 7-9 Path condition assessment and improvements**

Path observations			
Defect	Standard	Requirement for compliance	Recommended improvement
Poor path condition	Visual assessment	The footpath is assessed for cracked and uneven surfaces.	Replace footpath with 1.2m wide concrete footpath. Replace shared path with 2.5m wide concrete shared path.
Steep path grade/ cross fall	AS1428.1-2009 Design for Access and Mobility Table C1	Maximum longitudinal gradient 1:33. Maximum cross fall gradient 1:40.	Regrade where possible and provide 1.2m wide footpath / 2.5m wide shared path.
Potential pedestrian cyclist conflict on shared path	RMS NSW Bicycle Guidelines Table 6.3	Signage and line markings should be clearly visible by both pedestrians and cyclists.	Situation dependent.

Path observations			
Defect	Standard	Requirement for compliance	Recommended improvement
Hazard / obstruction	Australian Standards AS1428.2 (1992) r2015 Clause 6.4	The effective width of the pedestrian through zone (PTZ) should be minimum 1.2m.	Remove obstruction
No delineation on shared path	RMS Delineation Sec 12 - Pavement markings for bicycle facilities	Shared paths should be delineated with centre line-marking and pedestrian / bicycle logos	Provide new shared path line-marking and logos.
Personal security	Visual assessment	Pedestrian routes should be well lit, and promote active and passive surveillance	Investigate provision of adequate lighting facilities

## 7.3 Site audits and software

### 7.3.1 Site audits

The site audit of the Tomaree Planning District pedestrian network was completed from the 26<sup>th</sup> June 2017 to the 30<sup>th</sup> of June 2017. The audit assessed all pedestrian facilities located on the pedestrian network.

Data was collected on the site audits using mobile tablets installed with the “Collector for ArcGIS” application. Data was recorded and uploaded to the main GIS server over a mobile 4G connection available on the tablets.

Pedestrian facilities that were observed along the auditor’s path of travel were recorded and assessed according to the predetermined set of standards outlined in **Section 7.2**, and entered into the Collector for ArcGIS application by completing a form. This process is described in more detail in the section below.

### 7.3.2 PAMP software: Collector for ArcGIS

A custom-made form in the Collector for ArcGIS application was used to collect pedestrian audit data. Data was recorded by placing a point or line within the application to indicate the presence of a facility, issue and to recommend an improvement.

Each feature that was assessed and recorded was represented on the GIS map interface, either as a point symbol or line, carrying GPS coordinates and information added by the auditor on the tablet through a series of drop-down and text entry boxes.

The drop-down boxes comprised of a list of pedestrian facilities, and for each facility, common non-compliances and issues were listed. The recommended improvement could also be selected. On occasions where further explanation was required to complement an observed issue, or where a different concern was observed by the auditor, free text-entry boxes were also available for providing comments. For most of the facilities observed and audited, a photograph was taken and attached to the GIS point or line identifying the feature.



## 8 Identified issues

The site audit identified issues in the transport network that limit pedestrian connectivity and safety. Issues for pedestrians include path defects, unsafe crossings and non-compliant infrastructure. 161.6 kilometres of path was audited for the Tomaree Planning District. A total of 39.1 kilometres of existing footpath (24 per cent) and 15.5 kilometres of shared path (10 per cent) was audited, and 107 kilometres of the proposed pedestrian network had no existing footpath or shared path present (66 per cent).

Summary maps of the path compliance status during the audits is attached in **Appendix C**.

In total, 1,100 kerb ramps, kerb extensions and pedestrian refuges were audited as part of the pedestrian infrastructure, along with 280 hazardous locations, obstructions, personal security concerns and dangerous crossing locations. This section discusses the main issues identified in the audit process.

Summary maps of the compliance status of these facilities is attached in **Appendix D**.

### 8.1 Path issues

#### 8.1.1 Footpaths

Existing footpaths were generally compliant, with 22.6 kilometres (58 per cent) audited as having compliant widths, and 15 kilometres (38 per cent) having a minor non-compliant width. 1.5 kilometres of footpath (four per cent) however was too narrow.

35.6 kilometres of existing footpath (91 per cent) was in good condition, 356 metres (0.9 per cent) was deemed to be cracked, 2.4 kilometres (6.1 per cent) was uneven, and 685 metres (two per cent) was both cracked and uneven.

Examples of footpaths from the study area are shown in the following images:

**Compliant footpath: FP\_00018**



Location: Port Stephens Drive, Taylors Beach

**Minor non-compliant footpath width: FP\_00298**



Location: Sergeant Baker Drive, Corlette

**Non-compliant footpath width: FP\_00032**



Location: Ridgeway Avenue, Soldiers Point

**Missing footpath: FP\_00136**



Location: Rocky Point Road, Fingal Bay

### 8.1.2 Shared paths

15.5 kilometres of shared paths were audited. Of these, 10.1 kilometres (65 per cent) have compliant widths, 3.5 kilometres (23 per cent) have a minor non-compliance, and 1.9 kilometres (12 per cent) are too narrow. An additional 4.6 kilometres of shared path were determined to be missing, determined through a review of the key pedestrian and cyclist routes connecting to existing shared paths. Path conditions are mostly good, with only 750 metres (five per cent) found to be cracked and uneven in the audit.

Examples of shared paths from the study area are shown in the following images:

Compliant shared path: SP_00013	Minor non-compliant shared path width: SP_00031
	
Location: Shoal Bay Road, Shoal Bay	Location: Shoal Bay Road, Shoal Bay
Non-compliant shared path width: SP_00033	Missing shared path: SP_00047
	
Location: Stockton Street, Nelson Bay	Location: James Paterson Street, Anna Bay

### 8.1.3 Hazard/ obstructions

Hazards and obstacles facing pedestrians in the Tomaree Planning District are vegetation, road side furniture, power poles, retaining walls, cliff faces and utilities. A total of 11 power poles, 28 sections of obtrusive vegetation, 8 road side furniture objects, and 12 utility objects were audited. Example of hazards and obstructions are shown in the following images.

**Vegetation obstruction: HO\_00020**



Location: Coral Street, Fingal Bay

**Power pole obstruction: HO\_00016**



Location: Soldiers Point Road, Soldiers Point

**Utility obstruction: HO\_00048**



Location: Town Centre Circuit, Salamander Bay

**Retaining wall obstruction: HO\_00028**



Location: Government Road, Shoal Bay

## 8.2 Crossing issues

### 8.2.1 Kerb ramps

There are 356 existing kerb ramps attached to footpaths, and 71 attached to shared paths, in the study area. 76 kerb ramps are also constructed where there is no connecting pedestrian path. Of the 503 existing kerb ramps audited, 310 (62 per cent) were compliant and 193 (38 per cent) were non-compliant. 535 locations were identified where kerb ramps are missing and should be provided to connect to existing pedestrian paths. A large proportion of kerb ramps were found to be misaligned with the opposite kerb ramp, visually DDA non-compliant and damaged or in poor condition. Examples of kerb ramps from Port Stephens are shown in the following images.



**Compliant kerb ramp: KR\_00094**


Location: Bagnall Avenue, Salamander Bay

**Misaligned kerb ramp: KR\_00016**


Location: Port Stephens Drive, Taylors Beach

**Missing kerb ramp: KR\_00600**


Location: Montevideo Parade, Nelson Bay

**Visually DDA non-compliant kerb ramp: KR\_00295**


Location: Port Stephens Drive, Salamander Bay

### 8.2.2 Crossings

There are a total of 14 zebra crossings in the study area, eight of which are compliant. The others require repainted line markings, widening, ground tactiles or signage to be installed. One signalised pedestrian crossing facility exists in the Tomaree Planning District at the intersection of Victoria Parade, Laman Street and Stockton Street in Nelson Bay. The signalised pedestrian crossing was considered compliant. Hazardous crossing locations with no crossing facility were found at 68 locations throughout the study area, including locations at roundabouts, high speed roads and wide carriageways. An example of a hazardous crossing location, is shown below.

**Non-compliant zebra crossing (no tactiles): ZC\_00003**


Location: Gan Gan Road, Anna Bay

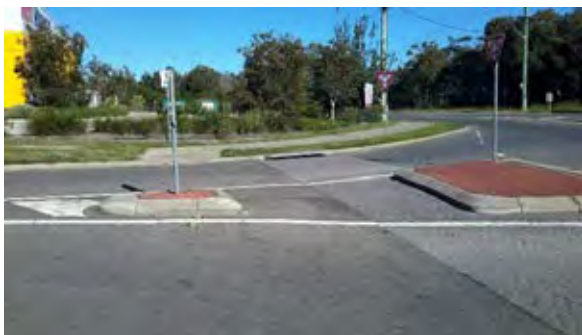
**Hazardous crossing location: HZ\_00047**


Location: Salamander Way, Salamander Bay

### 8.2.3 Roundabouts

In the Tomaree Planning District, roundabouts generally do not have compliant crossing facilities, as some legs do not have adequate refuges or kerb ramps. Examples of roundabout crossing facilities are shown in the following images.

Compliant roundabout crossing: RE\_00001



Location: Innovation Close, Taylors Beach

Non-compliant roundabout crossing (no refuge): HZ\_00004



Location: Soldiers Point Road, Salamander Bay

### 8.2.4 Pedestrian refuges

Of the 58 pedestrian refuges in the study area, 48 are non-compliant, the main issues are inadequate lengths and widths which don't provide enough pedestrian waiting space. Many pedestrian refuges are also missing at various legs of roundabouts throughout Port Stephens and there are 68 hazardous crossing locations in the study area where construction of a pedestrian refuge should be investigated. Examples of pedestrian refuges are shown in the following images.

Compliant pedestrian refuge: RE\_01019



Location: Sandy Point Road, Corlette

Non-compliant pedestrian refuge dimensions: RE\_00022



Location: Shoal Bay Road, Nelson Bay

### 8.2.5 Kerb extensions

Kerb extensions in the study area are mostly compliant, only 14 out of 41 were assessed as non-compliant. The main reason for non-compliant kerb extensions is a narrow width. Examples of kerb extensions from the study area are shown in the following images.

Compliant kerb extensions: KE\_00037



Location: Bagnall Beach Road, Salamander Bay

Non-compliant kerb extension width: KE\_00011



Location: Stockton Street, Nelson Bay

## 9 Improvements

To develop a safe, direct and complete pedestrian network across the Tomaree Planning District, the following infrastructure, policy and behaviour change improvements are recommended.

### 9.1 Infrastructure improvements

#### 9.1.1 Site audit recommendations

For the issues identified in the site audits across the pedestrian network, improvements were recommended to eliminate or mitigate the issues.

The complete list of improvements (and the issues they relate to) are provided in the accompanying Schedule of Works spreadsheet (**Appendix E**). The locations of the recommended infrastructure works align with the locations of identified issues on the maps presented in **Section 8**.

For a small number of issues no improvement or investigation was recommended. This was due to constraints such as the existing infrastructure, or it was determined that a further investigation was required prior to a specific recommendation being proposed for the walking network.

A summary of the general recommendations for the pedestrian network is provided in **Table 9-1**.

**Table 9-1 Improvement recommendations**

Feature	Issue	Improvement
Zebra crossing	Painted crossing width less than 3.6 metres	Widen crossing to 3.6 metres wide
	Poor sight lines for pedestrians	Investigate safe crossing operation
	Faded line markings	Re-paint line marking
	Lack of signage	Install signage
Signalised pedestrian crossing	Missing crossing leg	Investigate provision of additional crossing leg
	Delineated crossing width less than 3.3 metres	Adjust line marking to provide 3.3 metre wide pedestrian crossing zone
	No audio indicator	Provide an audio indicator
	No pedestrian lantern	Provide pedestrian lantern
Pedestrian refuge	Refuge dimensions less than 3m (parallel) x 2m (perpendicular)	Reconstruct refuge to provide compliant waiting space
	Unsafe crossing distance to refuge	Investigate safe crossing operation
Kerb ramp	Missing	Construct kerb ramp
	None (path level with road)	Investigate provision of tactile ground surface indicators (TGSI)
	Misaligned with opposite kerb ramp	Reconstruct kerb ramp
	DDA non-compliant dimensions and grades	Reconstruct kerb ramp
	Damaged / poor condition	Reconstruct kerb ramp



Feature	Issue	Improvement
Kerb extension	Width too narrow (Perpendicular to road)	Replace kerb extension
	Length too narrow (Parallel with road)	Replace kerb extension
Hazardous crossing	Hazardous crossing location / no formal crossing facility	Investigate provision of a crossing facility
Path width	No footpath	Provide a concrete footpath 1.2 metres wide
	Non-compliant footpath (<1.1m)	Replace with a concrete footpath 1.2 metres wide
	No shared path	Provide shared path 2.5 metres wide
	Non-compliant shared path (<2.4m)	Replace with shared path 2.5 metres wide
Path condition assessment	Poor path condition	Replace footpath/shared path with 1.2m/2.5m wide concrete footpath
	Steep path grade/ cross fall	Regrade where possible and provide 1.2m wide footpath / 2.5m wide shared path
	Potential pedestrian / cyclist conflict on shared path	Situation dependent
	Hazard / obstruction	Remove obstruction
	No delineation on shared path	Provide new shared path line-marking and logos
	Personal security	Investigate provision of adequate lighting facilities

## 9.2 Issues raised through consultation

The concerns regarding pedestrian infrastructure raised by the community and stakeholders in **Section 4** have been addressed in the PAMP. **Appendix F** contains a list of the proposed infrastructure that will address these issues.

## 9.3 Signage

Guidance and information signage can support the pedestrian network in each town:

- > **Guidance signs:** these include wayfinding signs and behavioural signs including path stencils.
- > **Information signs:** maps and feature signs of unique features with historic descriptions.

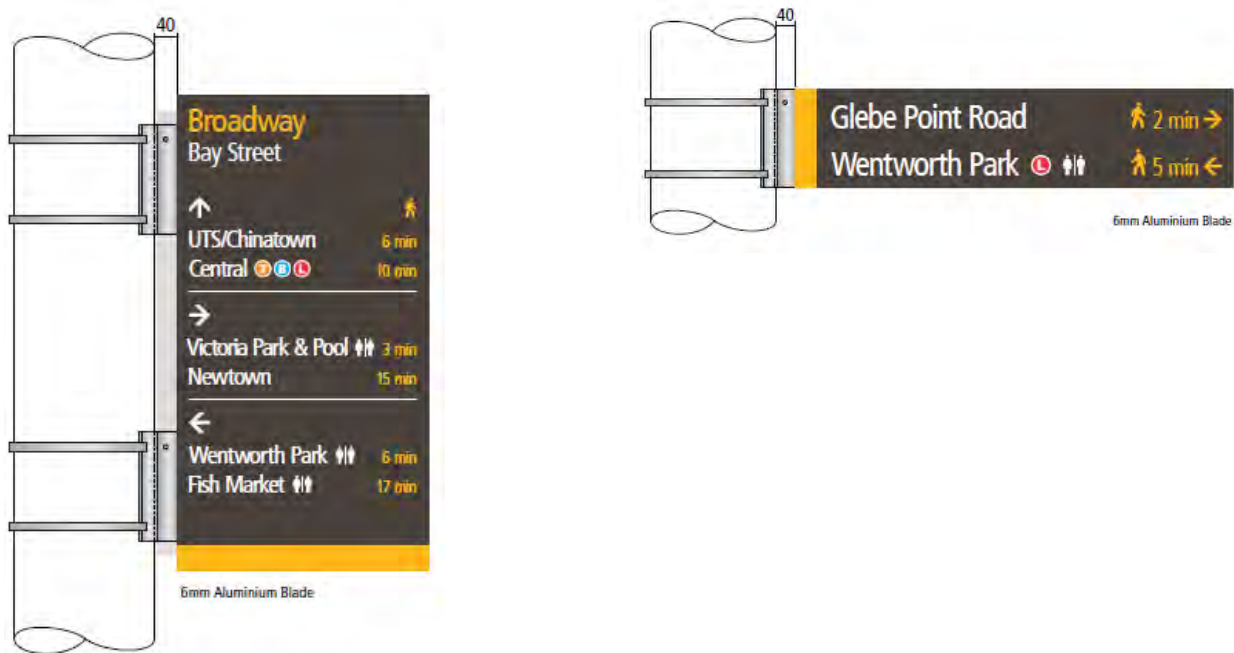
It is recommended that signs be installed in strategic locations taking into consideration the following principles:

- > **Clutter-reduction**, rationalise signage as much as possible;
- > **Clear sight lines**, positions signs where the growth of vegetation will not block the view of them, both upon installation and in the future;
- > **Consistent information**, after the introduction of a destination, it should be repeated until it is reached. Given the size of the route to the destination, outline distances to the nearest 10 metres; and
- > **Destinations and decision points**, a network focal point map assists to plan the signage scheme.

### 9.3.1 Guidance signs - wayfinding

Examples of wayfinding signage layouts, from the City of Sydney are reproduced in **Figure 9-1**. Where more than two destinations are located in a given direction, the signs can be stacked in lieu of providing a large single sign, however to reduce information overload it is recommended to restrict directional information to four locations in any one direction.

**Figure 9-1 Wayfinding sign convention and layout**



Source: City of Sydney Legible Sydney Design Manual Part 1

### 9.3.2 Guidance signs - behavioural

Standard shared path behavioural signs are shown in **Figure 9-2**. Behavioural signs ensure uniform access to key destinations, improving safety for all path users. An example of signage currently implemented across the Port Stephens LGA is presented in **Figure 9-3**.

**Figure 9-2 Behavioural signs and installation examples**



Source: NSW Bicycle Guidelines, RTA/RMS, 2005

**Figure 9-3 Example of shared path signage in Port Stephens LGA**



Source: Port Stephens Council

### 9.3.3 Information signs

Information maps are used on all route types to provide more detailed wayfinding to path users than what can be provided on wayfinding signage alone. They are intended for people to stop and view for a period of time and so should be placed so readers position themselves off the path. Maps can include the location of points of interest, public transport stops, and radial catchments indicating the average time required to walk from a person's current position. Examples of map signs are provided in **Figure 9-4** and **Figure 9-5**.

**Figure 9-4 Information signage, and mapping convention and layout**



Source: City of Sydney Legible Sydney Design Manual Part 1

**Figure 9-5 Map display board example**



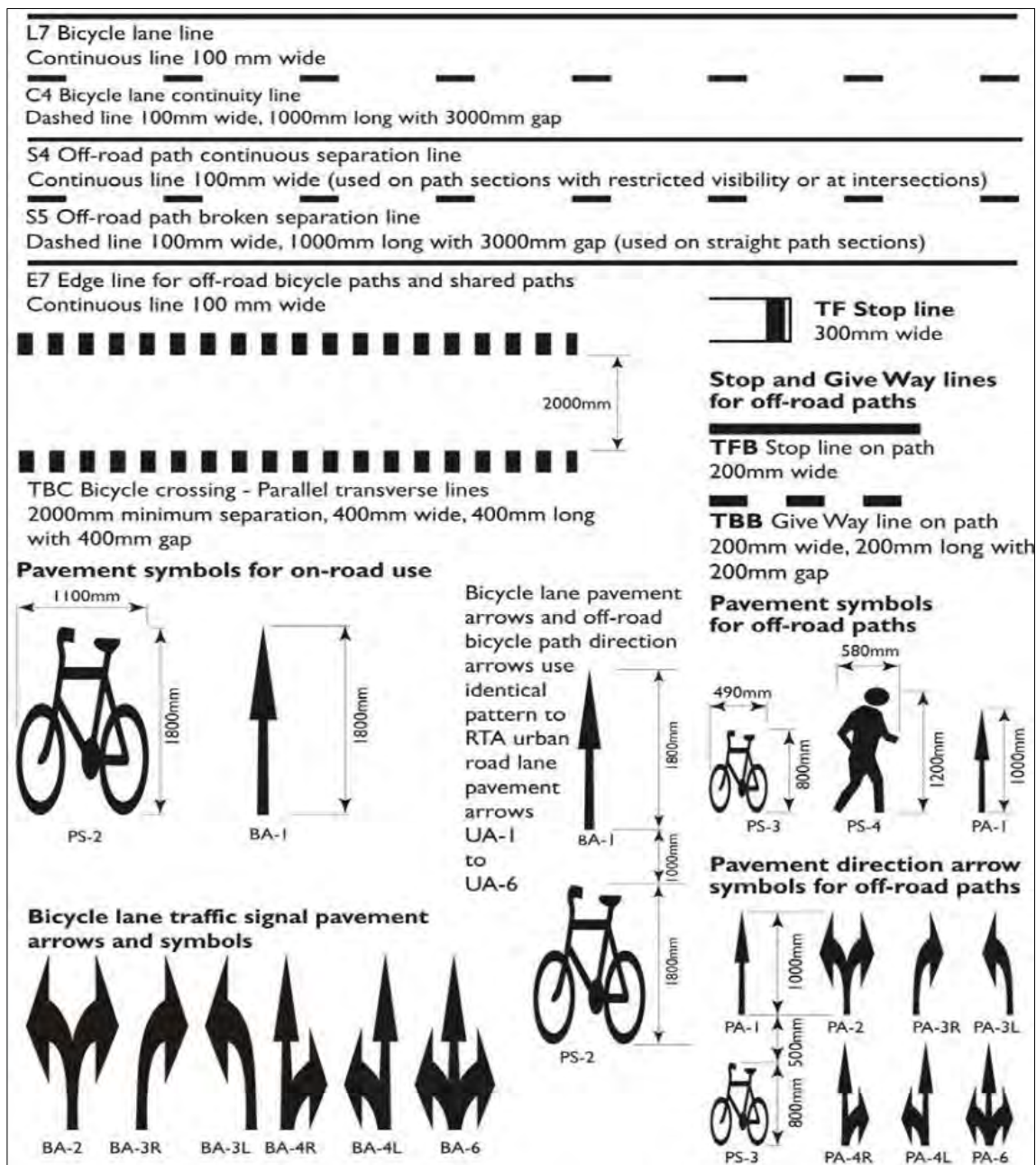
Source: City of Sydney Legible Sydney Design Manual Part 2



## 9.4 Linemarking

Linemarking of shared path facilities is outlined in Section 12 of the Delineation Guidelines prepared by RMS. The standard shared path markings specified are provided in **Figure 9-6**.

**Figure 9-6 RMS pavement marking specifications**



Source: Delineation, Section 12 – Pavement markings for bicycle facilities, RMS, 2010

## 9.5 Behavioural change and education

Implementation of the proposed pedestrian infrastructure for the ten towns will help to develop a coherent, direct, safe, attractive and comfortable network. While these improvements will be an important factor to encourage more residents, students and tourists to walk or cycle instead of drive, their effect can be enhanced through support initiatives such as education, promotion and incentives that will assist the decision to break existing travel habits and adopt sustainable transport modes.

Education, promotion and incentives can increase knowledge and understanding of the active travel choices, develop skills and confidence, and provide encouragement to make travel behaviour changes towards sustainable transport modes.



Initiatives which can help to stimulate the mode share shift from private vehicle to active travel for short trips around the Tomaree Planning District are provided in **Table 9-2**.

**Table 9-2 Summary of behavioural change initiatives**

#	Initiative	Rationale
1	<b>Walking School Bus or Cycling Trains</b> Parent volunteers or staff walk/ride with the children within a certain radius of schools <b>Figure 9-7</b> shows a walking bus.	Inexpensive way to encourage both adults and children to walk or ride to school safely and healthily.
2	<b>Schools focus on road safety</b> Work with schools to educate parents and children on road safety.	A joint communications focus on both parents and children will help to alleviate safety concerns and address questions that parents may have.
3	<b>Promote special events</b> Hold promotional activities and special events and align with national initiatives such as 'car-free-day' and walk-to-work-day'. On event days organise a breakfast for participants, and work with the organising group to provide promotion for the event. Involve schools in the events. A Walk Safely to School Day flyer is shown in <b>Figure 9-8</b> .	These activities and events will increase awareness amongst residents and workers about walking for typical daily trips. Walking events are easy to organise and are a great way to leverage off nationally promoted events.
4	<b>Promotion of new shared paths</b> Whenever a shared path is constructed, it can be promoted by Council through Council's website, local media and schools. A launch event or cycle could be held.	Promoting the new infrastructure will raise awareness of the new opportunity to cycle safely and encourage residents to trial the facility.
5	<b>Council's website</b> Use Council's website to provide updates and information on walking.	This is an inexpensive way to promote walking in the LGA.
6	<b>Walking maps</b> Walking maps that promote the walking network within the towns.	Walking maps inform the community and tourists of the pedestrian network within the towns and provide incentive for all to use and walk on the network routes.
7	<b>Travel to Work Seminars</b> Hold a seminar with free lunch to educate employees in the Tomaree Planning District about all the available transport options for travelling to work. Wednesday Walkers with Maree, Gateway Presbyterian Church, Heart Foundation Group, Birubi Sands Walking Group, Shoal Bay Community Association Inc and Fingal Haven Retirement Village should be invited to present their services in a social atmosphere.	This will increase employee awareness of their options in a social environment. It will give them the opportunity to ask questions and get/give feedback to Port Stephens Council, service providers or community groups.
8	<b>Lunchtime walks</b> Promote lunchtime walking groups, or other active/ lunchtime sports groups etc. to utilise adjacent parks and green spaces.	By encouraging workers to use the parkland, paths and public space in a social way at lunchtimes, they will become familiar with the active transport facilities and this will increase the likelihood that they will consider walking as a commuting trip.

**Figure 9-7 Walking School Bus Program**



**Figure 9-8 Australia's Walk to School Safely flyer**



## 10 Prioritisation, cost estimates and funding

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### 10.1 Route prioritisation

This section outlines the proposed plan for implementation of pedestrian infrastructure across the Tomaree Planning District over the next 15 years. The recommended improvement works to address each identified non-compliance were prioritised against a range of criteria agreed with Port Stephens Council. This provides a basis for works to be selected and programmed to be undertaken in line with any budgetary and resourcing constraints, along with any other determining factors, to ensure investment is prioritised to provide best value for money.

The prioritisation process is applied to the pedestrian network at a route level, rather than at an individual facility issue / non-compliance level. This process allows for the prioritised work of whole routes, rather than sections of routes, and will slowly form the complete pedestrian network. The proposed pedestrian route network is presented in **Section 6.2**.

Within each route, there are a number of subsections. Each audit feature is designated a particular subsection which in turn is designated to a route. This ensures there are no doubling up for the costing component, discussed in **Section 10.2**.

The pedestrian routes that form the network in each town were assessed against the following five factors to determine their priority for implementation of improvement works:

- > **Land use:** This prioritises improvements identified near key pedestrian attractors such as town centres, schools and hospitals. Prioritisation based on the location of aged care facilities is covered as part of the Vulnerable Communities criteria.
- > **Road type:** Routes are prioritised where they are located along major state or arterial road corridors.
- > **Safety:** Routes are prioritised where a section is located within close proximity to recorded crashes involving pedestrians. The crash analysis for the Tomaree Planning District is presented in **Section 3.3**.
- > **Recommendation type:** Where new facilities are required along the majority of a route, these are allocated with higher priority compared to routes where existing facilities are provided.
- > **Vulnerable communities:** Routes that connect to vulnerable community populations are prioritised based on the respective proportional density of the subject community.

The scoring applied to each of the above categories, and respective weightings to determine a route's priority is presented in **Table 10-1**.

**Table 10-1 Prioritisation scores and weighting**

Category	Category type	Score	Weighting
Land use (connects from town centre to)	Town Centre / School	10	25%
	Residential	6	
	Recreational	3	
	Industrial	2	
Road type	State / Regional	5	15%
	Local	3	
Safety	Within 10 metres of recorded crash	10	20%
	Within 100 metres of recorded crash	5	
	Not near a recorded crash	2	
Recommendation type	Majority new facility	8	15%
	Majority existing facility	5	
Route likely to be used by vulnerable groups	Yes - by portion population (density) greater than 50%	10	25%
	Yes - by portion population (density) greater than 35%	8	
	Yes - by portion population (density) greater than 15%	5	
	Less than 15%	3	

Routes were prioritised as low, medium and high priority based on the scores obtained from the above assessment. The priority categories correlate with Council's preferred implementation timeframes.

These timeframes for implementation of works for each priority level are presented in **Table 10-2**.

**Table 10-2 Priority rating**

Score	Priority	Timeframe
7.0 >	High priority	0 - 2 years
≤ 7.0 and ≥ 5	Medium priority	2 - 5 years
< 5	Low priority	5 - 15 years

Overall, out of the 125 routes identified, 27 were designated high priority, 84 medium priority and 14 low priority. The majority of the high priority routes were found in Nelson Bay (15), as well as in Salamander Bay (4), Shoal Bay (4), and Anna Bay/ Fisherman's Bay (4). This was primarily due to the following factors:

- > The crash history of these areas, resulting in higher scores allocated for the Safety criterion;
- > Connectivity to key land uses in these towns;
- > A lack of existing pedestrian infrastructure along these routes; and
- > The higher proportional presence of vulnerable communities in the areas surrounding these routes.

The low priority routes were largely concentrated in the Taylors Beach precinct, with five of the six routes assessed as low priority. This is largely due to the industrial nature of this suburb and low population.

A summary of the route priorities by town is provided in **Table 10-3**, and maps of the prioritised routes by each town precinct are provided in **Appendix G**.

**Table 10-3 Route priorities for each town**

Town	High priority	Medium Priority	Low Priority
Anna Bay and Fishermans Bay	AF1, AF2, AF8, AF9	AF3, AF4, AF5, AF6, AF7, AF10, AF11, AF12, AF13, AF14	
Boat Harbour		BH1, BH2, BH4, BH5, BH6, BH9, BH10	BH3, BH7, BH8
Corelette		C1A, C1B, C2, C3A, C3B, C5A, C5B, C7	C4, C6
Fingal Bay		FB3, FB4, FB5, FB6, FB7, FB8, FB9, FB10, FB11, FB12, FB13, FB14, FB15, FB16	FB1, FB2
Nelson Bay	NB2, NB3, NB4A, NB4B, NB9A, NB10, NB11A, NB11B, NB12, NB16, NB17, NB19, NB21, NB22, NB23	NB1A, NB1B, NB5, NB6, NB7, NB8, NB9B, NB13, NB14, NB15, NB18, NB20,	
One Mile		OM2	OM1
Salamander Bay	SB3A, SB3B, SB3C, SB3E	SB1, SB2, SB3D, SB4, SB6A, SB6B, SB7, SB8, SB9A, SB10, SB11	SB5
Shoal Bay	S5B, S5C, S5D, S5E	S1, S2A, S2B, S3, S4, S5A, S6, S7, S8	
Soldiers Point		SP1, SP2A, SP2B, SP3A, SP3B, SP4, SP5A, SP5B, SP6A, SP6B, SP6C	
Taylors Beach		TB1	TB2, TB3A, TB3B, TB4, TB5



## 10.2 Cost estimates

Cost estimates for the recommended improvement works are based on estimated unit costs and are provided in the Schedule of Works Spreadsheet in **Appendix E**. This section provides a breakdown of the cost estimates by town precinct. The cost estimates are for budgetary purposes only and should be considered with reference to the exclusions and assumptions outlined in **Section 10.2.3**.

### 10.2.1 Total cost estimate

The total cost estimate for the PAMP improvement works is \$23,542,430. The estimated cost per town is provided in **Table 10-4**.

The “Other” category consists of items such as:

- > Installation of signage;
- > Investigation of safe crossing operation;
- > Reconstruct kerb extension; and
- > Vegetation maintenance.

The cost estimate for some shared path upgrades is low, due to line-marking and logos to be painted to an existing shared path.

**Table 10-4 Cost estimate per precinct**

Precinct	Footpath	Shared path	Kerb ramp	Refuge	Other	Estimated Cost
Anna Bay and Fishermans Bay	\$2,936,974	\$539,233	\$376,200	\$28,000		\$3,880,407
Boat Harbour	\$970,012		\$102,300	\$28,000	\$1,540	\$1,101,852
Corlette	\$2,045,713	\$330,074	\$290,400	\$252,000	\$9,260	\$2,927,447
Fingal Bay	\$1,494,155	\$157	\$231,000	\$56,000	\$660	\$1,781,972
Nelson Bay	\$3,387,158	\$422,490	\$679,800	\$420,000	\$34,435	\$4,943,883
One Mile	\$467,255	\$681,074	\$19,800			\$1,168,129
Salamander Bay	\$2,750,839	\$378,686	\$350,900	\$392,000	\$181,450	\$4,053,875
Shoal Bay	\$1,232,859	\$153,122	\$187,000	\$56,000	\$28,635	\$1,657,616
Soldiers Point	\$879,437		\$229,900		\$1,100	\$1,110,437
Taylors Beach	\$845,217	\$314	\$70,400		\$880	\$916,810
Total	\$17,038,585	\$2,665,584	\$2,544,300	\$1,232,000	\$258,180	\$23,542,430

### 10.2.2 Priority cost estimates

A breakdown of the estimated cost by town precinct and priority level is presented in **Table 10-5**.

**Table 10-5 Priority Cost Estimates**

Precinct	Low priority	Medium priority	High priority	Total Per Precinct
Anna Bay and Fishermans Bay		\$2,483,721	\$1,396,686	\$3,880,407
Boat Harbour	\$229,235	\$872,616		\$1,101,852
Corlette	\$312,719	\$2,614,728		\$2,927,447
Fingal Bay	\$193,918	\$1,588,055		\$1,781,972
Nelson Bay		\$1,458,647	\$3,485,236	\$4,943,883
One Mile	\$122,417	\$1,045,712		\$1,168,129
Salamander Bay	\$603,584	\$1,039,257	\$2,411,034	\$4,053,875
Shoal Bay		\$939,610	\$718,006	\$1,657,616
Soldiers Point		\$1,110,437		\$1,110,437
Taylors Beach	\$840,789	\$76,021		\$916,810
Total	\$2,461,566	\$12,923,917	\$8,156,946	\$23,542,430

### 10.2.3 Exclusions and assumptions

The cost estimates provided are indicative only and are prepared for budgetary purposes only. Further analysis and assessment will be required to confirm the exact cost impact for individual locations, taking into account site-specific constraints and limitations.

The cost estimates for improvements were undertaken using unit rates provided by Port Stephens Council. The cost estimates presented above do not include costs with spoil, if any additional steel is required and any additional costs associated with environmental assessments.

The costs also do not include potential for external quotes and additional costs for kerb machine and concrete.

Where traffic control (two traffic controllers) are required for the construction of kerb ramps and kerb extensions, five hours of works was assumed to complete the task; for the construction of footpaths and shared paths, an hour of work was assumed per 80 square metres to allow for traffic controller costs.

For roadside vegetation maintenance, it was assumed work for each site can be completed within one hour. This also includes the requirement for two traffic controllers.

### 10.2.4 Schedule of works

The schedule of works by town precinct is attached in **Appendix E**.

## 10.3 Funding

Funding for the improvements and recommendations outlined in the PAMP may be available as part of a joint agreement with Roads and Maritime Services. The 2017-2018 Walking and Cycling Fund is an initiative of RMS on behalf of the NSW Government to provide financial assistance to Councils to deliver initiatives including:

- > New shared paths;
- > Pedestrian crossing facilities; and
- > Behavioural change and education programs.

This information in this PAMP will provide the necessary information and documentation required by RMS when submitting funding applications. This includes descriptions of the proposed project (including mapping

of location, infrastructure assessment and recommendation), and strategic cost estimates with prioritised milestones.

## 11 Summary

---

This PAMP proposes enhancements to the pedestrian network in the Tomaree Planning District to increase safety and accessibility for pedestrians. Schools, aged care facilities, child care facilities and town centres are in particular need of improved pedestrian connectivity and safety as children and less mobile citizens are vulnerable road users, and town centres need to be accessible for everyone. By making short walking trips easy and safe, and improving the general connectivity within towns, walking will be more attractive to more people and this can contribute to improving the vibrancy of streets.

This PAMP aligns with Port Stephens Council's plans to:

- > Promote sustainable, accessible and flexible transport modes;
- > Identify and plan for the future needs of an ageing population;
- > Make future provision for people with disabilities, their families and carers;
- > Provide strategic land use planning services; and
- > Reduce the infrastructure backlog on all Council assets.

This PAMP:

- > Sets out the strategic planning context;
- > Presents the current travel behaviour and transport networks;
- > Addresses the community and stakeholder concerns and suggestions;
- > Identifies particular issues of pedestrian safety and accessibility in the study area;
- > Proposes infrastructure improvements to the walking and cycling networks; and
- > Prioritises the costed improvements into high, medium and low priority for implementation.

Tomaree Planning District

APPENDIX

A

COMMUNITY SURVEY FORM



## **Community Survey - Port Stephens Council PAMP (Tomaree Peninsula)**

*Port Stephens Council is preparing a revision to its Pedestrian Access and Mobility Plan (PAMP) for the Tomaree Peninsula, covering the towns of Anna Bay, Boat Harbour, Corlette, Fingal Bay, Fisherman's Bay, Nelson Bay, One Mile, Salamander Bay, Shoal Bay, Soldier's Point and Taylor's Beach. Council aims to provide a safe road environment for all road users, current and future, and plan for active lifestyles and amenity.*

*The revised PAMP will help to focus State and Council investment in safe and convenient pedestrian infrastructure on key routes in towns across the Tomaree Peninsula.*

*The PAMP will help to integrate the footpath network with Port Stephens' growing residential areas, schools and workplaces. It will propose facilities to cater to the needs of all pedestrians including senior citizens, pedestrians with mobility and vision impairments and school children. It will identify any 'gaps' and deficiencies in the pedestrian network and the new infrastructure required such as footpaths and safe road crossings.*

*Council is seeking community feedback on the pedestrian facilities, issues and needs in the study area. Port Stephens residents, businesses and visitors can provide comments and ideas to Council by completing this community survey, either online or at Council offices, local schools, doctor's clinics, aged care facilities and community centres. The survey will be open to responses from the 24<sup>th</sup> May 2017 to 25<sup>th</sup> June 2017 (Please make sure you complete and submit the survey by this end date).*

### **YOUR PRIVACY**

Port Stephens Council is committed to protecting your privacy. We take reasonable steps to comply with relevant legislation and Council policy.

**Purpose:** Council is collecting this information to gain a better understanding of pedestrian access and mobility issues and needs within the study area.

**Intended recipients:** Council staff and approved contractors of Port Stephens Council.

**Supply:** Voluntary.

**Consequence of Non Provision:** Personal information only needs to be supplied if you want to receive updates on progress of the PAMP revision. There are no consequences to the non-provision of personal information.

**Storage and security:** This document will be placed on the relevant file and saved in Council's records management system in accordance with Council policy and relevant legislation.

**Access:** Please contact Council on (02) 4980 0255 to enquire how you can access information.

**This survey has interactive form fields. When viewed on a computer, you are able to record and save your answers without needing to print and complete by hand. The completed form can be emailed to Council.**

**Question 1: Where do you reside?**

<input type="checkbox"/> Anna Bay	<input type="checkbox"/> Fisherman's Bay	<input type="checkbox"/> Shoal Bay
<input type="checkbox"/> Boat Harbour	<input type="checkbox"/> Nelson Bay	<input type="checkbox"/> Soldier's Point
<input type="checkbox"/> Corlette	<input type="checkbox"/> One Mile	<input type="checkbox"/> Taylor's Beach
<input type="checkbox"/> Fingal Bay	<input type="checkbox"/> Salamander Bay	<input type="checkbox"/> Other (please specify): _____

**Question 2: What is your age group?**

<input type="checkbox"/> 12 – 18 years	<input type="checkbox"/> 45 – 54 years
<input type="checkbox"/> 19 – 24 years	<input type="checkbox"/> 55 – 64 years
<input type="checkbox"/> 25 – 34 years	<input type="checkbox"/> 65 – 74 years
<input type="checkbox"/> 35 – 44 years	<input type="checkbox"/> 75+

**Question 3: Are you a member of a group / club that regularly walks in the Port Stephens Council area?**

☐ Yes - Name of group / club (if applicable): \_\_\_\_\_

☐ No

**Question 4 - Are you, or someone you care for, sensory or mobility impaired?**

<input type="checkbox"/> Yes – mobility impairment	<input type="checkbox"/> Yes – other impairment (please specify): _____
<input type="checkbox"/> Yes – Sensory (visual or auditory) impairment	<input type="checkbox"/> No

**Question 5 - Are you considered the main carer of any of the following?**

<input type="checkbox"/> Children under 5 years	<input type="checkbox"/> Adult with an impairment	<input type="checkbox"/> No
<input type="checkbox"/> Children aged 6-12 years	<input type="checkbox"/> Elderly relative / friend	
<input type="checkbox"/> Child / children with an impairment	<input type="checkbox"/> Other (please specify): _____	

**Question 6 - Do you or anyone in your primary care use any of the following aids when travelling in, or to, the study area?**

<input type="checkbox"/> Pram	<input type="checkbox"/> Guide dog
<input type="checkbox"/> Shopping trolley bag	<input type="checkbox"/> Mobility scooter
<input type="checkbox"/> Walking stick/walking frame	<input type="checkbox"/> No
<input type="checkbox"/> Wheelchair	<input type="checkbox"/> Other (please specify): _____

**Question 7: How do you generally travel in your local area? Choose all that apply.**

<input type="checkbox"/> Walk	<input type="checkbox"/> Private vehicle
<input type="checkbox"/> Bicycle	<input type="checkbox"/> Community care transport
<input type="checkbox"/> Bus	<input type="checkbox"/> Taxi
<input type="checkbox"/> Mobility scooter	<input type="checkbox"/> Other (please specify): _____

**Question 8: Do you walk regularly in your local area?**

☐ Yes (proceed to Question 9)

☐ No (proceed to Question 11)

**Question 9: If you do walk, what are the main purposes of your walking trips? Choose all that apply.**

<input type="checkbox"/> To / from home	<input type="checkbox"/> Exercise / health benefits / visit parks
<input type="checkbox"/> To / from work and work-related activity	<input type="checkbox"/> To / from personal business and appointments
<input type="checkbox"/> To / from school / TAFE	<input type="checkbox"/> To / from friends / relatives houses
<input type="checkbox"/> To / from shopping	<input type="checkbox"/> Other (please specify): _____

**Question 10: If you do walk, how often do you walk on average?**

<input type="checkbox"/> Every day	<input type="checkbox"/> Once a month
<input type="checkbox"/> A few times a week	<input type="checkbox"/> A few times a year
<input type="checkbox"/> Once a week	<input type="checkbox"/> Other (please specify): _____

**Question 11: If you don't walk, what are the main reasons for choosing another form of transport? Choose all that apply.**

<input type="checkbox"/> Faster	<input type="checkbox"/> Distance is too far to walk
<input type="checkbox"/> Safer	<input type="checkbox"/> Other (please specify in Question 12)
<input type="checkbox"/> More convenient	

**Question 12: What are the main issues with walking in the towns of *Anna Bay, Boat Harbour, Corlette, Fingal Bay, Fisherman's Bay, Nelson Bay, One Mile, Salamander Bay, Shoal Bay, Soldier's Point or Taylor's Beach*?**

<input type="checkbox"/> Lack of footpaths	<input type="checkbox"/> Footpath width	<input type="checkbox"/> Uneven footpath
<input type="checkbox"/> Lack of, or poorly designed kerb ramps	<input type="checkbox"/> Lack of appropriate signage	<input type="checkbox"/> Maintenance and cleanliness of paths
<input type="checkbox"/> Lack of audible /tactile crossing facilities at signalised crossing	<input type="checkbox"/> Poor lighting	<input type="checkbox"/> Obstructions (poles, overhanging trees etc)
<input type="checkbox"/> Pedestrian crossing safety	<input type="checkbox"/> Concern for personal security	<input type="checkbox"/> Lack of amenities (benches, bus shelters etc)
<input type="checkbox"/> Lack of pedestrian crossing opportunities	<input type="checkbox"/> Motorist behaviour	<input type="checkbox"/> Other (please specify): _____

**Question 13: What types of improvements to pedestrian facilities are most important to you?**  
Please choose all that apply.

- |   |  |
|---|--|
| <input type="checkbox"/> More footpaths                 | <input type="checkbox"/> Accessible transport options (e.g. access to buses)   |
| <input type="checkbox"/> Directional signage            | <input type="checkbox"/> Audible/ tactile crossing facilities at signalised crossing for the sight impaired              |
| <input type="checkbox"/> Improved lighting and security | <input type="checkbox"/> Increased pedestrian crossing opportunities (pedestrian lights, refuges, crossings, overpasses) |
| <input type="checkbox"/> Kerb ramps                     | <input type="checkbox"/> Other (please specify): _____   |

**Question 14: Would you like to be kept up-to-date with the progress of the PAMP revision study? If yes, please provide your contact details:**

Name	
Address	
Email	

If you would like to provide feedback on the locations of specific issues in the Tomaree Planning District, please use the following link to our online interactive map: <http://bit.ly/PSCmapsurvey>

We appreciate you taking the time to complete our survey. Please ensure your survey response is submitted by the cut-off date of Sunday 25<sup>th</sup> June, 2017.

The pdf copy of this Survey is available online at <http://www.portstephens.nsw.gov.au/>

The hard copy of this Survey is available in Council offices, local schools, doctor's clinics, aged care facilities and local community centres.

**Completed Survey responses can be submitted as follows:**

**MAIL:** Port Stephens Council, PO Box 42, Raymond Terrace, NSW 2324

**IN PERSON:** Port Stephens Council Administration Building, 116 Adelaide Street, Raymond Terrace  
Tomaree Library & Community Centre, Town Centre Circuit, Salamander Bay  
Port Stephens Visitor Information Centre, 60 Victoria Parade, Nelson Bay

**EMAIL:** [council@portstephens.nsw.gov.au](mailto:council@portstephens.nsw.gov.au)

**For further enquiries please contact Council on (02) 4890 0255 or**  
[council@portstephens.nsw.gov.au](mailto:council@portstephens.nsw.gov.au)

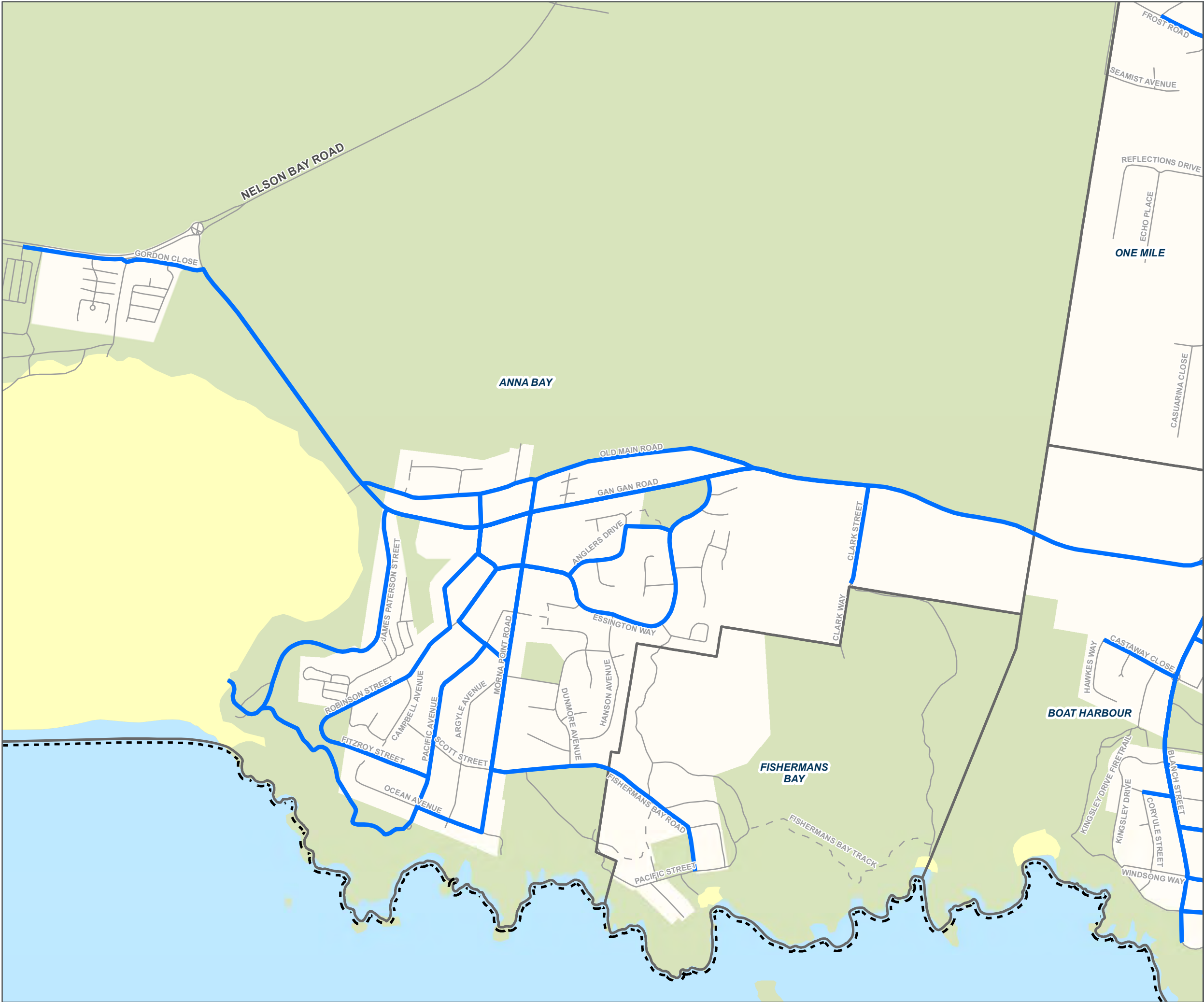


Tomaree Planning District

## APPENDIX

# B




## PEDESTRIAN ROUTE MAPS



## Anna Bay and Fishermans Bay

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

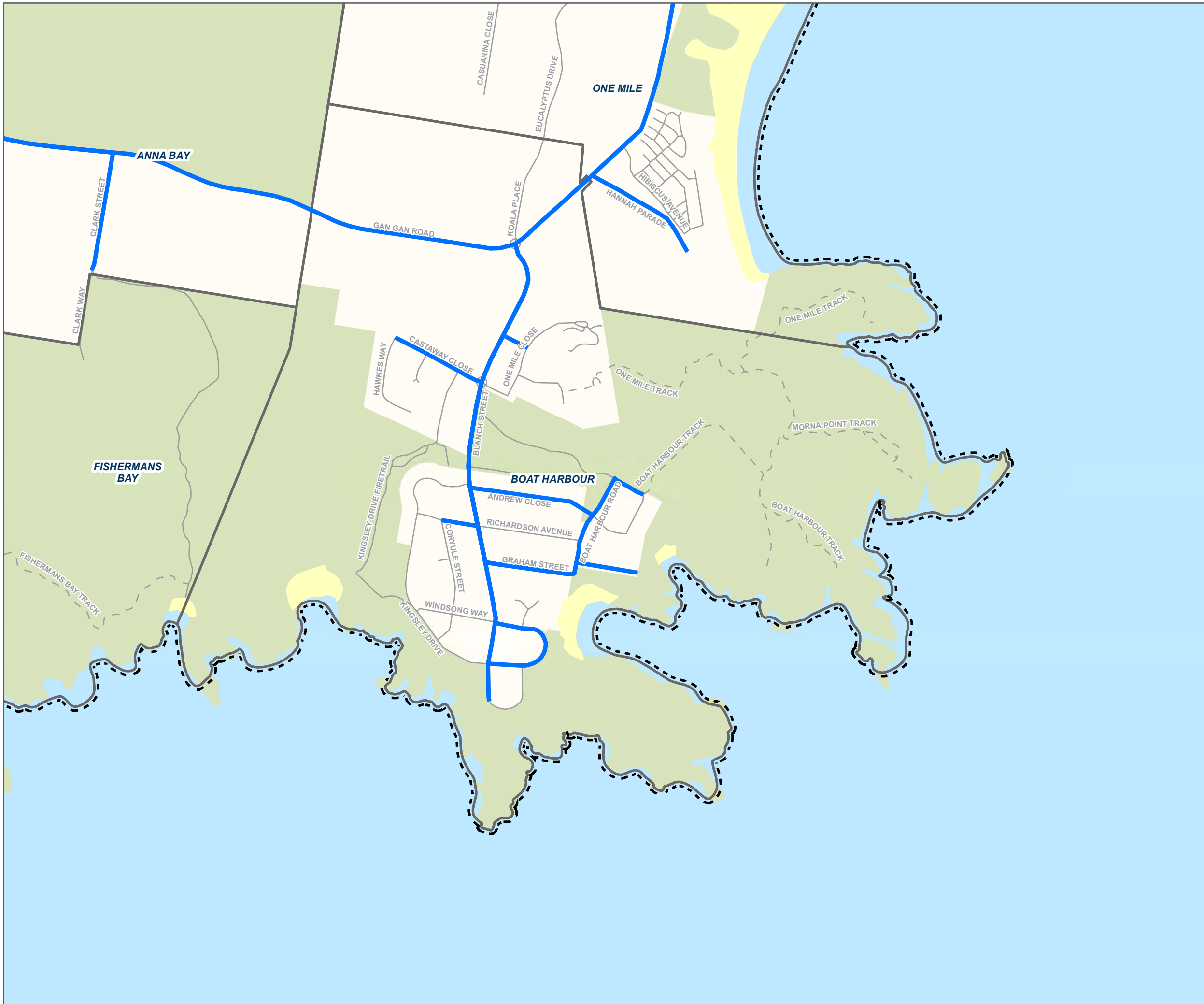
-  Pedestrian Network
-  Study Area
-  Suburb Boundary



1:12,000 Scale at A3

Metres  
0 200 400 600






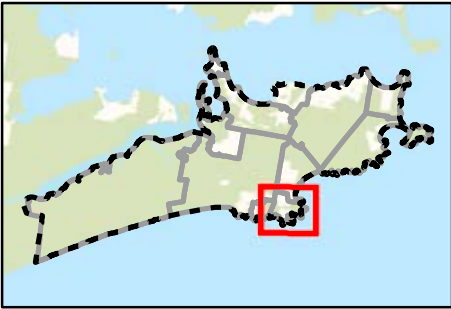


## Boat Harbour Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Pedestrian Network
-  Study Area
-  Suburb Boundary



1:10,000 Scale at A3

Metres  
0 150 300 450






Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-07-13 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-012-Boat Harbour Precinct.mxd 01

## Corlette Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Pedestrian Network
-  Study Area
-  Suburb Boundary

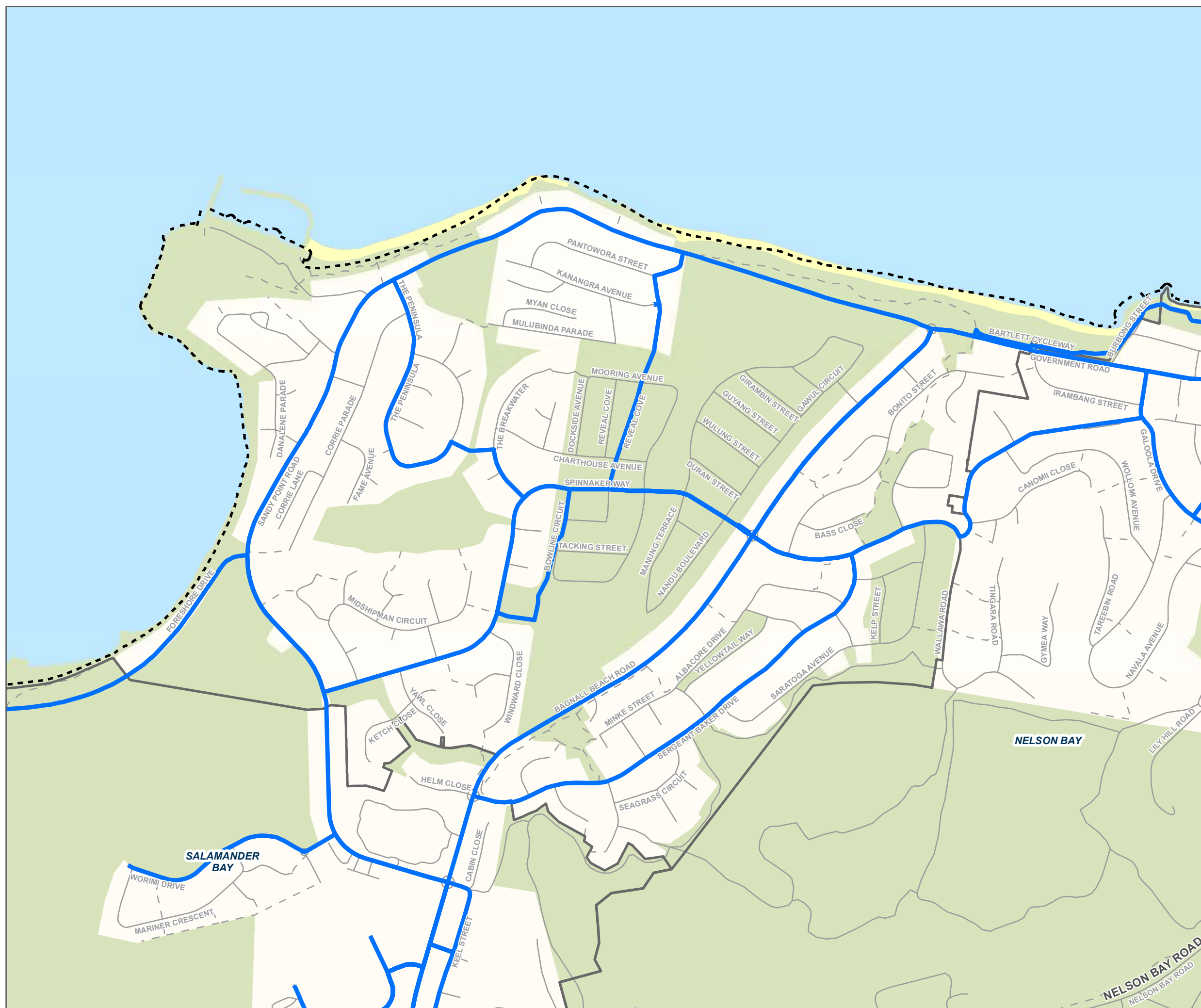


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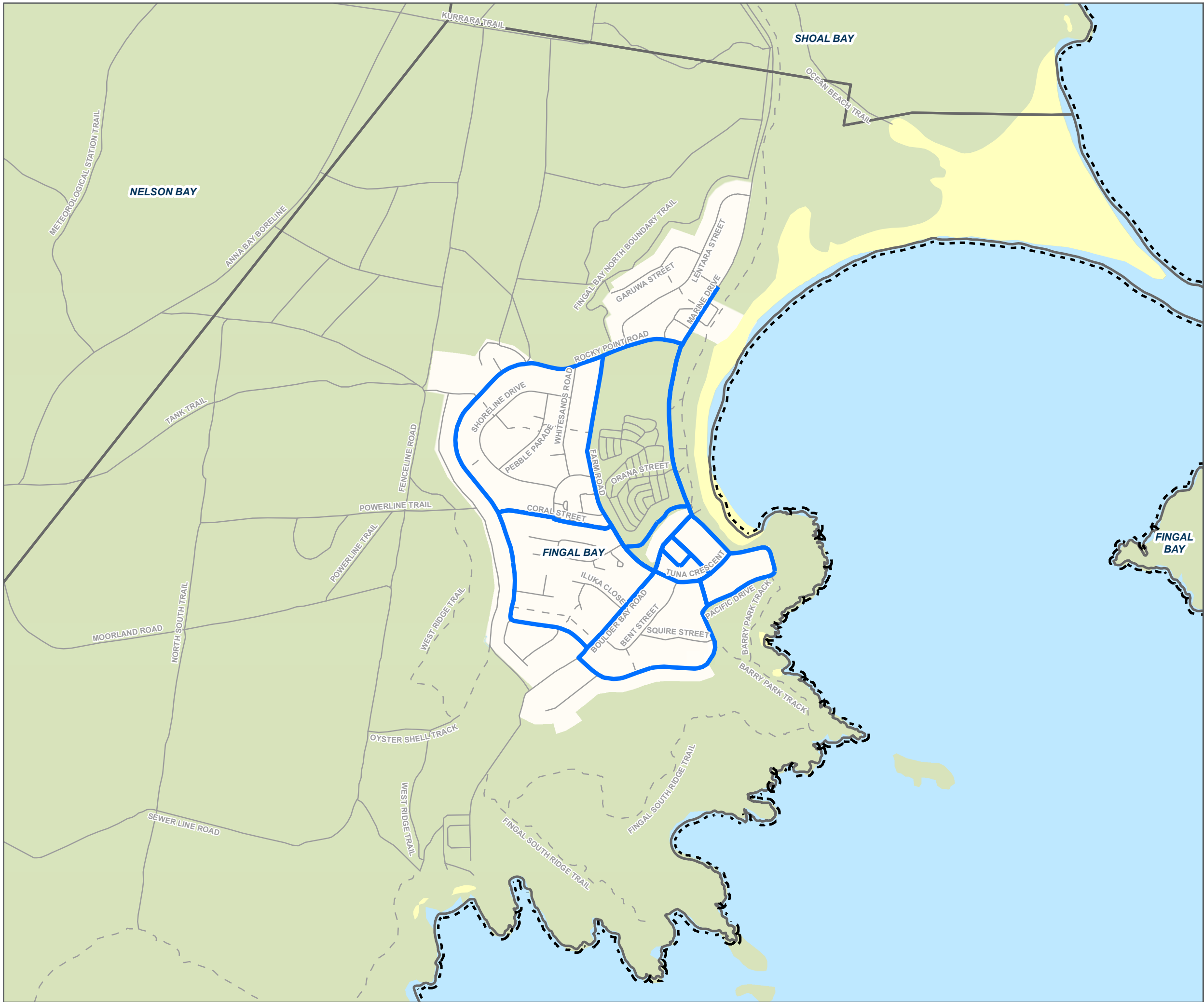
Metres  
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Date: 2017-07-13 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-008-Corlette Precinct.mxd 01










# Fingal Bay Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

- Legend**
-  Pedestrian Network
  -  Study Area
  -  Suburb Boundary






1:12,000 Scale at A3



# Nelson Bay Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

- Legend**
-  Pedestrian Network
  -  Study Area
  -  Suburb Boundary






1:12,000 Scale at A3





# One Mile Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

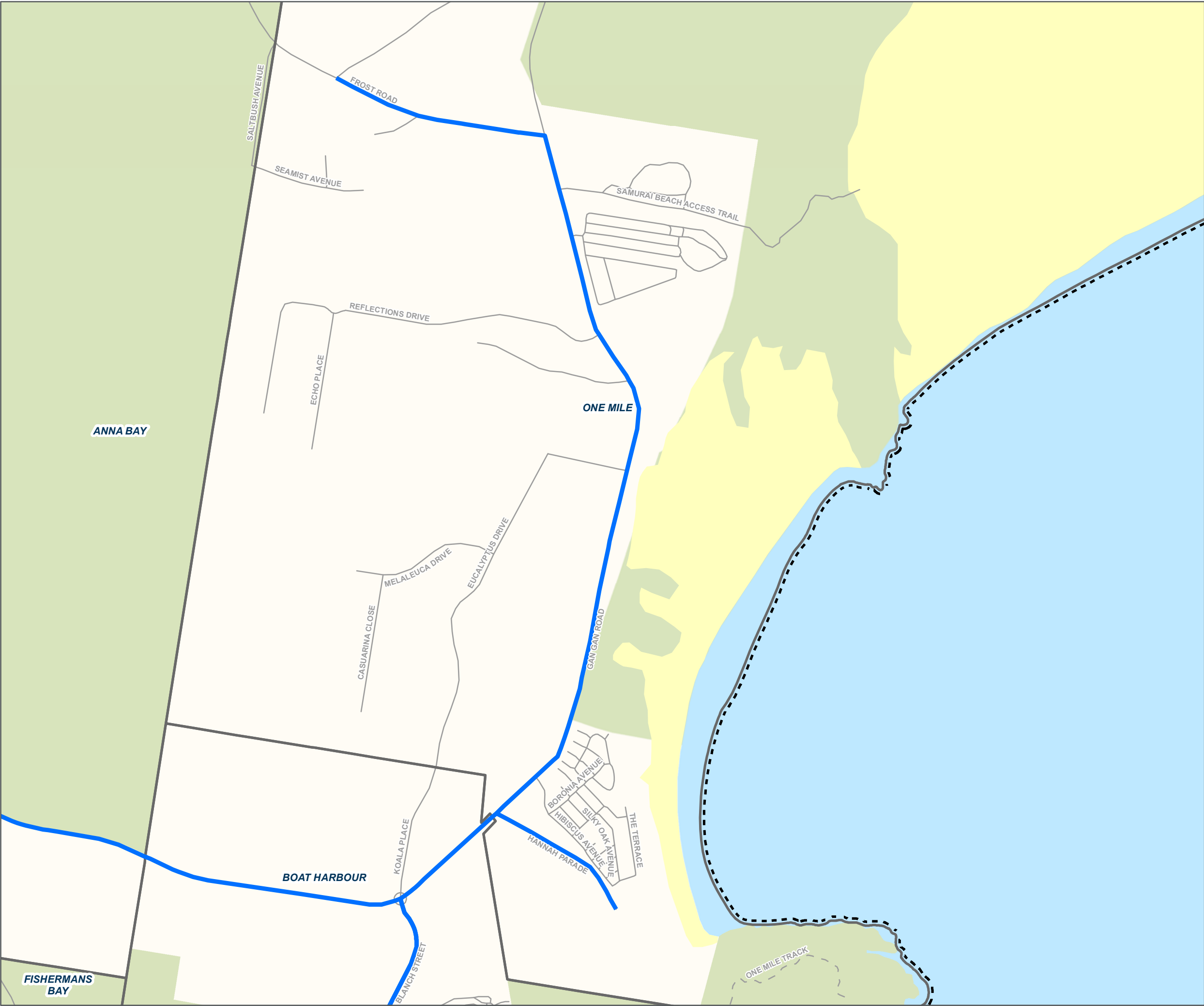
- Legend**
-  Pedestrian Network
  -  Study Area
  -  Suburb Boundary

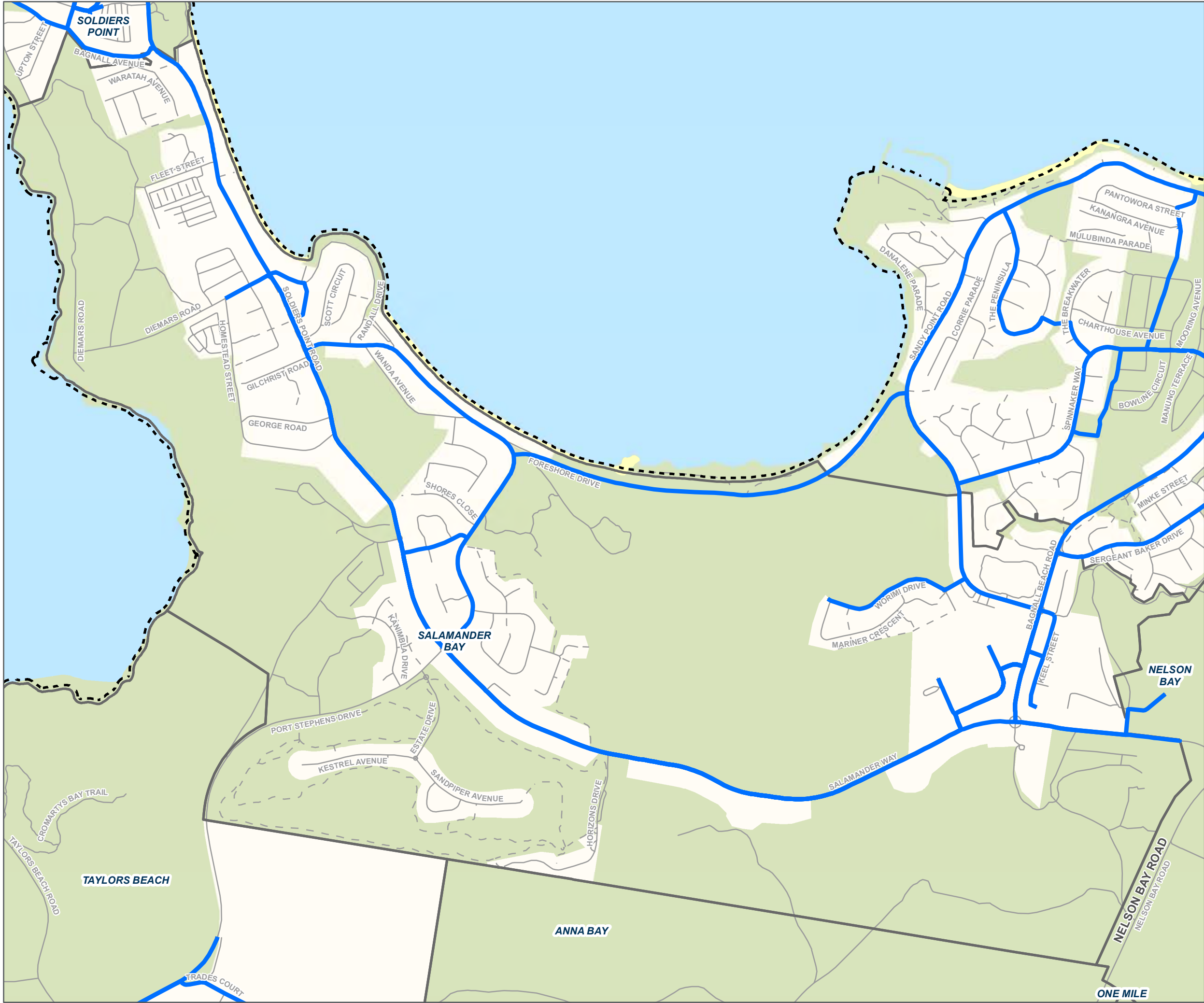


1:8,000 Scale at A3



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Map: 80017083-GS-014-OneMile.mxd 01






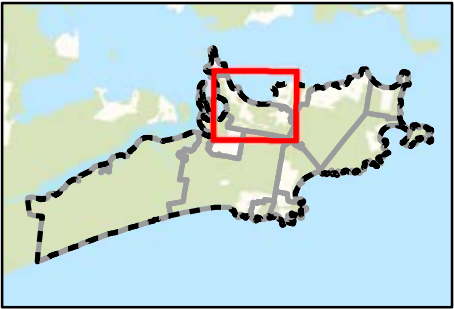


## Salamander Bay Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Pedestrian Network
-  Study Area
-  Suburb Boundary



1:15,000 Scale at A3

Metres  
0 200 400 600



Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-07-13 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-009-Salamander Bay Precinct.mxd 01








## Soldiers Point Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Pedestrian Network
-  Study Area
-  Suburb Boundary

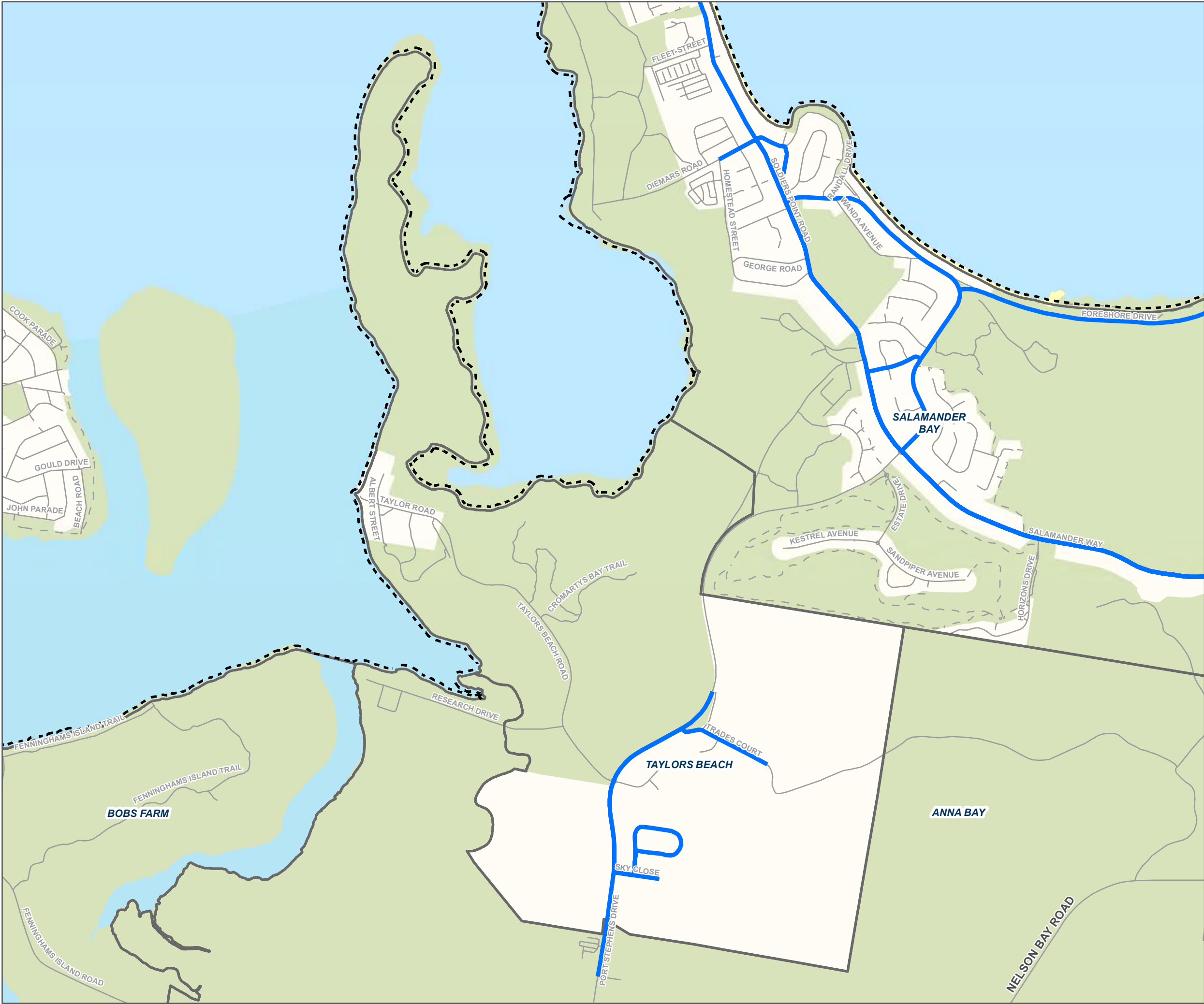


1:7,000 Scale at A3



Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
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Map: 80017083-GS-013-SoldiersPoint.mxd 01






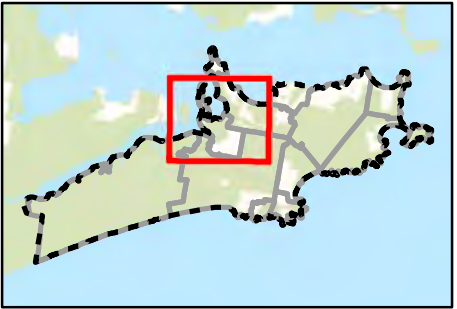


## Taylors Beach Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Pedestrian Network
-  Study Area
-  Suburb Boundary



1:18,000 Scale at A3

Metres  
0 200 400 600



Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-07-13 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-011-Taylors Beach Precinct.mxd 01

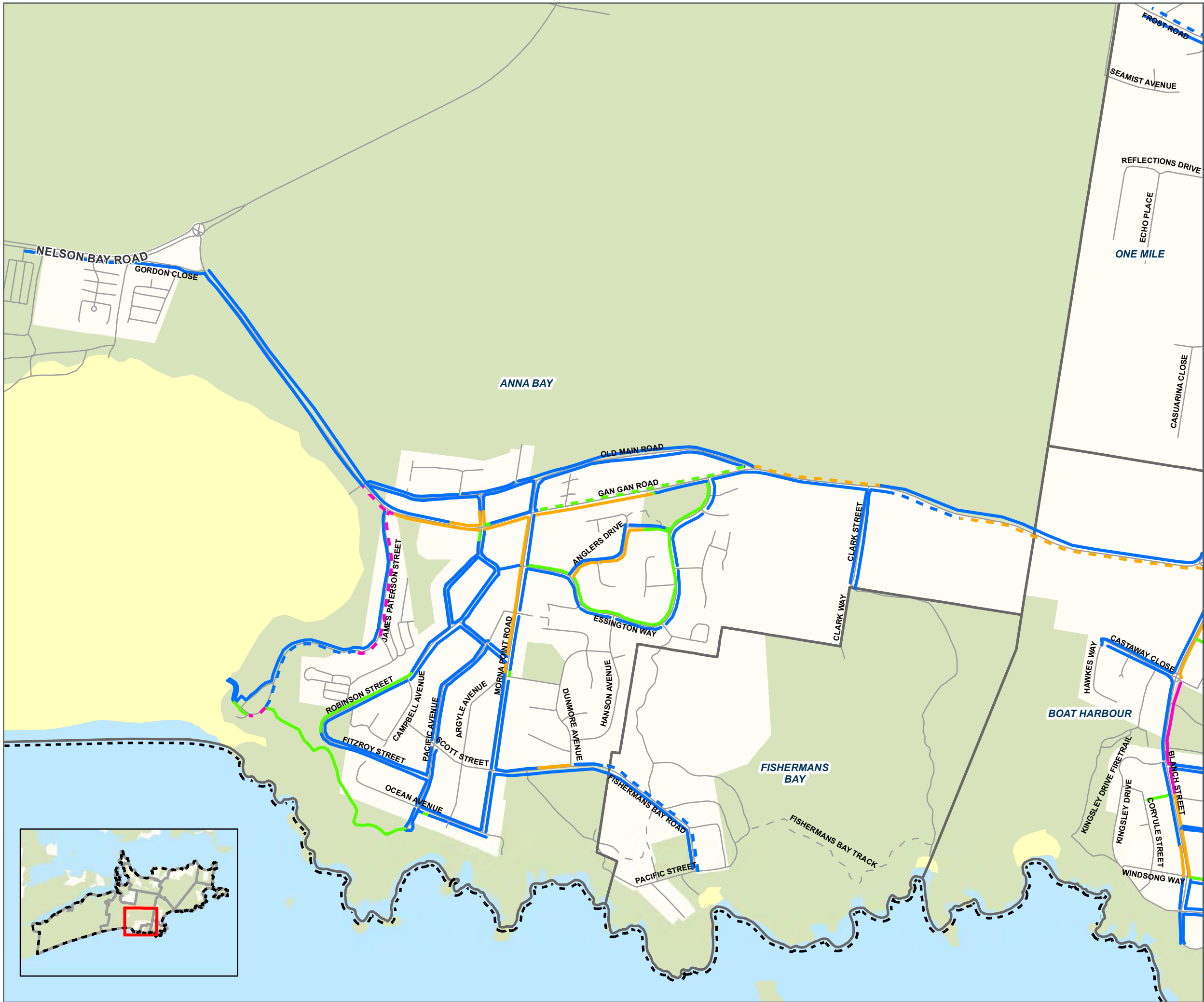
Tomaree Planning District

APPENDIX

C

PATH COMPLIANCE MAPS















## Anna Bay and Fishermans Bay Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary
- Infrastructure Assessment**
-  Compliant Footpath ( $\geq 1.2\text{m}$  wide)
-  Compliant Shared Path ( $\geq 2.5\text{ m}$  wide)
-  Minor Non-Compliant Shared Path  $\geq 2.4\text{m}$   $< 2.5\text{m}$  wide
-  Minor Non-Compliant Footpath  $\geq 1.1\text{m}$   $< 1.2\text{m}$  wide
-  Non-Compliant Footpath  $\leq 1.1\text{m}$  wide
-  Non-Compliant Shared Path  $< 2.39\text{m}$
-  No Footpath
-  No Shared path



1:12,000 Scale at A3

Metres  
0 200 400 600

## Boat Harbour Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary

### Infrastructure Assessment

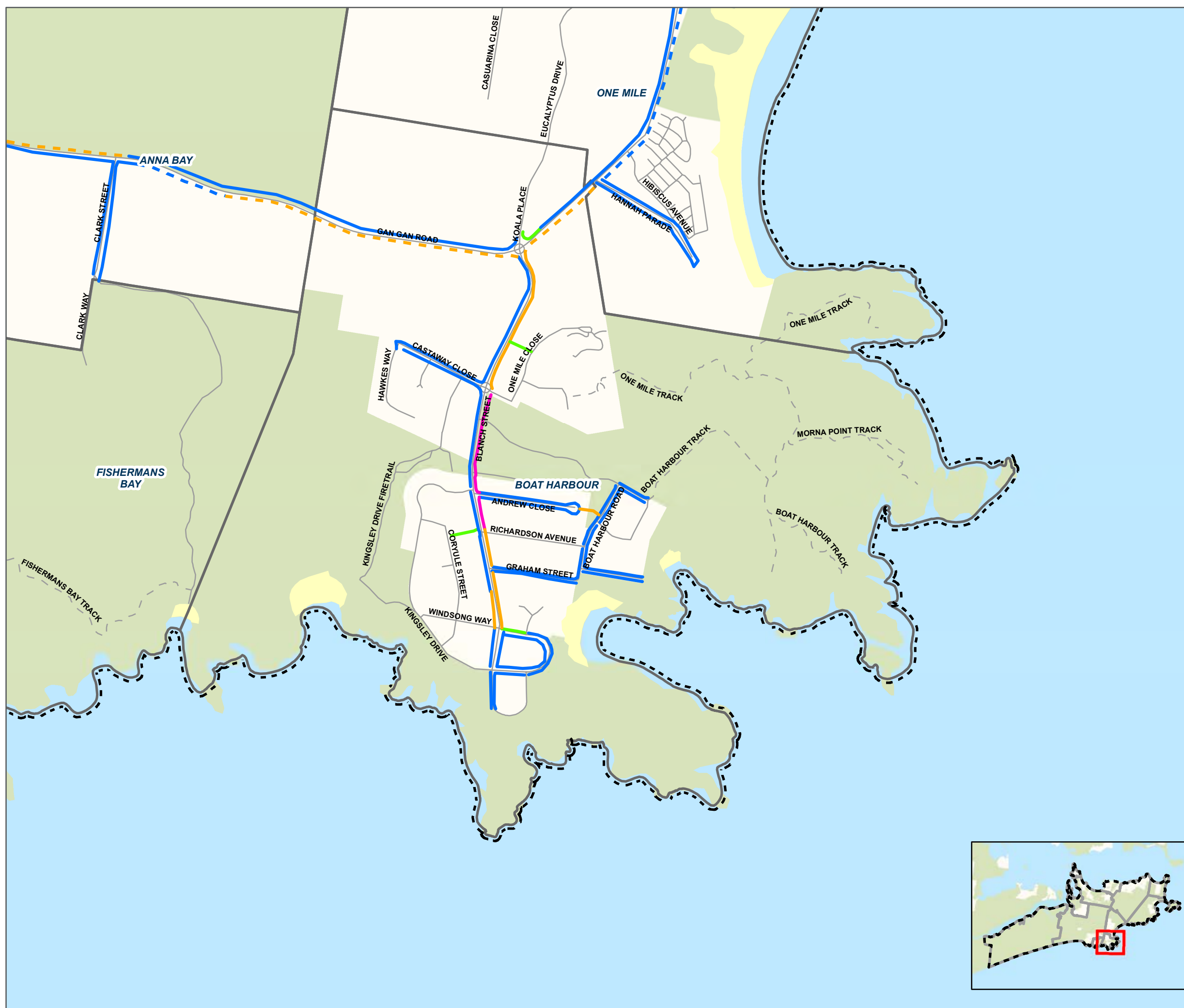
-  Compliant Footpath ( $\geq 1.2\text{m}$  wide)
-  Compliant Shared Path ( $\geq 2.5\text{ m}$  wide)
-  Minor Non-Compliant Shared Path ( $\geq 2.4\text{m} < 2.5\text{m}$  wide)
-  Minor Non-Compliant Footpath ( $\geq 1.1\text{m} < 1.2\text{m}$  wide)
-  Non-Compliant Footpath ( $< 1.1\text{m}$  wide)
-  Non-Compliant Shared Path ( $< 2.4\text{m}$ )
-  No Footpath
-  No Shared path

1:10,000 Scale at A3

Metres  
0 150 300 450





Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-08-04 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-024-BoatHarbourPrecinctPath.mxd 02











## Corlette Precinct

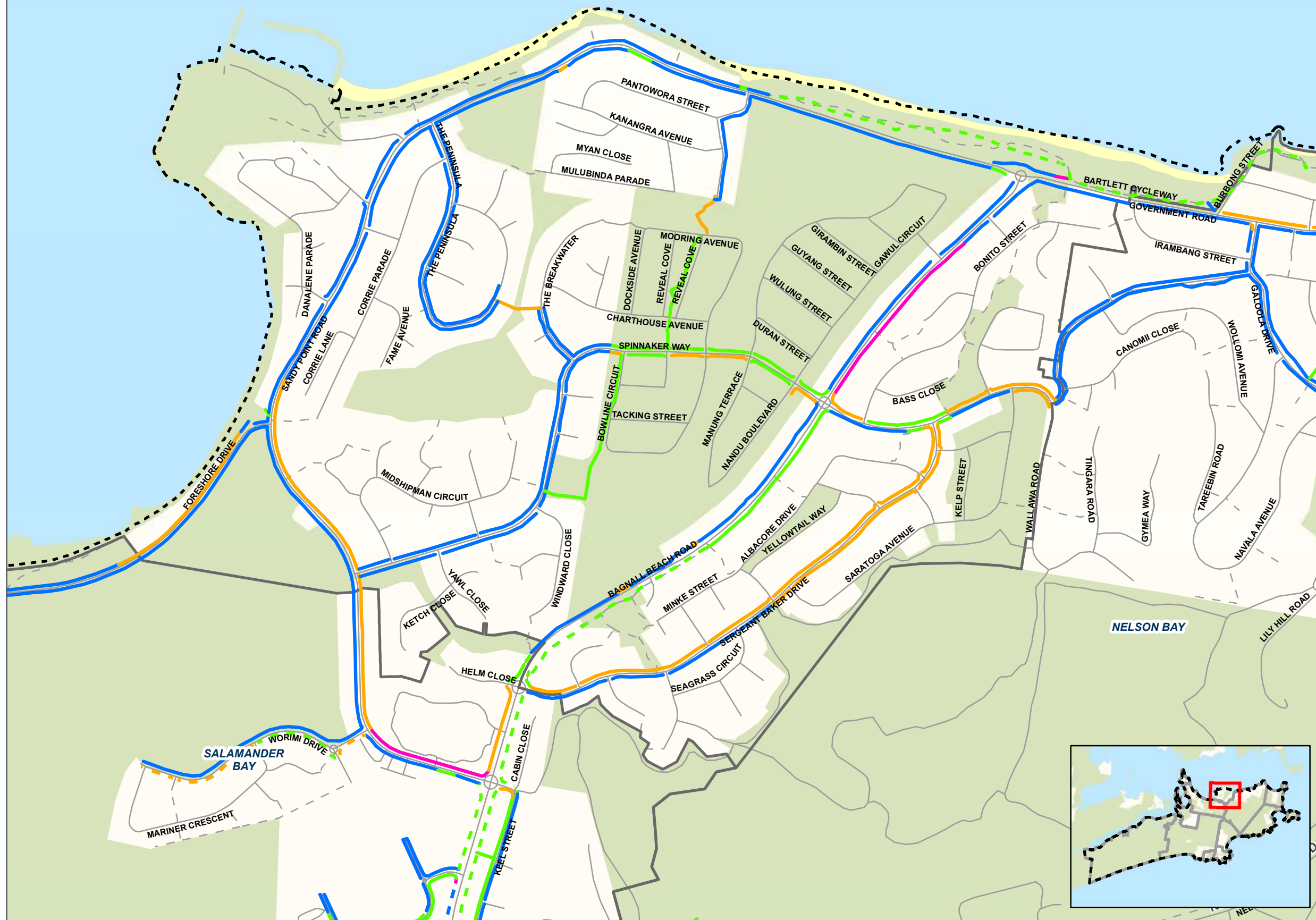
PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary

### Infrastructure Assessment

-  Compliant Footpath ( $\geq 1.2\text{m}$  wide)
-  Compliant Shared Path ( $\geq 2.5\text{m}$  wide)
-  Minor Non-Compliant Shared Path ( $\geq 2.4\text{m}$   $< 2.5\text{m}$  wide)
-  Minor Non-Compliant Footpath ( $\geq 1.1\text{m}$   $< 1.2\text{m}$  wide)
-  Non-Compliant Footpath ( $< 1.1\text{m}$  wide)
-  Non-Compliant Shared Path ( $< 2.4\text{m}$ )
-  No Footpath
-  No Shared path



1:10,000 Scale at A3

Metres  
0 150 300 450





Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-08-04 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-028-CorlettePrecinctPath.mxd 02











## Fingal Bay Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary

### Infrastructure Assessment

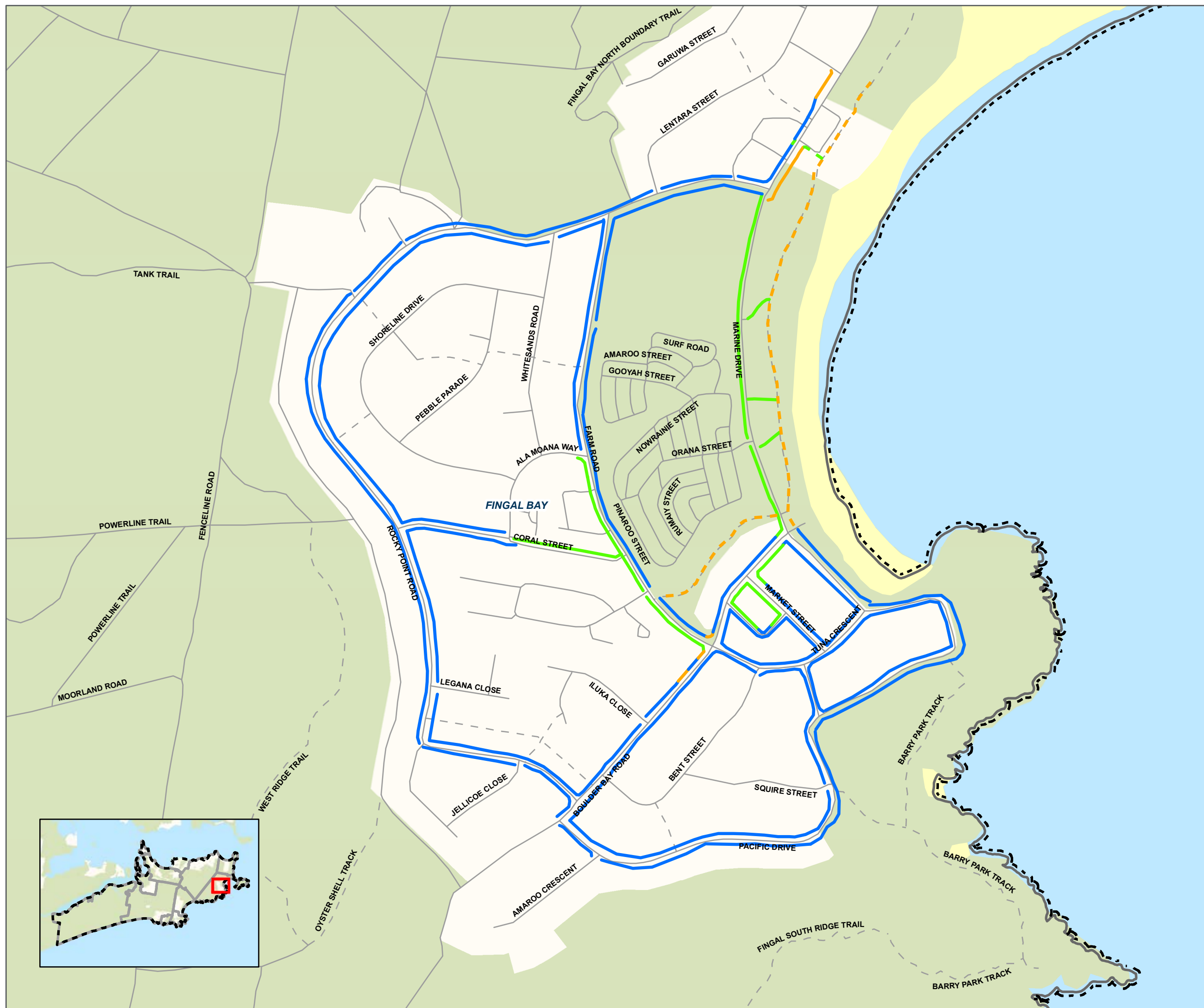
-  Compliant Footpath ( $\geq 1.2\text{m}$  wide)
-  Compliant Shared Path ( $\geq 2.5\text{ m}$  wide)
-  Minor Non-Compliant Shared Path ( $\geq 2.4\text{m} < 2.5\text{m}$  wide)
-  Minor Non-Compliant Footpath ( $\geq 1.1\text{m} < 1.2\text{m}$  wide)
-  Non-Compliant Footpath ( $< 1.1\text{m}$  wide)
-  Non-Compliant Shared Path ( $< 2.4\text{m}$ )
-  No Footpath
-  No Shared path

1:6,000 Scale at A3

Meters  
0 100 200 300





Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-08-04 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-022-FingalBayPath.mxd 02











## Nelson Bay Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary

### Infrastructure Assessment

-  Compliant Footpath ( $\geq 1.2\text{m}$  wide)
-  Compliant Shared Path ( $\geq 2.5\text{m}$  wide)
-  Minor Non-Compliant Shared Path ( $\geq 2.4\text{m}$   $< 2.5\text{m}$  wide)
-  Minor Non-Compliant Footpath ( $\geq 1.1\text{m}$   $< 1.2\text{m}$  wide)
-  Non-Compliant Footpath ( $< 1.1\text{m}$  wide)
-  Non-Compliant Shared Path ( $< 2.4\text{m}$ )
-  No Footpath
-  No Shared path



1:12,000 Scale at A3



Metres  
0 200 400 600




# One Mile Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

## Legend

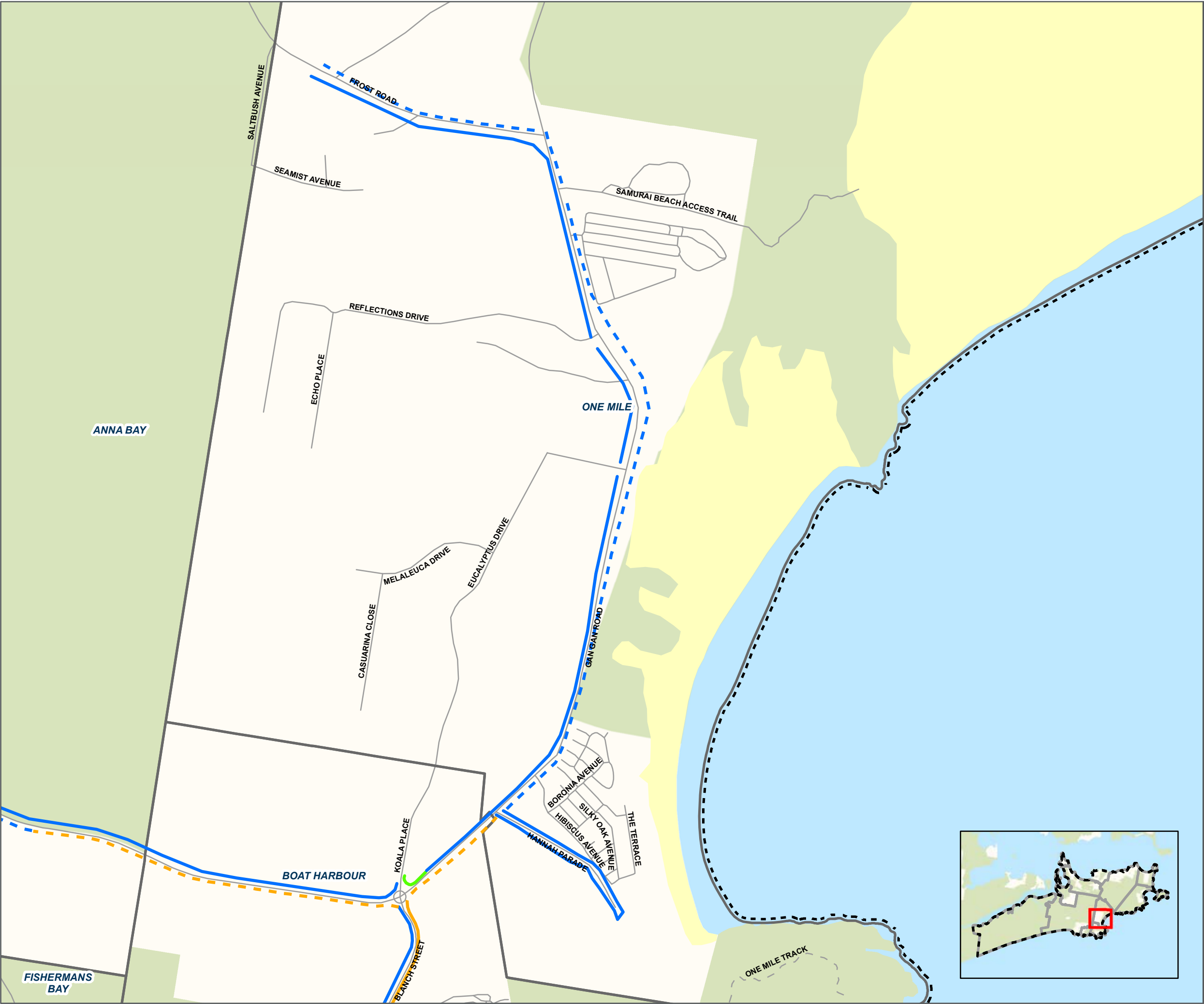
-  Study Area
-  Suburb Boundary

## Infrastructure Assessment

-  Compliant Footpath ( $\geq 1.2\text{m}$  wide)
-  Compliant Shared Path ( $\geq 2.5\text{ m}$  wide)
-  Minor Non-Compliant Shared Path ( $\geq 2.4\text{m} < 2.5\text{m}$  wide)
-  Minor Non-Compliant Footpath ( $\geq 1.1\text{m} < 1.2\text{m}$  wide)
-  Non-Compliant Footpath ( $< 1.1\text{m}$  wide)
-  Non-Compliant Shared Path ( $< 2.4\text{m}$ )
-  No Footpath
-  No Shared path

1:8,000 Scale at A3

Meters  
0 100 200 300









## Salamander Bay Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

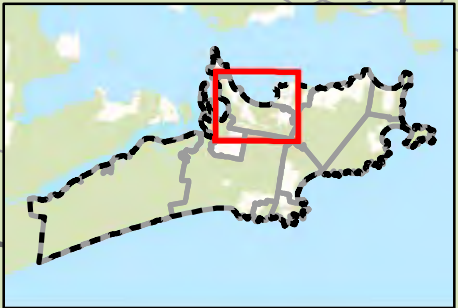
-  Study Area
-  Suburb Boundary

### Infrastructure Assessment

-  Compliant Footpath ( $\geq 1.2\text{m}$  wide)
-  Compliant Shared Path ( $\geq 2.5\text{m}$  wide)
-  Minor Non-Compliant Shared Path ( $\geq 2.4\text{m}$   $< 2.5\text{m}$  wide)
-  Minor Non-Compliant Footpath ( $\geq 1.1\text{m}$   $< 1.2\text{m}$  wide)
-  Non-Compliant Footpath ( $< 1.1\text{m}$  wide)
-  Non-Compliant Shared Path ( $< 2.4\text{m}$ )
-  No Footpath
-  No Shared path

1:15,000 Scale at A3

Metres  
0 200 400 600





ONE MILE





## Shoal Bay Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

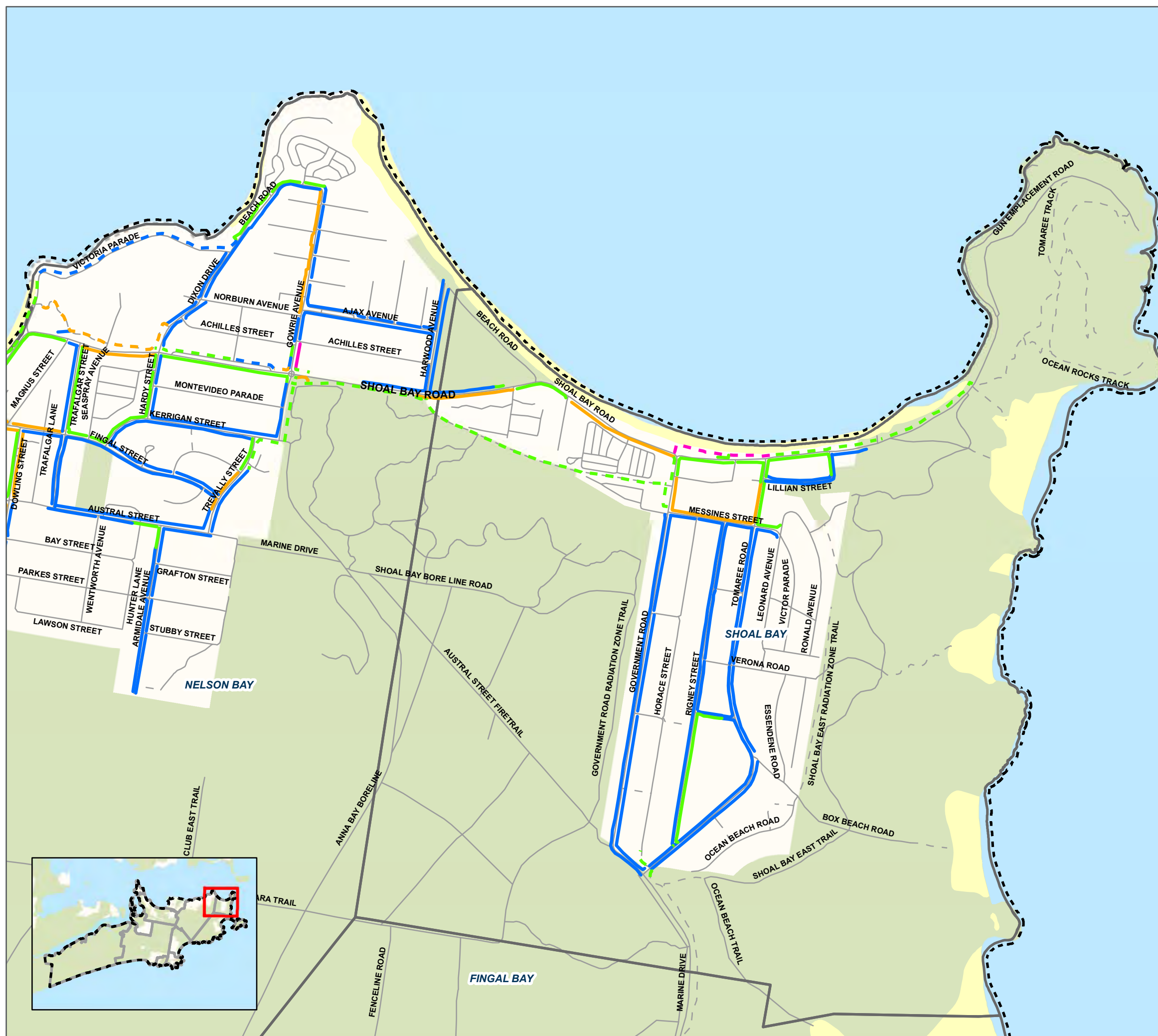
-  Study Area
-  Suburb Boundary

### Infrastructure Assessment

-  Compliant Footpath ( $\geq 1.2\text{m}$  wide)
-  Compliant Shared Path ( $\geq 2.5\text{m}$  wide)
-  Minor Non-Compliant Shared Path ( $\geq 2.4\text{m}$   $< 2.5\text{m}$  wide)
-  Minor Non-Compliant Footpath ( $\geq 1.1\text{m}$   $< 1.2\text{m}$  wide)
-  Non-Compliant Footpath ( $< 1.1\text{m}$  wide)
-  Non-Compliant Shared Path ( $< 2.4\text{m}$ )
-  No Footpath
-  No Shared path

1:12,000 Scale at A3

Metres  
0 200 400 600






## Soldiers Point Precinct


PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT


### Legend


 Study Area


 Suburb Boundary


### Infrastructure Assessment


 Compliant Footpath ( $\geq 1.2\text{m}$  wide)


 Compliant Shared Path ( $\geq 2.5\text{m}$  wide)


 Minor Non-Compliant Shared Path ( $\geq 2.4\text{m} < 2.5\text{m}$  wide)

 Minor Non-Compliant Footpath ( $\geq 1.1\text{m} < 1.2\text{m}$  wide)

 Non-Compliant Footpath ( $< 1.1\text{m}$  wide)

 Non-Compliant Shared Path ( $< 2.4\text{m}$ )

 No Footpath

 No Shared path

1:7,000 Scale at A3

Meters  
0 100 200 300



Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-08-04 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-023-SoldiersPointPath.mxd 02





# Taylors Beach Precinct

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

- Legend**
- Study Area
  - Suburb Boundary
- Infrastructure Assessment**
- Compliant Footpath ( $\geq 1.2\text{m}$  wide)
  - Compliant Shared Path ( $\geq 2.5\text{ m}$  wide)
  - Minor Non-Compliant Shared Path ( $\geq 2.4\text{m}$   $<2.5\text{m}$  wide)
  - Minor Non-Compliant Footpath ( $\geq 1.1\text{m}$   $<1.2\text{m}$  wide)
  - Non-Compliant Footpath ( $<1.1\text{m}$  wide)
  - Non-Compliant Shared Path ( $<2.4\text{m}$ )
  - No Footpath
  - No Shared path

1:10,000 Scale at A3

Metres

0 150 300 450

Tomaree Planning District

APPENDIX



D

INFRASTRUCTURE COMPLIANCE MAPS



# Anna Bay and Fishermans Bay Infrastructure Compliance

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

## Legend

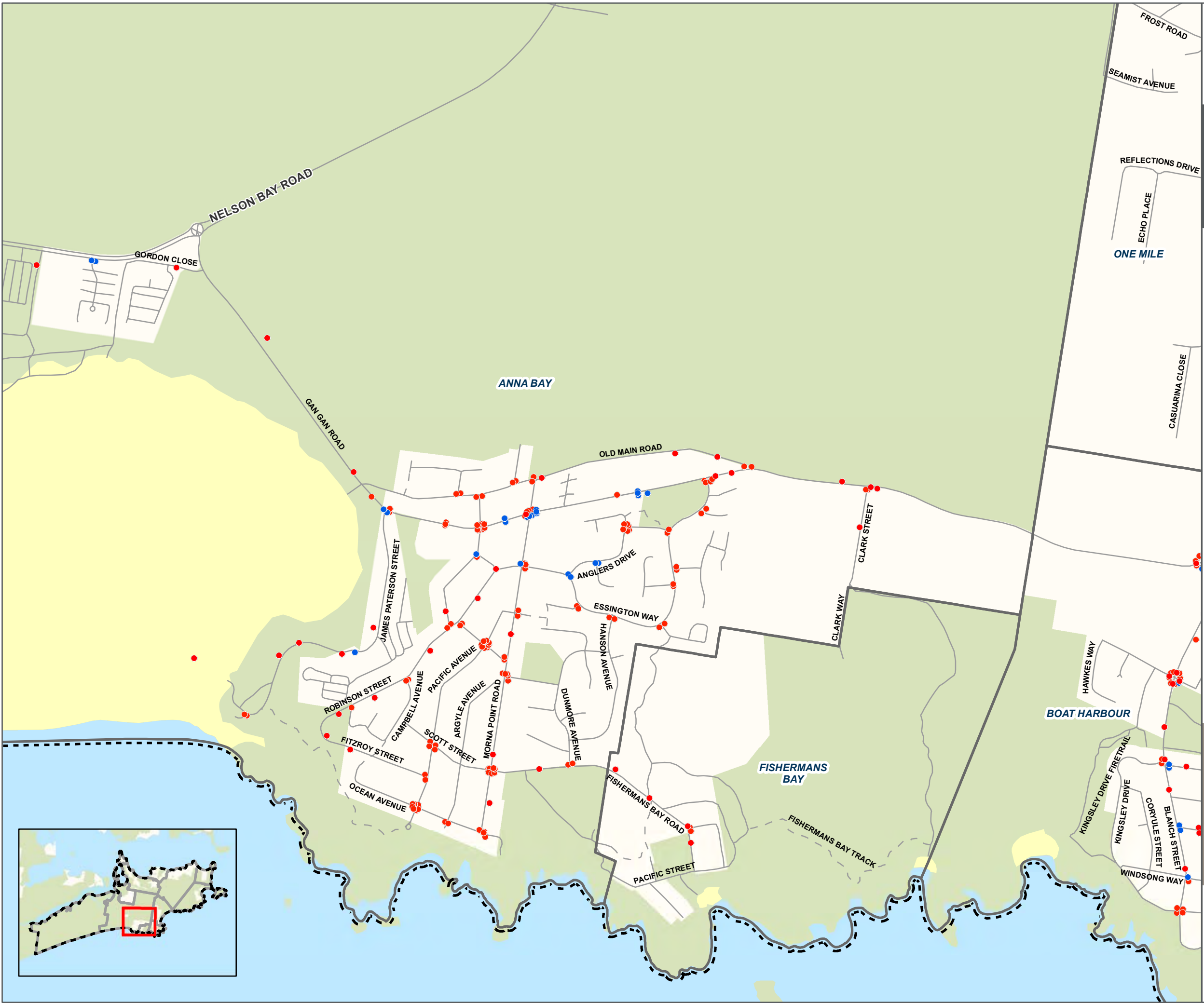
-  Study
-  Suburb Boundary

## Pedestrian Infrastructure

-  Compliant
-  Not Compliant

1:12,000 Scale at A3

Metres  
0 200 400 600






## Boat Harbour Infrastructure Compliance

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT


### Legend

 Study Area

 Suburb Boundary

### Pedestrian Infrastructure

 Compliant

 Not Compliant



1:10,000 Scale at A3

Metres  
0 150 300 450





Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-07-13 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-038-BoatHarbourInfrastructure.mxd 01



## Corlette Infrastructure Compliance

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary

### Pedestrian Infrastructure

-  Compliant
-  Not Compliant







1:10,000 Scale at A3

Metres  
0 150 300 450



# Fingal Bay Infrastructure Compliance

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

- Legend**
-  Study Area
  -  Suburb Boundary
  - Pedestrian Infrastructure**
    -  Compliant
    -  Not Compliant



1:6,000 Scale at A3






# Nelson Bay Infrastructure Compliance

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT


## Legend

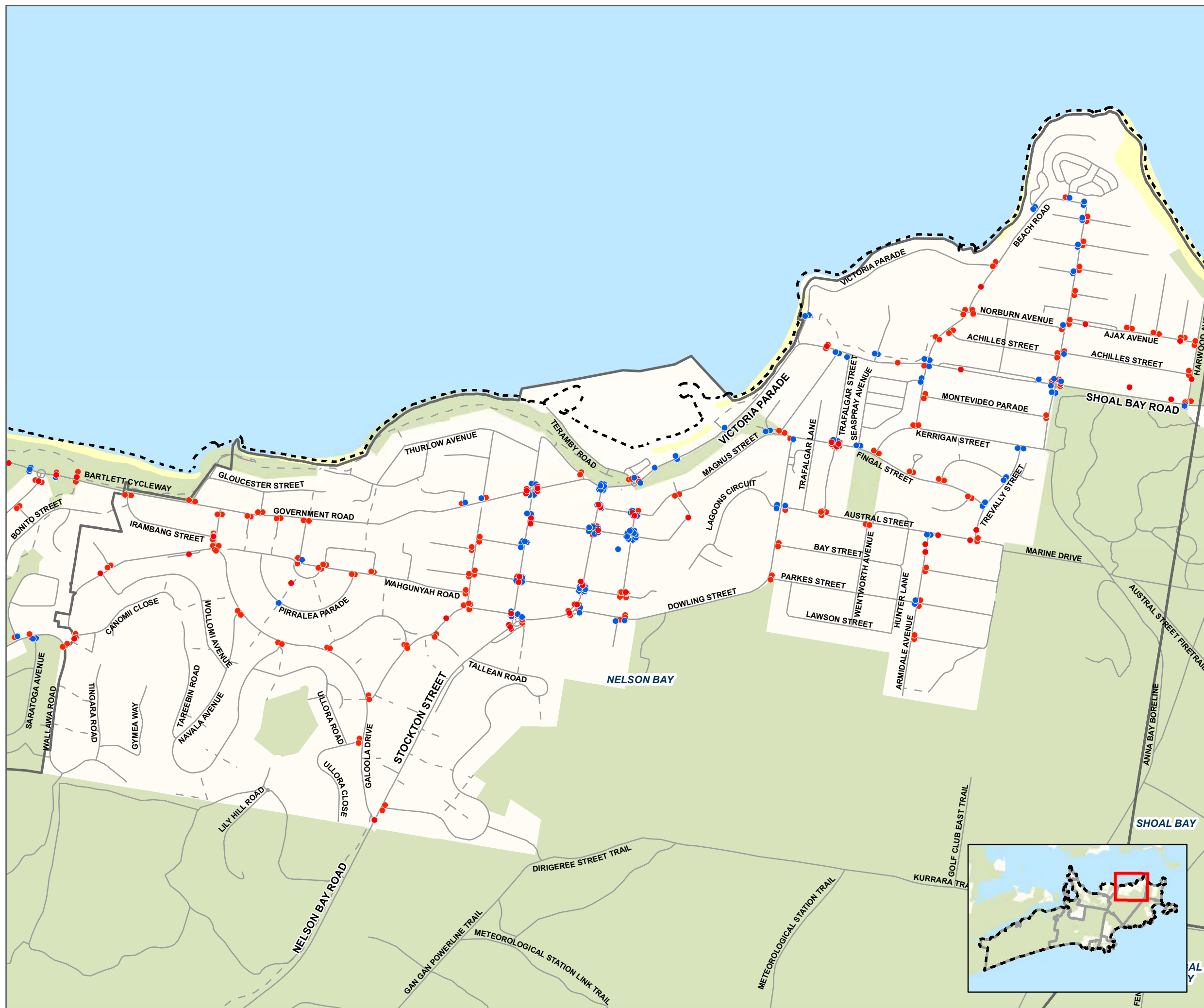
 Study

 Suburb Boundary

## Pedestrian Infrastructure

 Compliant

 Not Compliant



1:12,000 Scale at A3

Metres  
0 200 400 600







Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-07-13 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-031-NelsonBayInfrastructure.mxd 01



# One Mile Infrastructure Compliance

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

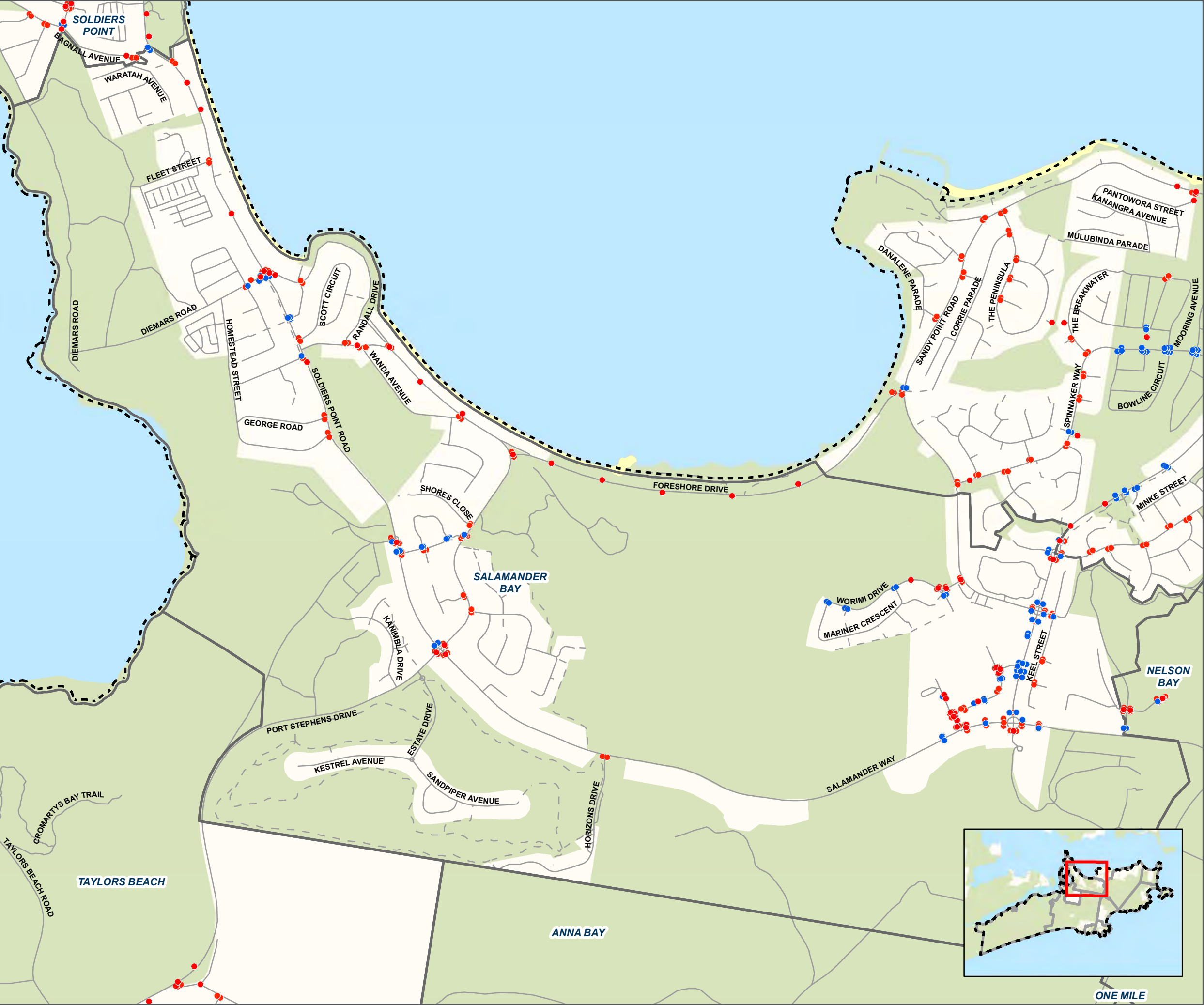
- Legend**
-  Study
  -  Suburb Boundary
  - Pedestrian Infrastructure**
    -  Compliant
    -  Not Compliant



1:8,000 Scale at A3











# Salamander Bay Infrastructure Compliance

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

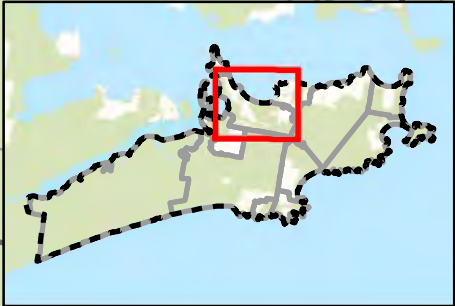
### Legend

-  Study Area
-  Suburb Boundary

### Pedestrian Infrastructure

-  Compliant
-  Not Compliant

1:15,000 Scale at A3





ONE MILE



## Shoal Bay Infrastructure Compliance

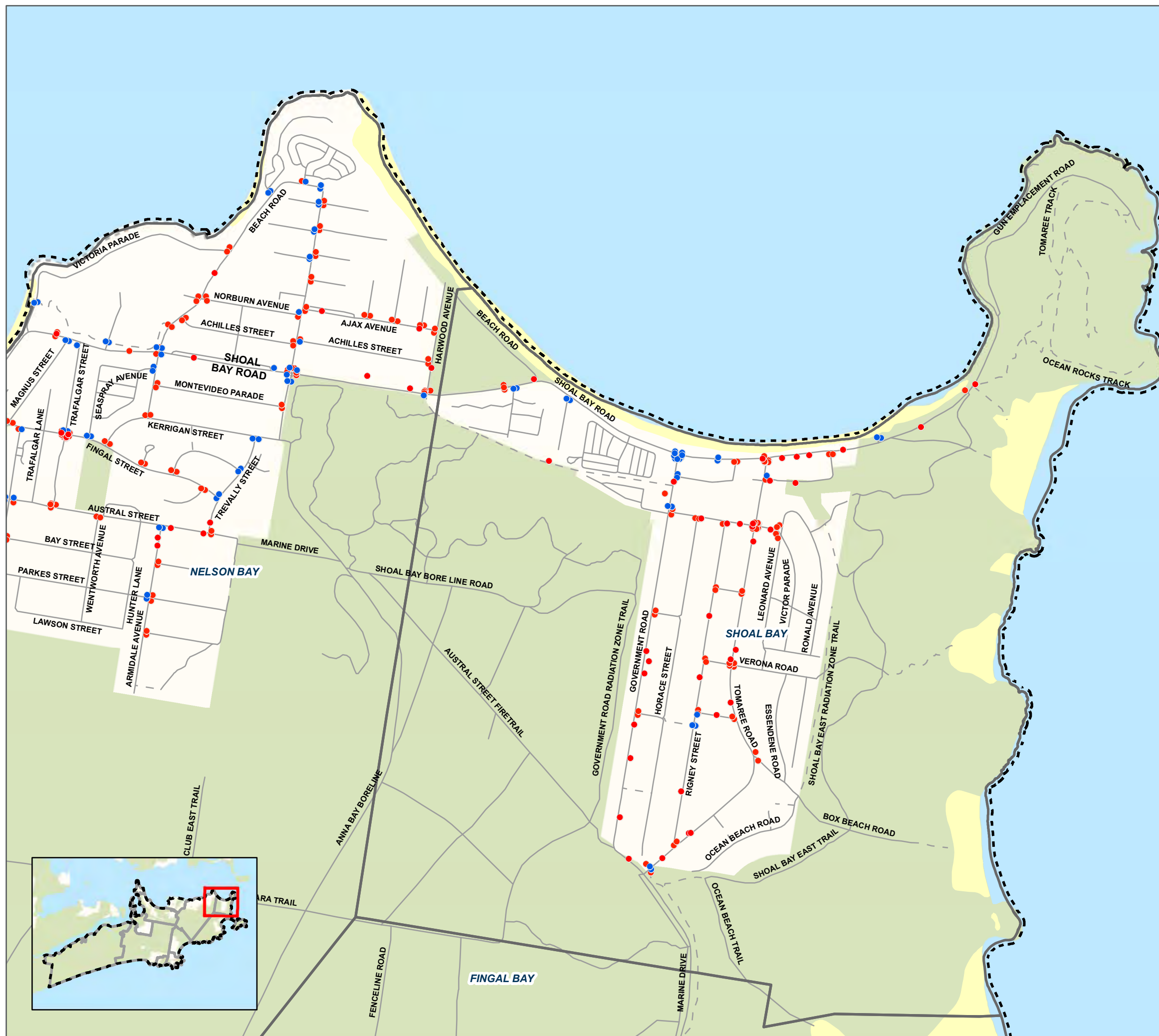
PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary

### Pedestrian Infrastructure

-  Compliant
-  Not Compliant



1:12,000 Scale at A3

Metres  
0 200 400 600




Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-07-13 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-032-ShoalBayInfrastructure.mxd 01

## Soldiers Point Infrastructure Compliance



PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

 Study Area

 Suburb Boundary

### Pedestrian Infrastructure

-  Compliant
-  Not Compliant

1:7,000 Scale at A3

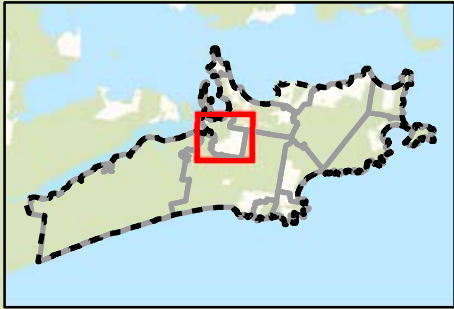
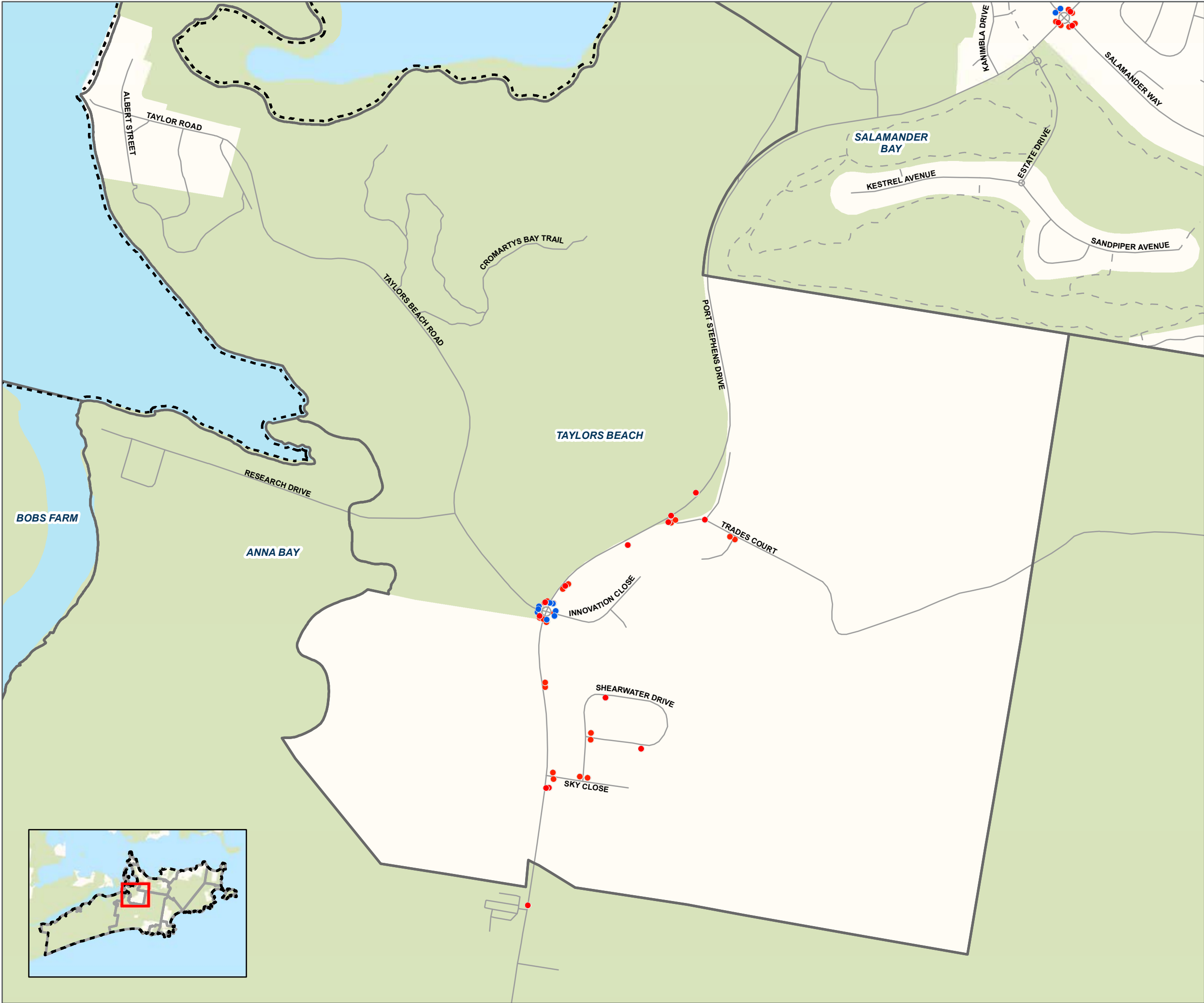
Meters  
0 100 200 300



Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-07-13 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-036-SoldiersPointInfrastructure.mxd 01







# Taylor's Beach Infrastructure Compliance

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

- Legend**
- Study Area
  - Suburb Boundary
  - Pedestrian Infrastructure**
    - Compliant
    - Not Compliant

1:10,000 Scale at A3

Metres

0 150 300 450

Tomaree Planning District

## APPENDIX

# E

## WORKS SCHEDULE



ID Label	Feature Type	Infrastructure Assessment	Condition Assessment	Improvement Recommendation	Cost Estimate	Comments	Road Name	Suburb Name	Length (m)	Latitude	Longitude	Has Photo	SubSection ID	% in SubSection	SubSection No.1	SubSection No.2	SubSection No.3	SubSection No.4	Route No.	Prioritisation	SubSection No. 110	SubSection No. 411
FP_00001	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 33,600		SKY CLOSE	Tailors Beach	213.500378	-32.753734	152.069832	TRUE	252	40%								
FP_00002	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 9,797		SKY CLOSE	Tailors Beach	62.254111	-32.7537	152.071153	TRUE	253	100%								
FP_00003	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 10,975		SKY CLOSE	Tailors Beach	69.387187	-32.753577	152.070182	TRUE	253	100%								
FP_00004	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 16,286		SEA-WATER DRIVE	Tailors Beach	103.465264	-32.753097	152.069852	TRUE	254	100%								
FP_00005	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 12,643		SKY CLOSE	Tailors Beach	80.335035	-32.753423	152.069156	TRUE	253	100%								
FP_00006	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 121,293		SHEARWATER DRIVE	Tailors Beach	770.275669	-32.751545	152.071495	TRUE	254	30%	255	40%	256	30%	TB3A	TB3B	TB3A	
FP_00007	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 88,786		SHEARWATER DRIVE	Tailors Beach	564.167382	-32.75187	152.071943	TRUE	255	50%								
FP_00008	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 11,504		SKY CLOSE	Tailors Beach	34.973468	-32.75165	152.070731	TRUE	253	100%								
FP_00009	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 36,421		PORT STEPHENS DRIVE	Tailors Beach	231.426808	-32.752304	152.068782	TRUE	257	100%								
FP_00010	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 88,114	the verge crossfall is steep and drops sharply away from the road	PORT STEPHENS DRIVE	Anna Bay	559.8984	-32.7526083	152.068272	TRUE	251	100%								
FP_00011	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 126,702		PORT STEPHENS DRIVE	Tailors Beach	805.098448	-32.754944	152.068203	TRUE	251	60%		257	40%			TB5		
FP_00012	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 28,250		TRADES COURT	Tailors Beach	185.484592	-32.747218	152.071315	TRUE	258	100%								
FP_00013	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 41,531		TRADES COURT	Tailors Beach	263.897675	-32.748252	152.075424	TRUE	258	100%								
FP_00014	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 71,298		TRADES COURT	Tailors Beach	453.042333	-32.747664	152.074585	TRUE	258	100%								
FP_00015	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 37,768	no footpath connection to bus stop along this area	PORT STEPHENS DRIVE	Tailors Beach	239.986006	-32.746451	152.073796	TRUE	259	100%								
FP_00016	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 31,209		PORT STEPHENS DRIVE	Tailors Beach	198.311111	-32.747619	152.071254	TRUE	257	100%								
FP_00017	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 10,025	no footpath access to the bus stop in this area	PORT STEPHENS DRIVE	Tailors Beach	64.938895	-32.74738	152.071339	TRUE	257	60%		259	40%			TB5		
FP_00018	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			PORT STEPHENS DRIVE	Tailors Beach	61.053447	-32.749983	152.068543	TRUE	257	100%								
FP_00019	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 29,795		PORT STEPHENS DRIVE	Tailors Beach	189.321935	-32.750495	152.068323	TRUE	257	100%								
FP_00020	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 6,250		PORT STEPHENS DRIVE	Tailors Beach	39.713992	-32.748496	152.068977	TRUE	257	100%								
FP_00021	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 15,417		PORT STEPHENS DRIVE	Tailors Beach	97.963427	-32.750702	152.068512	TRUE	257	100%								
FP_00022	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 19,668		PORT STEPHENS DRIVE	Tailors Beach	124.973668	-32.748814	152.069766	TRUE	257	100%								
FP_00023	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 2		MITCHELL STREET	Soldiers Point	350.208608	-32.699249	152.069751	TRUE	2	100%								
FP_00024	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 65,543		MITCHELL STREET	Soldiers Point	416.473453	-32.698605	152.063943	TRUE	20%		2	80%						
FP_00025	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 25,790		Soldiers Point		163.877111	-32.700553	152.062804	TRUE	1	100%								
FP_00026	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			MITCHELL STREET	Soldiers Point	130.209289	-32.700605	152.064997	TRUE	2	100%								
FP_00027	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 16,944		MITCHELL STREET	Soldiers Point	107.663981	-32.700802	152.065114	TRUE	2	100%								
FP_00028	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			MITCHELL STREET	Soldiers Point	39.759723	-32.700118	152.065147	TRUE	2	100%								
FP_00029	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 10,209		RIDGEWAY AVENUE	Soldiers Point	64.870124	-32.701179	152.064432	TRUE	5	100%								
FP_00030	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			SOLDIERS POINT ROAD	Soldiers Point	88.311332	-32.701691	152.064649	TRUE	6	100%								
FP_00031	Footpath (Block Length Average)	Non-compliant footpath <=1.1m wide	Good condition	Replace with concrete footpath 1.2m wide	\$ 5,296		SOLDIERS AVENUE	Soldiers Point	32.208211	-32.702114	152.064877	TRUE	5	100%								
FP_00032	Footpath (Block Length Average)	Non-compliant footpath <=1.1m wide	Good condition	Replace with concrete footpath 1.2m wide	\$ 5,532		RIDGEWAY AVENUE	Soldiers Point	16.707908	-32.701258	152.063574	TRUE	5	100%								
FP_00033	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			SOLDIERS POINT ROAD	Soldiers Point	98.546492	-32.701689	152.064849	TRUE	6	100%								
FP_00034	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 14,901		RIDGEWAY AVENUE	Soldiers Point	94.684429	-32.701356	152.064017	TRUE	5	100%								
FP_00035	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 11,266		RIDGEWAY AVENUE	Soldiers Point	71.588818	-32.701258	152.063114	TRUE	3	100%								
FP_00036	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 13,764		SUNSET BOULEVARD	Soldiers Point	87.457975	-32.701823	152.063592	TRUE	7	100%								
FP_00037	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 13,356		SUNSET BOULEVARD	Soldiers Point	84.868759	-32.701847	152.063501	TRUE	7	100%								
FP_00038	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 13,935		BRIDGEWAY AVENUE	Soldiers Point	88.545468	-32.701523	152.062988	TRUE	4	100%								
FP_00039	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 13,697		SUNSET BOULEVARD	Soldiers Point	84.119241	-32.701367	152.063739	TRUE	7	100%								
FP_00040	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 33,797		SUNSET BOULEVARD	Soldiers Point	214.757176	-32.70329	152.063842	TRUE	7	100%								
FP_00041	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 15,572		BROWN AVENUE	Soldiers Point	98.946679	-32.704396	152.064557	TRUE	8	100%								
FP_00042	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 15,980		BROWN AVENUE	Soldiers Point	101.539395	-32.704295	152.064517	TRUE	8	100%								
FP_00043	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			SOLDIERS POINT ROAD	Soldiers Point	235.377718	-32.703263	152.063133	TRUE	10	100%								
FP_00044	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			SOLDIERS POINT ROAD	Soldiers Point	113.475804	-32.703851	152.065047	TRUE	6	100%								
FP_00045	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			SOLDIERS POINT ROAD	Soldiers Point	70.351387	-32.702516	152.064806	TRUE	6	100%								
FP_00046	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			SOLDIERS POINT ROAD	Soldiers Point	50.500635	-32.703057	152.0649	TRUE	6	100%								
FP_00047	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 69,128		SOLDIERS POINT ROAD	Soldiers Point	439.256847	-32.705477	152.067076	TRUE	9	100%								
FP_00048	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			SOLDIERS POINT ROAD	Soldiers Point	562.728278	-32.705896	152.067399	TRUE	9	80%		18	20%					
FP_00049	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			SOLDIERS POINT ROAD	Soldiers Point	424.078127	-32.707898	152.06992	TRUE	18	100%								
FP_00050	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			SOLDIERS POINT ROAD	Soldiers Point	149.41878	-32.70718	152.069094	TRUE	18	100%								
FP_00051	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 6,118		SOLDIERS POINT ROAD	Soldiers Point	38.876501	-32.707852	152.070744	TRUE	18	100%								
FP_00052	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path cracked and uneven	Replace with concrete footpath 1.2m wide	\$ 3,321		SOLDIERS POINT ROAD	Soldiers Point	15.710856	-32.708019	152.070953	TRUE	18	100%								
FP_00053	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 79,911		SOLDIERS POINT ROAD	Soldiers Point	507.775148	-32.703064	152.071256	TRUE	18	100%								
FP_00054	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			SOLDIERS POINT ROAD	Soldiers Point	121.529138	-32.709948	152.071028	TRUE	18	100%								
FP_00055	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 28,592		ASH STREET	Soldiers Point	181.679308	-32.708335	152.067808	TRUE	10	100%								
FP_00056	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 11,545		ASH STREET	Soldiers Point	73.362389	-32.707961	152.067618	TRUE	10	100%								
FP_00057	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 29,135		ASH STREET	Soldiers Point	185.120164	-32.701017	152.068938	FALSE	10	100%								
FP_00058	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 1,604		ASH STREET	Soldiers Point	10.19077	-32.707467	152.067739	TRUE	10	100%								
FP_00059	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 8,787		ASH STREET	Soldiers Point	55.834571	-32.706868	152.067731	TRUE	10	100%								
FP_00060	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 32,375		ASH STREET	Soldiers Point	205.72088	-32.710002	152.067846	TRUE	10	100%								
FP_00061	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			CHROMARY ROAD	Soldiers Point	231.868213	-32.705466	152.064821	TRUE	16	100%								
FP_00062	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 43,428		OAKS CLOSE	Soldiers Point	275.953164	-32.71175	152.06568	TRUE	12	100%								
FP_00063	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 36,087		CHROMARY ROAD	Soldiers Point	229.308798	-32.705477	152.064952	TRUE	16	100%								
FP_00064	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			CHROMARY ROAD	Soldiers Point	98.365314	-32.710772	152.068992	TRUE	15	100%								
FP_00065	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			CHROMARY ROAD	Soldiers Point	192.015581	-32.707497	152.064641	TRUE	16	100%								
FP_00066	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 47,555		CHROMARY															



Infrastructure Assessment										Route No.										Prioritisation										
ID Label	Feature Type	Infrastructure Assessment	Condition Assessment	Improvement Recommendation	Cost Estimates	Comments	Road Name	Suburb/Name	Length (m)	Latitude	Longitude	HasPhoto	SubSection ID	% in SubSection	SubSection No.1	% in SubSection3	SubSection No.2	% in SubSection3	SubSection No.3	% in SubSection5	SubSection ID6	% in SubSection7	SubSection No. 1	SubSection No. 2	SubSection No. 3	SubSection No. 4	SubSection No.18	SubSection No. 29	SubSection No. 310	SubSection No. 411
FP_00169	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			TOMAREE ROAD	Shoal Bay	137.88099	-32.721537	152.175631	TRUE	150	100%									S4							
FP_00170	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			TOMAREE ROAD	Shoal Bay	390.003625	-32.722039	152.174567	TRUE	150	100%			152	20%	153	50%			S5B	S5E						
FP_00171	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	32,425	RIGNEY STREET	Shoal Bay	206.035722	-32.723053	152.17425	TRUE	162	100%									S5B							
FP_00172	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	588,210	RIGNEY STREET	Shoal Bay	218.21665	-32.725016	152.173846	TRUE	158	100%									S5B							
FP_00173	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	163,315	RIGNEY STREET	Shoal Bay	1037.742377	-32.726753	152.173426	TRUE	162	100%			162	60%					S5B	S5B						
FP_00174	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	24,187	RIGNEY STREET	Shoal Bay	153.68977	-32.726779	152.173555	TRUE	162	100%									S5B							
FP_00175	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	12,216	FINGAL STREET	Shoal Bay	77.622212	-32.727585	152.173785	TRUE	161	100%									S7							
FP_00176	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			NAGALA STREET	Shoal Bay	78.810917	-32.727675	152.173831	TRUE	161	100%									S7							
FP_00177	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			RIGNEY STREET	Shoal Bay	416.955381	-32.729463	152.173025	TRUE	159	100%									S5B							
FP_00178	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			TOMAREE ROAD	Shoal Bay	7.418013	-32.731339	152.172529	TRUE	158	100%									S5B							
FP_00179	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	14,421	TOMAREE ROAD	Shoal Bay	91.634492	-32.731679	152.172124	TRUE	158	100%									S5B							
FP_00180	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	581,654	GOVERNMENT ROAD	Shoal Bay	517.46161	-32.730088	152.170979	TRUE	154	100%									S5B							
FP_00181	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	16,914	SILVIA STREET	Shoal Bay	107.476452	-32.731851	152.173046	TRUE	158	100%									S5E							
FP_00182	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	172,541	GOVERNMENT ROAD	Shoal Bay	1096.365383	-32.726741	152.171738	TRUE	154	100%									S5E							
FP_00183	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	48,819	GOVERNMENT ROAD	Shoal Bay	31.208168	-32.726119	152.171768	TRUE	154	100%									S5E							
FP_00184	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	45,115	GOVERNMENT ROAD	Shoal Bay	305.990577	-32.732351	152.171227	TRUE	154	100%									S5B							
FP_00185	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	12,394	MESSINES STREET	Shoal Bay	76.754781	-32.721935	152.172974	TRUE	153	100%									S5E							
FP_00186	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Path uneven	Replace with concrete footpath 1.2m wide	\$	21,263	GOVERNMENT ROAD	Shoal Bay	100.5952568	-32.721349	152.172679	TRUE	143	20%			144	80%					S8	S8						
FP_00187	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	12,107	MESSINES STREET	Shoal Bay	76.930446	-32.722066	152.173917	TRUE	153	100%									S5E							
FP_00188	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	33,684	ULLIAN STREET	Shoal Bay	214.01703	-32.720907	152.176952	TRUE	149	100%									S2B							
FP_00189	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			TOMAREE ROAD	Shoal Bay	50.639292	-32.720572	152.175851	TRUE	149	100%									S2B, S4							
FP_00190	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			TOMAREE ROAD	Shoal Bay	62.168715	-32.720673	152.175681	TRUE	149	100%									S2B, S4							
FP_00191	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	47,043	ULLIAN STREET	Shoal Bay	298.940408	-32.721003	152.175113	TRUE	147	80%			148	70%					S2A	S2B						
FP_00192	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			ULLIAN STREET	Shoal Bay	65.821658	-32.72054	152.177989	TRUE	147	100%									S2A							
FP_00193	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	17,346	SHOAL BAY ROAD	Shoal Bay	110.218284	-32.720124	152.178651	TRUE	164	100%									S1							
FP_00194	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			SHOAL BAY ROAD	Shoal Bay	187.527332	-32.720242	152.176906	TRUE	146	100%									S2A							
FP_00195	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			SHOAL BAY ROAD	Shoal Bay	42.646873	-32.720208	152.177329	TRUE	145	100%									S3							
FP_00197	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			SHOAL BAY ROAD	Shoal Bay	167.147261	-32.720346	152.173849	TRUE	145	100%									S3							
FP_00198	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			SHOAL BAY ROAD	Shoal Bay	41.400171	-32.720234	152.174389	TRUE	145	100%									S3							
FP_00199	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	115,817	HANNAH PARADE	One Mile	75.913276	-32.779487	152.114823	FALSE	212	100%									OM1							
FP_00200	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	123,912	OLD MAIN ROAD	Anna Bay	787.348158	-32.77586	152.089143	TRUE	225	80%									AF10	AF11						
FP_00201	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	125,878	OLD MAIN ROAD	Anna Bay	799.861212	-32.775625	152.089777	TRUE	225	90%									AF10	AF10						
FP_00202	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	15,801	MORNA POINT ROAD	Anna Bay	100.403195	-32.776648	152.086107	TRUE	226	100%									AF11							
FP_00203	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	26,458	OLD MAIN ROAD	Anna Bay	168.119183	-32.776686	152.085329	TRUE	245	100%									AF10							
FP_00204	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	17,387	OLD MAIN ROAD	Anna Bay	174.02694	-32.777672	152.084591	TRUE	245	60%									AF10	AF3						
FP_00205	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	57,658	OLD MAIN ROAD	Anna Bay	366.374859	-32.777026	152.08225	TRUE	246	100%									AF3							
FP_00206	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	48,900	OLD MAIN ROAD	Anna Bay	310.722219	-32.776846	152.081861	TRUE	246	100%									AF3							
FP_00207	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	8,844	CAMPBELL AVENUE	Anna Bay	53.015045	-32.777146	152.084271	TRUE	244	100%									AF3, AF10							
FP_00208	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	8,523	CAMPBELL AVENUE	Anna Bay	65.686279	-32.777104	152.084112	TRUE	244	100%									AF3, AF10							
FP_00209	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			CAMPBELL AVENUE	Anna Bay	44.445234	-32.777565	152.084421	TRUE	244	100%									AF3, AF10							
FP_00210	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			GAN GAN ROAD	Anna Bay	150.760698	-32.777782	152.083903	TRUE	244	40%									AF3, AF10							
FP_00211	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	62,154	MARGARET STREET	Anna Bay	394.940279	-32.779398	152.084756	TRUE	229	80%									AF4	AF1, AF2						
FP_00212	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	1,373	CAMPBELL AVENUE	Anna Bay	8.721174	-32.777959	152.084281	TRUE	239	100%									AF4, AF5, AF7, AF14	AF5, AF7, AF14						
FP_00213	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			CAMPBELL AVENUE	Anna Bay	31.31521	-32.778137	152.084256	TRUE	239	100%									AF4, AF5, AF7, AF14							
FP_00214	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	6,054	CAMPBELL AVENUE	Anna Bay	38.470316	-32.778457	152.084196	TRUE	239	100%									AF4, AF5, AF7, AF14							
FP_00215	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	44,291	CAMPBELL AVENUE	Anna Bay	54.646251	-32.778595	152.084148	TRUE	238	20%									AF4	AF5, AF7, AF14						
FP_00216	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	45,258	CAMPBELL AVENUE	Anna Bay	287.579376	-32.779485	152.083125	TRUE	238	100%									AF4	AF5, AF7, AF14						
FP_00217	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	13,287	DAVIDSON STREET	Anna Bay	84.431064	-32.781046	152.084168	TRUE	241	100%									AF5, AF14							
FP_00218	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	15,352	DAVIDSON STREET	Anna Bay	97.551042	-32.781044	152.083958	TRUE	241	100%									AF5, AF14							
FP_00219	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			BLANC STREET	Boat Harbour	214.582831	-32.780294	152.110044	TRUE	209	100%									BH8							
FP_00220	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			BLANC STREET	Boat Harbour	153.555176	-32.781831	152.109093	TRUE	209	100%									BH8							
FP_00221	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	To note / see comment		very steep	Boat Harbour	Boat Harbour	64.119301	-32.781461	152.109719	TRUE	210	100%									BH8							
FP_00222	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			SOLDIERS POINT ROAD	Salamander Bay	85.45422	-32.722965	152.077661	TRUE	22	100%									S83A							
FP_00223	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			FORESHORE DRIVE	Salamander Bay	40.043854	-																				



														SubSection No. 1				SubSection No. 2				SubSection No. 3				SubSection No. 4				Route No.				Priority			
ID Label	Feature Type	Infrastructure Assessment	Condition Assessment	Improvement Recommendation	Cost Estimates	Comments	Road Name	SuburbName	Length (m)	Latitude	Longitude	HasPhoto	SubSection ID	% in SubSection	SubSection ID2	% in SubSection3	SubSection ID4	% in SubSection5	SubSection ID6	% in SubSection7	SubSection No. 1	SubSection No. 2	SubSection No. 3	SubSection No. 4	SubSection No. 18	SubSection No. 29	SubSection No. 310	SubSection No. 411									
FP_00339	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	142,870	SANDY POINT ROAD	Corlette	907.82951	-32.717321	152.112333	TRUE	52	10%		65	80%																				
FP_00340	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	52,818	SANDY POINT ROAD	Corlette	355.616088	-32.718211	152.110398	TRUE	65	100%								C7	C7		MEDIUM	MEDIUM											
FP_00341	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			SANDY POINT ROAD	Corlette	29.841565	-32.717182	152.112159	TRUE	65	100%								C3A			MEDIUM												
FP_00342	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	25,238	SANDY POINT ROAD	Corlette	160.730375	-32.717212	152.113053	TRUE	65	100%								C7			MEDIUM												
FP_00343	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path uneven	Replace with concrete footpath 1.2m wide	\$	13,755	SANDY POINT ROAD	Corlette	65.076019	-32.717357	152.114204	TRUE	65	100%								C7			MEDIUM												
FP_00344	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	37,936	SANDY POINT ROAD	Corlette	241.056257	-32.71792	152.115729	TRUE	65	100%								C7			MEDIUM												
FP_00345	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			SANDY POINT ROAD	Corlette	18.050363	-32.718484	152.110959	TRUE	66	100%								C7			MEDIUM												
FP_00346	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	8,216	BARLETT CYCLEWAY	Corlette	52.206353	-32.718185	152.11733	TRUE	66	100%								C7			MEDIUM												
FP_00347	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	98,682	SANDY POINT ROAD	Corlette	627.049345	-32.719371	152.122026	TRUE	66	100%								C7			MEDIUM												
FP_00348	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			SANDY POINT ROAD	Corlette	34.94058	-32.719591	152.123701	TRUE	66	100%								C7			MEDIUM												
FP_00349	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	24,946	GOVERNMENT ROAD	Corlette	158.514781	-32.719881	152.12439	TRUE	66	50%		68	50%					C7	CSA		MEDIUM	MEDIUM											
FP_00350	Footpath (Block Length Average)	Non-compliant footpath <=1.1m wide	Good condition	Replace with concrete footpath 1.2m wide	\$	6,865	GOVERNMENT ROAD	Corlette	32.479269	-32.720166	152.125366	TRUE	68	100%								CSA			MEDIUM												
FP_00351	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	32,267	THE PENINSULA	Corlette	205.032339	-32.719683	152.108935	TRUE	53	100%								C3A			MEDIUM												
FP_00352	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	12,614	THE PENINSULA	Corlette	80.153075	-32.719249	152.108742	TRUE	53	100%								C3A			MEDIUM												
FP_00353	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	96,758	THE PENINSULA	Corlette	614.826541	-32.722468	152.108293	TRUE	53	100%								C3A			MEDIUM												
FP_00354	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	11,382	THE PENINSULA	Corlette	72.323246	-32.721004	152.109112	TRUE	53	100%								C3A			MEDIUM												
FP_00355	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	12,203	THE PENINSULA	Corlette	77.542745	-32.721711	152.108719	TRUE	53	100%								C3A			MEDIUM												
FP_00356	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	52,039	THE PENINSULA	Corlette	330.608579	-32.721318	152.11045	TRUE	53	100%								C3A			MEDIUM												
FP_00357	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path cracked and uneven	Replace with concrete footpath 1.2m wide	\$	15,719 steep and gravel	Corlette	74.36502	-32.723597	152.114866	TRUE	64	100%									C6			LOW												
FP_00358	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	49,696	KALLAROD STREET	Corlette	315.783073	-32.719261	152.116412	TRUE	64	100%								N63			LOW												
FP_00359	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	17,620	TARE STREET	Nelson Bay	111.959889	-32.721788	152.130486	TRUE	72	100%								C2			HIGH												
FP_00360	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	10,349	TARE STREET	Nelson Bay	65.9548	-32.719347	152.13047	TRUE	72	100%								NB23			HIGH												
FP_00361	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	3,079	TARE STREET	Nelson Bay	19.563909	-32.722204	152.130261	TRUE	72	100%								NB23			HIGH												
FP_00362	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	32,897	GALLOOLA DRIVE	Nelson Bay	209.037284	-32.723254	152.130665	TRUE	74	100%								NB21			HIGH												
FP_00363	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	47,348	GALLOOLA DRIVE	Nelson Bay	300.845326	-32.723806	152.130925	TRUE	74	100%								NB21			HIGH												
FP_00364	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	98,148	WALLAWA ROAD	Nelson Bay	624.654495	-32.722184	152.130631	TRUE	73	100%								NB21			HIGH												
FP_00365	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	53,756	WALLAWA ROAD	Nelson Bay	341.581483	-32.722489	152.128456	TRUE	73	100%								NB23			HIGH												
FP_00366	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	49,864	WALLAWA ROAD	Corlette	316.850265	-32.723731	152.125302	TRUE	73	100%								NB23			HIGH												
FP_00367	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	7,253	WALLAWA ROAD	Nelson Bay	46.088082	-32.725731	152.12534	TRUE	73	100%								NB23			HIGH												
FP_00368	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			SPINNAKER WAY	Corlette	107.293584	-32.724957	152.124609	TRUE	61	100%								C2			MEDIUM												
FP_00369	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			SPINNAKER WAY	Corlette	177.469316	-32.724795	152.124328	TRUE	61	100%								C2			MEDIUM												
FP_00370	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	24,681	SPINNAKER WAY	Corlette	156.83084	-32.725159	152.123119	TRUE	61	100%								C2			MEDIUM												
FP_00371	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			SPINNAKER WAY	Corlette	33.446295	-32.725931	152.122109	TRUE	61	100%								C2			MEDIUM												
FP_00372	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			SPINNAKER WAY	Corlette	110.519629	-32.725184	152.122788	TRUE	61	100%								C2			MEDIUM												
FP_00373	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	37,187	GALLOOLA DRIVE	Nelson Bay	236.29735	-32.72513	152.132996	TRUE	78	100%								NB22			HIGH												
FP_00374	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	23,997	GALLOOLA DRIVE	Nelson Bay	152.48992	-32.724821	152.131796	TRUE	78	50%		78	50%					NB21			HIGH												
FP_00375	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	76,327	GALLOOLA DRIVE	Nelson Bay	485.003042	-32.725862	152.134864	TRUE	78	60%		106	40%					NB22			HIGH												
FP_00376	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	64,838	YOOLARA CRESCENT	Nelson Bay	411.998685	-32.726739	152.135673	TRUE	78	50%		80	50%					NB22	NB19, NB22		HIGH												
FP_00377	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	60,432	GALLOOLA DRIVE	Nelson Bay	383.997633	-32.728597	152.135487	TRUE	106	100%								NB19			HIGH												
FP_00378	Footpath (Block Length Average)	Non-compliant footpath <=1.1m wide	Path uneven	Replace with concrete footpath 1.2m wide	\$	8,922	GALLOOLA DRIVE	Nelson Bay	42.209991	-32.72838	152.135312	TRUE	106	100%								NB19			HIGH												
FP_00379	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	30,325	GALLOOLA DRIVE	Nelson Bay	192.692008	-32.729484	152.135367	TRUE	106	100%								NB17			HIGH												
FP_00380	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	6,552	STOCKTON STREET	Nelson Bay	41.634371	-32.730301	152.13596	TRUE	107	100%								NB13			HIGH												
FP_00381	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			STOCKTON STREET	Nelson Bay	310.464764	-32.728947	152.136625	TRUE	107	100%								NB13			MEDIUM												
FP_00382	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	119,104	STOCKTON STREET	Nelson Bay	756.817101	-32.726875	152.138134	TRUE	107	100%								NB13			MEDIUM												
FP_00383	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	25,573	STOCKTON STREET	Nelson Bay	187.910015	-32.726918	152.137791	TRUE	107	100%								NB13			MEDIUM												
FP_00384	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			STOCKTON STREET	Nelson Bay	222.011927	-32.725529	152.139213	TRUE	107	100%								NB13			MEDIUM												
FP_00385	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	36,024	MOOROODABA CRESCENT	Nelson Bay	228.905109	-32.724744	152.137994	TRUE	80	100%								NB19, NB22			HIGH												
FP_00386	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	21,246	MOOROODABA CRESCENT	Nelson Bay	135.001541	-32.724498	152.134844	TRUE	80	100%								NB19, NB22			HIGH												
FP_00387	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	49,142	YOOLARA CRESCENT	Nelson Bay	312.303461	-32.725731	152.134867	TRUE	106	100%								NB22			HIGH												
FP_00388	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	6,016	NELSON STREET	Nelson Bay	38.215089	-32.723946	152.139031	TRUE	80	100%								NB19, NB22			HIGH												
FP_00389	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	14,210	NELSON STREET	Nelson Bay	90.291266	-32.723664	152.139265	TRUE	80	50%		84	50%					NB19, NB22	NB17, NB21, NB22		HIGH												
FP_00390	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	55,579	WANGUNYAH ROAD	Nelson Bay	378.581558	-32.723417	152.137101	TRUE	79	100%								NB17			HIGH												
FP_00391	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			WANGUNYAH ROAD	Nelson Bay	307.799696	-32.723381	152.137463	TRUE	79	100%								NB17, NB21			HIGH												
FP_00392	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			WANGUNYAH ROAD	Nelson Bay	151.794923	-32.723017	152.134999	TRUE	79	100%								NB17, NB21			HIGH												
FP_00393	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	15,117	WANGUNYAH ROAD	Nelson Bay	96.058852	-32.723061	152.134558	TRUE	79	100%								NB17, NB21			HIGH												
FP_00394	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$	14,008	RAIYAH CRESCENT	Nelson Bay	89.099984	-32.723564	152.135674	TRUE	77	100%								NB21			HIGH												
FP_00395	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			WANGUNYAH ROAD																														



											SubSection No. 1		SubSection No. 2		SubSection No. 3		SubSection No. 4		Route No.		Prioritisation		SubSection No. 310		SubSection No. 411		
Footpath Type	Infrastructure Assessment	Condition Assessment	Improvement Recommendation	Cost Estimates	Comments	Road Name	SuburbName	Length (m)	Latitude	Longitude	HasPhoto	SubSection ID	% in SubSection	SubSection ID2	% in SubSection3	SubSection ID4	% in SubSection5	SubSection ID6	% in SubSection7	SubSection No. 1	SubSection No. 2	SubSection No. 3	SubSection No. 4	SubSection No. 18	SubSection No. 29	SubSection No. 310	SubSection No. 411
FP_00512	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path cracked and uneven	Replace with concrete footpath 1.2m wide	\$ 39,574	YACABARA STREET	Nelson Bay	687.219663	-32.722539	152.144796	TRUE	110	100%														
FP_00513	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		YACABARA STREET	Nelson Bay	53.704037	-32.721752	152.145145	TRUE	101	100%														
FP_00514	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		YACABARA STREET	Nelson Bay	189.243168	-32.721662	152.144866	TRUE	101	100%														
FP_00515	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 23,464	TOMAREE STREET	Nelson Bay	149.098921	-32.723606	152.142247	TRUE	89	100%														
FP_00516	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		TOMAREE STREET	Nelson Bay	188.28374	-32.723444	152.142065	TRUE	89	100%														
FP_00517	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path uneven	Replace with concrete footpath 1.2m wide	\$ 19,061	TOMAREE STREET	Nelson Bay	90.174358	-32.721805	152.143599	TRUE	102	100%														
FP_00518	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 2,105	VICTORIA PARADE	Nelson Bay	13.373128	-32.720607	152.145199	TRUE	102	100%														
FP_00519	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		TOMAREE STREET	Nelson Bay	40.464531	-32.723486	152.141258	TRUE	89	100%														
FP_00520	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		VICTORIA PARADE	Nelson Bay	386.766729	-32.719814	152.146603	TRUE	113	100%														
FP_00521	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 21,650	TOMAREE STREET	Nelson Bay	137.569029	-32.723322	152.140109	TRUE	85	100%														
FP_00522	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 7,649	TOMAREE STREET	Nelson Bay	48.601465	-32.723235	152.140603	TRUE	85	100%														
FP_00523	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path cracked and uneven	Replace with concrete footpath 1.2m wide	\$ 19,574	TOMAREE STREET	Nelson Bay	92.401946	-32.721347	152.139871	TRUE	85	100%														
FP_00524	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path uneven	Replace with concrete footpath 1.2m wide	\$ 37,443	YACABARA STREET	Nelson Bay	177.189781	-32.722884	152.144615	TRUE	100	100%														
FP_00525	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 21,382	DALTON STREET	Nelson Bay	135.868104	-32.722234	152.140273	TRUE	91	100%														
FP_00526	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 21,790	DALTON STREET	Nelson Bay	138.456058	-32.722175	152.140314	TRUE	91	100%														
FP_00527	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path uneven	Replace with concrete footpath 1.2m wide	\$ 41,404	DONALD STREET	Nelson Bay	159.8805	-32.721861	152.142381	TRUE	98	100%														
FP_00528	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		STOCKTON STREET	Nelson Bay	54.755445	-32.723985	152.141331	TRUE	87	100%														
FP_00529	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		DONALD STREET	Nelson Bay	200.588559	-32.7217	152.142451	TRUE	98	100%														
FP_00530	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 21,689	DONALD STREET	Nelson Bay	137.82033	-32.724038	152.143788	TRUE	114	100%														
FP_00531	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		STOCKTON STREET	Nelson Bay	152.698076	-32.724464	152.142006	TRUE	88	100%														
FP_00532	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		DONALD STREET	Nelson Bay	101.67417	-32.721935	152.142416	TRUE	99	100%														
FP_00534	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path uneven	Replace with concrete footpath 1.2m wide	\$ 37,748	STOCKTON STREET	Nelson Bay	178.581725	-32.722792	152.143238	TRUE	108	100%														
FP_00535	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path uneven	Replace with concrete footpath 1.2m wide	\$ 34,330	STOCKTON STREET	Nelson Bay	162.41936	-32.722883	152.14344	TRUE	108	100%														
FP_00536	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		DONALD STREET	Nelson Bay	107.768849	-32.721483	152.141831	TRUE	99	100%														
FP_00537	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		STOCKTON STREET	Nelson Bay	129.243793	-32.721258	152.143602	TRUE	96	50%	97	50%												
FP_00538	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		STOCKTON STREET	Nelson Bay	62.451919	-32.721575	152.143723	TRUE	97	100%														
FP_00539	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		STOCKTON STREET	Nelson Bay	53.91348	-32.720956	152.143886	TRUE	96	100%														
FP_00540	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		DONALD STREET	Nelson Bay	54.51382	-32.722073	152.143571	TRUE	111	100%														
FP_00541	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 13,729	DONALD STREET	Nelson Bay	87.234602	-32.722258	152.145472	TRUE	111	100%														
FP_00542	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 18,097	DONALD STREET	Nelson Bay	114.95669	-32.72136	152.146129	TRUE	111	100%														
FP_00543	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		DONALD STREET	Nelson Bay	51.27128	-32.722517	152.146188	TRUE	111	100%														
FP_00544	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 2,601	DONALD STREET	Nelson Bay	16.530454	-32.722021	152.146455	TRUE	111	100%														
FP_00545	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		TERAMBY ROAD	Nelson Bay	119.947625	-32.720333	152.144626	TRUE	105	100%														
FP_00546	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		DONALD STREET	Nelson Bay	106.526802	-32.721545	152.146698	TRUE	111	100%														
FP_00547	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		DONALD STREET	Nelson Bay	51.793218	-32.721768	152.146685	TRUE	111	100%														
FP_00548	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 3,464	DONALD STREET	Nelson Bay	22.080977	-32.7215	152.146913	TRUE	111	100%														
FP_00550	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path uneven	Replace with concrete footpath 1.2m wide	\$ 2,926	DONALD STREET	Nelson Bay	14.132857	-32.721336	152.146902	TRUE	111	100%														
FP_00551	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 7,687	DONALD STREET	Nelson Bay	48.456824	-32.721074	152.146701	TRUE	111	100%														
FP_00552	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		DONALD STREET	Nelson Bay	17.61559	-32.720523	152.144389	TRUE	111	100%														
FP_00553	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 7,188	MAGNUS STREET	Nelson Bay	45.676492	-32.720825	152.146786	TRUE	112	100%														
FP_00554	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		MAGNUS STREET	Nelson Bay	127.169799	-32.720427	152.147579	TRUE	112	100%														
FP_00555	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 5,489	MAGNUS STREET	Nelson Bay	34.78576	-32.720007	152.146291	TRUE	112	100%														
FP_00556	Footpath (Block Length Average)	Non-compliant footpath >=1.1m wide	Good condition	Replace with concrete footpath 1.2m wide	\$ 13,069	MAGNUS STREET	Nelson Bay	61.87825	-32.71975	152.148708	TRUE	112	100%														
FP_00557	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 2,373	MAGNUS STREET	Nelson Bay	15.078252	-32.719546	152.149036	TRUE	112	100%														
FP_00558	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None		MAGNUS STREET	Nelson Bay	130.37354	-32.719214	152.149709	TRUE	112	100%														
FP_00559	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None		MAGNUS STREET	Nelson Bay	31.818222	-32.719093	152.149884	TRUE	112	100%														
FP_00560	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 10,855	CHURCH STREET	Nelson Bay	68.976922	-32.721123	152.141455	TRUE	93	100%														
FP_00561	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		CHURCH STREET	Nelson Bay	15.205073	-32.72149	152.141384	TRUE	93	100%														
FP_00562	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		MAGNUS STREET	Nelson Bay	508.786528	-32.720887	152.147365	TRUE	112	100%														
FP_00563	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 5,865	MAGNUS STREET	Nelson Bay	37.26589	-32.72101	152.146195	TRUE	112	100%														
FP_00564	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path cracked and uneven	Replace with concrete footpath 1.2m wide	\$ 32,745	CHURCH STREET	Nelson Bay	154.916083	-32.721158	152.141177	TRUE	92	50%	93	50%												
FP_00565	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		MAGNUS STREET	Nelson Bay	44.700505	-32.721499	152.145099	TRUE	112	100%														
FP_00566	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 6,527	MAGNUS STREET	Nelson Bay	41.471576	-32.721574	152.145581	TRUE	112	100%														
FP_00567	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		MAGNUS STREET	Nelson Bay	28.864608	-32.721531	152.145229	TRUE	112	100%														
FP_00568	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		CHURCH STREET	Nelson Bay	66.984152	-32.722002	152.141275	TRUE	92	100%														
FP_00569	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		MAGNUS STREET	Nelson Bay	103.76381	-32.72118	152.144331	TRUE	100	100%														
FP_00570	Footpath (Block Length Average)	No footpath		Provide concrete footpath 1.2m wide	\$ 9,055	CHURCH STREET	Nelson Bay	57.140197	-32.722157	152.141175	TRUE	100	100%														
FP_00571	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		MAGNUS STREET	Nelson Bay	104.183928	-32.721273	152.143455	TRUE	100	100%														
FP_00572	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		CHURCH STREET	Nelson Bay	93.031158	-32.722836	152.140944	TRUE	90	100%														
FP_00573	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None		CHUR																					



ID Label	Feature Type	Infrastructure Assessment	Condition Assessment	Improvement Recommendation	Cost Estimate	Comments	Road Name	Suburb Name	Length (m)	Latitude	Longitude	Has Photo	SubSection ID	SubSection No. 1	SubSection No. 2	SubSection No. 3	SubSection No. 4	Route No.	Prioritisation						
														% in SubSection	% in SubSection	% in SubSection	% in SubSection	SubSection No. 1	SubSection No. 2	SubSection No. 3	SubSection No. 4	SubSection No. 18	SubSection No. 29	SubSection No. 310	SubSection No. 411
FP_00685	Footpath (Block Length Average)	Non-compliant footpath <=1.1m wide	Good condition	Replace with concrete footpath 1.2m wide	\$ 58,884		BLANCH STREET	Boat Harbour	278.77272	-32.783855	152.108475	TRUE	207	100%											
FP_00686	Footpath (Block Length Average)	Non-compliant footpath <=1.1m wide	Good condition	Replace with concrete footpath 1.2m wide	\$ 18,950		BLANCH STREET	Boat Harbour	89.64899	-32.785557	152.108531	FALSE	205	100%					BH6, BH7						
FP_00687	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			BLANCH STREET	Boat Harbour	130.11436	-32.786397	152.108723	TRUE	206	100%					BH3, BH6						
FP_00688	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			BLANCH STREET	Boat Harbour	152.02215	-32.787098	152.108899	TRUE	198	100%					BH1, BH2						
FP_00689	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 12,403		KINGSLEY DRIVE	Boat Harbour	78.811663	-32.789518	152.109329	TRUE	196	100%					BH7						
FP_00690	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 15,427		NOAMUNGA STREET	Boat Harbour	98.028339	-32.78993	152.108867	TRUE	195	100%					BH1						
FP_00691	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 15,682		NOAMUNGA STREET	Boat Harbour	99.646878	-32.789912	152.108766	TRUE	195	100%					BH1						
FP_00692	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 151,666		BLANCH STREET	Boat Harbour	105.901615	-32.788891	152.108813	TRUE	197	100%					BH1						
FP_00693	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 24,099		BLANCH STREET	Boat Harbour	153.129829	-32.786799	152.108624	TRUE	198	40%		206	60%		BH1, BH2	BH3, BH6					
FP_00694	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Path uneven	Replace with concrete footpath 1.2m wide	\$ 21,096		BLANCH STREET	Boat Harbour	99.804519	-32.78793	152.108867	TRUE	198	100%					BH1, BH2				MEDIUM		
FP_00695	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			Boat Harbour	74.271475	-32.786031	152.108041	TRUE	204	100%					BH3							
FP_00696	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 3,264		BLANCH STREET	Boat Harbour	20.742194	-32.786029	152.108475	TRUE	205	100%					BH3, BH10						
FP_00697	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 16,113		BLANCH STREET	Boat Harbour	102.38577	-32.785476	152.10833	TRUE	204	100%					BH6, BH7						
FP_00698	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 41,890		BLANCH STREET	Boat Harbour	266.181943	-32.783699	152.108329	TRUE	207	100%					BH7						
FP_00699	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 43,131		GAN GAN ROAD	One Mile	274.063488	-32.786284	152.115183	TRUE	214	100%					OM2						
FP_00700	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 241,085		GAN GAN ROAD	One Mile	960.029587	-32.784092	152.112125	TRUE	211	100%					OM2						
FP_00701	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 25,943		OCEAN PARADE	Boat Harbour	164.850977	-32.78714	152.112338	TRUE	200	100%					BH4						
FP_00702	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 46,353		KINGSLEY DRIVE	Boat Harbour	294.540312	-32.78912	152.110345	TRUE	196	100%					BH2						
FP_00703	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 39,964		CAMPBELL AVENUE	Anna Bay	196.792436	-32.781379	152.082368	TRUE	238	100%					AF4						
FP_00704	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			ROBINSON STREET	Anna Bay	177.386351	-32.782522	152.080048	TRUE	238	100%					AF4						
FP_00705	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 60,497		FITZROY STREET	Anna Bay	384.414943	-32.784666	152.080444	TRUE	238	100%					AF4						
FP_00706	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 13,579		PACIFIC AVENUE	Anna Bay	86.286791	-32.785688	152.082151	TRUE	235	100%					AF5						
FP_00707	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 10,538		PACIFIC AVENUE	Anna Bay	66.964196	-32.786654	152.081795	TRUE	236	100%					AF5						
FP_00708	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			PACIFIC AVENUE	Anna Bay	731.958806	-32.785107	152.079151	TRUE	236	100%					AF5						
FP_00709	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 3,007		OCEAN AVENUE	Anna Bay	19.105304	-32.78627	152.082113	TRUE	233	100%					AF12						
FP_00710	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			OCEAN AVENUE	Anna Bay	19.557472	-32.786346	152.08231	TRUE	233	100%					AF12						
FP_00711	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 9,340		OCEAN AVENUE	Anna Bay	59.348483	-32.786475	152.082704	TRUE	231	100%					AF12						
FP_00712	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 20,187		OCEAN AVENUE	Anna Bay	128.274017	-32.786827	152.083765	TRUE	233	100%					AF12						
FP_00713	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 30,380		MORNA POINT ROAD	Anna Bay	193.03939	-32.786022	152.084551	TRUE	232	100%					AF12						
FP_00714	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 129,979		FISHERMANS BAY ROAD	Fishermans Bay	825.915857	-32.785245	152.088882	TRUE	231	100%					AF13						
FP_00715	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 45,443		MORNA POINT ROAD	Anna Bay	288.757557	-32.783695	152.084888	TRUE	230	100%					AF13						
FP_00716	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path uneven	Replace with concrete footpath 1.2m wide	\$ 4,205		MORNA POINT ROAD	Anna Bay	19.89416	-32.782156	152.085277	TRUE	230	100%					AF12						
FP_00717	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 27,761		MORNA POINT ROAD	Anna Bay	176.40007	-32.781275	152.085447	TRUE	229	80%		230	20%		AF12	AF12					
FP_00718	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 10,702		DAVIDSON STREET	Anna Bay	64.005983	-32.781491	152.084893	TRUE	242	100%					AF14						
FP_00719	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 59,044		PACIFIC AVENUE	Anna Bay	375.178857	-32.78344	152.083972	TRUE	241	100%					AF14						
FP_00720	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 14,157		PACIFIC AVENUE	Anna Bay	90.211399	-32.784763	152.082426	TRUE	234	100%					AF5						
FP_00721	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 21,300		MORNA POINT ROAD	Anna Bay	135.346121	-32.779701	152.085775	TRUE	229	100%					AF12						
FP_00722	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 25,646		MORNA POINT ROAD	Anna Bay	162.962734	-32.778221	152.086056	TRUE	227	100%					AF12						
FP_00723	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 37,407		ESSINGTON WAY	Anna Bay	227.682628	-32.779293	152.087105	TRUE	221	40%		223	60%		AF12					AF6, AF7	
FP_00724	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 16,254		ESSINGTON WAY	Anna Bay	103.281741	-32.780449	152.088297	TRUE	221	100%					AF6						
FP_00725	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 24,085		ESSINGTON WAY	Anna Bay	153.044801	-32.780818	152.089823	TRUE	221	100%					AF6						
FP_00726	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 29,489		ESSINGTON WAY	Anna Bay	187.379066	-32.780029	152.091213	TRUE	221	100%					AF6						
FP_00727	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 35,208		ESSINGTON WAY	Anna Bay	223.72915	-32.777991	152.092115	TRUE	221	50%					AF6	AF6					
FP_00728	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			CALLAGHAN DRIVE	Anna Bay	20.379205	-32.777917	152.090865	TRUE	222	100%					AF7						
FP_00729	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 18,028		CALLAGHAN DRIVE	Anna Bay	114.555497	-32.777827	152.090154	TRUE	222	100%					AF7						
FP_00730	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 44,930		ANGUS DRIVE	Anna Bay	285.40975	-32.778791	152.088472	TRUE	222	100%					AF7						
FP_00731	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 16,068		ESSINGTON WAY	Anna Bay	102.099322	-32.776957	152.092509	TRUE	220	100%					AF7						
FP_00732	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Path uneven	Replace with concrete footpath 1.2m wide	\$ 5,091		GAN GAN ROAD	Anna Bay	24.083177	-32.77774	152.084556	TRUE	243	100%					AF8, AF11, AF12						
FP_00733	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 20,571		GAN GAN ROAD	Anna Bay	130.14721	-32.777554	152.085353	TRUE	243	100%					AF8, AF11, AF12						
FP_00734	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 48,919		GAN GAN ROAD	Anna Bay	310.841671	-32.777365	152.081383	TRUE	247	60%		249	40%		AF1, AF2					AF1	
FP_00735	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 49,110		CLARK STREET	Anna Bay	312.054631	-32.778204	152.097584	TRUE	217	100%					AF9						
FP_00736	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			GAN GAN ROAD	Boat Harbour	71.647767	-32.778783	152.11003	TRUE	213	100%					BH10						
FP_00737	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 157,222		GAN GAN ROAD	One Mile	999.027328	-32.775347	152.113691	TRUE	213	20%		214	80%		BH10	OM2					
FP_00738	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 43,281		GAN GAN ROAD	Boat Harbour	516.482123	-32.77649	152.095165	TRUE	218	100%					BH10						
FP_00739	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 175,295		GAN GAN ROAD	Boat Harbour	1113.867856	-32.778313	152.103997	FALSE	215	50%		216	50%		BH9	AF8					
FP_00740	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 14,948		BLANCH STREET	Boat Harbour	94.98051	-32.788906	152.110005	FALSE	197	100%					BH1						
FP_00741	Footpath (Block Length Average)	Minor non-compliant footpath >=1.1m <1.2m wide	Good condition	None			BLANCH STREET	Boat Harbour	56.362088	-32.785502	152.111094	FALSE	203	100%					BH5						
FP_00742	Footpath (Block Length Average)	No footpath	Good condition	Provide concrete footpath 1.2m wide	\$ 8,320		KINGSLEY DRIVE	Boat Harbour	52.869713	-32.789041	152.110152	FALSE	196	100%					BH5						
FP_00743	Footpath (Block Length Average)	Compliant (>= 1.2m wide)	Good condition	None			KINGSLEY DRIVE	Anna Bay	55.725259	-32.783154	152.075766	FALSE	237	100%					HIGH						
FP_00744	Footpath (Block Length Average)	No footpath	Good condition																						



ID	Label	Feature Type	Path Type	Compliance Criteria	Assessment Criteria (1)	Assessment Criteria (2)	Assessment Criteria (3)	Assessment Criteria (4)	Improvement Recommendation (1)	Improvement Recommendation (2)	Improvement Recommendation (3)	Improvement Recommendation (4)	Cost Estimates	Comments	Road Name	Subur/Village	Latitude	Longitude	HasPhoto	SubSection No.	Route No.	Prioritisation
H0_0001	Hazard / Obstruction	No facility	Vegetation		Vegetation				Vegetation maintenance				\$	220.00	SHEARWATER DRIVE	Taylor Beach	-32.751536	152.070346	TRUE	256	TBA	LOW
H0_0002	Hazard / Obstruction	No facility	Vegetation		Vegetation				Vegetation maintenance				\$	220.00	SHEARWATER DRIVE	Taylor Beach	-32.752808	152.071176	TRUE	255	TBA	LOW
H0_0003	Hazard / Obstruction	No facility		Road side furniture (incl. signage)					Investigate relocation of obstruction				N/A		PORT STEPHENS DRIVE	Taylor Beach	-32.753792	152.068657	TRUE	251	TB1	MEDIUM
H0_0004	Hazard / Obstruction	Other (See comment)		Other (See comment)					Investigate relocation of obstruction				N/A	drain	PORT STEPHENS DRIVE	Taylor Beach	-32.747221	152.07223	TRUE	257	TB5	LOW
H0_0005	Hazard / Obstruction	Shared path	Vegetation		Vegetation				Vegetation maintenance				\$	220.00	PORT STEPHENS DRIVE	Taylor Beach	-32.746173	152.068907	TRUE	257	TB5	LOW
H0_0006	Hazard / Obstruction	Shared path	Vegetation		Vegetation				Vegetation maintenance				\$	220.00	PORT STEPHENS DRIVE	Taylor Beach	-32.74955	152.06844	TRUE	257	TB5	LOW
H0_0007	Hazard / Obstruction	No facility	Other (See comment)						Investigate relocation of obstruction				N/A		ROSEBAY AVENUE	Soldiers Point	-32.763244	152.063876	TRUE	5	SP28, SP2A, SP3A	MEDIUM
H0_0008	Hazard / Obstruction	No facility	Power pole						Investigate relocation of obstruction				N/A		ROSEBAY AVENUE	Soldiers Point	-32.762975	152.064013	FALSE	8	SP28	MEDIUM
H0_0009	Hazard / Obstruction	No facility	Vegetation			Other (See comment)			Vegetation maintenance				\$	200.00	SOLDIERS POINT ROAD	Soldiers Point	-32.767805	152.067345	TRUE	6	SP4A	MEDIUM
H0_0010	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	ASH STREET	Soldiers Point	-32.710109	152.068018	TRUE	10	SP4A	MEDIUM
H0_00011	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	ASH STREET	Soldiers Point	-32.710285	152.068034	TRUE	10	SP4B	MEDIUM
H0_00012	Hazard / Obstruction	No facility	Other (See comment)						Investigate relocation of obstruction				N/A	drain	ASH STREET	Soldiers Point	-32.710902	152.068015	FALSE	10	SP4B	MEDIUM
H0_00013	Hazard / Obstruction	No facility	Other (See comment)						Investigate relocation of obstruction				N/A	drain	WENE CRESCENT	Soldiers Point	-32.710993	152.067782	FALSE	11	SP4B	MEDIUM
H0_00014	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	BAGMALL AVENUE	Soldiers Point	-32.710108	152.064448	TRUE	16	SP4	MEDIUM
H0_00015	Hazard / Obstruction	No facility	Other (See comment)		Vegetation		Power pole			Vegetation maintenance		Investigate relocation of obstruction	N/A	the verge is very steep, chail works would be needed to accommodate a path	BAGMALL AVENUE	Soldiers Point	-32.711893	152.067585	TRUE	16	SP4	MEDIUM
H0_00016	Hazard / Obstruction	No facility	Power pole						Investigate relocation of obstruction				N/A		SOLDIERS POINT ROAD	Soldiers Point	-32.711303	152.071307	TRUE	18	SP5A	MEDIUM
H0_00017	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	SOLDIERS POINT ROAD	Soldiers Point	-32.712133	152.071404	TRUE	18	SP5A	MEDIUM
H0_00018	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	TUNA CRESCENT	Fingal Bay	-32.750041	152.170081	TRUE	179	PB14	MEDIUM
H0_00019	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	PACIFIC DRIVE	Fingal Bay	-32.75288	152.168291	TRUE	181	PB9	MEDIUM
H0_00020	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	CORAL STREET	Fingal Bay	-32.748012	152.163808	TRUE	192	PB6, PB8	MEDIUM
H0_00021	Hazard / Obstruction	No facility	Power pole			Other (See comment)			Investigate relocation of obstruction				N/A		TOMAREE ROAD	Shoal Bay	-32.733024	152.173078	FALSE	140	S2A	MEDIUM
H0_00022	Hazard / Obstruction	No facility	Power pole						Investigate relocation of obstruction				N/A	drainage grate cover	TOMAREE ROAD	Shoal Bay	-32.727291	152.170514	TRUE	140	S2A	MEDIUM
H0_00023	Hazard / Obstruction	No facility		Road side furniture (incl. signage)					Investigate relocation of obstruction				N/A	drain	TOMAREE ROAD	Shoal Bay	-32.72605	152.170643	FALSE	142	S2A	MEDIUM
H0_00024	Hazard / Obstruction	No facility	Other (See comment)						Investigate relocation of obstruction				N/A	drain	MESSINES STREET	Shoal Bay	-32.72225	152.175316	FALSE	152	S2B	HIGH
H0_00025	Hazard / Obstruction	No facility	Power pole						Investigate relocation of obstruction				N/A		MESSINES STREET	Shoal Bay	-32.722158	152.175339	FALSE	152	S2B	HIGH
H0_00026	Hazard / Obstruction	No facility		Road side furniture (incl. signage)		Other (See comment)			Investigate relocation of obstruction				N/A	telstra pt.	HONEY STREET	Shoal Bay	-32.722152	152.174959	FALSE	152	S2B	HIGH
H0_00027	Hazard / Obstruction	No facility	Other (See comment)						Investigate relocation of obstruction				N/A	stone wall	GOVERNMENT ROAD	Shoal Bay	-32.720083	152.171763	FALSE	154	S2E	HIGH
H0_00028	Hazard / Obstruction	No facility	Other (See comment)						Investigate relocation of obstruction				N/A	retaining wall	GOVERNMENT ROAD	Shoal Bay	-32.720434	152.17161	TRUE	154	S2E	HIGH
H0_00029	Hazard / Obstruction	No facility	Other (See comment)						Investigate relocation of obstruction				N/A	drainage pit	MESSINES STREET	Shoal Bay	-32.722001	152.175381	TRUE	153	S2E	LOW
H0_00030	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	LELLIAN STREET	Shoal Bay	-32.720928	152.175921	TRUE	148	S2B	MEDIUM
H0_00031	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	LELLIAN STREET	Shoal Bay	-32.721001	152.17629	TRUE	148	S2B	MEDIUM
H0_00032	Hazard / Obstruction	Footpath	Power pole						Investigate relocation of obstruction				N/A		SHOAL BAY ROAD	Shoal Bay	-32.720284	152.176342	TRUE	146	S2A	MEDIUM
H0_00033	Hazard / Obstruction	Footpath	Power pole						Investigate relocation of obstruction				N/A		SHOAL BAY ROAD	Shoal Bay	-32.720246	152.176845	TRUE	146	S2A	MEDIUM
H0_00034	Hazard / Obstruction	Footpath	Power pole						Investigate relocation of obstruction				N/A		SHOAL BAY ROAD	Shoal Bay	-32.72021	152.177262	TRUE	146	S2A	MEDIUM
H0_00035	Hazard / Obstruction	No facility	Other (See comment)						Investigate relocation of obstruction				N/A	retaining wall	WALLAMBA ROAD	Nelson Bay	-32.727598	152.174942	TRUE	75	NB23	HIGH
H0_00036	Hazard / Obstruction	No facility	Power pole						Investigate relocation of obstruction				N/A		SHOAL BAY ROAD	Nelson Bay	-32.719203	152.16975	TRUE	140	NB1A, NB14	MEDIUM
H0_00037	Hazard / Obstruction	No facility	Other (See comment)						Investigate relocation of obstruction				N/A	drain	TRAFALGAR STREET	Nelson Bay	-32.719025	152.163055	TRUE	137	NB3	MEDIUM
H0_00038	Hazard / Obstruction	No facility	Power pole						Investigate relocation of obstruction				N/A		YACAMBA STREET	Nelson Bay	-32.721709	152.144646	FALSE	150	NB8	MEDIUM
H0_00039	Hazard / Obstruction	Footpath		Road side furniture (incl. signage)					Investigate relocation of obstruction				N/A		GOVERNMENT ROAD	Nelson Bay	-32.720737	152.145391	TRUE	95	NB15	MEDIUM
H0_00040	Hazard / Obstruction	Footpath		Road side furniture (incl. signage)					Investigate relocation of obstruction				N/A		GOVERNMENT ROAD	Nelson Bay	-32.720621	152.145598	TRUE	95	NB15	MEDIUM
H0_00041	Hazard / Obstruction	Footpath		Road side furniture (incl. signage)					Investigate relocation of obstruction				N/A		GOVERNMENT ROAD	Nelson Bay	-32.720834	152.14512	TRUE	94	NB16, NB23	HIGH
H0_00042	Hazard / Obstruction	Footpath		Road side furniture (incl. signage)					Investigate relocation of obstruction				N/A		GOVERNMENT ROAD	Nelson Bay	-32.720696	152.142255	TRUE	94	NB16, NB23	HIGH
H0_00043	Hazard / Obstruction	Footpath	Other (See comment)						Investigate relocation of obstruction				N/A	pH	CHURCH STREET	Nelson Bay	-32.721555	152.141384	TRUE	93	NB16, NB23	HIGH
H0_00044	Hazard / Obstruction	Footpath	Other (See comment)						Investigate relocation of obstruction				N/A	pH	CHURCH STREET	Nelson Bay	-32.721719	152.141343	TRUE	92	NB17, NB19, NB20, NB21	HIGH
H0_00045	Hazard / Obstruction	Footpath	Vegetation						Vegetation maintenance				\$	220.00	STOCKTON STREET	Nelson Bay	-32.7247	152.140569	TRUE	107	NB13	MEDIUM
H0_00046	Hazard / Obstruction	Footpath	Vegetation						Vegetation maintenance				\$	220.00	STOCKTON STREET	Nelson Bay	-32.724818	152.140543	TRUE	107	NB13	MEDIUM
H0_00047	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	AQUATIC CLOSE	Nelson Bay	-32.730951	152.115487	TRUE	165	SB8B	MEDIUM
H0_00048	Hazard / Obstruction	Footpath	Other (See comment)						Investigate relocation of obstruction				N/A	utility structure	TOWN CENTRE CIRCUIT	Salamanca Bay	-32.716058	152.107422	TRUE	33	SB2, SB3A, SB3C, SB3D	HIGH
H0_00049	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	TOWN CENTRE CIRCUIT	Salamanca Bay	-32.716058	152.106403	TRUE	30	SB3A, SB3C, SB3D	MEDIUM
H0_00050	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	TOWN CENTRE CIRCUIT	Salamanca Bay	-32.716097	152.109375	TRUE	31	SB2	MEDIUM
H0_00052	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	TOWN CENTRE CIRCUIT	Salamanca Bay	-32.73688	152.106014	FALSE	31	SB2	MEDIUM
H0_00053	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	GRAHAM STREET	Boat Harbour	-32.786944	152.109497	FALSE	199	BH4	MEDIUM
H0_00054	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	BOAT HARBOUR ROAD	Boat Harbour	-32.785943	152.111628	FALSE	201	BH5	MEDIUM
H0_00055	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	TOMAREE CRESCENT	Boat Harbour	-32.785059	152.112715	TRUE	202	BH5	MEDIUM
H0_00056	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	BOAT HARBOUR ROAD	Boat Harbour	-32.785452	152.1123	TRUE	202	BH5	MEDIUM
H0_00057	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	OCEAN PARADE	Boat Harbour	-32.787279	152.112995	TRUE	200	BH4	MEDIUM
H0_00058	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	GRAHAM STREET	Boat Harbour	-32.786972	152.109759	TRUE	199	BH4	MEDIUM
H0_00059	Hazard / Obstruction	No facility	Vegetation						Vegetation maintenance				\$	220.00	GRAHAM STREET	Boat Harbour	-32.787059	152.109516	TRUE	199	BH4	MEDIUM
H0_00060	Hazard / Obstruction	No facility	Other (See comment)					Other (See comment)							KINGSLEY DRIVE	Boat Harbour	-32.78896	152.110551	FALSE	196	BH2	MEDIUM
H0_00061	Hazard / Obstruction	Footpath	Power pole						Investigate relocation of obstruction				N/A	cliff face and fence	DONALD STREET	Nelson Bay	-32.72157951	152.146441	FALSE	111	NB5	MEDIUM
H2_00001	Hazardous Crossing Location	No facility			Hazardous crossing location / no formal crossing facility				Investigate crossing facility				N/A	there is no formal crossing opportunity for pedestrians to access the bus stop on the western side of port stephens drive, high speed road, and pedestrian sightlines are poor when crossing from west to east	PORT STEPHENS DRIVE	Taylor Beach	-32.747063	152.072322	TRUE	259	TB5	LOW
H2_00002	Hazardous Crossing Location	No facility			Hazardous crossing location / no formal crossing facility				Investigate crossing facility				N/A	entrance to burnings	PORT STEPHENS DRIVE	Taylor Beach	-32.748772	152.067023	TRUE	257	TB5	LOW
H2_00003	Hazardous Crossing Location	Footpath			Hazardous crossing location / no formal crossing facility				Investigate crossing facility				N/A	high traffic volumes in the area, consider a refuge	BAGMALL AVENUE	Soldiers Point	-32.710902	152.067782	FALSE	21	SB6	MEDIUM
H2_00004	Hazardous Crossing Location	Footpath			Hazardous crossing location / no formal crossing facility				Investigate crossing facility				N/A	high traffic volumes in the area, consider a refuge	SOLDIERS POINT ROAD	Salamanca Bay	-32.730912	152.070345	TRUE	19	SB3A	HIGH
H2_00005	Hazardous Crossing Location	No facility			Hazardous crossing location / no formal crossing facility				Investigate crossing facility				N/A		MARINE DRIVE	Fingal Bay	-32.748133	152.170132	TRUE	173	PB1, PB13	MEDIUM
H2_00006	Hazardous Crossing Location	Footpath			Hazardous crossing location / no formal crossing facility				Investigate crossing facility				N/A	the turn angle is very wide for vehicles that can approach at high speed, and pedestrian sightlines are poor	ORANA STREET	Fingal Bay	-32.746776	152.169482	TRUE	187	PB1	LOW
H2_00007	Hazardous Crossing Location	Footpath			Hazardous crossing location / no formal crossing facility				Investigate crossing facility				N/A		MARINE DRIVE	Fingal Bay	-32.744965	152.169382	TRUE	187	PB1	LOW
H2_00008	Hazardous Crossing Location	Footpath			Hazardous crossing location / no formal crossing facility				Investigate crossing facility				N/A		SHOAL BAY ROAD	Shoal Bay	-32.720284	152.175676	TRUE	145	S1, S6	MEDIUM
H2_00009	Hazardous Crossing Location	Footpath			Hazardous crossing location / no formal crossing facility				Investigate crossing facility				N/A		SOLDIERS POINT ROAD	Salamanca Bay	-32.736906	152.082048	TRUE	24	SB3A	HIGH
H2_00010	Hazardous Crossing Location	No facility			Hazardous crossing location / no formal crossing facility				Investigate crossing facility				N/A		PORT STEPHENS DRIVE	Salamanca Bay	-32.73471	152.084095	TRUE	27	SB3C	HIGH
H2_00011	Hazardous Crossing Location	Footpath			Hazardous crossing location / no formal crossing facility				Investigate crossing facility				N/A		PORT STEPHENS DRIVE	Salamanca Bay	-32.734979	152.08374	TRUE	29	SB3A, SB3C, SB3D	HIGH
H2_0																						



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K1_0007	Kerb Extension	Shared path	Compliant												BAGMALL BEACH ROAD	Corlette	-32.728317	152.115511	TRUE	58	CLA	MEDIUM
K1_0008	Kerb Extension	Shared path	Compliant												BAGMALL BEACH ROAD	Corlette	-32.728384	152.115769	TRUE	58	CLA	MEDIUM
K1_0009	Kerb Extension	Footpath	Not compliant	Width too narrow (Less than 2.0m)					Reconstruct kerb extension				\$	4,080.00	SPINNAKER WAY	Corlette	-32.725795	152.121274	TRUE	60	C18, C2	MEDIUM
K1_0010	Kerb Extension	Footpath	Not compliant	Width too narrow (Less than 2.0m)					Reconstruct kerb extension				\$	5,180.00	SPINNAKER WAY	Corlette	-32.725691	152.121238	TRUE	60	C18, C2	MEDIUM
K1_0011	Kerb Extension	Footpath	Not compliant	Width too narrow (Less than 2.0m)					Reconstruct kerb extension				\$	6,630.00	STOCKTON STREET	Nelson Bay	-32.723548	152.148215	TRUE	108	NB1A, NB7, NB13, NB18	MEDIUM
K1_0012	Kerb Extension	Footpath	Not compliant	Width too narrow (Less than 2.0m)					Reconstruct kerb extension				\$	4,080.00	STOCKTON STREET	Nelson Bay	-32.723575	152.148381	TRUE	108	NB1A, NB7, NB13, NB18	MEDIUM
K1_0013	Kerb Extension	Footpath	Compliant												STOCKTON STREET	Nelson Bay	-32.72204	152.148385	TRUE	108	NB1A, NB7, NB13, NB18	MEDIUM
K1_0014	Kerb Extension	Footpath	Not compliant	Width too narrow (Less than 2.0m)					Reconstruct kerb extension				\$	4,080.00	DONALD STREET	Nelson Bay	-32.722785	152.14868	TRUE	99	N85	MEDIUM
K1_0015	Kerb Extension	Footpath	Not compliant	Width too narrow (Less than 2.0m)					Reconstruct kerb extension				\$	4,080.00	DONALD STREET	Nelson Bay	-32.722785	152.148687	TRUE	99	N85	MEDIUM
K1_0016	Kerb Extension	Footpath	Compliant												DONALD STREET	Nelson Bay	-32.721854	152.148466	TRUE	98	NB15, NB17, NB20, NB21	HIGH
K1_0017	Kerb Extension	Footpath	Compliant												STOCKTON STREET	Nelson Bay	-32.721827	152.148312	TRUE	97	NB2, NB3, NB5	HIGH
K1_0018	Kerb Extension	Footpath	Compliant												DONALD STREET	Nelson Bay	-32.722116	152.14869	TRUE	99	N85	MEDIUM
K1_0019	Kerb Extension	Footpath	Not compliant	Width too narrow (Less than 2.0m)					Reconstruct kerb extension				\$	4,080.00	YACABBA STREET	Nelson Bay	-32.7222	152.148799	TRUE	110	N88	MEDIUM
K1_0020	Kerb Extension	Footpath	Not compliant	Width too narrow (Less than 2.0m)					Reconstruct kerb extension				\$	4,080.00	YACABBA STREET	Nelson Bay	-32.72222	152.148917	TRUE	110	N88	MEDIUM
K1_0021	Kerb Extension	Footpath	Not compliant	Width too narrow (Less than 2.0m)					Reconstruct kerb extension				\$	4,080.00	DONALD STREET	Nelson Bay	-32.722172	152.14501	TRUE	111	N85	MEDIUM
K1_0022	Kerb Extension	Footpath	Not compliant	Width too narrow (Less than 2.0m)					Reconstruct kerb extension				\$	4,080.00	DONALD STREET	Nelson Bay	-32.722047	152.145012	TRUE	111	N85	MEDIUM
K1_0023	Kerb Extension	Footpath	Compliant												YACABBA STREET	Nelson Bay	-32.721949	152.148895	TRUE	101	N86	MEDIUM
K1_0024	Kerb Extension	Footpath	Compliant												YACABBA STREET	Nelson Bay	-32.721939	152.148852	TRUE	101	N86	MEDIUM
K1_0025	Kerb Extension	Footpath	Compliant												DONALD STREET	Nelson Bay	-32.722014	152.148733	TRUE	99	N85	MEDIUM
K1_0026	Kerb Extension	Footpath	Compliant												MAGNUS STREET	Nelson Bay	-32.721426	152.14485	TRUE	100	NB18, NB3	HIGH
K1_0027	Kerb Extension	Footpath	Compliant												MAGNUS STREET	Nelson Bay	-32.721358	152.144915	TRUE	102	N86	MEDIUM
K1_0028	Kerb Extension	Footpath	Compliant												MAGNUS STREET	Nelson Bay	-32.721231	152.144912	TRUE	100	NB18, NB3	HIGH
K1_0029	Kerb Extension	Footpath	Compliant												STOCKTON STREET	Nelson Bay	-32.721466	152.148786	TRUE	96	NB3, NB16	HIGH
K1_0030	Kerb Extension	Footpath	Compliant												STOCKTON STREET	Nelson Bay	-32.72118	152.148677	TRUE	96	NB2, NB15	HIGH
K1_0031	Kerb Extension	Footpath	Compliant												MAGNUS STREET	Nelson Bay	-32.721286	152.148823	TRUE	100	NB18, NB3	HIGH
K1_0032	Kerb Extension	Footpath	Compliant												VICTORIA PARADE	Nelson Bay	-32.719834	152.146487	TRUE	113	NB2, N86	HIGH
K1_0033	Kerb Extension	Footpath	Compliant												VICTORIA PARADE	Nelson Bay	-32.719765	152.146459	TRUE	113	NB2, N86	HIGH
K1_0034	Kerb Extension	Shared path	Compliant												SALAMANDER WAY	Salamander Bay	-32.718238	152.10584	TRUE	29	SB3A, SB3C, SB3D	HIGH
K1_0035	Kerb Extension	Shared path	Compliant												SALAMANDER WAY	Salamander Bay	-32.718403	152.105988	TRUE	29	SB3A, SB3C, SB3D	HIGH
K1_0036	Kerb Extension	Footpath	Not compliant	Length too narrow (Less than 6.0m)					Reconstruct kerb extension				\$	4,080.00	SALAMANDER WAY	Salamander Bay	-32.717949	152.11009	TRUE	37	SB6A	MEDIUM
K1_0037	Kerb Extension	Footpath	Compliant												BAGMALL BEACH ROAD	Salamander Bay	-32.715299	152.110075	TRUE	47	SB11	MEDIUM
K1_0038	Kerb Extension	Footpath	Compliant												BAGMALL BEACH ROAD	Salamander Bay	-32.71404	152.110054	TRUE	43	SB5, SB10	MEDIUM
K1_0039	Kerb Extension	Footpath	Compliant												GAN GAN ROAD	Anna Bay	-32.777699	152.085229	TRUE	243	AFB, AF11, AF12	HIGH
K1_0040	Kerb Extension	No facility	Compliant												GAN GAN ROAD	Anna Bay	-32.777603	152.085212	TRUE	243	AFB, AF11, AF12	HIGH
K1_0001	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	SEAWATER DRIVE	Taylor Beach	-32.735013	152.069758	TRUE	254	TB3A	LOW
K1_0002	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	Taylor Beach	Taylor Beach	-32.731848	152.069713	TRUE	254	TB3A	LOW
K1_0003	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	SEAWATER DRIVE	Taylor Beach	-32.735751	152.0689	FALSE	256	TB3A	LOW
K1_0004	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	SKY CLOSE	Taylor Beach	-32.731378	152.068794	TRUE	252	TB2	LOW
K1_0005	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	SKY CLOSE	Taylor Beach	-32.735339	152.068808	TRUE	252	TB2	LOW
K1_0006	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	FORT STEPHENS DRIVE	Taylor Beach	-32.751264	152.068591	TRUE	257	TB5	LOW
K1_0007	Kerb Ramp	No facility	Not compliant	Visually DOA non compliant dimensions/grades					Reconstruct kerb ramp				\$	4,400.00	KARA CRESCENT	Taylor Beach	-32.747607	152.07436	TRUE	258	TB4	LOW
K1_0008	Kerb Ramp	No facility	Not compliant	Visually DOA non compliant dimensions/grades					Reconstruct kerb ramp				\$	4,400.00	KARA CRESCENT	Taylor Beach	-32.747597	152.074021	TRUE	258	TB4	LOW
K1_0009	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	TRADES COURT	Taylor Beach	-32.747236	152.07236	TRUE	258	TB4	LOW
K1_0010	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	TRADES COURT	Taylor Beach	-32.747167	152.072417	TRUE	258	TB4	LOW
K1_0011	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp					Reconstruct kerb ramp				\$	4,400.00	INNOVATION CLOSE	Taylor Beach	-32.746991	152.068915	TRUE	257	TB5	LOW
K1_0012	Kerb Ramp	Shared path	Compliant												FORT STEPHENS DRIVE	Taylor Beach	-32.746209	152.068815	TRUE	257	TB5	LOW
K1_0013	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp					Reconstruct kerb ramp				\$	4,400.00	INNOVATION CLOSE	Taylor Beach	-32.748515	152.068873	TRUE	257	TB5	LOW
K1_0014	Kerb Ramp	Shared path	Not compliant	Misaligned with opposite kerb ramp					Reconstruct kerb ramp				\$	4,400.00	FORT STEPHENS DRIVE	Taylor Beach	-32.749145	152.068674	TRUE	257	TB5	LOW
K1_0015	Kerb Ramp	Shared path	Compliant												TAYLORS BEACH ROAD	Taylor Beach	-32.749727	152.068616	TRUE	257	TB5	LOW
K1_0016	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp					Reconstruct kerb ramp				\$	4,400.00	FORT STEPHENS DRIVE	Taylor Beach	-32.749788	152.06861	TRUE	257	TB5	LOW
K1_0017	Kerb Ramp	Shared path	Compliant												TAYLORS BEACH ROAD	Taylor Beach	-32.748415	152.068382	TRUE	257	TB5	LOW
K1_0018	Kerb Ramp	Footpath	Not compliant	Damaged / poor condition					Reconstruct kerb ramp				\$	4,400.00	FORT STEPHENS DRIVE	Taylor Beach	-32.748559	152.068617	TRUE	257	TB5	LOW
K1_0019	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	FORT STEPHENS DRIVE	Taylor Beach	-32.74885	152.069124	TRUE	257	TB5	LOW
K1_0020	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	FORT STEPHENS DRIVE	Taylor Beach	-32.748727	152.069294	TRUE	257	TB5	LOW
K1_0021	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	FORT STEPHENS DRIVE	Taylor Beach	-32.75115	152.06859	TRUE	257	TB5	LOW
K1_0022	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	RIDGEWAY AVENUE	Soldiers Point	-32.701178	152.064553	TRUE	5	SP28, SP2A, SP3A	MEDIUM
K1_0023	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp		Visually DOA non compliant dimensions/grades			Reconstruct kerb ramp				\$	4,400.00	RIDGEWAY AVENUE	Soldiers Point	-32.701285	152.064556	TRUE	5	SP28, SP2A, SP3A	MEDIUM
K1_0024	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	SOLDIERS POINT ROAD	Soldiers Point	-32.701325	152.064789	TRUE	2	SP1	MEDIUM
K1_0025	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	TOMAREE STREET	Soldiers Point	-32.701224	152.06469	TRUE	5	SP28, SP2A, SP3A	MEDIUM
K1_0026	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	TOMAREE STREET	Soldiers Point	-32.701196	152.064614	TRUE	5	SP28, SP2A, SP3A	MEDIUM
K1_0027	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp		Visually DOA non compliant dimensions/grades			Reconstruct kerb ramp				\$	4,400.00	SOLDIERS POINT ROAD	Soldiers Point	-32.701319	152.064607	FALSE	5	SP28, SP2A, SP3A	MEDIUM
K1_0028	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	MITCHELL FREET	Soldiers Point	-32.701269	152.06481	TRUE	2	SP1	MEDIUM
K1_0029	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	MITCHELL FREET	Soldiers Point	-32.701267	152.064719	TRUE	2	SP1	MEDIUM
K1_0030	Kerb Ramp	Footpath	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	TOMAREE STREET	Soldiers Point	-32.701231	152.061763	TRUE	5	SP28, SP2A, SP3A	MEDIUM
K1_0031	Kerb Ramp	Footpath	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	TOMAREE STREET	Soldiers Point	-32.701245	152.063662	TRUE	5	SP28, SP2A, SP3A	MEDIUM
K1_0032	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	SUNSET BOULEVARD	Soldiers Point	-32.701432	152.063521	TRUE	5	SP28, SP2A, SP3A	MEDIUM
K1_0033	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	SUNSET BOULEVARD	Soldiers Point	-32.701469	152.063434	TRUE	4	SP28	MEDIUM
K1_0034	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	RESHAWEN AVENUE	Soldiers Point	-32.702222	152.06368	TRUE	7	SP3A	MEDIUM
K1_0035	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	RESHAWEN AVENUE	Soldiers Point	-32.700319	152.063693	TRUE	7	SP3A	MEDIUM
K1_0036	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	RESHAWEN AVENUE	Soldiers Point	-32.702237	152.06356	TRUE	7	SP3A	MEDIUM
K1_0037	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	RESHAWEN AVENUE	Soldiers Point	-32.700328	152.063571	TRUE	7	SP3A	MEDIUM
K1_0038	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp				\$	3,300.00	SUNSET BOULEVARD	Soldiers Point	-32.704222	152.063912	TRUE	7	SP3A	MEDIUM
K1_0039	Kerb Ramp	No facility	Not compliant	Missing					Construct kerb ramp</													



ID Label	Feature Type	Path Type	Compliance Criteria	Assessment Criteria (1)	Assessment Criteria (2)	Assessment Criteria (3)	Assessment Criteria (4)	Improvement Recommendation (1)	Improvement Recommendation (2)	Improvement Recommendation (3)	Improvement Recommendation (4)	Cost Estimate	Comments	Road Name	Subur/Name	Latitude	Longitude	HasPhoto	SubSection No.	Route No.	Prioritisation
KR_00101	Kerb Ramp	Footpath	Compliant											DEMANS ROAD	Salvander Bay	-32.721004	152.076183	TRUE	20	3838	HIGH
KR_00102	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	RANDALL DRIVE	Salvander Bay	-32.720922	152.076677	TRUE	21	3838	HIGH
KR_00103	Kerb Ramp	Footpath	Compliant											DEMANS ROAD	Salvander Bay	-32.721096	152.076233	TRUE	20	3838	HIGH
KR_00104	Kerb Ramp	Footpath	Compliant											SOLDERS POINT ROAD	Salvander Bay	-32.721043	152.076577	TRUE	260	383A	HIGH
KR_00105	Kerb Ramp	Footpath	Compliant											CALEDONIA CLOSE	Salvander Bay	-32.721381	152.076518	TRUE	20	3838	HIGH
KR_00106	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	CALEDONIA CLOSE	Salvander Bay	-32.721425	152.076511	TRUE	20	3838	HIGH
KR_00107	Kerb Ramp	Footpath	Compliant											DEMANS ROAD	Salvander Bay	-32.7212	152.076138	TRUE	20	3838	HIGH
KR_00108	Kerb Ramp	Footpath	Compliant											MCNALLY AVENUE	Salvander Bay	-32.721707	152.077489	TRUE	27	383A	HIGH
KR_00109	Kerb Ramp	Footpath	Compliant											MCNALLY AVENUE	Salvander Bay	-32.721652	152.077464	TRUE	260	383A	HIGH
KR_00110	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	RANDALL DRIVE	Salvander Bay	-32.721299	152.076917	TRUE	21	3838	HIGH
KR_00111	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	RANDALL DRIVE	Salvander Bay	-32.721203	152.077944	TRUE	21	3838	HIGH
KR_00112	Kerb Ramp	Footpath	Compliant											BOULDER BAY ROAD	Fingal Bay	-32.748283	152.170035	TRUE	173	FB1, FB1	MEDIUM
KR_00113	Kerb Ramp	Footpath	Compliant											MARKET STREET	Fingal Bay	-32.748754	152.169566	TRUE	174	FB05, FB12, FB16	MEDIUM
KR_00114	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MARKET STREET	Fingal Bay	-32.749796	152.170793	TRUE	170	FB15, FB12	MEDIUM
KR_00115	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MARKET STREET	Fingal Bay	-32.748878	152.170615	TRUE	170	FB15, FB12	MEDIUM
KR_00116	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SHORT STREET	Fingal Bay	-32.750116	152.170476	TRUE	167	FB15, FB13	MEDIUM
KR_00117	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TUNA CRESCENT	Fingal Bay	-32.748761	152.168896	TRUE	179	FB1A	MEDIUM
KR_00118	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TUNA CRESCENT	Fingal Bay	-32.748862	152.168893	TRUE	179	FB1A	MEDIUM
KR_00119	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SHORT STREET	Fingal Bay	-32.750146	152.170338	TRUE	167	FB15, FB13	MEDIUM
KR_00120	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		Fingal Bay	-32.749255	152.169115	TRUE	177	FB15	MEDIUM
KR_00121	Kerb Ramp	Footpath	Not compliant	None: path level with road				Investigate provision of TGI				N/A			Fingal Bay	-32.748377	152.169148	TRUE	177	FB15	MEDIUM
KR_00122	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BENT STREET	Fingal Bay	-32.750919	152.169055	TRUE	179	FB1A	MEDIUM
KR_00123	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BENT STREET	Fingal Bay	-32.750123	152.169644	TRUE	179	FB1A	MEDIUM
KR_00124	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	BENT STREET	Fingal Bay	-32.749372	152.170069	TRUE	175	FB15	MEDIUM
KR_00125	Kerb Ramp	Footpath	Compliant											MARKET STREET	Fingal Bay	-32.748381	152.169979	TRUE	175	FB15	MEDIUM
KR_00126	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BOULDER BAY ROAD	Fingal Bay	-32.748889	152.168813	TRUE	182	FB7, FB9	MEDIUM
KR_00127	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MARKET STREET	Fingal Bay	-32.748854	152.169428	TRUE	174	FB15, FB12, FB16	MEDIUM
KR_00128	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BOULDER BAY ROAD	Fingal Bay	-32.748839	152.168856	TRUE	182	FB7, FB9	MEDIUM
KR_00129	Kerb Ramp	Footpath	Compliant											FARM ROAD	Fingal Bay	-32.749759	152.168827	TRUE	185	FB1, FB4	MEDIUM
KR_00130	Kerb Ramp	Footpath	Compliant											BOULDER BAY ROAD	Fingal Bay	-32.748185	152.169914	TRUE	173	FB1, FB11	MEDIUM
KR_00131	Kerb Ramp	Footpath	Not compliant	Damaged / poor condition				Reconstruct kerb ramp				\$	4,400.00	FARM ROAD	Fingal Bay	-32.748914	152.167793	TRUE	185	FB1, FB4	MEDIUM
KR_00132	Kerb Ramp	Shared path	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	MARINE DRIVE	Fingal Bay	-32.747891	152.169956	TRUE	187	FB1	LOW
KR_00133	Kerb Ramp	Shared path	Compliant											MARINE DRIVE	Fingal Bay	-32.747804	152.170083	TRUE	187	FB1	LOW
KR_00134	Kerb Ramp	Footpath	Compliant											FARM ROAD	Fingal Bay	-32.749046	152.167836	TRUE	185	FB1, FB4	MEDIUM
KR_00135	Kerb Ramp	Footpath	Not compliant	Damaged / poor condition				Reconstruct kerb ramp				\$	4,400.00	FARM ROAD	Fingal Bay	-32.749004	152.167859	TRUE	186	FB1	MEDIUM
KR_00136	Kerb Ramp	Footpath	Compliant											FARM ROAD	Fingal Bay	-32.748983	152.167798	TRUE	186	FB1	MEDIUM
KR_00137	Kerb Ramp	Footpath	Compliant											MARINE DRIVE	Fingal Bay	-32.748853	152.168869	TRUE	187	FB1	LOW
KR_00138	Kerb Ramp	Footpath	Not compliant	Visually DGA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	MARINE DRIVE	Fingal Bay	-32.746882	152.169152	TRUE	187	FB1	LOW
KR_00139	Kerb Ramp	Footpath	Not compliant	Visually DGA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	ORANA STREET	Fingal Bay	-32.746883	152.169488	TRUE	187	FB1	LOW
KR_00140	Kerb Ramp	Footpath	Compliant											ORANA STREET	Fingal Bay	-32.746724	152.169438	TRUE	187	FB1	LOW
KR_00141	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SHORT STREET	Fingal Bay	-32.750705	152.170757	TRUE	167	FB15, FB13	MEDIUM
KR_00142	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SHORT STREET	Fingal Bay	-32.750815	152.170539	TRUE	167	FB15, FB13	MEDIUM
KR_00143	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SQUIRE STREET	Fingal Bay	-32.751182	152.170731	TRUE	166	FB10	MEDIUM
KR_00144	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SQUIRE STREET	Fingal Bay	-32.751025	152.170779	TRUE	166	FB10	MEDIUM
KR_00145	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	AMAROD CRESCENT	Fingal Bay	-32.752091	152.166772	TRUE	181	FB9	MEDIUM
KR_00146	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	AMAROD CRESCENT	Fingal Bay	-32.752865	152.166977	TRUE	181	FB9	MEDIUM
KR_00147	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	PACIFIC DRIVE	Fingal Bay	-32.752325	152.166275	TRUE	181	FB9	MEDIUM
KR_00148	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	PACIFIC DRIVE	Fingal Bay	-32.752405	152.166095	TRUE	181	FB9	MEDIUM
KR_00149	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp			Visually DGA non compliant dimensions/grades	Reconstruct kerb ramp				\$	4,400.00	BOULDER BAY ROAD	Fingal Bay	-32.749345	152.168629	TRUE	181	FB9	MEDIUM
KR_00150	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp			Visually DGA non compliant dimensions/grades	Reconstruct kerb ramp				\$	4,400.00	ROCKY POINT ROAD	Fingal Bay	-32.751966	152.166176	TRUE	181	FB9	MEDIUM
KR_00151	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BENT STREET	Fingal Bay	-32.751763	152.166887	TRUE	182	FB7, FB9	MEDIUM
KR_00152	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BENT STREET	Fingal Bay	-32.751661	152.167006	TRUE	182	FB7, FB9	MEDIUM
KR_00153	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp			Visually DGA non compliant dimensions/grades	Reconstruct kerb ramp				\$	4,400.00	ELIKA CLOSE	Fingal Bay	-32.750911	152.167959	TRUE	182	FB7, FB9	MEDIUM
KR_00154	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp			Visually DGA non compliant dimensions/grades	Reconstruct kerb ramp				\$	4,400.00	ELIKA CLOSE	Fingal Bay	-32.750786	152.167695	TRUE	182	FB7, FB9	MEDIUM
KR_00155	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ELIUCKE CLOSE	Fingal Bay	-32.751529	152.165547	TRUE	263	FB7	MEDIUM
KR_00156	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ELIUCKE CLOSE	Fingal Bay	-32.751528	152.165528	TRUE	263	FB7	MEDIUM
KR_00157	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CREWELL PLACE	Fingal Bay	-32.751238	152.163731	TRUE	263	FB7	MEDIUM
KR_00158	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CREWELL PLACE	Fingal Bay	-32.751189	152.163669	TRUE	263	FB7	MEDIUM
KR_00159	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp			Visually DGA non compliant dimensions/grades	Reconstruct kerb ramp				\$	4,400.00	LEGANA CLOSE	Fingal Bay	-32.750483	152.163895	TRUE	263	FB7	MEDIUM
KR_00160	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp			Visually DGA non compliant dimensions/grades	Reconstruct kerb ramp				\$	4,400.00	LEGANA CLOSE	Fingal Bay	-32.750291	152.163994	TRUE	263	FB7	MEDIUM
KR_00161	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CORAL STREET	Fingal Bay	-32.748805	152.163479	TRUE	192	FB6, FB8	MEDIUM
KR_00162	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ALA MODANA WAY	Fingal Bay	-32.748979	152.163147	TRUE	192	FB6, FB8	MEDIUM
KR_00163	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CORAL STREET	Fingal Bay	-32.748878	152.163105	TRUE	192	FB6, FB8	MEDIUM
KR_00164	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	ALA MODANA WAY	Fingal Bay	-32.748714	152.163165	TRUE	192	FB6, FB8	MEDIUM
KR_00165	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BOWLING CLUB ACCESS ROAD	Fingal Bay	-32.748507	152.162827	TRUE	191	FB6	MEDIUM
KR_00166	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BOWLING CLUB ACCESS ROAD	Fingal Bay	-32.748502	152.162977	TRUE	191	FB6	MEDIUM
KR_00167	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SURF CLOSE	Fingal Bay	-32.747394	152.163438	TRUE	191	FB6	MEDIUM
KR_00168	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SURF CLOSE	Fingal Bay	-32.747374	152.163483	TRUE	190	FB3	MEDIUM
KR_00169	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	WHITESANDS ROAD	Fingal Bay	-32.745789	152.163995	TRUE	190	FB3	MEDIUM
KR_00170	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	WHITESANDS ROAD	Fingal Bay	-32.745737	152.166179	TRUE	190	FB3	MEDIUM
KR_00171	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	FARM ROAD	Fingal Bay	-32.743489	152.166448	TRUE	188	FB3	MEDIUM
KR_00172	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	FARM ROAD	Fingal Bay	-32.744963	152.166804	TRUE	188	FB3	MEDIUM
KR_00173	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	FARM ROAD	Fingal Bay	-32.745082	152.166797	TRUE	188	FB3	MEDIUM
KR_00174	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$									



ID Label	Feature Type	Path Type	Compliance Criteria	Assessment Criteria (1)	Assessment Criteria (2)	Assessment Criteria (3)	Assessment Criteria (4)	Improvement Recommendation (1)	Improvement Recommendation (2)	Improvement Recommendation (3)	Improvement Recommendation (4)	Cost Estimate	Comments	Road Name	SubstName	Latitude	Longitude	HasPhoto	SubSection No.	Route No.	Prioritisation	
KR_0235	Kerb Ramp	Shared path	Compliant											SHOAL BAY ROAD	Shoal Bay	-32.719729	152.179055	TRUE	164	51	MEDIUM	
KR_0236	Kerb Ramp	Shared path	Compliant											SHOAL BAY ROAD	Shoal Bay	-32.719708	152.179558	TRUE	164	51	MEDIUM	
KR_0237	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp	Visually DGA non compliant dimensions/grades	Other (See comment)		Reconstruct kerb ramp				\$	4,400.00	Isoltra pit destruction	SHOAL BAY ROAD	Shoal Bay	-32.720345	152.175848	TRUE	146	52A	MEDIUM
KR_0238	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00		SHOAL BAY ROAD	Shoal Bay	-32.720378	152.174836	TRUE	145	51, 56	MEDIUM
KR_0239	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		SHOAL BAY ROAD	Shoal Bay	-32.720601	152.175872	TRUE	149	52B, 54	MEDIUM
KR_0240	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00		SHOAL BAY ROAD	Shoal Bay	-32.720379	152.174713	TRUE	145	51, 56	MEDIUM
KR_0241	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		SHOAL BAY ROAD	Shoal Bay	-32.720398	152.175736	TRUE	149	52B, 54	MEDIUM
KR_0242	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00		SHOAL BAY ROAD	Shoal Bay	-32.720495	152.177142	TRUE	145	51, 56	MEDIUM
KR_0243	Kerb Ramp	Footpath	Not compliant	Visually DGA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00		SHOAL BAY ROAD	Shoal Bay	-32.720528	152.175732	TRUE	145	51, 56	MEDIUM
KR_0244	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		OLD MAIN ROAD	Anna Bay	-32.719158	152.086215	TRUE	245	AF10	MEDIUM
KR_0245	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		MORNING POINT ROAD	Anna Bay	-32.719499	152.086181	TRUE	226	AF11	MEDIUM
KR_0246	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		SHEILY CLOSE	Anna Bay	-32.719475	152.085608	TRUE	245	AF10	MEDIUM
KR_0247	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		SHEILY CLOSE	Anna Bay	-32.719517	152.0855	TRUE	245	AF10	MEDIUM
KR_0248	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		CAMPBELL AVENUE	Anna Bay	-32.719512	152.084413	TRUE	244	AF1, AF10	MEDIUM
KR_0249	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		CAMPBELL AVENUE	Anna Bay	-32.719041	152.084213	TRUE	244	AF1, AF10	MEDIUM
KR_0250	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		HARRIS ROAD	Anna Bay	-32.719827	152.083651	TRUE	246	AF1	MEDIUM
KR_0251	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		HARRIS ROAD	Anna Bay	-32.719845	152.083504	TRUE	246	AF1	MEDIUM
KR_0252	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		DAVIDSON STREET	Anna Bay	-32.780696	152.083671	TRUE	241	AF5, AF14	MEDIUM
KR_0253	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		DAVIDSON STREET	Anna Bay	-32.780751	152.083602	TRUE	241	AF5, AF14	MEDIUM
KR_0254	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		CAMPBELL AVENUE	Anna Bay	-32.719715	152.084209	TRUE	238	AF4	MEDIUM
KR_0255	Kerb Ramp	No facility	Compliant											CAMPBELL AVENUE	Anna Bay	-32.719708	152.084189	TRUE	238	AF4	MEDIUM	
KR_0256	Kerb Ramp	Footpath	Not compliant	Visually DGA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00		SCOTT CRESCENT	Salamanca Bay	-32.722157	152.079877	TRUE	27	581A	HIGH
KR_0257	Kerb Ramp	Footpath	Not compliant	Visually DGA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00		SCOTT CRESCENT	Salamanca Bay	-32.722454	152.079862	TRUE	22	581A	HIGH
KR_0258	Kerb Ramp	Shared path	Compliant											GELCHIST ROAD	Salamanca Bay	-32.723982	152.07962	TRUE	24	581A	HIGH	
KR_0259	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		GELCHIST ROAD	Salamanca Bay	-32.724083	152.079831	TRUE	24	581A	HIGH
KR_0260	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		GEORGE ROAD	Salamanca Bay	-32.726175	152.079923	TRUE	24	581A	HIGH
KR_0261	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		GEORGE ROAD	Salamanca Bay	-32.726339	152.079849	TRUE	24	581A	HIGH
KR_0262	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		GEORGE ROAD	Salamanca Bay	-32.726829	152.079074	TRUE	24	581A	HIGH
KR_0263	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00		GEORGE ROAD	Salamanca Bay	-32.726995	152.079149	TRUE	24	581A	HIGH
KR_0264	Kerb Ramp	Footpath	Compliant											TARRANT ROAD	Salamanca Bay	-32.730388	152.081844	TRUE	24	581A	HIGH	
KR_0265	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		SOLDIERS POINT ROAD	Salamanca Bay	-32.730948	152.081888	TRUE	24	581A	HIGH
KR_0266	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00		TARRANT ROAD	Salamanca Bay	-32.730735	152.081787	TRUE	24	581A	HIGH
KR_0267	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		SOLDIERS POINT ROAD	Salamanca Bay	-32.730936	152.082154	TRUE	24	581A	HIGH
KR_0268	Kerb Ramp	Footpath	Compliant											SOLDIERS POINT ROAD	Salamanca Bay	-32.731217	152.082151	TRUE	24	581A	HIGH	
KR_0269	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		MULLER STREET	Salamanca Bay	-32.731373	152.082161	TRUE	25	581D	MEDIUM
KR_0270	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		MULLER STREET	Salamanca Bay	-32.731244	152.082161	TRUE	25	581D	MEDIUM
KR_0271	Kerb Ramp	No facility	Compliant											SOLDIERS POINT ROAD	Salamanca Bay	-32.730404	152.083006	TRUE	26	581A, 581D	MEDIUM	
KR_0272	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		FORT STEPHENS DRIVE	Salamanca Bay	-32.734762	152.084149	TRUE	27	581C	HIGH
KR_0273	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		FORT STEPHENS DRIVE	Salamanca Bay	-32.734657	152.084042	TRUE	27	581C	HIGH
KR_0274	Kerb Ramp	Footpath	Compliant											SOLDIERS POINT ROAD	Salamanca Bay	-32.734734	152.083651	TRUE	26	581A, 581D	MEDIUM	
KR_0275	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		FORT STEPHENS DRIVE	Salamanca Bay	-32.734652	152.083857	TRUE	26	581A, 581D	MEDIUM
KR_0276	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		FORT STEPHENS DRIVE	Salamanca Bay	-32.735044	152.083811	TRUE	29	581A, 581C, 581D	HIGH
KR_0277	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		SALAMANDER WAY	Salamanca Bay	-32.735004	152.084235	TRUE	29	581A, 581C, 581D	HIGH
KR_0278	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		HORIZONS DRIVE	Salamanca Bay	-32.738876	152.090771	TRUE	29	581A, 581C, 581D	HIGH
KR_0279	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		HORIZONS DRIVE	Salamanca Bay	-32.738913	152.091165	TRUE	29	581A, 581C, 581D	HIGH
KR_0280	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		THE PIER	Salamanca Bay	-32.732942	152.084955	TRUE	27	581C	HIGH
KR_0281	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		YACHTSMAN CRESCENT	Salamanca Bay	-32.733521	152.085289	TRUE	27	581C	HIGH
KR_0282	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		THE PIER	Salamanca Bay	-32.731291	152.084145	TRUE	27	581C	HIGH
KR_0283	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		YACHTSMAN CRESCENT	Salamanca Bay	-32.731899	152.085271	TRUE	27	581C	HIGH
KR_0284	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		MULLER STREET	Salamanca Bay	-32.731771	152.084858	TRUE	25	581D	MEDIUM
KR_0285	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		MULLER STREET	Salamanca Bay	-32.730404	152.084932	TRUE	25	581D	MEDIUM
KR_0286	Kerb Ramp	Footpath	Compliant											Salamanca Bay	Salamanca Bay	-32.730731	152.084167	TRUE	25	581D	MEDIUM	
KR_0287	Kerb Ramp	Footpath	Compliant											Salamanca Bay	Salamanca Bay	-32.730756	152.084315	TRUE	25	581D	MEDIUM	
KR_0288	Kerb Ramp	Footpath	Compliant											Salamanca Bay	Salamanca Bay	-32.730773	152.084268	TRUE	25	581D	MEDIUM	
KR_0289	Kerb Ramp	Footpath	Compliant											Salamanca Bay	Salamanca Bay	-32.730788	152.084216	TRUE	25	581D	MEDIUM	
KR_0290	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		THE WHARF	Salamanca Bay	-32.731186	152.083128	TRUE	25	581D	MEDIUM
KR_0291	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		THE WHARF	Salamanca Bay	-32.731211	152.083228	TRUE	25	581D	MEDIUM
KR_0292	Kerb Ramp	Footpath	Compliant											Salamanca Bay	Salamanca Bay	-32.731074	152.083212	TRUE	25	581D	MEDIUM	
KR_0293	Kerb Ramp	Footpath	Compliant											Salamanca Bay	Salamanca Bay	-32.731086	152.083147	TRUE	25	581D	MEDIUM	
KR_0294	Kerb Ramp	Footpath	Compliant											Salamanca Bay	Salamanca Bay	-32.731032	152.083007	TRUE	28	581C	HIGH	
KR_0295	Kerb Ramp	Footpath	Not compliant	Visually DGA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00		FORT STEPHENS DRIVE	Salamanca Bay	-32.730693	152.083144	TRUE	28	581C	HIGH
KR_0296	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		FORT STEPHENS DRIVE	Salamanca Bay	-32.730693	152.083144	TRUE	28	581C	HIGH
KR_0297	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		SHEILY CLOSE	Salamanca Bay	-32.730233	152.081284	TRUE	28	581C	HIGH
KR_0298	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		SHEILY CLOSE	Salamanca Bay	-32.730292	152.080271	TRUE	28	581C	HIGH
KR_0299	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		WANDA AVENUE	Salamanca Bay	-32.732162	152.084917	TRUE	23	581C	HIGH
KR_0300	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		WANDA AVENUE	Salamanca Bay	-32.732066	152.084851	TRUE	23	581C	HIGH
KR_0301	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		COOK STREET	Salamanca Bay	-32.732373	152.081886	TRUE	23	581C	HIGH
KR_0302	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		COOK STREET	Salamanca Bay	-32.732646	152.081745	TRUE	23	581C	HIGH
KR_0303	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		WANDA AVENUE	Salamanca Bay	-32.732688	152.080764	TRUE	23	581C	HIGH
KR_0304	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		WANDA AVENUE	Salamanca Bay	-32.733692	152.080455	TRUE	23	581C	HIGH
KR_0305	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		RANDALL DRIVE	Salamanca Bay	-32.72382	152.079989	TRUE	23	581C	HIGH
KR_0306	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00		RANDALL DRIVE	Salamanca Bay	-32.723514	152.079858	TRUE	23	581C	HIGH
KR_0307																						



ID Label	Feature Type	Path Type	Compliance Criteria	Assessment Criteria (1)	Assessment Criteria (2)	Assessment Criteria (3)	Assessment Criteria (4)	Improvement Recommendation (1)	Improvement Recommendation (2)	Improvement Recommendation (3)	Improvement Recommendation (4)	Cost Estimate	Comments	Road Name	Subur/Name	Latitude	Longitude	HasPhoto	SubSection No.	Route No.	Prioritisation
KR_0369	Kerb Ramp	Footpath	Compliant											NAUL ROUAZUMU	Corlette	-32.724704	152.118083	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0370	Kerb Ramp	Footpath	Compliant											GAULU CIRCUIT	Corlette	-32.724683	152.118382	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0371	Kerb Ramp	Footpath	Compliant											GAULU CIRCUIT	Corlette	-32.724694	152.118234	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0372	Kerb Ramp	Footpath	Compliant											MANUNG TERRACE	Corlette	-32.724217	152.117092	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0373	Kerb Ramp	Footpath	Compliant											MANUNG TERRACE	Corlette	-32.724187	152.116973	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0374	Kerb Ramp	Footpath	Compliant											GAULU CIRCUIT	Corlette	-32.724054	152.117147	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0375	Kerb Ramp	Footpath	Compliant											SPINAKER WAY	Corlette	-32.723946	152.116896	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0376	Kerb Ramp	Footpath	Compliant											GAULU CIRCUIT	Corlette	-32.724037	152.117119	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0377	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MOORING AVENUE	Corlette	-32.723432	152.116746	TRUE	64	C5	LOW
KR_0378	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MOORING AVENUE	Corlette	-32.723138	152.116987	FALSE	64	C5	LOW
KR_0379	Kerb Ramp	Footpath	Compliant											SPINAKER WAY	Corlette	-32.723405	152.116936	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0380	Kerb Ramp	Footpath	Compliant											BOWLINE CIRCUIT	Corlette	-32.724119	152.115938	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0381	Kerb Ramp	Footpath	Compliant											BOWLINE CIRCUIT	Corlette	-32.724113	152.115802	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0382	Kerb Ramp	Footpath	Compliant											MOORING AVENUE	Corlette	-32.723953	152.115952	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0383	Kerb Ramp	Footpath	Compliant											MOORING AVENUE	Corlette	-32.723954	152.115792	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0384	Kerb Ramp	Footpath	Compliant											SPINAKER WAY	Corlette	-32.724086	152.115703	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0385	Kerb Ramp	Footpath	Compliant											SPINAKER WAY	Corlette	-32.723974	152.115696	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0386	Kerb Ramp	Footpath	Compliant											EBBIDE WAY	Corlette	-32.724091	152.114914	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0387	Kerb Ramp	Footpath	Compliant											EBBIDE WAY	Corlette	-32.724091	152.11479	TRUE	63	C3A, C3B, C4, C6	MEDIUM
KR_0388	Kerb Ramp	Footpath	Compliant											SPINAKER WAY	Corlette	-32.724056	152.114704	TRUE	62	C3A, C3B, C4	MEDIUM
KR_0389	Kerb Ramp	Footpath	Compliant											SPINAKER WAY	Corlette	-32.723946	152.114699	TRUE	62	C3A, C3B, C4	MEDIUM
KR_0390	Kerb Ramp	Footpath	Compliant											SPINAKER WAY	Corlette	-32.723976	152.113812	TRUE	62	C3A, C3B, C4	MEDIUM
KR_0391	Kerb Ramp	Footpath	Compliant											BOWLINE CIRCUIT	Corlette	-32.724086	152.113788	TRUE	56	C3B	MEDIUM
KR_0392	Kerb Ramp	Footpath	Compliant											BOWLINE CIRCUIT	Corlette	-32.724072	152.113636	TRUE	56	C3B	MEDIUM
KR_0393	Kerb Ramp	Footpath	Compliant											SPINAKER WAY	Corlette	-32.724051	152.113823	TRUE	62	C3A, C3B, C4	MEDIUM
KR_0394	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	THE BREAKAWATER	Corlette	-32.724085	152.112346	TRUE	53	C3A	MEDIUM
KR_0395	Kerb Ramp	No facility	Not compliant	Visually DOA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	THE BRIGANTINE	Corlette	-32.724084	152.112145	TRUE	55	C4	LOW
KR_0396	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	THE BREAKAWATER	Corlette	-32.724167	152.112254	TRUE	53	C3A	MEDIUM
KR_0397	Kerb Ramp	No facility	Not compliant	Visually DOA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	THE BRIGANTINE	Corlette	-32.724089	152.112136	TRUE	55	C4	LOW
KR_0398	Kerb Ramp	No facility	Not compliant	Visually DOA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	THE HALYARD	Corlette	-32.725178	152.111561	TRUE	55	C4	LOW
KR_0399	Kerb Ramp	No facility	Not compliant	Visually DOA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	THE HALYARD	Corlette	-32.725853	152.110329	TRUE	55	C4	LOW
KR_0400	Kerb Ramp	Footpath	Compliant											SPINAKER WAY	Corlette	-32.727052	152.111651	TRUE	57	C3B	MEDIUM
KR_0401	Kerb Ramp	Footpath	Compliant											SPINAKER WAY	Corlette	-32.727052	152.114751	TRUE	57	C3B	MEDIUM
KR_0402	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MIDSHIPMAN CIRCUIT	Corlette	-32.725959	152.107425	TRUE	57	C3B	MEDIUM
KR_0403	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MIDSHIPMAN CIRCUIT	Corlette	-32.725965	152.107538	TRUE	57	C3B	MEDIUM
KR_0404	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	WALL CLOSE	Corlette	-32.725977	152.108454	TRUE	57	C3B	MEDIUM
KR_0405	Kerb Ramp	No facility	Not compliant	Visually DOA non compliant dimensions/grades				Construct kerb ramp				\$	4,400.00	MIDSHIPMAN CIRCUIT	Corlette	-32.725958	152.108714	TRUE	57	C3B	MEDIUM
KR_0406	Kerb Ramp	No facility	Not compliant	Visually DOA non compliant dimensions/grades				Construct kerb ramp				\$	4,400.00	MIDSHIPMAN CIRCUIT	Corlette	-32.725946	152.108615	TRUE	57	C3B	MEDIUM
KR_0407	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	YAWL CLOSE	Corlette	-32.725874	152.108807	TRUE	57	C3B	MEDIUM
KR_0408	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	WINDOWARD CLOSE	Corlette	-32.727569	152.111351	TRUE	57	C3B	MEDIUM
KR_0409	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	WINDOWARD CLOSE	Corlette	-32.727456	152.11114	TRUE	57	C3B	MEDIUM
KR_0410	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	THE BRIDGE	Corlette	-32.723634	152.111649	TRUE	53	C3A	MEDIUM
KR_0411	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	THE BRIDGE	Corlette	-32.723957	152.111608	TRUE	53	C3A	MEDIUM
KR_0412	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CARROLL AVENUE	Corlette	-32.722829	152.105075	TRUE	51	C3B	MEDIUM
KR_0413	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CARROLL AVENUE	Corlette	-32.722773	152.105737	TRUE	51	C3B	MEDIUM
KR_0414	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	DRUNGALL AVENUE	Corlette	-32.721285	152.106877	TRUE	52	C3A	MEDIUM
KR_0415	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	DRUNGALL AVENUE	Corlette	-32.721103	152.106941	TRUE	52	C3A	MEDIUM
KR_0416	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	JUDITH STREET	Corlette	-32.720614	152.106413	TRUE	52	C3A	MEDIUM
KR_0417	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	JUDITH STREET	Corlette	-32.720597	152.106639	TRUE	52	C3A	MEDIUM
KR_0418	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CONLETTE POINT ROAD	Corlette	-32.719767	152.107764	TRUE	52	C3A	MEDIUM
KR_0419	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CONLETTE POINT ROAD	Corlette	-32.719084	152.107889	FALSE	52	C3A	MEDIUM
KR_0420	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	THE PENINSULA	Corlette	-32.718942	152.108549	TRUE	53	C3A	MEDIUM
KR_0421	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	THE PENINSULA	Corlette	-32.718853	152.108757	TRUE	53	C3A	MEDIUM
KR_0422	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KALARADO STREET	Corlette	-32.718231	152.110549	FALSE	64	C6	LOW
KR_0423	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KALARADO STREET	Corlette	-32.718231	152.110549	TRUE	64	C6	LOW
KR_0424	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KALARADO STREET	Corlette	-32.718275	152.117109	TRUE	64	C6	LOW
KR_0425	Kerb Ramp	Footpath	Compliant											GOVERNMENT ROAD	Corlette	-32.720029	152.126782	TRUE	68	C5A	MEDIUM
KR_0426	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	GOVERNMENT ROAD	Corlette	-32.720009	152.126823	TRUE	68	C5A	MEDIUM
KR_0427	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BAGMALL BEACH ROAD	Corlette	-32.720384	152.126294	TRUE	67	C5A, C7	MEDIUM
KR_0428	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BAGMALL BEACH ROAD	Corlette	-32.720121	152.126079	TRUE	67	C5A, C7	MEDIUM
KR_0429	Kerb Ramp	Footpath	Compliant											SANDY POINT ROAD	Corlette	-32.720058	152.123886	TRUE	66	C7	MEDIUM
KR_0430	Kerb Ramp	Shared path	Not compliant	None: path level with road				Investigate provision of TGI				N/A		GOVERNMENT ROAD	Corlette	-32.720193	152.125542	TRUE	69	C3B	MEDIUM
KR_0431	Kerb Ramp	Footpath	Compliant											SANDY POINT ROAD	Corlette	-32.719939	152.123952	TRUE	66	C7	MEDIUM
KR_0432	Kerb Ramp	Shared path	Not compliant	Other (See comment)				Reconstruct kerb ramp				\$	4,400.00	GOVERNMENT ROAD	Corlette	-32.720771	152.125954	TRUE	68	C5A	MEDIUM
KR_0433	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CORRIE PARADE	Corlette	-32.721852	152.108823	TRUE	53	C3A	MEDIUM
KR_0434	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CORRIE PARADE	Corlette	-32.719727	152.108959	TRUE	53	C3A	MEDIUM
KR_0435	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	THE PENINSULA	Corlette	-32.720586	152.109283	TRUE	53	C3A	MEDIUM
KR_0436	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	THE PENINSULA	Corlette	-32.720674	152.10923	TRUE	53	C3A	MEDIUM
KR_0437	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	THE MERIDIAN	Corlette	-32.721306	152.108985	TRUE	53	C3A	MEDIUM
KR_0438	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	THE MERIDIAN	Corlette	-32.721319	152.108939	TRUE	53	C3A	MEDIUM
KR_0439	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	THE MERIDIAN	Corlette	-32.720959	152.108553	TRUE	53	C3A	MEDIUM
KR_0440	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	THE MAINDECK	Corlette	-32.722149	152.108251	TRUE	53	C3A	MEDIUM
KR_0441	Kerb Ramp	Footpath	Compliant											CHARTHOUSE AVENUE	Corlette	-32.723189	152.114907	TRUE	64	C6	LOW
KR_0442	Kerb Ramp	Footpath	Compliant											CHARTHOUSE AVENUE	Corlette	-32.723283	152.114895	TRUE	64	C6	LOW
KR_0443	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	RAMBANG STREET	Nelson Bay	-32.723193	152.130281	TRUE	72	NB23	HIGH
KR_0444	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	RAMBANG STREET	Nelson Bay	-32.723195					



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KR_0004	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	GOVERNMENT ROAD	Nelson Bay	-32.72132	152.13184	TRUE	75	NB16, NB23	HIGH
KR_0005	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KARUJAH CLOSE	Nelson Bay	-32.721444	152.131555	TRUE	75	NB16, NB23	HIGH
KR_0006	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KARUJAH CLOSE	Nelson Bay	-32.721428	152.131455	TRUE	75	NB16, NB23	HIGH
KR_0007	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TABER STREET	Nelson Bay	-32.721374	152.130572	TRUE	72	NB23	HIGH
KR_0008	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TABER STREET	Nelson Bay	-32.721368	152.130424	TRUE	72	NB23	HIGH
KR_0009	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	RAMBANG STREET	Nelson Bay	-32.720793	152.127417	TRUE	71	NB15	HIGH
KR_0010	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	RAMBANG STREET	Nelson Bay	-32.720774	152.127272	TRUE	70	CSA	MEDIUM
KR_0011	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	BURNING STREET	Nelson Bay	-32.720997	152.126473	TRUE	71	NB15	HIGH
KR_0012	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BURNING STREET	Nelson Bay	-32.720961	152.126365	TRUE	71	NB15	HIGH
KR_0013	Kerb Ramp	Footpath	Not compliant	Visually DOA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	THOMPSON PLACE	Nelson Bay	-32.721105	152.128951	TRUE	81	NB14, NB23	HIGH
KR_0014	Kerb Ramp	Footpath	Compliant											THOMPSON PLACE	Nelson Bay	-32.721081	152.128967	TRUE	81	NB16, NB23	HIGH
KR_0015	Kerb Ramp	Footpath	Not compliant	Visually DOA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	NELSON STREET	Nelson Bay	-32.720942	152.129795	TRUE	94	NB16, NB23	HIGH
KR_0016	Kerb Ramp	Footpath	Compliant											NELSON STREET	Nelson Bay	-32.720936	152.129632	TRUE	81	NB16, NB23	HIGH
KR_0017	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	DOWNLING STREET	Nelson Bay	-32.719271	152.150426	TRUE	115	NB18	MEDIUM
KR_0018	Kerb Ramp	Footpath	Compliant											DOWNLING STREET	Nelson Bay	-32.719288	152.150535	TRUE	115	NB18	MEDIUM
KR_0019	Kerb Ramp	Footpath	Compliant											AUSTRAL STREET	Nelson Bay	-32.721248	152.15024	TRUE	115	NB18	MEDIUM
KR_0020	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	AUSTRAL STREET	Nelson Bay	-32.721382	152.150244	TRUE	115	NB18	MEDIUM
KR_0021	Kerb Ramp	Footpath	Compliant											LAGOONS CIRCUT	Nelson Bay	-32.721225	152.149951	TRUE	115	NB18	MEDIUM
KR_0022	Kerb Ramp	Footpath	Compliant											LAGOONS CIRCUT	Nelson Bay	-32.72133	152.149933	TRUE	115	NB18	MEDIUM
KR_0023	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BAY STREET	Nelson Bay	-32.722347	152.150002	TRUE	115	NB18	MEDIUM
KR_0024	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	PARKS STREET	Nelson Bay	-32.722402	152.149979	TRUE	115	NB18	MEDIUM
KR_0025	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	PARKS STREET	Nelson Bay	-32.722392	152.149939	TRUE	115	NB18	MEDIUM
KR_0026	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	PARKS STREET	Nelson Bay	-32.722401	152.149785	TRUE	114	NB14	MEDIUM
KR_0027	Kerb Ramp	Footpath	Compliant											PARKS STREET	Nelson Bay	-32.72461	152.144286	TRUE	114	NB14	MEDIUM
KR_0028	Kerb Ramp	Footpath	Compliant											SHOAL BAY AVENUE	Shoal Bay	-32.718278	152.169156	TRUE	141	53	MEDIUM
KR_0029	Kerb Ramp	Footpath	Compliant											SHOAL BAY AVENUE	Shoal Bay	-32.718334	152.169319	TRUE	141	53	MEDIUM
KR_0030	Kerb Ramp	Footpath	Compliant											SHOAL BAY AVENUE	Shoal Bay	-32.718218	152.16775	TRUE	141	53	MEDIUM
KR_0031	Kerb Ramp	Footpath	Compliant											SHOAL BAY AVENUE	Shoal Bay	-32.718237	152.167237	TRUE	141	53	MEDIUM
KR_0032	Kerb Ramp	Footpath	Not compliant	Visually DOA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	SHOAL BAY ROAD	Shoal Bay	-32.718125	152.166998	TRUE	141	53	MEDIUM
KR_0033	Kerb Ramp	Footpath	Not compliant	Visually DOA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	SHOAL BAY ROAD	Shoal Bay	-32.718261	152.166916	TRUE	141	53	MEDIUM
KR_0034	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	HARWOOD AVENUE	Nelson Bay	-32.718267	152.164425	TRUE	139	NB11A	HIGH
KR_0035	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	HARWOOD AVENUE	Nelson Bay	-32.71827	152.16424	TRUE	139	NB11A	HIGH
KR_0036	Kerb Ramp	No facility	Not compliant	Damaged / poor condition				Reconstruct kerb ramp				\$	4,400.00 - the utility pits present a trip hazard	SHOAL BAY ROAD	Nelson Bay	-32.718294	152.164219	TRUE	140	NB20, NB11A	HIGH
KR_0037	Kerb Ramp	Footpath	Compliant											SHOAL BAY ROAD	Nelson Bay	-32.718404	152.164139	TRUE	140	NB20, NB11A	HIGH
KR_0038	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ACHILLES STREET	Nelson Bay	-32.717398	152.164935	TRUE	139	NB11A	HIGH
KR_0039	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ACHILLES STREET	Nelson Bay	-32.717392	152.164759	TRUE	139	NB11A	HIGH
KR_0040	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	AXAM AVENUE	Nelson Bay	-32.716912	152.164957	TRUE	126	NB11B	HIGH
KR_0041	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	AXAM AVENUE	Nelson Bay	-32.71648	152.164956	TRUE	126	NB11B	HIGH
KR_0042	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ONDINE CLOSE	Nelson Bay	-32.716398	152.164025	TRUE	126	NB11B	HIGH
KR_0043	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ONDINE CLOSE	Nelson Bay	-32.716386	152.164082	TRUE	126	NB11B	HIGH
KR_0044	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	VOYAGER CLOSE	Nelson Bay	-32.716279	152.163326	TRUE	126	NB11B	HIGH
KR_0045	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	VOYAGER CLOSE	Nelson Bay	-32.716229	152.163133	TRUE	126	NB11B	HIGH
KR_0046	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	GRETEL CLOSE	Nelson Bay	-32.716113	152.162839	TRUE	126	NB11B	HIGH
KR_0047	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	GRETEL CLOSE	Nelson Bay	-32.716081	152.162201	TRUE	126	NB11B	HIGH
KR_0048	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	AXAM AVENUE	Nelson Bay	-32.715962	152.160185	TRUE	126	NB11B	HIGH
KR_0049	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	AXAM AVENUE	Nelson Bay	-32.715839	152.160223	TRUE	126	NB11B	HIGH
KR_0050	Kerb Ramp	Footpath	Compliant											NOBILUNA AVENUE	Nelson Bay	-32.71599	152.159978	TRUE	127	NB1A	HIGH
KR_0051	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	ACHILLES AVENUE	Nelson Bay	-32.716122	152.159941	TRUE	127	NB1A	HIGH
KR_0052	Kerb Ramp	No facility	Not compliant	Visually DOA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	ACHILLES STREET	Nelson Bay	-32.716078	152.159823	TRUE	127	NB1A	HIGH
KR_0053	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ACHILLES STREET	Nelson Bay	-32.716051	152.159737	TRUE	127	NB1A	HIGH
KR_0054	Kerb Ramp	Footpath	Compliant											ACHILLES STREET	Nelson Bay	-32.716043	152.160085	TRUE	127	NB1A	HIGH
KR_0055	Kerb Ramp	No facility	Not compliant	Visually DOA non compliant dimensions/grades	Other (See comment)			Reconstruct kerb ramp				\$	4,400.00 - ramp has high lip, consider replacing	ACHILLES STREET	Nelson Bay	-32.716048	152.159769	TRUE	127	NB1A	HIGH
KR_0056	Kerb Ramp	Shared path	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	GDWARIE AVENUE	Nelson Bay	-32.717396	152.159889	TRUE	127	NB1A	HIGH
KR_0057	Kerb Ramp	Shared path	Compliant											GDWARIE AVENUE	Nelson Bay	-32.717375	152.159648	TRUE	127	NB1A	HIGH
KR_0058	Kerb Ramp	Shared path	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	SHOAL BAY ROAD	Nelson Bay	-32.717264	152.159578	TRUE	128	NB10, NB11A	HIGH
KR_0059	Kerb Ramp	Shared path	Compliant											GDWARIE AVENUE	Nelson Bay	-32.717386	152.1597	TRUE	130	NB1A	HIGH
KR_0060	Kerb Ramp	Shared path	Compliant											SHOAL BAY ROAD	Nelson Bay	-32.717777	152.159546	TRUE	128	NB10, NB11A	HIGH
KR_0061	Kerb Ramp	Shared path	Compliant											GDWARIE AVENUE	Nelson Bay	-32.717365	152.159573	TRUE	130	NB1A	HIGH
KR_0062	Kerb Ramp	Shared path	Not compliant	Misaligned with opposite kerb ramp	Other (See comment)			Reconstruct kerb ramp				\$	4,400.00 - non standard kerb ramp design	SHOAL BAY ROAD	Nelson Bay	-32.717799	152.159869	TRUE	140	NB10, NB11A	HIGH
KR_0063	Kerb Ramp	Shared path	Compliant											SHOAL BAY ROAD	Nelson Bay	-32.717051	152.159897	TRUE	140	NB10, NB11A	HIGH
KR_0064	Kerb Ramp	Shared path	Compliant											SHOAL BAY ROAD	Nelson Bay	-32.717049	152.159916	TRUE	124	NB10, NB11A	HIGH
KR_0065	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KNAT CLOSE	Nelson Bay	-32.715114	152.161383	TRUE	124	NB1A	HIGH
KR_0066	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KNAT CLOSE	Nelson Bay	-32.715082	152.160413	TRUE	124	NB1A	HIGH
KR_0067	Kerb Ramp	Footpath	Compliant											MISTRAL CLOSE	Nelson Bay	-32.715467	152.160743	TRUE	124	NB1A	HIGH
KR_0068	Kerb Ramp	Footpath	Compliant											MISTRAL CLOSE	Nelson Bay	-32.714802	152.160199	TRUE	124	NB1A	HIGH
KR_0069	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CATALINA CLOSE	Nelson Bay	-32.714383	152.160551	TRUE	124	NB1A	HIGH
KR_0070	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CATALINA CLOSE	Nelson Bay	-32.714271	152.16057	TRUE	124	NB1A	HIGH
KR_0071	Kerb Ramp	Footpath	Compliant											KURRAWA CLOSE	Nelson Bay	-32.713691	152.160508	TRUE	124	NB1A	HIGH
KR_0072	Kerb Ramp	Footpath	Compliant											KURRAWA CLOSE	Nelson Bay	-32.713619	152.160527	TRUE	124	NB1A	HIGH
KR_0073	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	WETHERLY CLOSE	Nelson Bay	-32.713647	152.160691	TRUE	124	NB1A	HIGH
KR_0074	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	WETHERLY CLOSE	Nelson Bay	-32.713529	152.160717	TRUE	124	NB1A	HIGH
KR_0075	Kerb Ramp	Footpath	Compliant											COLUMBIA CLOSE	Nelson Bay	-32.712908	152.160684	TRUE	124	NB1A	HIGH
KR_0076	Kerb Ramp	Footpath	Compliant											COLUMBIA CLOSE	Nelson Bay	-32.712812	152.160684	TRUE	124	NB1A	HIGH
KR_0077	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	WYTHED CLOSE	Nelson Bay	-32.712931	152.160816	TRUE	124	NB1A	HIGH
KR_0078	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	WYTHED CLOSE	Nelson Bay	-32.712799	152.160842	TRUE</			



Feature Type	Path Type	Compliance Criteria	Assessment Criteria [1]	Assessment Criteria [2]	Assessment Criteria [3]	Assessment Criteria [4]	Improvement Recommendation [1]	Improvement Recommendation [2]	Improvement Recommendation [3]	Improvement Recommendation [4]	Cost Estimates	Comments	Asset Name	Suburb/Area	Latitude	Longitude	RecPropNo	Selection No.	Route No.	Priority/Status	
KR_00338	Kerb Ramp	No facility	Compliant										ANIMADALE AVENUE	Nelson Bay	-32.72215	152.15515	TRUE	138	NB3	HIGH	
KR_00339	Kerb Ramp	No facility	Compliant										ANIMADALE AVENUE	Nelson Bay	-32.72213	152.155173	TRUE	138	NB3	HIGH	
KR_00840	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		ANIMADALE AVENUE	Nelson Bay	-32.72235	152.156932	TRUE	137	NB4B	HIGH
KR_00541	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		AUSTRAL STREET	Nelson Bay	-32.72248	152.15655	TRUE	136	NB4A	HIGH
KR_00542	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		WENTWORTH AVENUE	Nelson Bay	-32.72181	152.153943	TRUE	117	NB3	HIGH
KR_00543	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		WENTWORTH AVENUE	Nelson Bay	-32.72187	152.153173	TRUE	117	NB3	HIGH
KR_00544	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		TRAFALGAR STREET	Nelson Bay	-32.72184	152.153673	TRUE	117	NB3	HIGH
KR_00545	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		TRAFALGAR STREET	Nelson Bay	-32.72182	152.153115	TRUE	117	NB3	HIGH
KR_00546	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp			Reconstruct kerb ramp				\$	4,400.00		AUSTRAL STREET	Nelson Bay	-32.72183	152.15215	TRUE	117	NB3	HIGH
KR_00547	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		AUSTRAL STREET	Nelson Bay	-32.72187	152.151484	TRUE	117	NB3	HIGH
KR_00548	Kerb Ramp	Footpath	Compliant										TRAFALGAR STREET	Nelson Bay	-32.71886	152.152813	TRUE	118	NB10	HIGH	
KR_00549	Kerb Ramp	Shared path	Compliant										CULTURAL CLOSE	Nelson Bay	-32.716811	152.153516	TRUE	122	NB10	HIGH	
KR_00550	Kerb Ramp	Shared path	Compliant										CULTURAL CLOSE	Nelson Bay	-32.71579	152.153855	TRUE	122	NB10	HIGH	
KR_00551	Kerb Ramp	Footpath	Compliant										MAGNUS STREET	Nelson Bay	-32.716769	152.152158	TRUE	119	NB6	MEDIUM	
KR_00552	Kerb Ramp	Footpath	Compliant										MAGNUS STREET	Nelson Bay	-32.716737	152.152038	TRUE	119	NB6	MEDIUM	
KR_00553	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		SHOAL BAY ROAD	Nelson Bay	-32.716511	152.151765	TRUE	119	NB6	MEDIUM
KR_00554	Kerb Ramp	Shared path	Compliant										VICTORIA PARADE	Nelson Bay	-32.71564	152.151133	TRUE	120	NB2	HIGH	
KR_00555	Kerb Ramp	Shared path	Compliant										VICTORIA PARADE	Nelson Bay	-32.71561	152.150869	TRUE	120	NB2	HIGH	
KR_00556	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		TOMARKE STREET	Nelson Bay	-32.72393	152.148446	TRUE	109	NB7	MEDIUM
KR_00557	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp		Other (See comments)	Reconstruct kerb ramp				\$	4,400.00	ramp has very 'high' bty, consider replacing	TOMARKE STREET	Nelson Bay	-32.72391	152.148461	TRUE	109	NB7	MEDIUM
KR_00558	Kerb Ramp	No facility	Not compliant	Damaged / poor condition			Reconstruct kerb ramp				\$	4,400.00		TOMARKE STREET	Nelson Bay	-32.72375	152.148487	TRUE	109	NB8	MEDIUM
KR_00559	Kerb Ramp	Footpath	Compliant										YACARABA STREET	Nelson Bay	-32.72393	152.148395	TRUE	110	NB8	MEDIUM	
KR_00560	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp			Reconstruct kerb ramp				\$	4,400.00		TOMARKE STREET	Nelson Bay	-32.72372	152.148446	TRUE	109	NB7	MEDIUM
KR_00561	Kerb Ramp	Footpath	Compliant										YACARABA STREET	Nelson Bay	-32.72221	152.148903	TRUE	110	NB8	MEDIUM	
KR_00562	Kerb Ramp	Footpath	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		YACARABA STREET	Nelson Bay	-32.72371	152.148486	TRUE	110	NB8	MEDIUM
KR_00563	Kerb Ramp	Footpath	Compliant										YACARABA STREET	Nelson Bay	-32.72216	152.144767	TRUE	110	NB8	MEDIUM	
KR_00564	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		YACARABA STREET	Nelson Bay	-32.72375	152.148637	TRUE	110	NB8	MEDIUM
KR_00565	Kerb Ramp	Footpath	Compliant										DONALD STREET	Nelson Bay	-32.72216	152.145008	TRUE	111	NB5	MEDIUM	
KR_00566	Kerb Ramp	Footpath	Compliant										DONALD STREET	Nelson Bay	-32.72207	152.145011	TRUE	111	NB5	MEDIUM	
KR_00567	Kerb Ramp	Footpath	Compliant										STOXTON STREET	Nelson Bay	-32.72373	152.143234	TRUE	108	NB1A, NB7, NB13, NB18	HIGH	
KR_00568	Kerb Ramp	Footpath	Compliant										YACARABA STREET	Nelson Bay	-32.72204	152.148947	TRUE	101	NB6	MEDIUM	
KR_00569	Kerb Ramp	Footpath	Compliant										STOXTON STREET	Nelson Bay	-32.72254	152.143979	TRUE	108	NB1A, NB7, NB13, NB18	MEDIUM	
KR_00570	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		STOXTON STREET	Nelson Bay	-32.72376	152.143924	TRUE	87	NB1A	MEDIUM
KR_00571	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		STOXTON STREET	Nelson Bay	-32.72377	152.143138	TRUE	87	NB1A	MEDIUM
KR_00572	Kerb Ramp	Footpath	Compliant										CHURCH STREET	Nelson Bay	-32.72386	152.143084	TRUE	90	NB17	HIGH	
KR_00573	Kerb Ramp	Footpath	Compliant										VICTORIA PARADE	Nelson Bay	-32.72058	152.145186	TRUE	102	NB6	MEDIUM	
KR_00574	Kerb Ramp	Footpath	Compliant										CHURCH STREET	Nelson Bay	-32.72347	152.141006	TRUE	86	NB18	MEDIUM	
KR_00575	Kerb Ramp	Footpath	Compliant										CHURCH STREET	Nelson Bay	-32.72345	152.140839	TRUE	86	NB18	MEDIUM	
KR_00576	Kerb Ramp	No facility	Not compliant	Visually ODA non compliant dimensions/grades	Misaligned with opposite kerb ramp		Reconstruct kerb ramp				\$	4,400.00		VICTORIA PARADE	Nelson Bay	-32.72048	152.145997	TRUE	113	NB2, NB6	HIGH
KR_00577	Kerb Ramp	Footpath	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		MAGNUS STREET	Nelson Bay	-32.72135	152.145105	TRUE	102	NB6	MEDIUM
KR_00578	Kerb Ramp	Footpath	Not compliant	Other (See comments)			Reconstruct kerb ramp				\$	4,400.00	this ramp is merged with the north-south ramp, consider rebuilding to separate the two movements	CHURCH STREET	Nelson Bay	-32.72325	152.140885	TRUE	90	NB17	HIGH
KR_00579	Kerb Ramp	Footpath	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		MAGNUS STREET	Nelson Bay	-32.72152	152.145086	TRUE	112	NB18, NB3	HIGH
KR_00580	Kerb Ramp	Footpath	Compliant										DONALD STREET	Nelson Bay	-32.72201	152.144275	TRUE	99	NB5	MEDIUM	
KR_00581	Kerb Ramp	Footpath	Compliant										DONALD STREET	Nelson Bay	-32.72217	152.143706	TRUE	99	NB5	MEDIUM	
KR_00582	Kerb Ramp	Footpath	Compliant										TOMARKE STREET	Nelson Bay	-32.72369	152.143241	TRUE	109	NB7	MEDIUM	
KR_00583	Kerb Ramp	Footpath	Compliant										TOMARKE STREET	Nelson Bay	-32.72373	152.143207	TRUE	109	NB7	MEDIUM	
KR_00584	Kerb Ramp	Footpath	Compliant										DOWNLING STREET	Nelson Bay	-32.724212	152.143048	TRUE	114	NB1A	MEDIUM	
KR_00585	Kerb Ramp	Footpath	Compliant										DOWNLING STREET	Nelson Bay	-32.72433	152.14303	TRUE	114	NB1A	MEDIUM	
KR_00586	Kerb Ramp	Footpath	Not compliant	None: path level with road			Investigate provision of TOS				N/A		STOXTON STREET	Nelson Bay	-32.72175	152.143537	TRUE	97	NB2, NB1, NB15	HIGH	
KR_00587	Kerb Ramp	Footpath	Not compliant	None: path level with road			Investigate provision of TOS				N/A		STOXTON STREET	Nelson Bay	-32.72181	152.14366	TRUE	97	NB2, NB1, NB15	HIGH	
KR_00588	Kerb Ramp	Footpath	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		STOXTON STREET	Nelson Bay	-32.72443	152.142703	TRUE	88	NB13	MEDIUM
KR_00589	Kerb Ramp	Footpath	Compliant										DONALD STREET	Nelson Bay	-32.72158	152.143372	TRUE	98	NB16, NB17, NB20, NB21	HIGH	
KR_00590	Kerb Ramp	Shared path	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		STOXTON STREET	Nelson Bay	-32.72435	152.142839	TRUE	88	NB13	MEDIUM
KR_00591	Kerb Ramp	Footpath	Compliant										DONALD STREET	Nelson Bay	-32.72186	152.143384	TRUE	98	NB1A, NB17, NB20, NB21	HIGH	
KR_00592	Kerb Ramp	Footpath	Compliant										TOMARKE STREET	Nelson Bay	-32.72371	152.143019	TRUE	89	NB18	MEDIUM	
KR_00593	Kerb Ramp	Footpath	Compliant										TOMARKE STREET	Nelson Bay	-32.72259	152.143247	TRUE	89	NB18	MEDIUM	
KR_00594	Kerb Ramp	Footpath	Compliant										DONALD STREET	Nelson Bay	-32.72194	152.143099	TRUE	99	NB5	MEDIUM	
KR_00595	Kerb Ramp	Footpath	Compliant										DONALD STREET	Nelson Bay	-32.72187	152.143204	TRUE	99	NB5	MEDIUM	
KR_00596	Kerb Ramp	Footpath	Compliant										VACARABA STREET	Nelson Bay	-32.721956	152.144809	TRUE	101	NB6	MEDIUM	
KR_00597	Kerb Ramp	Footpath	Compliant										VICTORIA PARADE	Nelson Bay	-32.720702	152.143919	TRUE	104	NB2, NB1A	MEDIUM	
KR_00598	Kerb Ramp	Footpath	Compliant										STOXTON STREET	Nelson Bay	-32.720747	152.143887	TRUE	96	NB2, NB15	HIGH	
KR_00599	Kerb Ramp	Footpath	Compliant										STOXTON STREET	Nelson Bay	-32.720729	152.143749	TRUE	96	NB2, NB15	HIGH	
KR_00600	Kerb Ramp	Footpath	Compliant										LAMANA STREET	Nelson Bay	-32.72005	152.143769	TRUE	95	NB15	MEDIUM	
KR_00701	Kerb Ramp	Footpath	Compliant										LAMANA STREET	Nelson Bay	-32.720569	152.143826	TRUE	95	NB15	MEDIUM	
KR_00702	Kerb Ramp	Footpath	Compliant										VICTORIA PARADE	Nelson Bay	-32.720075	152.143932	TRUE	104	NB2, NB1A	MEDIUM	
KR_00703	Kerb Ramp	Footpath	Compliant										TERANBY ROAD	Nelson Bay	-32.7208264	152.144805	TRUE	113	NB2, NB6	HIGH	
KR_00704	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp			Reconstruct kerb ramp				\$	4,400.00		TERANBY ROAD	Nelson Bay	-32.720842	152.144793	TRUE	103	NB2	HIGH
KR_00705	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp			Reconstruct kerb ramp				\$	4,400.00		DONALD STREET	Nelson Bay	-32.72187	152.143416	TRUE	111	NB5	MEDIUM
KR_00706	Kerb Ramp	No facility	Not compliant	Missing			Construct kerb ramp				\$	3,300.00		DONALD STREET	Nelson Bay	-32.72008	152.143409	TRUE	111	NB5	MEDIUM
KR_00707	Kerb Ramp	Footpath	Compliant										CHURCH STREET	Nelson Bay	-32.71967	152.141483	TRUE	93	NB16, NB13	HIGH	
KR_00708	Kerb Ramp	Footpath	Compliant										CHURCH STREET	Nelson Bay	-32.720876	152.141312	TRUE	93	NB16, NB13	HIGH	
KR_00709	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp			Reconstruct kerb ramp				\$	4,400.00		MAGNUS STREET	Nelson Bay	-32.721505	152.150235	TRUE	112	NB18, NB3	HIGH
KR_00710	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp			Reconstruct kerb ramp				\$	4,400.00		MAGNUS STREET	Nelson Bay	-32.72041	152.150004	TRUE	112	NB18, NB3	HIGH
KR_00711	Kerb Ramp	Footpath	Compliant										CHURCH STREET	Nelson Bay	-32.720541	152.141391	TRUE	94	NB16, NB13	HIGH	
KR_00712	Kerb Ramp	Footpath	Compliant										MAGNUS STREET	Nelson Bay	-32.720082	152.149729	TRUE	112	NB18, NB3	HIGH	
KR_00713	Kerb Ramp	Footpath	Compliant										CHURCH STREET	Nelson Bay	-32.720555	152.141546	TRUE	95	NB15	MEDIUM	
KR_00714	Kerb Ramp	Footpath	Compliant										MAGNUS STREET	Nelson Bay	-32.720082	152.149978	TRUE	112	NB18, NB3	HIGH	
KR_00715	Kerb Ramp	Footpath	Compliant										CHURCH STREET	Nelson Bay	-32.72144	152.141369	TRUE	93	NB16, NB13	HIGH	
KR_00716	Kerb Ramp	Footpath	Compliant										CHURCH STREET	Nelson Bay	-32.72149						



ID Label	Feature Type	Path Type	Compliance Criteria	Assessment Criteria (1)	Assessment Criteria (2)	Assessment Criteria (3)	Assessment Criteria (4)	Improvement Recommendation (1)	Improvement Recommendation (2)	Improvement Recommendation (3)	Improvement Recommendation (4)	Cost Estimate	Comments	Road Name	Subur/Name	Latitude	Longitude	HasPhoto	SubSection No.	Route No.	Prioritisation
KR_0272	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	THE DECK	Salamander Bay	-32.735504	152.110227	FALSE	40	588	MEDIUM
KR_0273	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MAST CLOSE	Salamander Bay	-32.736219	152.108885	TRUE	40	588	MEDIUM
KR_0274	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MAST CLOSE	Salamander Bay	-32.736366	152.108881	TRUE	40	588	MEDIUM
KR_0275	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.731731	152.109119	TRUE	35	584, 585	MEDIUM
KR_0276	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	construction site	Salamander Bay	-32.735089	152.109188	TRUE	35	584, 585	MEDIUM
KR_0277	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.731927	152.106422	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0278	Kerb Ramp	Footpath	Compliant											BAGMALL BEACH ROAD	Salamander Bay	-32.738032	152.109076	TRUE	36	584, 586A	MEDIUM
KR_0279	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.737295	152.106138	FALSE	39	582, 583A, 583C, 583D	HIGH
KR_0280	Kerb Ramp	Footpath	Compliant											BAGMALL BEACH ROAD	Salamander Bay	-32.738087	152.109045	TRUE	36	584, 586A	MEDIUM
KR_0281	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.731989	152.106171	TRUE	31	582	MEDIUM
KR_0282	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.733346	152.106282	TRUE	31	582	MEDIUM
KR_0283	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.731913	152.106415	TRUE	30	583A, 583C, 583D	HIGH
KR_0284	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.731987	152.106055	TRUE	30	583A, 583C, 583D	HIGH
KR_0285	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.731701	152.106782	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0286	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.732228	152.106832	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0287	Kerb Ramp	Footpath	Compliant											TOWN CENTRE CIRCUIT	Salamander Bay	-32.731703	152.107223	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0288	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.736073	152.107238	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0289	Kerb Ramp	Footpath	Compliant											TOWN CENTRE CIRCUIT	Salamander Bay	-32.736869	152.107654	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0290	Kerb Ramp	Footpath	Compliant											TOWN CENTRE CIRCUIT	Salamander Bay	-32.736959	152.107731	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0291	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.736598	152.108241	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0292	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.738087	152.108122	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0293	Kerb Ramp	Shared path	Compliant											SALAMANDER WAY	Salamander Bay	-32.735294	152.110923	TRUE	29	583A, 583C, 583D	HIGH
KR_0294	Kerb Ramp	Footpath	Compliant											SALAMANDER WAY	Salamander Bay	-32.738087	152.109043	TRUE	29	583A, 583C, 583D	HIGH
KR_0295	Kerb Ramp	Footpath	Compliant											TOWN CENTRE CIRCUIT	Salamander Bay	-32.736108	152.108481	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0296	Kerb Ramp	Footpath	Compliant											TOWN CENTRE CIRCUIT	Salamander Bay	-32.736145	152.108359	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0297	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp	Visually ODA non compliant dimensions/grades			Reconstruct kerb ramp				\$	4,400.00	SALAMANDER WAY	Salamander Bay	-32.731974	152.110852	TRUE	32	584	MEDIUM
KR_0298	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BAGMALL BEACH ROAD	Salamander Bay	-32.738051	152.108836	TRUE	32	584	MEDIUM
KR_0299	Kerb Ramp	Shared path	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BAGMALL BEACH ROAD	Salamander Bay	-32.738071	152.109073	TRUE	37	586A	MEDIUM
KR_0300	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.735909	152.108846	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0301	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.735994	152.108289	TRUE	33	582, 583A, 583C, 583D	HIGH
KR_0302	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.735847	152.108422	TRUE	35	584, 585	MEDIUM
KR_0303	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.735724	152.108158	TRUE	35	584, 585	MEDIUM
KR_0304	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.7357	152.108271	TRUE	34	583	MEDIUM
KR_0305	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.735744	152.108152	FALSE	34	583	MEDIUM
KR_0306	Kerb Ramp	Footpath	Compliant											SPINNAKER WAY	Corlette	-32.735979	152.110846	TRUE	60	C18, C1	MEDIUM
KR_0307	Kerb Ramp	Footpath	Compliant											BAGMALL BEACH ROAD	Corlette	-32.735996	152.110758	TRUE	67	C1A, C7	MEDIUM
KR_0308	Kerb Ramp	Footpath	Compliant											BAGMALL BEACH ROAD	Corlette	-32.738032	152.110118	TRUE	67	C1A, C7	MEDIUM
KR_0309	Kerb Ramp	Footpath	Compliant											SPINNAKER WAY	Corlette	-32.736088	152.110847	TRUE	63	C1A, C18, C1, C5	MEDIUM
KR_0310	Kerb Ramp	Footpath	Compliant											SPINNAKER WAY	Corlette	-32.735108	152.118793	TRUE	63	C1A, C18, C1, C5	MEDIUM
KR_0311	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.731981	152.106415	TRUE	30	583A, 583C, 583D	HIGH
KR_0312	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	TOWN CENTRE CIRCUIT	Salamander Bay	-32.735747	152.106249	TRUE	30	583A, 583C, 583D	HIGH
KR_0313	Kerb Ramp	No facility	Not compliant	Damaged / poor condition				Reconstruct kerb ramp				\$	4,400.00	BAGMALL BEACH ROAD	Corlette	-32.735289	152.118783	TRUE	58	C1A	MEDIUM
KR_0314	Kerb Ramp	Footpath	Compliant											BAGMALL BEACH ROAD	Corlette	-32.735407	152.118936	TRUE	58	C1A	MEDIUM
KR_0315	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	SPINNAKER WAY	Corlette	-32.735344	152.110451	TRUE	60	C18, C1	MEDIUM
KR_0316	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SALAMANDER WAY	Salamander Bay	-32.737024	152.110844	TRUE	32	584	MEDIUM
KR_0317	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SALAMANDER WAY	Salamander Bay	-32.738038	152.109111	TRUE	32	584	MEDIUM
KR_0318	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SALAMANDER WAY	Salamander Bay	-32.735959	152.107704	TRUE	32	584	MEDIUM
KR_0319	Kerb Ramp	Shared path	Compliant											BAGMALL BEACH ROAD	Corlette	-32.735994	152.111972	TRUE	58	C1A	MEDIUM
KR_0320	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SALAMANDER WAY	Salamander Bay	-32.735979	152.107704	TRUE	32	584	MEDIUM
KR_0321	Kerb Ramp	Shared path	Compliant											BAGMALL BEACH ROAD	Corlette	-32.735903	152.111993	TRUE	58	C1A	MEDIUM
KR_0322	Kerb Ramp	Shared path	Compliant											BAGMALL BEACH ROAD	Corlette	-32.735951	152.113835	TRUE	58	C1A	MEDIUM
KR_0323	Kerb Ramp	No facility	Not compliant	Visually ODA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	SALAMANDER WAY	Salamander Bay	-32.735796	152.108517	TRUE	32	584	MEDIUM
KR_0324	Kerb Ramp	Shared path	Compliant											BAGMALL BEACH ROAD	Corlette	-32.735386	152.113485	TRUE	58	C1A	MEDIUM
KR_0325	Kerb Ramp	No facility	Compliant											BAGMALL BEACH ROAD	Salamander Bay	-32.735785	152.108782	TRUE	36	584, 586A	MEDIUM
KR_0326	Kerb Ramp	Shared path	Compliant											BAGMALL BEACH ROAD	Salamander Bay	-32.735728	152.109085	TRUE	36	584, 586A	MEDIUM
KR_0327	Kerb Ramp	Shared path	Compliant											SALAMANDER WAY	Salamander Bay	-32.735908	152.109351	TRUE	37	586A	MEDIUM
KR_0328	Kerb Ramp	Shared path	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	SEARGENT BAKER DRIVE	Corlette	-32.731501	152.111136	TRUE	261	C1A	MEDIUM
KR_0329	Kerb Ramp	Shared path	Compliant											BAGMALL BEACH ROAD	Corlette	-32.731067	152.111092	TRUE	58	C1A	MEDIUM
KR_0330	Kerb Ramp	Shared path	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	SALAMANDER WAY	Salamander Bay	-32.735994	152.109314	TRUE	37	586A	MEDIUM
KR_0331	Kerb Ramp	Shared path	Compliant											BAGMALL BEACH ROAD	Salamander Bay	-32.7311025	152.110998	TRUE	58	C1A	MEDIUM
KR_0332	Kerb Ramp	Footpath	Compliant											HELM CLOSE	Salamander Bay	-32.731375	152.110598	TRUE	58	C1A	MEDIUM
KR_0333	Kerb Ramp	Footpath	Compliant											SALAMANDER WAY	Salamander Bay	-32.735966	152.110045	TRUE	37	586A	MEDIUM
KR_0334	Kerb Ramp	Footpath	Compliant											HELM CLOSE	Salamander Bay	-32.731381	152.110058	TRUE	47	5811	MEDIUM
KR_0335	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BAGMALL BEACH ROAD	Salamander Bay	-32.731705	152.110857	TRUE	47	5811	MEDIUM
KR_0336	Kerb Ramp	Shared path	Not compliant	Downer path level with road	Investigate provision of TGI							N/A		SALAMANDER WAY	Salamander Bay	-32.731905	152.110807	TRUE	37	586A	MEDIUM
KR_0337	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BAGMALL BEACH ROAD	Salamander Bay	-32.731705	152.110887	TRUE	47	5811	MEDIUM
KR_0338	Kerb Ramp	Shared path	Compliant											SEARGENT BAKER DRIVE	Salamander Bay	-32.731633	152.111076	TRUE	261	C1A	MEDIUM
KR_0339	Kerb Ramp	Footpath	Compliant											BAGMALL BEACH ROAD	Salamander Bay	-32.731316	152.110041	TRUE	47	5811	MEDIUM
KR_0340	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	SANDY POINT ROAD	Salamander Bay	-32.735493	152.109846	TRUE	44	585	LOW
KR_0341	Kerb Ramp	Footpath	Compliant											SANDY POINT ROAD	Salamander Bay	-32.735632	152.109774	TRUE	44	585	LOW
KR_0342	Kerb Ramp	Footpath	Compliant											BAGMALL BEACH ROAD	Salamander Bay	-32.735961	152.109802	TRUE	43	585, 5810	MEDIUM
KR_0343	Kerb Ramp	Footpath	Compliant											BAGMALL BEACH ROAD	Salamander Bay	-32.736039	152.110072	TRUE	43	585, 5810	MEDIUM
KR_0344	Kerb Ramp	Shared path	Compliant											KEEL STREET	Salamander Bay	-32.731705	152.110399	TRUE	42	5810	MEDIUM
KR_0345	Kerb Ramp	Shared path	Not compliant	Visually ODA non compliant dimensions/grades																	



ID Label	Feature Type	Path Type	Compliance Criteria	Assessment Criteria (1)	Assessment Criteria (2)	Assessment Criteria (3)	Assessment Criteria (4)	Improvement Recommendation (1)	Improvement Recommendation (2)	Improvement Recommendation (3)	Improvement Recommendation (4)	Cost Estimates	Comments	Road Name	Subur/Village	Latitude	Longitude	HasPhoto	SubSection No.	Route No.	Prioritisation
KR_0006	Kerb Ramp	Footpath	Compliant											BEACHCOMBER CLOSE	Anna Bay	-32.778932	152.088489	TRUE	222	A87	MEDIUM
KR_0007	Kerb Ramp	Footpath	Compliant											BEACHCOMBER CLOSE	Anna Bay	-32.778936	152.088179	TRUE	222	A87	MEDIUM
KR_0008	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	GAN GAN ROAD	Anna Bay	-32.779051	152.092229	TRUE	224	A98	LOW
KR_0009	Kerb Ramp	Footpath	Not compliant	Visually DCA non compliant dimensions/grades	Damaged / poor condition			Reconstruct kerb ramp				\$	4,400.00	ESSINGTON WAY	Anna Bay	-32.770564	152.092271	TRUE	220	A87	MEDIUM
KR_0010	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ESSINGTON WAY	Anna Bay	-32.770543	152.092654	TRUE	220	A87	MEDIUM
KR_0011	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	GAN GAN ROAD	Anna Bay	-32.778467	152.092926	TRUE	219	A98	HIGH
KR_0012	Kerb Ramp	Footpath	Compliant											GAN GAN ROAD	Anna Bay	-32.778874	152.093228	TRUE	224	A98	LOW
KR_0013	Kerb Ramp	Footpath	Compliant											MOONA POINT ROAD	Anna Bay	-32.777924	152.090192	TRUE	227	A97A	MEDIUM
KR_0014	Kerb Ramp	Footpath	Compliant											MORNA POINT ROAD	Anna Bay	-32.777506	152.090936	TRUE	227	A97A	MEDIUM
KR_0015	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	GAN GAN ROAD	Anna Bay	-32.77752	152.090914	TRUE	243	A76, A71, A712	HIGH
KR_0016	Kerb Ramp	Footpath	Compliant										vegetation	GAN GAN ROAD	Anna Bay	-32.777904	152.093229	TRUE	243	A76, A71, A712	HIGH
KR_0017	Kerb Ramp	Footpath	Not compliant	Visually DCA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	CAMPBELL AVENUE	Anna Bay	-32.777998	152.084413	TRUE	239	A74, A71, A77, A714	MEDIUM
KR_0018	Kerb Ramp	Footpath	Not compliant	Visually DCA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	CAMPBELL AVENUE	Anna Bay	-32.777931	152.084039	TRUE	239	A74, A71, A77, A714	MEDIUM
KR_0019	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	GAN GAN ROAD	Anna Bay	-32.777291	152.084243	TRUE	247	A71, A72	HIGH
KR_0020	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	GAN GAN ROAD	Anna Bay	-32.777855	152.084498	TRUE	243	A76, A71, A712	HIGH
KR_0021	Kerb Ramp	Footpath	Compliant											JAMES PATTERSON STREET	Anna Bay	-32.777376	152.081067	TRUE	248	A82	HIGH
KR_0022	Kerb Ramp	Footpath	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	GAN GAN ROAD	Anna Bay	-32.777368	152.081155	TRUE	247	A71, A72	HIGH
KR_0023	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp	Damaged / poor condition	Visually DCA non compliant dimensions/grades		Reconstruct kerb ramp				\$	4,400.00	GAN GAN ROAD	Anna Bay	-32.777271	152.081172	TRUE	247	A71, A72	HIGH
KR_0024	Kerb Ramp	Footpath	Compliant											GAN GAN ROAD	Anna Bay	-32.777295	152.079993	TRUE	240	A81	HIGH
KR_0025	Kerb Ramp	Footpath	Compliant											GAN GAN ROAD	Anna Bay	-32.776824	152.079769	TRUE	250	A81	HIGH
KR_0026	Kerb Ramp	Footpath	Compliant											GRANHAM STREET	Boat Harbour	-32.780866	152.108352	TRUE	199	B9A	MEDIUM
KR_0027	Kerb Ramp	Footpath	Compliant											GRANHAM STREET	Boat Harbour	-32.779701	152.108896	TRUE	199	B9A	MEDIUM
KR_0028	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	NOAHUMBA STREET	Boat Harbour	-32.780536	152.109465	TRUE	196	B92	MEDIUM
KR_0029	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp	Visually DCA non compliant dimensions/grades			Reconstruct kerb ramp				\$	4,400.00	NOAHUMBA STREET	Boat Harbour	-32.780539	152.109719	TRUE	196	B92	MEDIUM
KR_0030	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KINGSLEY DRIVE	Boat Harbour	-32.780468	152.108709	TRUE	195	B91	MEDIUM
KR_0031	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KINGSLEY DRIVE	Boat Harbour	-32.780312	152.108717	TRUE	197	B91	MEDIUM
KR_0032	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KINGSLEY DRIVE	Boat Harbour	-32.780356	152.108919	TRUE	196	B92	MEDIUM
KR_0033	Kerb Ramp	No facility	Not compliant	Visually DCA non compliant dimensions/grades				Construct kerb ramp				\$	4,400.00	KINGSLEY DRIVE	Boat Harbour	-32.780446	152.108911	TRUE	196	B92	MEDIUM
KR_0034	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KINGSLEY DRIVE	Boat Harbour	-32.780204	152.108221	TRUE	205	B96, B97	MEDIUM
KR_0035	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	KINGSLEY DRIVE	Boat Harbour	-32.7849	152.108224	TRUE	207	B97	LOW
KR_0036	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CASTAWAY CLOSE	Boat Harbour	-32.782345	152.108566	TRUE	208	B97	LOW
KR_0037	Kerb Ramp	Footpath	Compliant											BLANCH STREET	Boat Harbour	-32.779221	152.108866	TRUE	211	B99	MEDIUM
KR_0038	Kerb Ramp	Shared path	Compliant											BLANCH STREET	Boat Harbour	-32.779259	152.109992	TRUE	211	B99	MEDIUM
KR_0039	Kerb Ramp	Shared path	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ONE MILE	One Mile	-32.777474	152.111998	TRUE	212	OM1	LOW
KR_0040	Kerb Ramp	Shared path	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	HANHAM PARADE	One Mile	-32.777365	152.112167	TRUE	212	OM1	LOW
KR_0041	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	EUCALYPTUS DRIVE	One Mile	-32.779732	152.114953	TRUE	214	OM2	MEDIUM
KR_0042	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	EUCALYPTUS DRIVE	One Mile	-32.778955	152.114899	TRUE	214	OM2	MEDIUM
KR_0043	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	REFLECTIONS DRIVE	One Mile	-32.786232	152.114437	TRUE	214	OM2	MEDIUM
KR_0044	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	REFLECTIONS DRIVE	One Mile	-32.786034	152.114296	TRUE	214	OM2	MEDIUM
KR_0045	Kerb Ramp	No facility	Not compliant	None: path level with road				Investigate provision of TSGI				N/A		SAMURAI BEACH ACCESS TRAIL	One Mile	-32.785166	152.113735	TRUE	214	OM2	MEDIUM
KR_0046	Kerb Ramp	No facility	Not compliant	None: path level with road				Investigate provision of TSGI				N/A		SAMURAI BEACH ACCESS TRAIL	One Mile	-32.785035	152.113652	TRUE	214	OM2	MEDIUM
KR_0047	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BLANCH STREET	Boat Harbour	-32.788029	152.109125	TRUE	196	B92	MEDIUM
KR_0048	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CAMPBELL AVENUE	Anna Bay	-32.7807	152.083284	TRUE	238	A64	MEDIUM
KR_0049	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	CAMPBELL AVENUE	Anna Bay	-32.780818	152.083146	TRUE	238	A64	MEDIUM
KR_0050	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	FITZROY STREET	Anna Bay	-32.780327	152.082329	TRUE	238	A64	MEDIUM
KR_0051	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	PACIFIC AVENUE	Anna Bay	-32.786042	152.081951	TRUE	235	A65	MEDIUM
KR_0052	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	OCEAN AVENUE	Anna Bay	-32.786032	152.081886	TRUE	235	A65	MEDIUM
KR_0053	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	OCEAN AVENUE	Anna Bay	-32.786113	152.081721	TRUE	236	A65	MEDIUM
KR_0054	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	PACIFIC AVENUE	Anna Bay	-32.786085	152.081975	TRUE	236	A65	MEDIUM
KR_0055	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	PACIFIC AVENUE	Anna Bay	-32.786174	152.081933	TRUE	235	A67A	MEDIUM
KR_0056	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ARDFLE AVENUE	Anna Bay	-32.786058	152.083122	TRUE	233	A712	MEDIUM
KR_0057	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BURBUL LANE	Anna Bay	-32.781703	152.084417	TRUE	232	A712	MEDIUM
KR_0058	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BURBUL LANE	Anna Bay	-32.786907	152.084347	TRUE	232	A712	MEDIUM
KR_0059	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MORNA POINT ROAD	Anna Bay	-32.785157	152.084655	TRUE	232	A712	MEDIUM
KR_0060	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	FISHERMANS BAY ROAD	Anna Bay	-32.785133	152.084777	TRUE	231	A713	MEDIUM
KR_0061	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	FISHERMANS BAY ROAD	Anna Bay	-32.785023	152.084755	TRUE	231	A713	MEDIUM
KR_0062	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MORNA POINT ROAD	Anna Bay	-32.786992	152.084734	TRUE	230	A712	MEDIUM
KR_0063	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	BLAKE PARADE	Anna Bay	-32.782407	152.085271	TRUE	230	A712	MEDIUM
KR_0064	Kerb Ramp	Footpath	Not compliant	Misaligned with opposite kerb ramp	Visually DCA non compliant dimensions/grades			Reconstruct kerb ramp				\$	4,400.00	BLAKE PARADE	Anna Bay	-32.782259	152.085262	TRUE	230	A712	MEDIUM
KR_0065	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MORNA POINT ROAD	Anna Bay	-32.782196	152.085224	TRUE	230	A712	MEDIUM
KR_0066	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MORNA POINT ROAD	Anna Bay	-32.782185	152.085038	TRUE	230	A712	MEDIUM
KR_0067	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	DAVIDSON STREET	Anna Bay	-32.782133	152.084624	TRUE	242	A714	MEDIUM
KR_0068	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	PACIFIC AVENUE	Anna Bay	-32.786077	152.084613	TRUE	242	A714	MEDIUM
KR_0069	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	PACIFIC AVENUE	Anna Bay	-32.781205	152.084526	TRUE	241	A75, A714	MEDIUM
KR_0070	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	DAVIDSON STREET	Anna Bay	-32.781232	152.084454	TRUE	241	A75, A714	MEDIUM
KR_0071	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SCOTT STREET	Anna Bay	-32.784193	152.082518	TRUE	234	A65	MEDIUM
KR_0072	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SCOTT STREET	Anna Bay	-32.784321	152.082487	TRUE	234	A65	MEDIUM
KR_0073	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ANGELERS DRIVE	Anna Bay	-32.780477	152.085613	TRUE	229	A712	MEDIUM
KR_0074	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ANGELERS DRIVE	Anna Bay	-32.780313	152.085657	TRUE	229	A712	MEDIUM
KR_0075	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ESSINGTON WAY	Anna Bay	-32.779083	152.089199	TRUE	223	A76, A77	MEDIUM
KR_0076	Kerb Ramp	Footpath	Not compliant	Visually DCA non compliant dimensions/grades				Reconstruct kerb ramp				\$	4,400.00	MORNA POINT ROAD	Anna Bay	-32.778925	152.085896	TRUE	227	A712	MEDIUM
KR_0077	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MORNA POINT ROAD	Anna Bay	-32.779957	152.085929	TRUE	223	A76, A77	MEDIUM
KR_0078	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	SEABREEZE CLOSE	Anna Bay	-32.780203	152.087715	TRUE	221	A96	MEDIUM
KR_0079	Kerb Ramp	No facility	Not compliant	Misaligned with opposite kerb ramp				Reconstruct kerb ramp				\$	4,400.00	SEABREEZE CLOSE	Anna Bay	-32.780281	152.087769				



Asset ID	Feature Type	Path Type	Compliance Criteria	Assessment Criteria (1)	Assessment Criteria (2)	Assessment Criteria (3)	Assessment Criteria (4)	Improvement Recommendation (1)	Improvement Recommendation (2)	Improvement Recommendation (3)	Improvement Recommendation (4)	Cost Estimate	Comments	Road Name	Suburb/Area	Latitude	Longitude	HasPhoto	SubSection No.	Route No.	Priority
KL_01040	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	MOORDOBA CRESCENT	Nelson Bay	-32.72510617	152.1370165	FALSE	80	NB10, NB22	HIGH
KL_01041	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	DIXON DRIVE	Nelson Bay	-32.71810928	152.1556092	FALSE	121	NB99	MEDIUM
KL_01042	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SHOAL BAY ROAD		-32.72081806	152.1779356	FALSE	147	SA	MEDIUM
KL_01043	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SHOAL BAY ROAD		-32.72018157	152.1780683	FALSE	147	SA	MEDIUM
KL_01044	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ROADLER BAY ROAD		-32.72227278	152.1660006	FALSE	181	FB9	MEDIUM
KL_01045	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	ROADLER BAY ROAD		-32.72241499	152.166118	FALSE	181	FB9	MEDIUM
KL_01046	Kerb Ramp	No facility	Not compliant	Missing				Construct kerb ramp				\$	3,300.00	SHEARWATER DRIVE	Taylors Beach	-32.7240388	152.0699139	FALSE	235	TB9	LOW
KL_01047	Kerb Ramp	Footpath	Compliant											SHOAL BAY ROAD		-32.7201094	152.1779187	FALSE	145	SA, SA	MEDIUM
KL_01048	Kerb Ramp	Footpath	Compliant											SHOAL BAY ROAD		-32.72080994	152.1779351	FALSE	143	SA, SA	MEDIUM
KL_01049	Kerb Ramp	Shared path	Compliant											SHOAL BAY ROAD		-32.72071958	152.1779709	FALSE	143	SA, SA	MEDIUM
KL_01050	Kerb Ramp	Shared path	Compliant											SHOAL BAY ROAD		-32.720209	152.1779799	FALSE	143	SA	MEDIUM
KL_01051	Kerb Ramp	Shared path	Compliant											SHOAL BAY ROAD		-32.7200094	152.1777715	FALSE	143	SA	MEDIUM
KL_01052	Kerb Ramp	Shared path	Compliant											SHOAL BAY ROAD		-32.72001039	152.1779471	FALSE	145	SA, SA	MEDIUM
KL_01053	Kerb Ramp	Footpath	Compliant											GOVERNMENT ROAD		-32.72072291	152.1777948	FALSE	143	SA, SA	MEDIUM
KL_01054	Kerb Ramp	Footpath	Compliant											GOVERNMENT ROAD		-32.72080294	152.1772769	FALSE	143	SA, SA	MEDIUM
KL_01055	Kerb Ramp	Shared path	Compliant											BAGNALL BEACH ROAD	Salvander Bay	-32.71551512	152.100206	FALSE	38	SA5	LOW
KL_01056	Kerb Ramp	Footpath	Compliant											BAGNALL BEACH ROAD	Salvander Bay	-32.7156083	152.1005902	FALSE	38	SA5	LOW
KL_01057	Kerb Ramp	Footpath	Compliant											BAGNALL BEACH ROAD	Salvander Bay	-32.7158819	152.1004526	FALSE	36	SA4, SA6A	MEDIUM
KL_01058	Kerb Ramp	Shared path	Compliant											BAGNALL BEACH ROAD	Salvander Bay	-32.71582633	152.1001187	FALSE	36	SA4, SA6A	MEDIUM
KL_01059	Kerb Ramp	Shared path	Compliant											BAGNALL BEACH ROAD	Salvander Bay	-32.71457148	152.1006203	FALSE	43	SA5, SA6A	MEDIUM
KL_01060	Kerb Ramp	Shared path	Compliant											BAGNALL BEACH ROAD	Salvander Bay	-32.71457197	152.1005937	FALSE	43	SA5, SA6A	MEDIUM
KL_00001	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	PORT STEPHENS DRIVE	Taylors Beach	-32.749597	152.068561	TRUE	237	TB5	LOW
KL_00002	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	PORT STEPHENS DRIVE	Taylors Beach	-32.749586	152.068580	TRUE	237	TB5	LOW
KL_00003	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	PORT STEPHENS DRIVE	Taylors Beach	-32.74955	152.068443	TRUE	237	TB5	LOW
KL_00004	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	PORT STEPHENS DRIVE	Taylors Beach	-32.749662	152.068637	TRUE	237	TB5	LOW
KL_00005	Observation Defect / Issue	No facility	Not compliant	Steep path grade / crossfall				Investigate opportunities to improve path grade / crossfall				N/A		ASH STREET	Siddons Point	-32.708039	152.06761	TRUE	10	SP5B	MEDIUM
KL_00006	Observation Defect / Issue	No facility	Not compliant	Steep path grade / crossfall				Investigate opportunities to improve path grade / crossfall				N/A		ASH STREET	Siddons Point	-32.708038	152.067782	TRUE	10	SP5B	MEDIUM
KL_00007	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	DIEMARS ROAD	Salvander Bay	-32.721167	152.07578	TRUE	20	SA10	HIGH
KL_00008	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	MARINE DRIVE		-32.747683	152.170131	TRUE	187	FB1	LOW
KL_00009	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	PORT STEPHENS DRIVE		-32.747918	152.169456	TRUE	232	FB5	MEDIUM
KL_00010	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	PORT STEPHENS DRIVE		-32.7388	152.173651	TRUE	157	SSC	LOW
KL_00011	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	PORT STEPHENS DRIVE		-32.73141	152.171778	TRUE	156	SSD	LOW
KL_00012	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	SHOAL BAY ROAD		-32.722278	152.172751	TRUE	144	SA	MEDIUM
KL_00013	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	SHOAL BAY ROAD		-32.71838	152.185278	TRUE	145	SA	MEDIUM
KL_00014	Observation Defect / Issue	Footpath	Not compliant	Steep path grade / crossfall				Investigate opportunities to improve path grade / crossfall				N/A		Boyd Harbour		-32.781358	152.109064	FALSE	210	BA9	LOW
KL_00015	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	BAGNALL BEACH ROAD	Corlette	-32.711069	152.111213	TRUE	58	C1A	MEDIUM
KL_00016	Observation Defect / Issue	Footpath	Not compliant	Other (See comment)				Investigate opportunities to improve path grade / crossfall				N/A	gravel, consider pavement	MOORING AVENUE	Corlette	-32.711306	152.115896	TRUE	64	C6	LOW
KL_00017	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	BARTLETT CIRCLEWAY	Corlette	-32.712083	152.125569	FALSE	69	C1B	MEDIUM
KL_00018	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	GAN GAN ROAD	Anna Bay	-32.770915	152.089156	TRUE	224	A1F	LOW
KL_00019	Observation Defect / Issue	Shared path	Not compliant	No delineation on shared path				Provide new shared path themarking and signs				\$	78.39	GAN GAN ROAD	Anna Bay	-32.770906	152.089153	TRUE	249	A1F	HIGH
PL_00001	Personal Security	No facility	Not compliant	No lighting				Investigate provision of adequate lighting facilities				N/A		MONEY STREET	Shoal Bay	-32.7248	152.173824	FALSE	162	SSB	HIGH
PL_00002	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		GOVERNMENT ROAD	Shoal Bay	-32.725789	152.171688	FALSE	154	SS5	HIGH
PL_00003	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		GOVERNMENT ROAD	Shoal Bay	-32.727885	152.171249	FALSE	154	SS5	LOW
PL_00004	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		GOVERNMENT ROAD	Shoal Bay	-32.728915	152.171109	FALSE	154	SS5	HIGH
PL_00005	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		GOVERNMENT ROAD	Shoal Bay	-32.728914	152.170789	FALSE	154	SS5	HIGH
PL_00006	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		SYDIA STREET	Shoal Bay	-32.713744	152.171053	FALSE	154	SS5	HIGH
PL_00007	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		TOMAHIE ROAD	Shoal Bay	-32.713178	152.172168	FALSE	158	SSB	HIGH
PL_00008	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		MONEY STREET	Shoal Bay	-32.724815	152.173823	FALSE	159	SSB	HIGH
PL_00009	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		PANGAL STREET	Shoal Bay	-32.727638	152.173049	FALSE	161	SP7	MEDIUM
PL_00010	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		MONEY STREET	Shoal Bay	-32.726513	152.173492	FALSE	162	SSB	HIGH
PL_00011	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		MESSEMS STREET	Shoal Bay	-32.722159	152.174893	FALSE	152	SSB	HIGH
PL_00012	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		TOMAHIE ROAD	Shoal Bay	-32.722672	152.173348	FALSE	163	SSA	MEDIUM
PL_00013	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		TOMAHIE ROAD	Shoal Bay	-32.72577	152.174723	FALSE	163	SSA	MEDIUM
PL_00014	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		TOMAHIE ROAD	Shoal Bay	-32.711014	152.171147	FALSE	160	SSA	MEDIUM
PL_00015	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		MESSEMS STREET	Shoal Bay	-32.722238	152.175937	FALSE	151	SA	MEDIUM
PL_00016	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		SHOAL BAY ROAD	Shoal Bay	-32.720077	152.178018	FALSE	164	SA	MEDIUM
PL_00017	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		SHOAL BAY ROAD	Shoal Bay	-32.720908	152.168375	FALSE	164	SA	MEDIUM
PL_00018	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		SHOAL BAY ROAD	Shoal Bay	-32.718211	152.185236	FALSE	165	SA	MEDIUM
PL_00019	Personal Security	Footpath	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		SHOAL BAY ROAD	Shoal Bay	-32.720316	152.186820	FALSE	142	SA	MEDIUM
PL_00020	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		HARWOOD AVENUE	Nelson Bay	-32.717942	152.16446	FALSE	139	NB11A	HIGH
PL_00021	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		AJAX AVENUE	Nelson Bay	-32.716488	152.164099	FALSE	126	NB11B	HIGH
PL_00022	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		AJAX AVENUE	Nelson Bay	-32.715966	152.160757	FALSE	126	NB11B	HIGH
PL_00023	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		DIXON DRIVE	Nelson Bay	-32.714845	152.157124	FALSE	121	NB99	MEDIUM
PL_00024	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		AUSTAL STREET	Nelson Bay	-32.722155	152.155568	FALSE	137	NB4B	HIGH
PL_00025	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		TREVALLY STREET	Nelson Bay	-32.72201	152.156804	FALSE	136	NB5A	HIGH
PL_00026	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		AUSTAL STREET	Nelson Bay	-32.722151	152.156479	FALSE	137	NB4B	HIGH
PL_00027	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		ARMADALE AVENUE	Nelson Bay	-32.722051	152.155114	FALSE	138	NB3	HIGH
PL_00028	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		ARMADALE AVENUE	Nelson Bay	-32.722424	152.155119	FALSE	138	NB3	HIGH
PL_00029	Personal Security	Footpath	No lighting	Low level of lighting				Investigate provision of adequate lighting facilities				N/A		STROTHERS STREET	Nelson Bay	-32.723491	152.164848	FALSE	158	NB5A, NB7, NB13, NB18	MEDIUM
PL_00030	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		PILOT ROAD	Ora Miro	-32.726991	152.110913	FALSE	214	OM2	MEDIUM
PL_00031	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		SOLDIERS POINT ROAD	Salvander Bay	-32.714465	152.079358	FALSE	19	SB3A	HIGH
PL_00032	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		SOLDIERS POINT ROAD	Salvander Bay	-32.71871	152.074940	FALSE	19	SB3A	HIGH
PL_00033	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		MITCHELL STREET	Siddons Point	-32.69942	152.064746	FALSE	2	SP1	MEDIUM
PL_00034	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		MITCHELL STREET	Siddons Point	-32.698838	152.063978	FALSE	2	SP1	MEDIUM
PL_00035	Personal Security	No facility	No lighting	No lighting				Investigate provision of adequate lighting facilities				N/A		MITCHELL STREET	Sidd						



ID	Label	Feature Type	Path Type	Compliance Criteria	Assessment Criteria (1)	Assessment Criteria (2)	Assessment Criteria (3)	Assessment Criteria (4)	Improvement Recommendation (1)	Improvement Recommendation (2)	Improvement Recommendation (3)	Improvement Recommendation (4)	Cost Estimates	Comments	Road Name	Subur/Village	Latitude	Longitude	HasPhoto	SubSection No.	Route No.	Prioritisation	
PS_0005	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			FRIDAY CRESCENT	Frangal Bay	-32.748824	352.188943	FALSE	179	FB04	MEDIUM
PS_0006	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			SHORT STREET	Frangal Bay	-32.750503	352.17052	FALSE	187	FB05, FB13	MEDIUM
PS_0007	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			PACIFIC DRIVE	Frangal Bay	-32.751604	352.17074	FALSE	186	FB05	MEDIUM
PS_0008	Personal Security	No facility			Low level of lighting				Investigate provision of adequate lighting facilities				N/A				Frangal Bay	-32.748355	352.16647	FALSE	192	FB06, FB8	MEDIUM
PS_0009	Personal Security	Footpath			No lighting				Investigate provision of adequate lighting facilities				N/A			BLANCH STREET	Boat Harbour	-32.78816	352.10951	FALSE	198	BH01, BH2	MEDIUM
PS_0010	Personal Security	Footpath			No lighting				Investigate provision of adequate lighting facilities				N/A			BOAT HARBOUR ROAD	Boat Harbour	-32.788453	352.11473	FALSE	201	BH5	MEDIUM
PS_0011	Personal Security	Footpath			No lighting				Investigate provision of adequate lighting facilities				N/A			BOAT HARBOUR ROAD	Boat Harbour	-32.788957	352.11252	FALSE	202	BH5	MEDIUM
PS_0012	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			ANDREW CLOSE	Boat Harbour	-32.789125	352.10902	FALSE	205	BH6	MEDIUM
PS_0013	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			BLANCH STREET	Boat Harbour	-32.789004	352.10873	FALSE	206	BH6, BH7	MEDIUM
PS_0014	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			BLANCH STREET	Boat Harbour	-32.789048	352.10815	FALSE	207	BH7	LOW
PS_0015	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			BLANCH STREET	Boat Harbour	-32.781599	352.10782	FALSE	220	BH8	LOW
PS_0016	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			BLANCH STREET	Boat Harbour	-32.780585	352.10748	FALSE	211	BH9	MEDIUM
PS_0017	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			GAN GAN ROAD	Boat Harbour	-32.777983	352.11158	FALSE	213	BH10	MEDIUM
PS_0018	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			HANNAH PARADE	One Mile	-32.777808	352.113049	FALSE	212	OM5	LOW
PS_0019	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			GAN GAN ROAD	One Mile	-32.772583	352.118514	FALSE	214	OM2	MEDIUM
PS_0010	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			FROST ROAD	One Mile	-32.76384	352.11177	FALSE	214	OM2	MEDIUM
PS_0011	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			GAN GAN ROAD	One Mile	-32.763868	352.113161	FALSE	214	OM2	MEDIUM
PS_0012	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			CAMPBELL AVENUE	Anna Bay	-32.780128	352.08102	FALSE	238	A4	MEDIUM
PS_0013	Personal Security	No facility			Low level of lighting				Investigate provision of adequate lighting facilities				N/A			MARGARET STREET	Anna Bay	-32.779946	352.08621	FALSE	241	AF5, AF14	MEDIUM
PS_0014	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			CAMPBELL AVENUE	Anna Bay	-32.781494	352.08251	FALSE	238	A4	MEDIUM
PS_0015	Personal Security	No facility			Low level of lighting				Investigate provision of adequate lighting facilities				N/A			ROBINSON STREET	Anna Bay	-32.782869	352.08076	FALSE	238	A4	MEDIUM
PS_0016	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			ROBINSON STREET	Anna Bay	-32.782933	352.07919	FALSE	238	A4	MEDIUM
PS_0017	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			HYDESBY STREET	Anna Bay	-32.782886	352.07881	FALSE	238	A4	MEDIUM
PS_0018	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			FITZROY STREET	Anna Bay	-32.786409	352.07976	FALSE	238	A4	MEDIUM
PS_0019	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A				Anna Bay	-32.781649	352.076246	FALSE	237	AF2	HIGH
PS_0020	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			MORNA POINT ROAD	Anna Bay	-32.788224	352.08454	FALSE	232	AF12	MEDIUM
PS_0021	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			FISHERMANS BAY ROAD	Anna Bay	-32.785034	352.08637	FALSE	231	AF13	MEDIUM
PS_0022	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			FISHERMANS BAY ROAD	Fishermans Bay	-32.785058	352.08925	FALSE	231	AF13	MEDIUM
PS_0023	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			FISHERMANS BAY ROAD	Fishermans Bay	-32.785919	352.090292	FALSE	231	AF13	MEDIUM
PS_0024	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			FISHERMANS BAY ROAD	Fishermans Bay	-32.786761	352.091544	FALSE	231	AF13	MEDIUM
PS_0025	Personal Security	No facility			Low level of lighting				Investigate provision of adequate lighting facilities				N/A			PARK STREET	Fishermans Bay	-32.787264	352.091446	FALSE	231	AF13	MEDIUM
PS_0026	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			MORNA POINT ROAD	Anna Bay	-32.784591	352.084716	FALSE	230	AF12	MEDIUM
PS_0027	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			MORNA POINT ROAD	Anna Bay	-32.783104	352.085386	FALSE	229	AF12	MEDIUM
PS_0028	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			GAN GAN ROAD	Anna Bay	-32.775178	352.09225	FALSE	219	AF8	HIGH
PS_0029	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			GAN GAN ROAD	Anna Bay	-32.775769	352.09154	FALSE	219	AF8	HIGH
PS_0030	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			GAN GAN ROAD	Anna Bay	-32.777476	352.09174	FALSE	218	AF8	HIGH
PS_0031	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			CLARE STREET	Anna Bay	-32.777003	352.07972	FALSE	217	AF9	HIGH
PS_0032	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			OLD MAIN ROAD	Anna Bay	-32.775812	352.09263	FALSE	225	AF10	MEDIUM
PS_0033	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			OLD MAIN ROAD	Anna Bay	-32.775988	352.091207	FALSE	225	AF10	MEDIUM
PS_0034	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			OLD MAIN ROAD	Anna Bay	-32.776393	352.086517	FALSE	226	AF11	MEDIUM
PS_0035	Personal Security	No facility			No lighting				Investigate provision of adequate lighting facilities				N/A			CHOMAREY CRESCENT	Anna Bay	-32.775881	352.084882	FALSE	228	AF6, AF7	MEDIUM
HE_0001	Refuge	Footpath	Compliant													INNOVATION CLOSE	Taylor's Beach	-32.745439	352.08887	TRUE	257	TB5	LOW
HE_0002	Refuge	Shared path	Compliant													PORT STEPHENS DRIVE	Taylor's Beach	-32.745192	352.088741	TRUE	257	TB5	LOW
HE_0003	Refuge	Shared path	Compliant													TAYLORS BEACH ROAD	Taylor's Beach	-32.745341	352.088404	TRUE	257	TB5	LOW
HE_0004	Refuge	Footpath	Compliant													PORT STEPHENS DRIVE	Taylor's Beach	-32.745584	352.088552	TRUE	257	TB5	LOW
HE_0005	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		SOLDIERS POINT ROAD	Salvadorer Bay	-32.721074	352.076593	TRUE	260	SB3A	HIGH
HE_0006	Refuge	Footpath	Compliant													FARM ROAD	Frangal Bay	-32.745706	352.18864	TRUE	185	FB3, FB4	MEDIUM
HE_0007	Refuge	Footpath	Compliant													FARM ROAD	Frangal Bay	-32.745802	352.187746	TRUE	185	FB3, FB4	MEDIUM
HE_0008	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		MAHON DRIVE	Frangal Bay	-32.746886	352.189548	TRUE	187	FB5	LOW
HE_0009	Refuge	Shared path	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		MAHON DRIVE	Frangal Bay	-32.742199	352.170313	TRUE	184	FB1	LOW
HE_0010	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		GOVERNMENT ROAD	Shoal Bay	-32.731643	352.173833	TRUE	144	SB	MEDIUM
HE_0011	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		TARRANT ROAD	Salvadorer Bay	-32.730811	352.081818	TRUE	24	SB3A	HIGH
HE_0012	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		SOLDIERS POINT ROAD	Salvadorer Bay	-32.734686	352.083745	TRUE	26	SB3A, SB3D	MEDIUM
HE_0013	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		PORT STEPHENS DRIVE	Salvadorer Bay	-32.730663	352.085071	TRUE	28	SB3C	HIGH
HE_0014	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		SANDY POINT ROAD	Corlette	-32.725356	352.104325	TRUE	51	C3B	MEDIUM
HE_0015	Refuge	Shared path	Compliant													BAGMALL BEACH ROAD	Corlette	-32.728345	352.115717	TRUE	58	CL4	MEDIUM
HE_0016	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		SEARGENT BAKER DRIVE	Corlette	-32.725701	352.121903	TRUE	59	C1B	MEDIUM
HE_0017	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		NAUVA ROLA AVENUE	Corlette	-32.724821	352.118119	TRUE	63	C3A, C3B, C4, C5	MEDIUM
HE_0018	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		GAWUL CIRCUIT	Corlette	-32.724642	352.118288	TRUE	63	C3A, C3B, C4, C5	MEDIUM
HE_0019	Refuge	Footpath	Compliant													SANDY POINT ROAD	Corlette	-32.719948	352.12189	TRUE	66	C7	MEDIUM
HE_0020	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		LAGOONS CIRCUIT	Nelson Bay	-32.721281	352.149999	TRUE	115	NB18	MEDIUM
HE_0021	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space	Investigate safe crossing operation			\$	28,000.00	high traffic volumes and speeds, consider an alternative crossing type	SHOAL BAY ROAD	Nelson Bay	-32.731918	352.16952	TRUE	141	SB	MEDIUM
HE_0022	Refuge	No facility			Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		SHOAL BAY ROAD	Nelson Bay	-32.731847	352.168214	TRUE	140	NB18, NB11A	HIGH
HE_0023	Refuge	Shared path	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		GOINER AVENUE	Nelson Bay	-32.731789	352.159712	TRUE	127	NB14	HIGH
HE_0024	Refuge	Shared path	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		SHOAL BAY ROAD	Nelson Bay	-32.731709	352.159395	TRUE	128	NB15, NB11A	HIGH
HE_0025	Refuge	Shared path	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		SHOAL BAY ROAD	Nelson Bay	-32.731777	352.159877	TRUE	140	NB15, NB11A	HIGH
HE_0026	Refuge	Shared path	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		DIXON DRIVE	Nelson Bay	-32.731675	352.155238	TRUE	121	NB18	MEDIUM
HE_0027	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		VICTORIA PARADE	Nelson Bay	-32.720501	352.14514	TRUE	113	NB2, NB6	HIGH
HE_0028	Refuge	Footpath	Compliant													TOMAREE STREET	Nelson Bay	-32.735872	352.145226	TRUE	109	NB7	MEDIUM
HE_0029	Refuge	Footpath	Not compliant		Refuge dimensions less than 3m (parallel) x 2m (perpendicular)				Reconstruct refuge to provide compliant waiting space				\$	28,000.00		DOWNLING STREET	Nelson Bay	-32.724283	352.14392	TRUE	114	NB1A	MEDIUM

Tomaree Planning District

## APPENDIX

# F

RESPONSES TO COMMUNITY  
AND STAKEHOLDER FEEDBACK

# 1 Responses to stakeholder feedback

Name of stakeholder	Key issues raised regarding pedestrian network	Summary of PAMP recommendation
Port Stephens Council	<ul style="list-style-type: none"> <li>Key focus areas included the streets surrounding the Salamander Bay Shopping Centre and Tomaree High School – safety concerns raised for pedestrian movements between these two key land uses.</li> <li>Improvements are under construction at Shoal Bay (intersection of Government Road and Shoal Bay Road) and at Salamander Bay (between the Shopping Centre and KFC).</li> <li>A pedestrian crossing at Shoal Bay Road is an item of concern due to poor motorist and pedestrian sight lines.</li> </ul>	<ul style="list-style-type: none"> <li>The PAMP notes the new signalised intersection proposed at Bagnall Beach Road and Town Centre Circuit.</li> <li>Improved crossings are under construction at Town Centre Circuit and the new Central Street.</li> <li>Vegetation maintenance is proposed in the area adjacent to the crossing to improve sight lines.</li> </ul>
Anna Bay Public School	<ul style="list-style-type: none"> <li>There is no footpath facility along Old Main Road, to the rear of the school. Parents and carers prefer to use Old Main Road for pick-up and set-down as it is quieter than Gan Gan Road with less through traffic.</li> <li>Old Main Road is very dark at night, and the existing lighting facilities are insufficient.</li> <li>The shared path network along Gan Gan Road connecting Anna Bay with Boat Harbour is incomplete, with missing links and designated crossing facilities to connect the two areas.</li> </ul>	<ul style="list-style-type: none"> <li>New footpaths are proposed along Old Main Road</li> <li>Investigating improvements to the lighting facilities in the area is proposed</li> <li>Hazardous crossings are noted where the shared path transitions from the northern side of Gan Gan Road to the southern side. Completing missing shared path links are also recommended.</li> </ul>
Shoal Bay Public School	<ul style="list-style-type: none"> <li>There is no footpath along Rigney Street northbound from the school towards the Shoal Bay town centre. Many students travel in this direction, and often walk along the verge or on the road.</li> <li>Traffic speeds along Rigney Street are sometimes high, causing safety concerns.</li> <li>Street lighting in the area is generally good.</li> </ul>	<ul style="list-style-type: none"> <li>New footpaths are proposed along both sides of Rigney Street between Messines Street and Tomaree Road.</li> <li>Areas of poor lighting were noted with recommendations to investigate provision of additional lighting</li> </ul>
St Phillips Christian College	<ul style="list-style-type: none"> <li>The area out of the front of the Uniting Church on Salamander Way and also on the opposite side of the road does not have footpaths however the road does have a safe area for pedestrians to cross.</li> <li>Concerns have been raised for the safety of pedestrians when cars are attempting to turn right into Narnia Early Learning Centre (across a white line median strip). At the moment vehicles will often move around cars making the right-hand turn resulting in them driving along the gravel next to the road.</li> <li>Additional flashing lights / speed notification signs would be beneficial along Salamander Way near the school crossing to raise awareness of the crossing and the need for increased alertness when travelling in this area. Additional safety measures should also be considered at the intersection of Salamander Way and Bagnall Beach Road, where significant congestion occurs.</li> </ul>	<ul style="list-style-type: none"> <li>New footpaths and shared paths are proposed along the northern, western and eastern approaches to the roundabout intersection of Salamander Way and Bagnall Beach Road.</li> <li>Council to consider additional traffic safety measures along Salamander Way.</li> </ul>



Name of stakeholder	Key issues raised regarding pedestrian network	Summary of PAMP recommendation
Tomaree Public School	<ul style="list-style-type: none"> <li>There is no footpath along Salamander Way past the Salamander Bay Shopping Centre.</li> <li>Crossing opportunities along Bagnall Beach Road are limited, with concerns raised for students leaving the school and accessing the Corlette area due to the high traffic volumes and speeds along the road.</li> <li>It is difficult for vehicles leaving Leisure Drive to turn right into Salamander Way.</li> </ul>	<ul style="list-style-type: none"> <li>New footpaths are proposed on both sides of Salamander Way from the Tomaree Aquatic Centre to Port Stephens Drive</li> <li>The PAMP has noted Council's proposal to construct a new signalised crossing facility at the intersection of Bagnall Beach Road and Town Centre Circuit.</li> </ul>
Uniting Salamander Bay	<ul style="list-style-type: none"> <li>The bus stop on Port Stephens Drive to the east of the centre is located far away from the pedestrian refuge crossing providing access to Muller Street.</li> <li>There are no designated crossing facilities along Soldier's Point Road, presenting safety concerns. Currently footpath links are provided to kerb ramps, but no pedestrian priority given.</li> </ul>	<ul style="list-style-type: none"> <li>Additional footpath links have been proposed along the length of Port Stephens Drive between Salamander Way and Foreshore Drive, linking to the existing bus stops.</li> <li>Hazardous crossing locations along Port Stephens Drive have been noted for investigation.</li> </ul>
Anna Bay Village Retreat	<ul style="list-style-type: none"> <li>There is no footpath facility available to link visitors and clients to the Anna Bay town centre.</li> <li>Street lighting in the area is inadequate.</li> </ul>	<ul style="list-style-type: none"> <li>Footpath facilities are proposed along Nelson Bay Road, Gordon Close and Gan Gan Road connecting to the Anna Bay town centre.</li> <li>The poor lighting in the area has been noted, with recommendations to investigate providing additional lighting facilities.</li> </ul>
Middle Rock Home Village	<ul style="list-style-type: none"> <li>There is no footpath, or kerb and gutter along Gan Gan Road.</li> <li>The connection of the Holiday Park to Hannah Parade was suggested.</li> </ul>	<ul style="list-style-type: none"> <li>An extension of the shared path is proposed along Gan Gan Road and Frost Road.</li> </ul>
Harbourside Haven	<ul style="list-style-type: none"> <li>There is a pedestrian refuge at the front of the town centre which allows for pedestrians to cross Shoal Bay Road.</li> </ul>	<ul style="list-style-type: none"> <li>The crossing has been noted as a hazardous crossing location for further investigation by Council</li> </ul>
Salamander Childcare Centre	<ul style="list-style-type: none"> <li>There is no pedestrian crossing connecting the community centre with the Salamander Bay Shopping Centre.</li> <li>There are inconsistencies in the footpath network in the area with gaps and missing facilities observed along Community Close.</li> <li>Vehicle speeds are high along Community Close and Town Centre Circuit, speed limits are not signposted in the area.</li> <li>The intersection layout of Salamander Way and Community Close has recently changed, and accidents have been reported with vehicles attempting to turn out from Community Close.</li> </ul>	<ul style="list-style-type: none"> <li>A hazardous crossing location has been noted on Community Close.</li> <li>New footpaths are recommended along Community Close.</li> </ul>
Karingal Pre-School	<ul style="list-style-type: none"> <li>There is no footpath facility along Norburn Avenue – parents and carers use this street for pick-up and set-down – desire lines are visible where the grass has eroded away.</li> <li>Tree roots in the area at the front of the centre pose a tripping hazard for pedestrians.</li> <li>A raised threshold is suggested for Norburn Avenue for buses travelling in the area.</li> <li>Residents have complained about vehicles speeding down the hill along Norburn Avenue.</li> </ul>	<ul style="list-style-type: none"> <li>New footpath and kerb ramp facilities are proposed at the intersection of Norburn Avenue and Gowrie Avenue.</li> </ul>
Goodstart Childcare	<ul style="list-style-type: none"> <li>The footpath heading eastbound along Shoal Bay Road from the centre is in poor condition.</li> </ul>	<ul style="list-style-type: none"> <li>A hazardous crossing location is noted on Shoal Bay Road outside of the entrance to the Wests Diggers Club.</li> </ul>

Name of stakeholder	Key issues raised regarding pedestrian network	Summary of PAMP recommendation
Centre Nelson Bay	<ul style="list-style-type: none"> <li>The bus stop servicing the Wests Nelson Bay Diggers Club (Shoal Bay Road northern side) is in a poor location. Passengers travelling to the centre need to walk back along Shoal Bay Road, cross Dixon Drive, cross Shoal Bay Road at the designated crossing and then proceed back east towards the centre.</li> </ul>	
Nelson Bay Preschool	<ul style="list-style-type: none"> <li>The pedestrian refuge facility allowing crossings across Church Street near the intersection of Dalton Street is not safe.</li> </ul>	<ul style="list-style-type: none"> <li>A hazardous crossing has been noted at the intersection of Church Street and Dalton Street</li> </ul>
Salamander Gumnuts	<ul style="list-style-type: none"> <li>There is no footpath provided along Salamander Way – this makes access for parents or carers pushing prams difficult. Some clients or visitors access the centre by bus, and there is no footpath link provided from the stops on Salamander Way.</li> <li>There are no formal crossings in the vicinity of the centre.</li> <li>Street lighting in the area is poor at night.</li> <li>The speed limit of 50km/h is too high in this area, pedestrian signage is needed</li> </ul>	<ul style="list-style-type: none"> <li>Footpaths are recommended on both sides of Salamander Way between the Tomaree Aquatic Centre and Port Stephens Drive.</li> <li>Hazardous crossings for further investigation by Council are noted at the intersection of Salamander Way and Port Stephens Drive.</li> </ul>
Anna Bay and Shoal Bay Medical Centre	<ul style="list-style-type: none"> <li>Outside the Anna Bay Medical Centre, the pedestrian zebra crossing across Gan Gan Road is in a poor location; drivers sometimes do not see pedestrians as they approach the crossing.</li> <li>Outside the Shoal Bay Medical Centre, the pedestrian refuge crossing across Government Road is in a poor location; drivers sometimes do not see pedestrians as they approach the crossing.</li> <li>Lighting around the Shoal Bay centre is good.</li> </ul>	<ul style="list-style-type: none"> <li>Council to consider additional traffic speed safety measures at the zebra crossing – the current layout is compliant with the exception of missing tactiles.</li> <li>The PAMP notes the upgrade to the intersection of Government Road and Shoal Bay Road is under construction.</li> </ul>
Tomaree Aquatic Centre	<ul style="list-style-type: none"> <li>The intersection of Salamander Way and Leisure Drive becomes very congested and busy during school times, as the access road to the centre is shared with access to the Tomaree High School and TAFE. There is difficulty with vehicles attempting to enter and leave the area as the intersection is a Give-Way only.</li> <li>Along Foreshore Drive, the shared path ends past the last house on the eastern side (197 Foreshore Drive).</li> </ul>	<ul style="list-style-type: none"> <li>Footpath links are proposed along Foreshore Drive.</li> </ul>
Port Stephens Coaches	<ul style="list-style-type: none"> <li>Drivers reported accessibility issues for customers wanting to access bus services from the two stops on Tomaree Road, after Victor Parade (Transit Stop Numbers 231577 and 231522).</li> </ul>	<ul style="list-style-type: none"> <li>New footpath links are proposed along the length of Tomaree Road, connecting to bus stop 231577 and 231522.</li> </ul>



## 2 Responses to community feedback

Key issues raised regarding pedestrian network	Summary of PAMP recommendation
Lack of footpath on Hannah Parade	Footpaths are proposed along Hannah Parade
Footpath needed on Blanch Close	Footpaths are recommended on both sides of Blanch Street
Lack of footpath on Bagnall Beach Road	Footpaths and shared paths are proposed along Bagnall Beach Road between Salamander Way and Sandy Point Road
Shared path needed on Foreshore Drive	Footpaths are proposed along both sides of Foreshore Drive
Footpath needed connecting Anna Bay and Salamander Bay	Council to consider extensions of the proposed pedestrian network to connect Anna Bay and Salamander Bay
Lack of footpath on Victoria Parade	New footpath facilities are proposed to complete missing links where they were observed along Victoria Parade
Disconnected footpaths at Nelson Bay Marina	New footpath facilities are proposed along the Nelson Bay foreshore, connecting across Teramby Road. Council to consider additional provisions at the Marina.
Unsafe crossings and lack of footpath between Boat Harbour to Anna Bay	Completion of the shared path network, with crossings between Boat Harbour and Anna Bay is proposed.
Lack of footpath between Fingal Beach to Barry Park	Footpaths are proposed along Marine Drive and Pacific Drive, providing a connection between Fingal Beach and Barry Park
Lack of footpath from Roy Wood Reserve to Corlette Headland	Council to consider path provisions around Roy Wood Reserve and Corlette Headland
Lack of footpath on Sandy Point Road	Footpaths are proposed on both sides of Sandy Point Road.
Beach Road dangerous for pedestrians at night	A lack of lighting in the area along Beach Road has been noted, with recommendation for Council to consider additional lighting provisions.
Lack of footpath on Boulder Bay road	Footpaths are proposed along Boulder Bay Road between Pacific Drive and Marine Drive.
Lack of footpath along Foreshore Drive	Footpaths are proposed along both sides of Foreshore Drive
Lack of footpath on Tomaree Road	Footpaths are proposed along both sides of Tomaree Road.
Lack of footpath on Government Road	Footpaths are proposed on both sides of Government Road.
Missing shared path between Boat Harbour and Anna Bay	Completion of the shared path network, with crossings between Boat Harbour and Anna Bay is proposed.
Lack of footpath between Iris Moore Reserve and Anna Bay	Footpath connections are proposed between Iris Moore Reserve and the Anna Bay town centre, along Ocean Avenue, Morna Point Road and Fishermans Bay Road.
Lack of footpath between Anna Bay and Nelson Bay	Council to consider extensions of the proposed pedestrian network to connect Anna Bay and Nelson Bay.

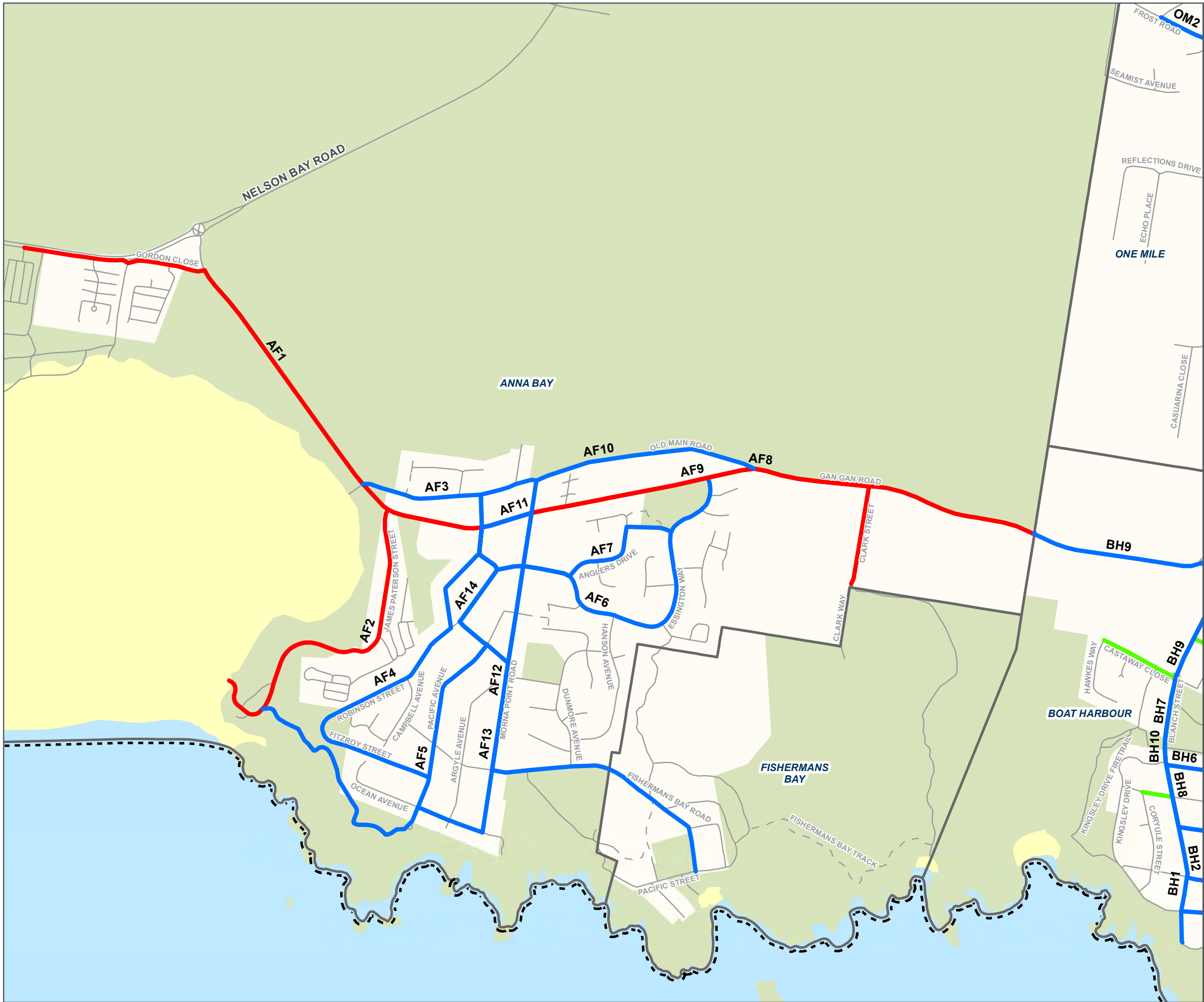
Key issues raised regarding pedestrian network	Summary of PAMP recommendation
Unsafe crossings to Salamander Bay Shopping Centre	Upgrades to existing crossings have been recommended. The PAMP notes the Council plan for a new signalised crossing facility at the intersection of Bagnall Beach Road and Town Centre Circuit.
Footpath on Donald Street is uneven with exposed tree roots	Damage has been noted along some sections of existing path on Donald Street, with recommendations to replace. Council to consider site-specific concerns.
Lack of footpaths in Shoal Bay	Footpaths are proposed along both sides of major streets in Shoal Bay.
Lack of wayfinding in Corlette to beach	Council to consider signage and wayfinding provisions.
Lack of footpath on Gan Gan Road	Footpaths and shared paths are proposed along both sides of Gan Gan Road between Gordon Close and Frost Road.
Crossing to Karralika Park needed	Council to consider crossing provisions along Pantowora Street
Lack of crossings on Shoal Bay Road	Hazardous crossings have been noted along Shoal Bay Road for further investigation by Council. The PAMP notes the construction of new signalised crossings at the intersection of Shoal Bay Road and Government Road.

Tomaree Planning District

APPENDIX

G

ROUTE PRIORITISATION MAPS

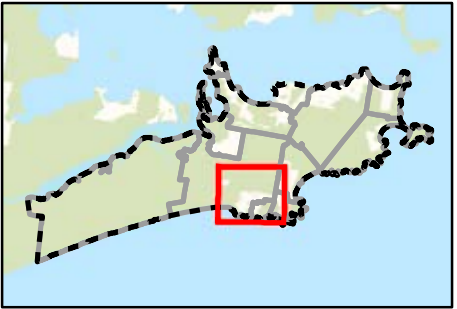


# Anna Bay and Fishermans Bay Precinct Network Prioritisation

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

## Legend

- Study Area
- Suburb Boundary
- Priority Rating**
  - High
  - Medium
  - Low








1:12,000 Scale at A3



Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-07-14 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-046-Anna Bay PrecinctPriority.mxd 01

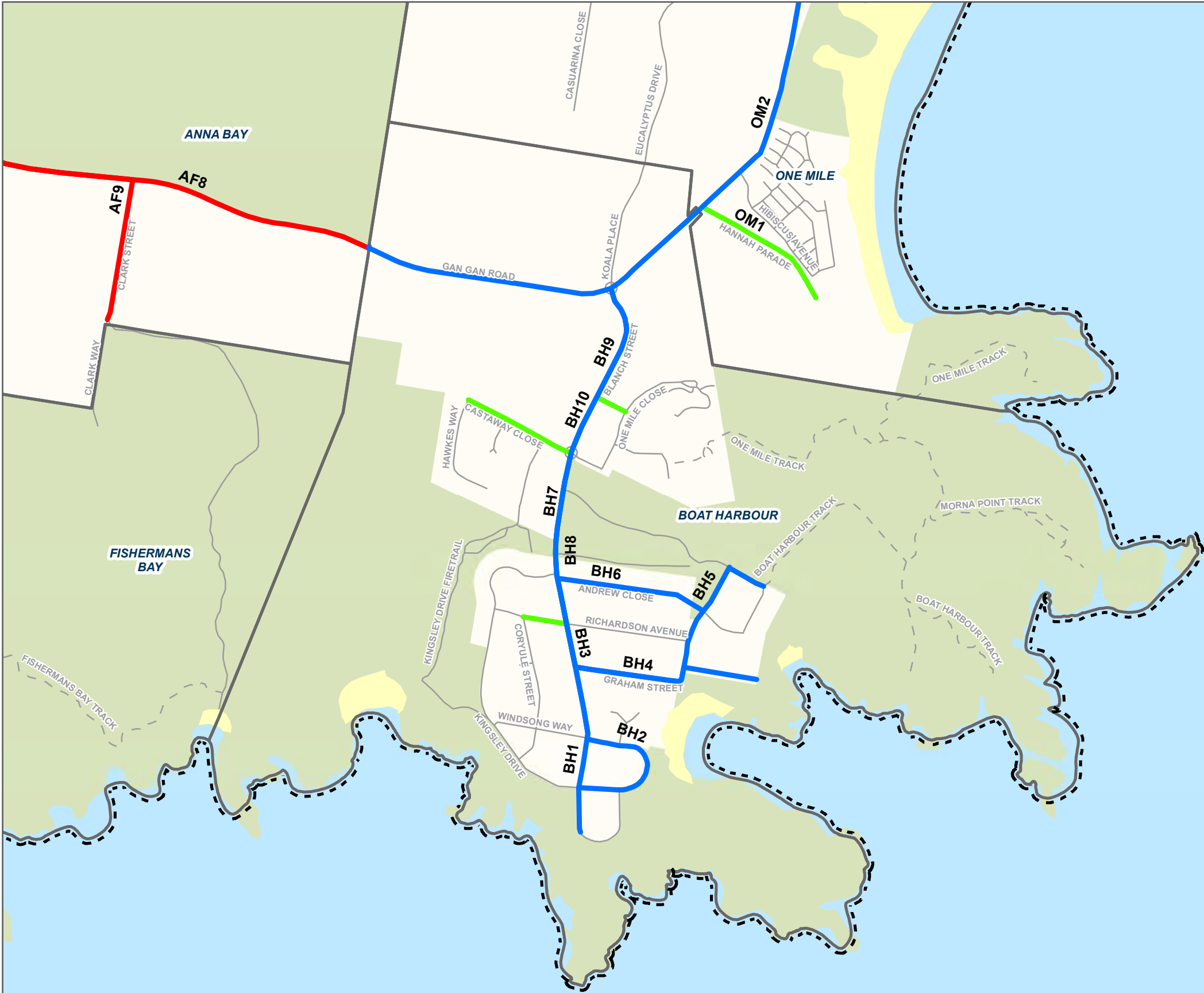
**Boat Harbour Precinct  
Network Prioritisation**

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

- Legend**
-  Study Area
  -  Suburb Boundary
  - Priority Rating**
  -  High
  -  Medium
  -  Low



1:10,000 Scale at A3








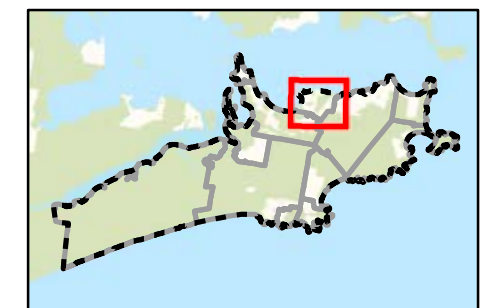


## Corlette Precinct Network Prioritisation

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary
- Priority Rating**
-  High
-  Medium
-  Low

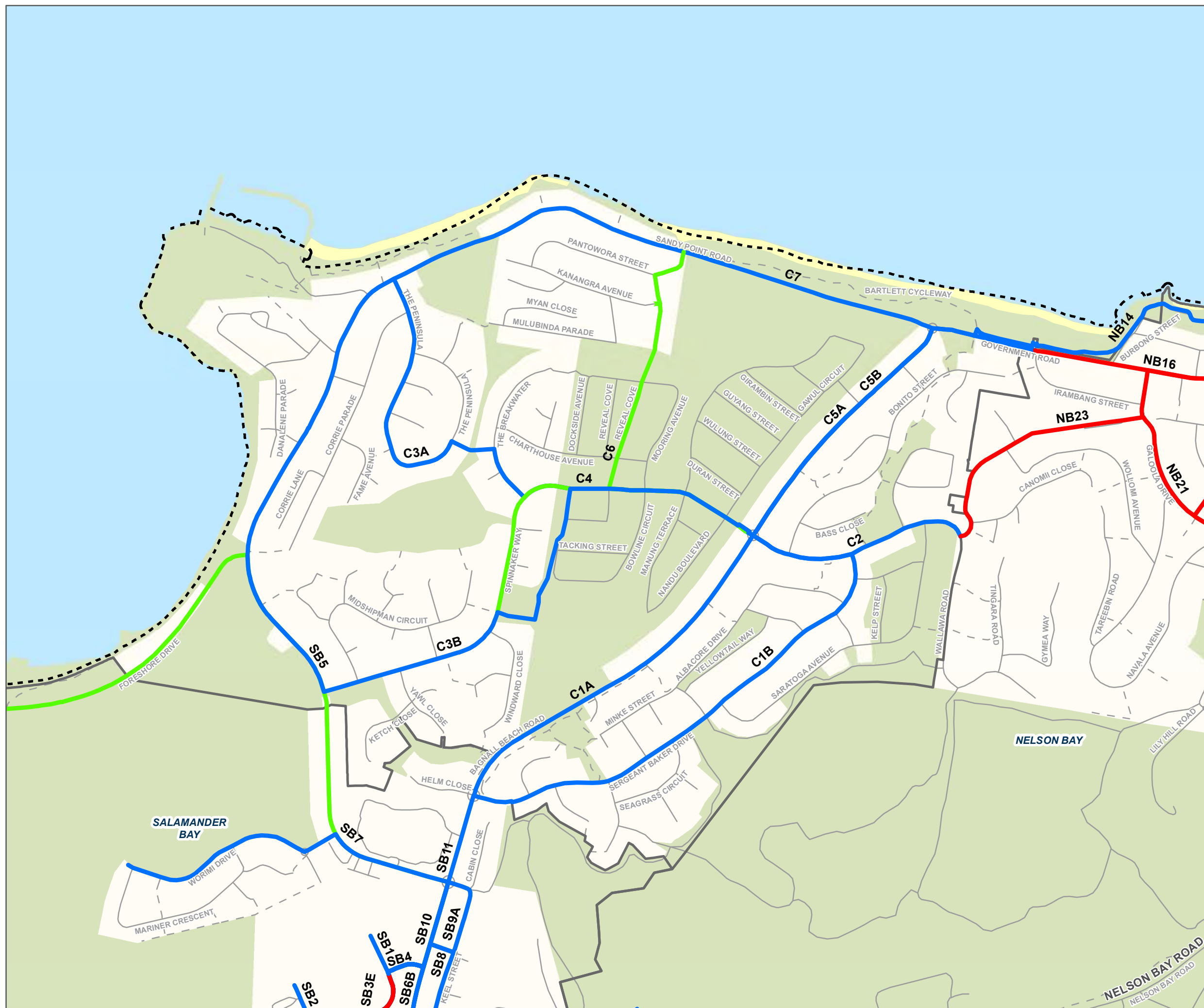


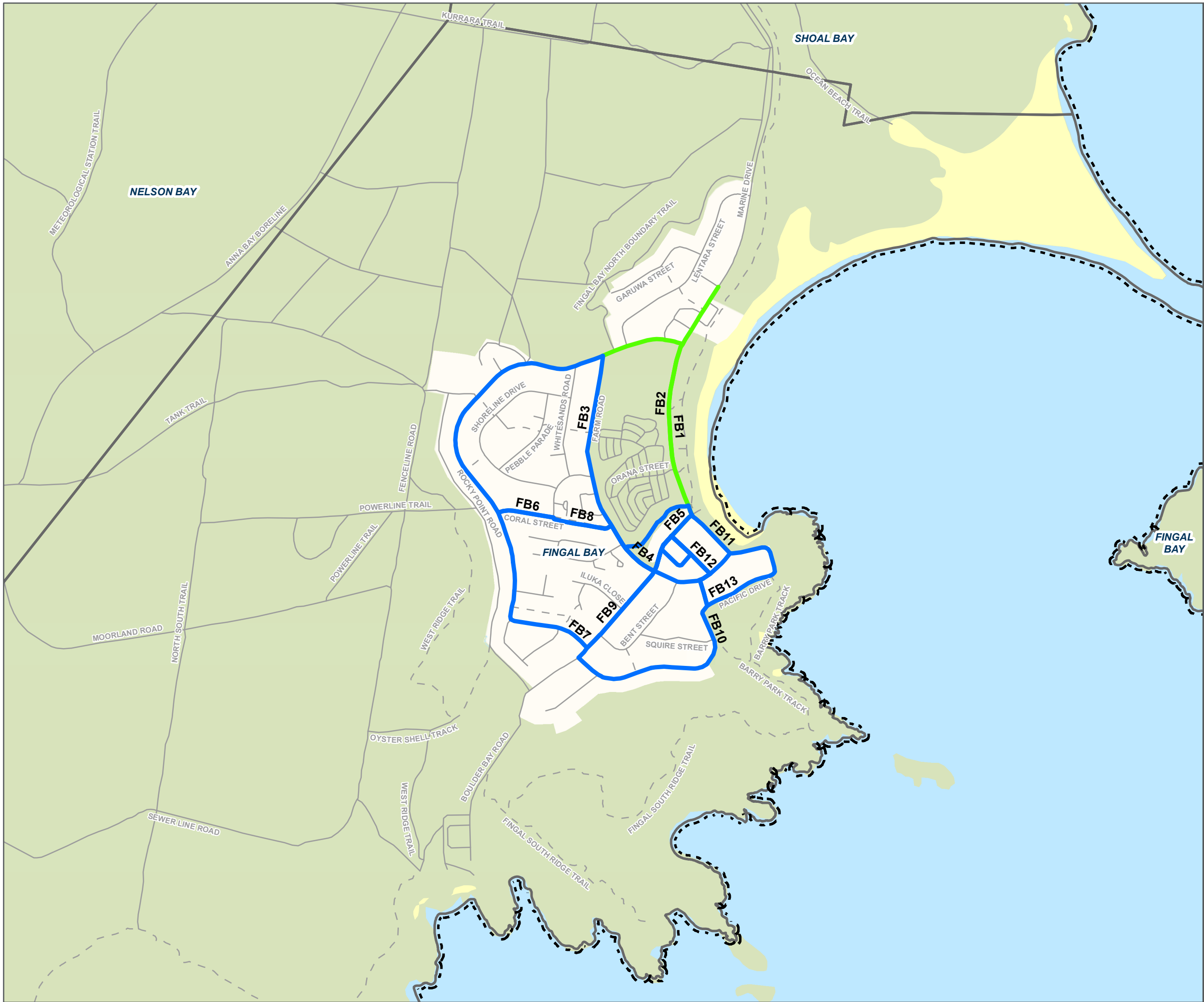
1:10,000 Scale at A3

Metres  
0 150 300 450



Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
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Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-042-Corlette PrecinctPriority.mxd 01









## Fingal Bay Precinct Network Prioritisation

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary
- Priority Rating**
-  Medium
-  Low



1:12,000 Scale at A3

Meters  
0 200 400 600







Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-07-14 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-049-FingalBayPrecinctPriority.mxd 01

## Nelson Bay Precinct Network Prioritisation

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

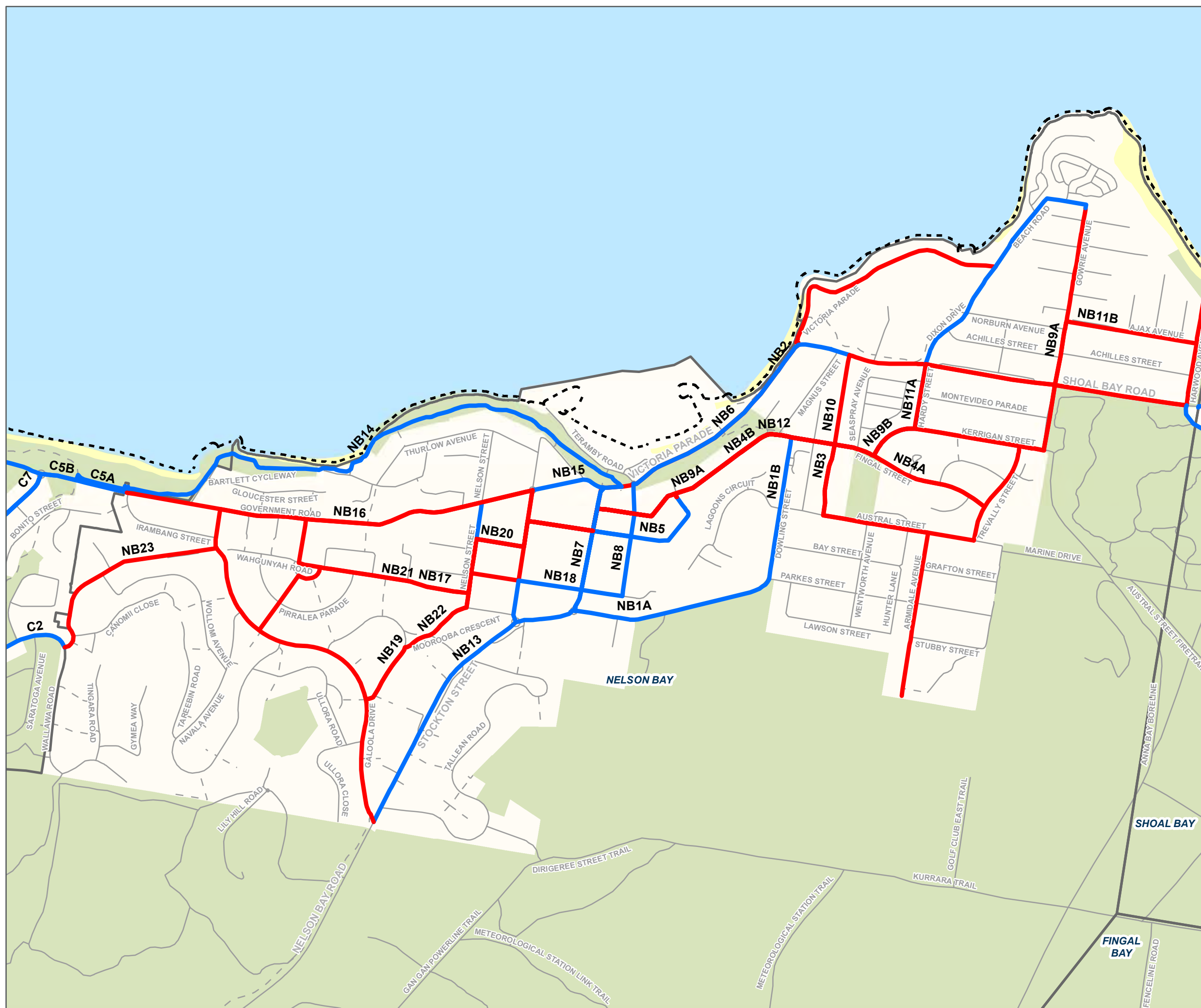
### Legend

-  Study Area
-  Suburb Boundary
- Priority Rating**
  -  High
  -  Medium



1:12,000 Scale at A3






Metres  
0 200 400 600

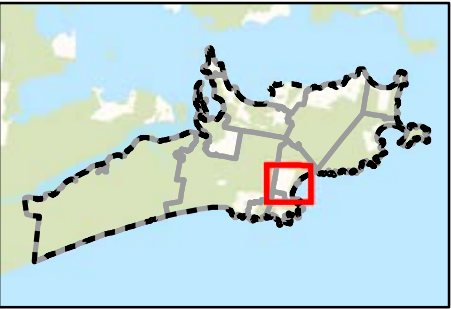




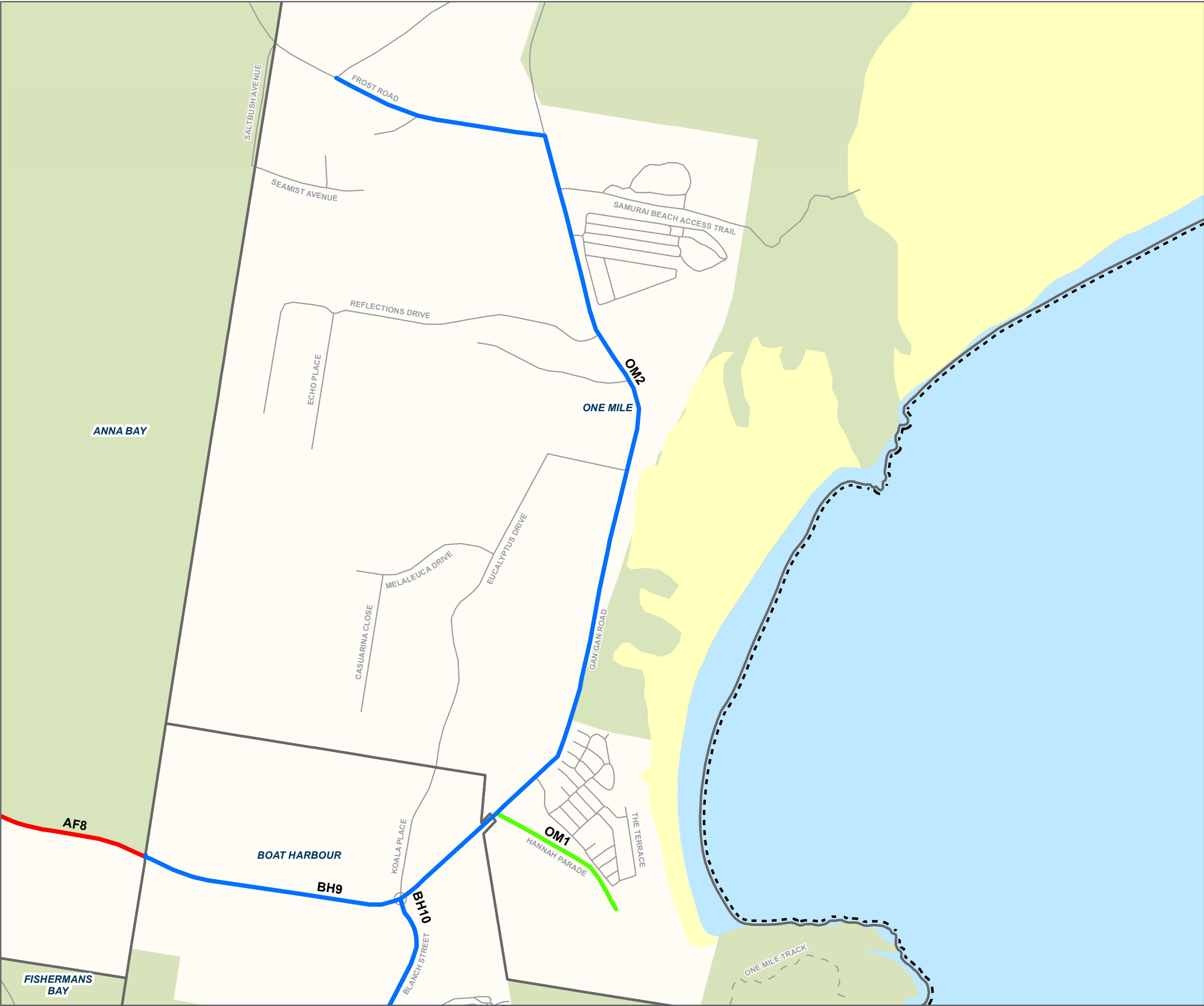
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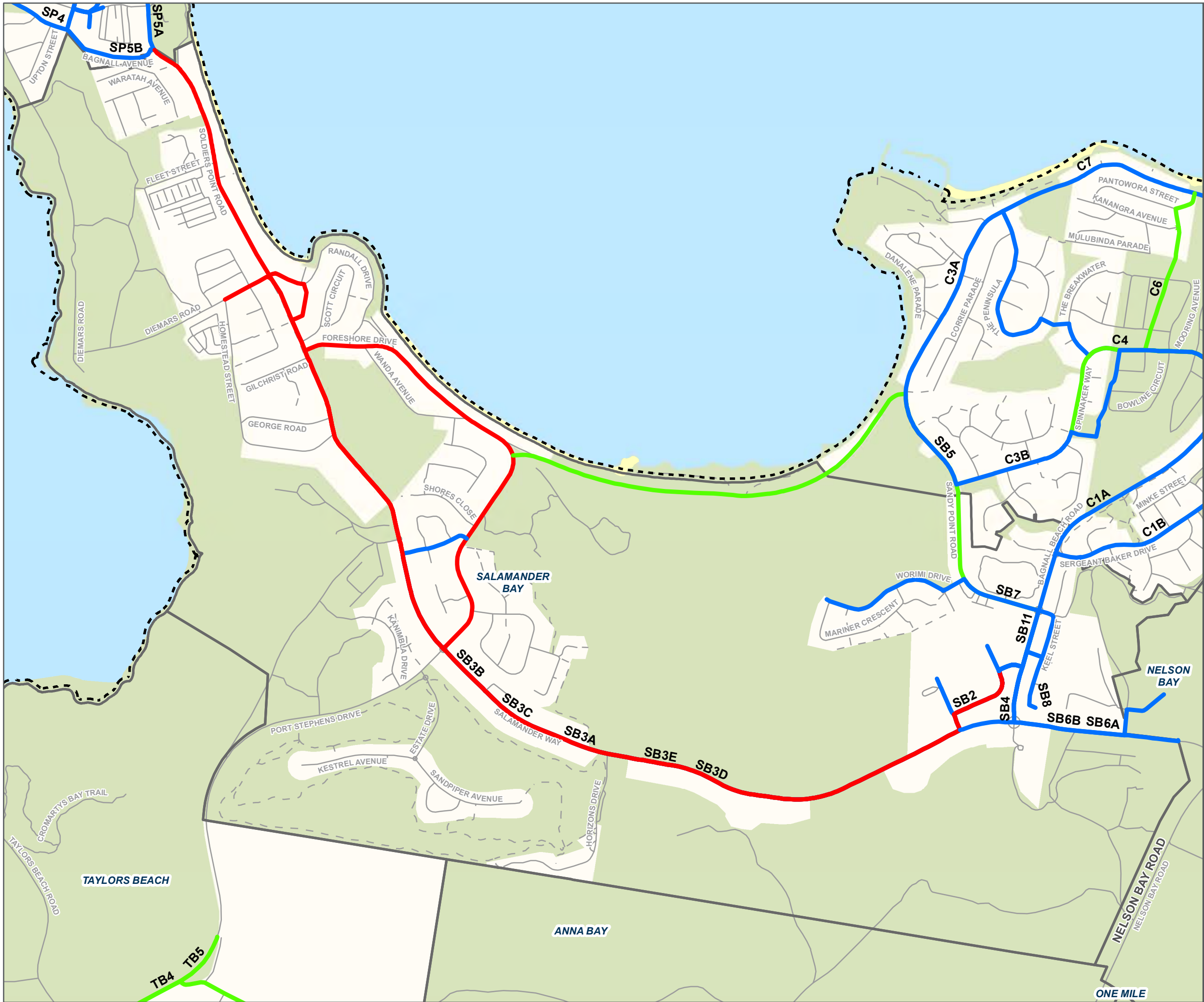
PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

- Legend**
-  Study Area
  -  Suburb Boundary
  - Priority Rating**
  -  High
  -  Medium
  -  Low



1:8,000 Scale at A3








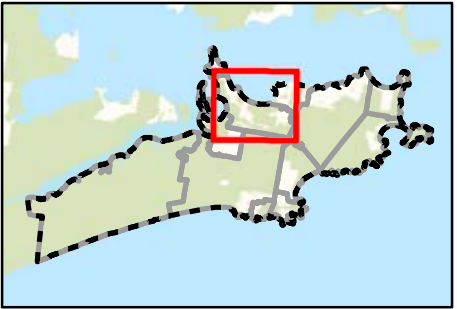


## Salamander Bay Precinct Network Prioritisation

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary
- Priority Rating**
  -  High
  -  Medium
  -  Low



1:15,000 Scale at A3

Metres  
0 200 400 600





Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-07-14 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-045-Salamander Bay PrecinctPriority.mxd 01



## Shoal Bay Precinct Network Prioritisation

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary

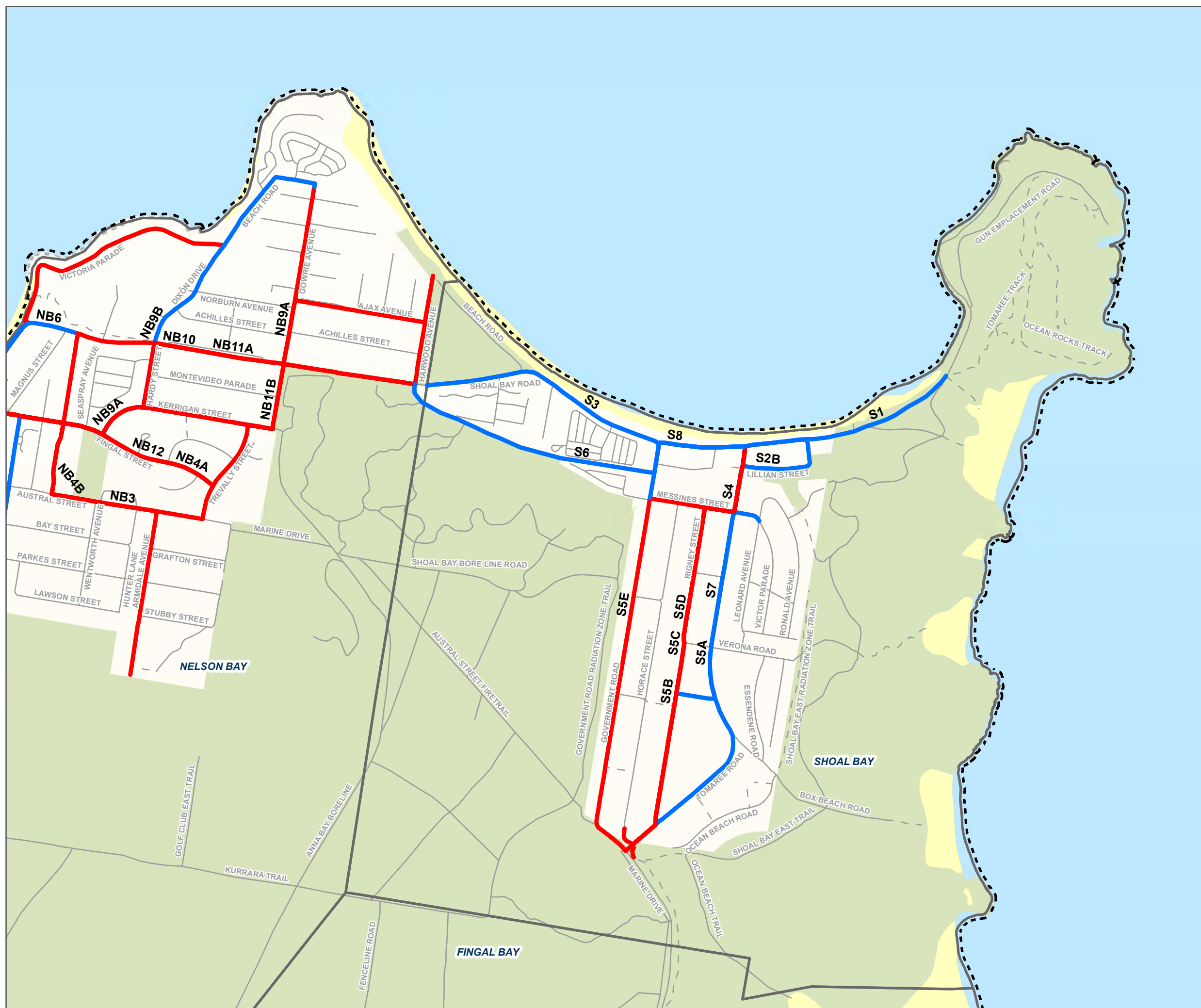
### Priority Rating

-  High
-  Medium

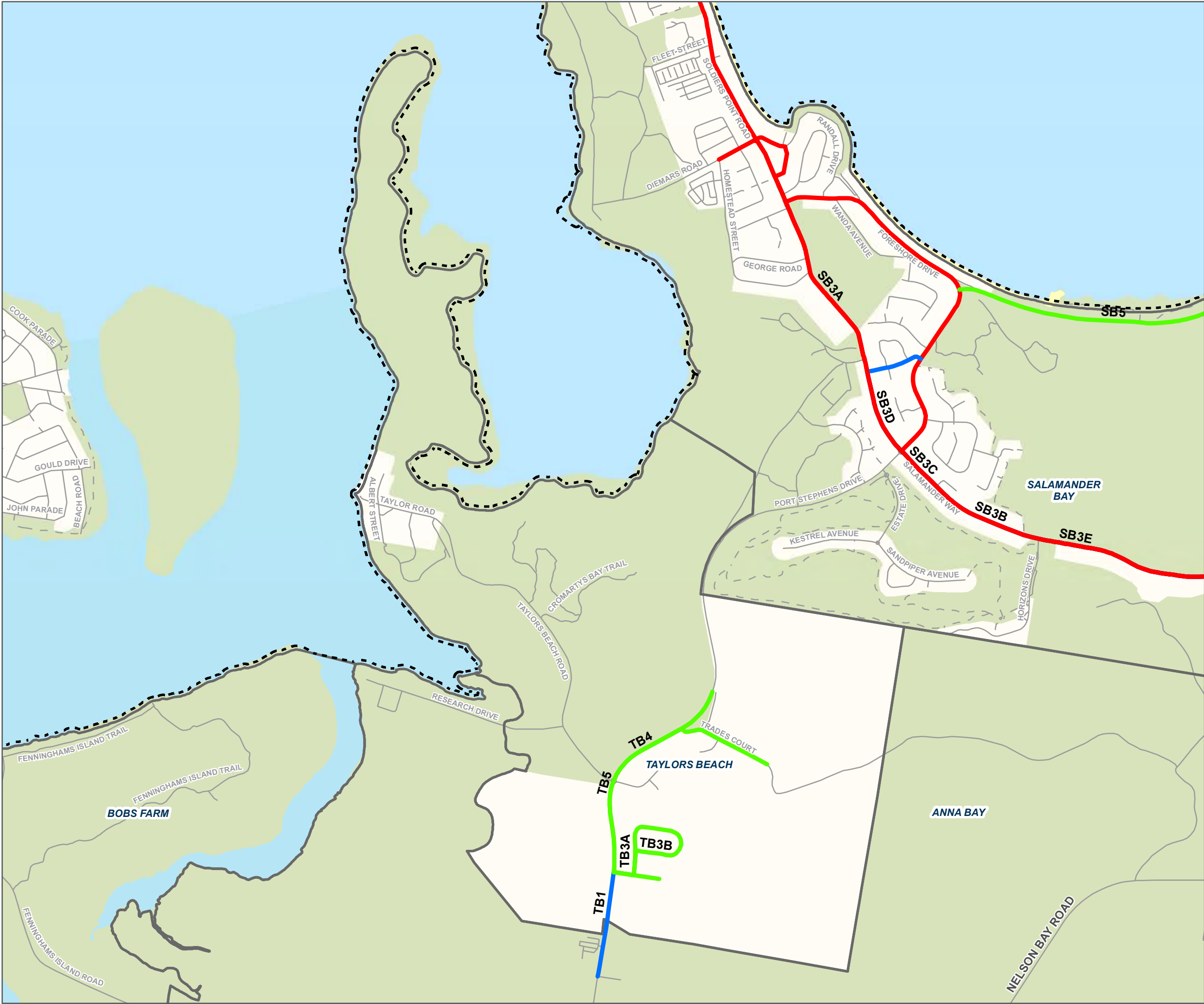


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Metres  
0 200 400 600










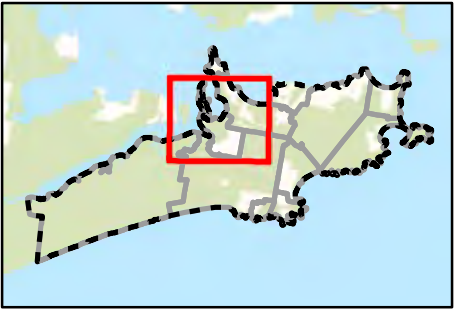


## Taylors Beach Precinct Network Prioritisation

PORT STEPHENS PAMP STAGE 1  
TOMAREE PLANNING DISTRICT

### Legend

-  Study Area
-  Suburb Boundary
- Priority Rating**
-  High
-  Medium
-  Low



1:18,000 Scale at A3

Metres  
0 200 400 600



Map Produced by Cardno NSW/ACT Pty Ltd (SYD)  
Date: 2017-07-14 | Project: 80017083  
Coordinate System: GDA 1994 MGA Zone 56  
Map: 80017083-GS-047-Taylors Beach PrecinctPriority.mxd 01

## **Appendix 12 – Nelson Bay Public Domain Plan**

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# Nelson Bay Public Domain

## Nelson Bay Public Domain Plan

Prepared by Tract Consultants for Port Stephens Council

Exhibition Draft

February 2019



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Supported by the



This project was funded by Port Stephens Council and the Australian Government, and administered on behalf of the NSW Government by the NSW Department of Industry.

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# 1. Introduction.

Nelson Bay hosts pristine sheltered bays and a stunning natural environment. In order to remain attractive and competitive as a key tourism destination, as well as a sustainable and unique place to live, the Town Centre public domain requires rejuvenation. This Public Domain Plan will guide future improvement works, aligning previous strategies, expectations and strategic implementation.

## 1.1 Background

Nelson Bay is a primary town centre of Port Stephens, and a major tourism and service centre of the Tomaree Peninsula, due to its position and outstanding natural environment.

In competition with other coastal centres elsewhere in NSW, like Port Macquarie and Coffs Harbour, and increasingly overseas, Nelson Bay has been left behind in terms of attracting investment and residents. The town experiences high seasonal variations in tourism.

In order for Nelson Bay to remain competitive and attractive, it is important to rejuvenate the Town Centre and Foreshore to make it an unique destination with high quality amenity.

In 2012 Port Stephens Council adopted the Nelson Bay Town Centre and Foreshore Strategy (the Strategy) seeking to guide Nelson Bay towards a more attractive place for tourists, local businesses and residents.

Port Stephens Council further undertook a series of supporting studies and adopted several planning policies and controls between 2012 and 2017, such as:

- Nelson Bay Town Centre and Foreshore Improvement Program, April 2012
- Development Control Plan, 2014
- Apex Park Masterplan, 2015
- Public Art Policy and Guidelines, 2015
- Heritage Policy, 2015
- Nelson Bay/Shoal Bay Pathways Plan, 2016
- Nelson Bay Traffic and Parking Study Update, 2017
- Capital Works Program, 2017-2018

However there has been limited private investment in the Town Centre since the Strategy's adoption.

Council therefore undertook a review of the Strategy and the supporting Improvement Program. On 25 September 2018, Council adopted the 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A Revised Implementation and Delivery Program' (Delivery Program). A key recommendation of the Delivery Program is to prepare a Public Domain Plan (the Plan).

## 1.2 Aim Of Public Domain Plan

**The Nelson Bay Public Domain Plan is a 20 year vision to guide all future public domain improvement works necessary to revitalise the Nelson Bay Town Centre and Foreshore. The Plan is to ensure investment in the public domain contributes to the overarching vision for the Town, and in turn encourages investment.**

The improvement works, as mostly identified in the Strategy, include:

- Upgrading streetscapes, better defining and improving view corridors, improving pedestrian connectivity, and creating a strong pedestrian "spine" along Stockton Street to the waterfront;
- Upgrading wayfinding to improve the visitor's experience of Nelson Bay and to bring the Town Centre and the waterfront closer together;
- Reinforcing the character of key places;
- Reviewing the Apex Park Masterplan and Apex Park interface;
- Establishing public art and events locations and developing a coherent strategy for street elements.

Through the Public Domain Plan, we aim to achieve:

- A well preserved natural environment;
- A friendly walking and cycling environment to reinforce pedestrian and cyclists' connection between the Town Centre and Foreshore, and minimise the impact of vehicular traffic on pedestrians;
- A welcoming and convenient, evocative and memorable place, which supports the social and cultural history of Nelson Bay and enhances its character, public amenity and safety.

The Plan is to establish the design coordination and technical links necessary to facilitate integration between council's vision, community expectations, design strategies, guidelines and implementation.

## 1.3 Document Structure

The deliverables of the Nelson Bay Public Domain Plan include five components, which are one primary document and four supporting documents.

The primary document, being the Nelson Bay Public Domain Plan Report, incorporates the vision, analysis and high level design responses and strategies. It is to be used as an overarching element and in coordination with the technical links elaborated in the supporting documents.

Supporting documents are:

- Wayfinding Strategy and Signage Suite
- Streetscape Design Guideline
- Street Tree Master Plan
- Public Domain Improvements Implementation Plan

The nature of the Public Domain Plan and the supporting documents is such that they are living documents. They address the main issues and set the framework and tone for future design activities. The development of works for actual construction is an extension of this process and will need to be undertaken on a similar rigorous basis. Nevertheless, this Plan and supporting documents, together with community support and Council's initiatives, provide a sound platform from which to embark.

## 1.4 Design Philosophy & Process

Creating an outstanding public domain environment is dependent upon the implementation of successful placemaking. It requires an understanding of the natural environment and ecological value of the Peninsula, the patterns of urban development and the cultural heritage of the town, as well as the local community who are passionate about Nelson Bay.

It's important to further understand the influences of public domain upon natural environment, people and place. Environmental and ecological, physical, cultural, social and commercial factors need to be taken into account during the analysis. A synthesis of the issues and a rational and innovative design process needs to result.

The development of the Plan has been undertaken in 6 stages, commencing in April 2018:

- Stage 1 Background Research and Analysis
- Stage 2 Development of Vision, Design Principles and Concept Ideas
- Stage 3 Workshop and Community Consultation
- Stage 4 Draft Nelson Bay Public Domain Plan and supporting documents
- Stage 5 Public Exhibition
- Stage 6 Review feedback and finalisation of the Nelson Bay Public Domain Plan

### Note

Images within this document are representations of a 20 year vision. Subject to further detailed design requirements that may result from consideration of;

-Underground services - tree root zones, service corridors and utilities

-Overhead services - power lines

- Topography, WSUD or sustainability principles in the design

## 2. Vision.

Nelson Bay, a thriving place  
that is leaping forward  
into its NEXT chapter.

Nelson Bay will become a unique destination for both tourists and local residents, to live, work, play and stay. The Town Centre and Foreshore is envisaged as an interlinked active place that celebrates its unique identity as a **Town by the Bay**.

It will continue to play its vital role as a tourist centre within the Tomaree Tourism and Lifestyle Growth Area in Port Stephens LGA, sustaining population and employment growth over the next 20 years.

As a **Town by the Bay**, it will continue to celebrate its unique land-form, rich biodiversity and outstanding marine and coastal environment. Nelson Bay offers diverse fun-filled water-based activities and a relaxing coastal lifestyle.

Nelson Bay will lead as an example for environmental sustainability, preserving and enhancing its natural environment for generations to come.

It will celebrate the region's culture and heritage, from the aboriginal village green of the Worimi people, to the town's rich fishing and military history.

As a **Town by the Bay**, it will provide seamless connections between the Town Centre and Foreshore, where cafés and boutique retail destinations meet high quality marina restaurants. The streets and public spaces will be convenient, exciting and safe for people to use, and visually vibrant, both day and night all year-round.







### 3. Understanding Context.

Nelson Bay, one of the largest towns in the Port Stephens area, is located on the Tomaree Peninsula, just inside the mouth of Port Stephens, a large natural harbour along the east coast of New South Wales.

Nelson Bay is the main entry point for enjoying the pristine Port Stephens waterway, particularly for dolphin and whale watching, fishing and other recreational aquatic activities.

### 3.1 Regional Context

Nelson Bay is located 60 km north-east of Newcastle and 200 km from Sydney, on the Tomaree Peninsula of Port Stephens.

Nelson Bay is joined along the Peninsula with the coastal settlements of Anna Bay, Fishermans Bay, Fingal Bay, Shoal Bay, Salamander Bay and Soldiers Point. These distinct areas are separated by natural bush land and hilly topography, which provides a dramatic backdrop to picturesque coastal views.

Preserving and enhancing this sensitive and unique regional context, which contributes to the distinct character of each bay within the Peninsula, is a fundamental consideration.

The main access to Nelson Bay is via Nelson Bay Road. Traffic passes either through or around Nelson Bay Town Centre in order to reach the smaller centres to the east, such as Shoal Bay and Fingal Bay.

Nelson Bay is located within the Tomaree Tourism and Lifestyle Growth Area as identified in Port Stephens Planning Strategy 2011. Nelson Bay Tourism Precinct has been identified as a “strategic centre” by the Hunter Regional Plan, which will be “the focus for population and/or economic growth over the next 20 years”.

### 3.2 Local Context

Nelson Bay serves as the primary tourism and service centre for the Tomaree Peninsula and Port Stephens Local Government Area.

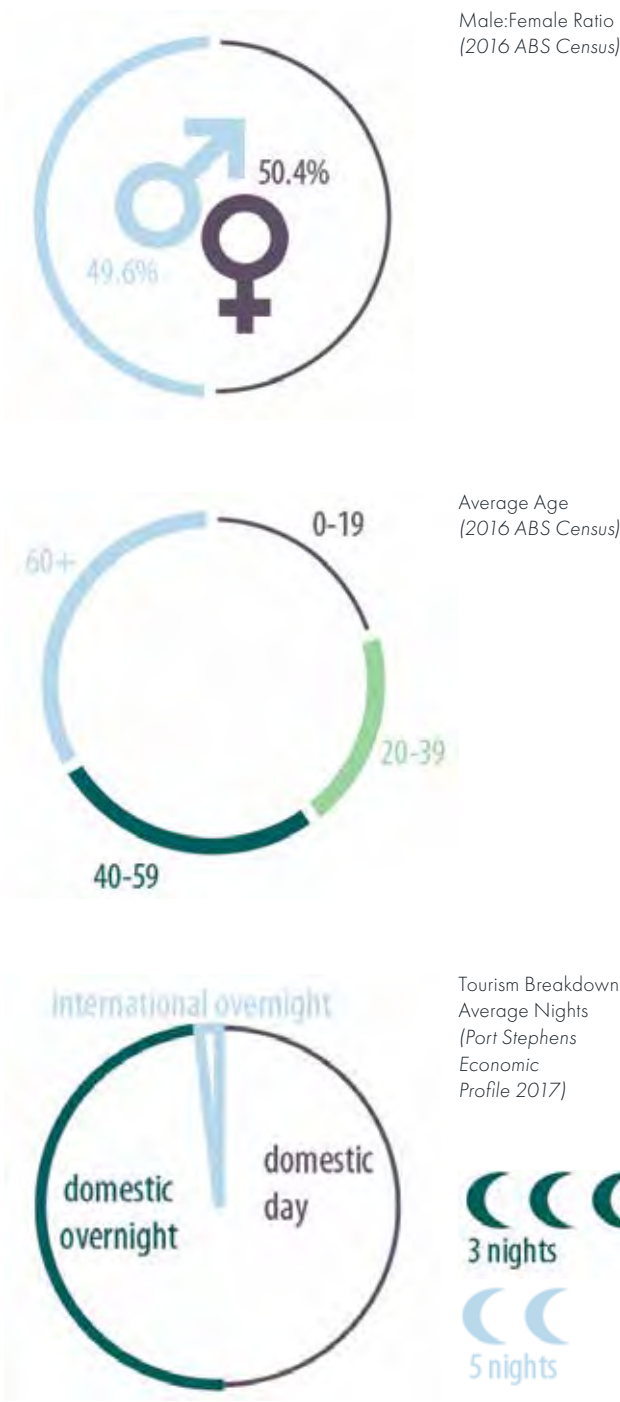
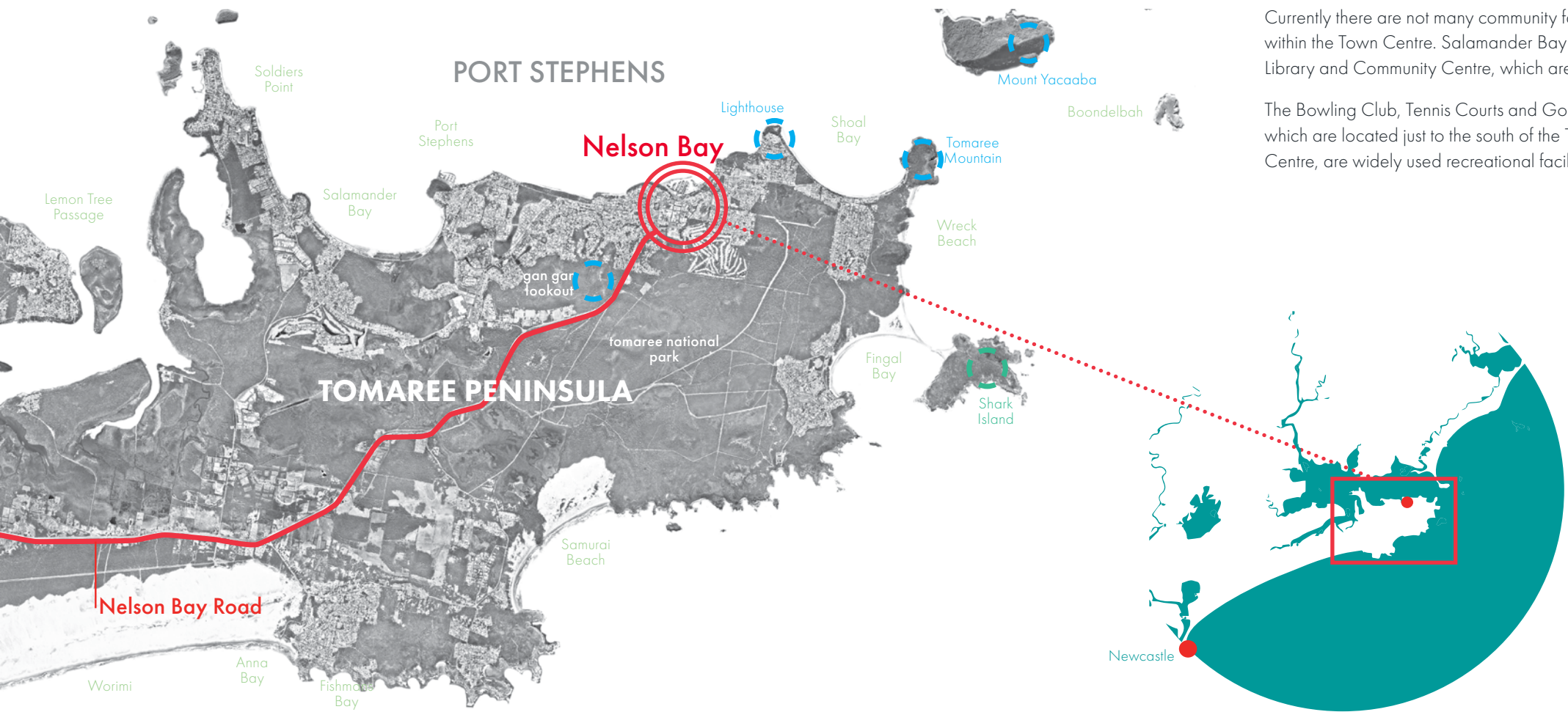
It contains a number of retail and hospitality venues. However, activation of the Town Centre is seasonal, with high variation in the tourism population.

Prior to Nelson Bay’s Woolworths supermarket, the Salamander Centre was the main destination for the Tomaree Peninsula’s weekly shopping, whilst Nelson Bay’s retail focused on leisure shopping, cafés and restaurants and tourist services.

There is a substantial local population of approximately 5,000 in the suburb, with a significant proportion of retirees.

Currently there are not many community facilities and services within the Town Centre. Salamander Bay provides Tomaree Library and Community Centre, which are 8km away.

The Bowling Club, Tennis Courts and Golf Club, which are located just to the south of the Town Centre, are widely used recreational facilities.



## 4. Understanding Nelson Bay.

To better understand Nelson Bay, we undertook a thorough site analysis study, as well as community consultation with stakeholders.

The key findings are summarised in this section, with detailed results included in the Appendix.



# 4.1 Understanding Natural Environment

## EXISTING SCENIC VALUE

Nelson Bay is surrounded by outstanding natural beauty, with Port Stephens water body and the marina to the north and the forested hills of Tomaree National Park to the south. Its rich, unique marine and bush environment provides the major attraction for tourists and residents.

The ancient volcanic topography provides a slow reveal of picturesque water views whilst approaching the Town Centre and the Foreshore, either from the main axis of Stockton Street or along Government Road.

## EXISTING ECOLOGICAL VALUE

Nelson Bay is adjacent to Port Stephens Great Lakes Marine Park’s rich marine biodiversity, harbouring dolphins, turtles, fish, invertebrates, sea birds and seaweeds along with threatened species such as Gould’s petrel, little tern, grey nurse sharks and green turtles. Humpback whales also pass on their annual migration along the coast.

Meanwhile, Tomaree National Park to the south contains a wide variety of flora habitats from coastal headlands to volcanic peaks and sub-coastal swamps, with a high density of native species, several of which are threatened.

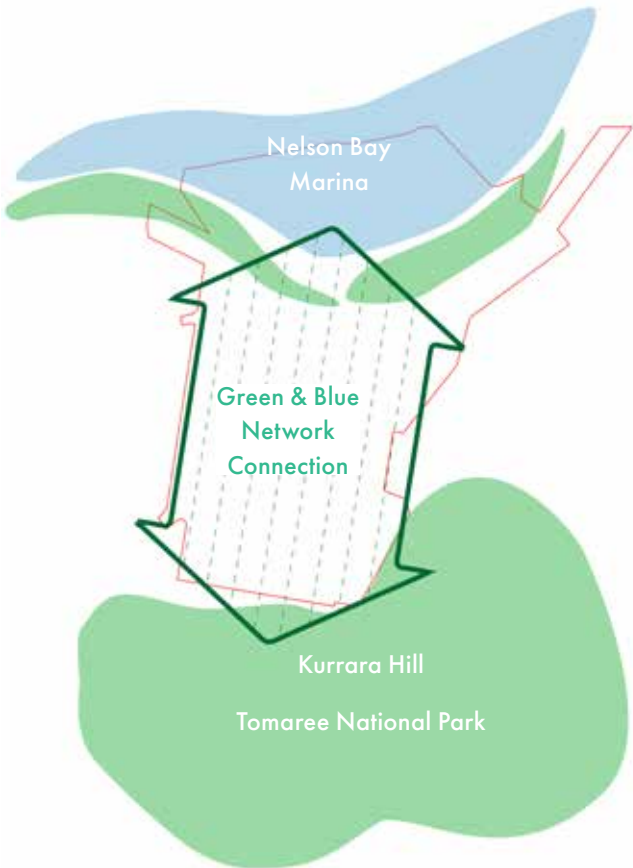
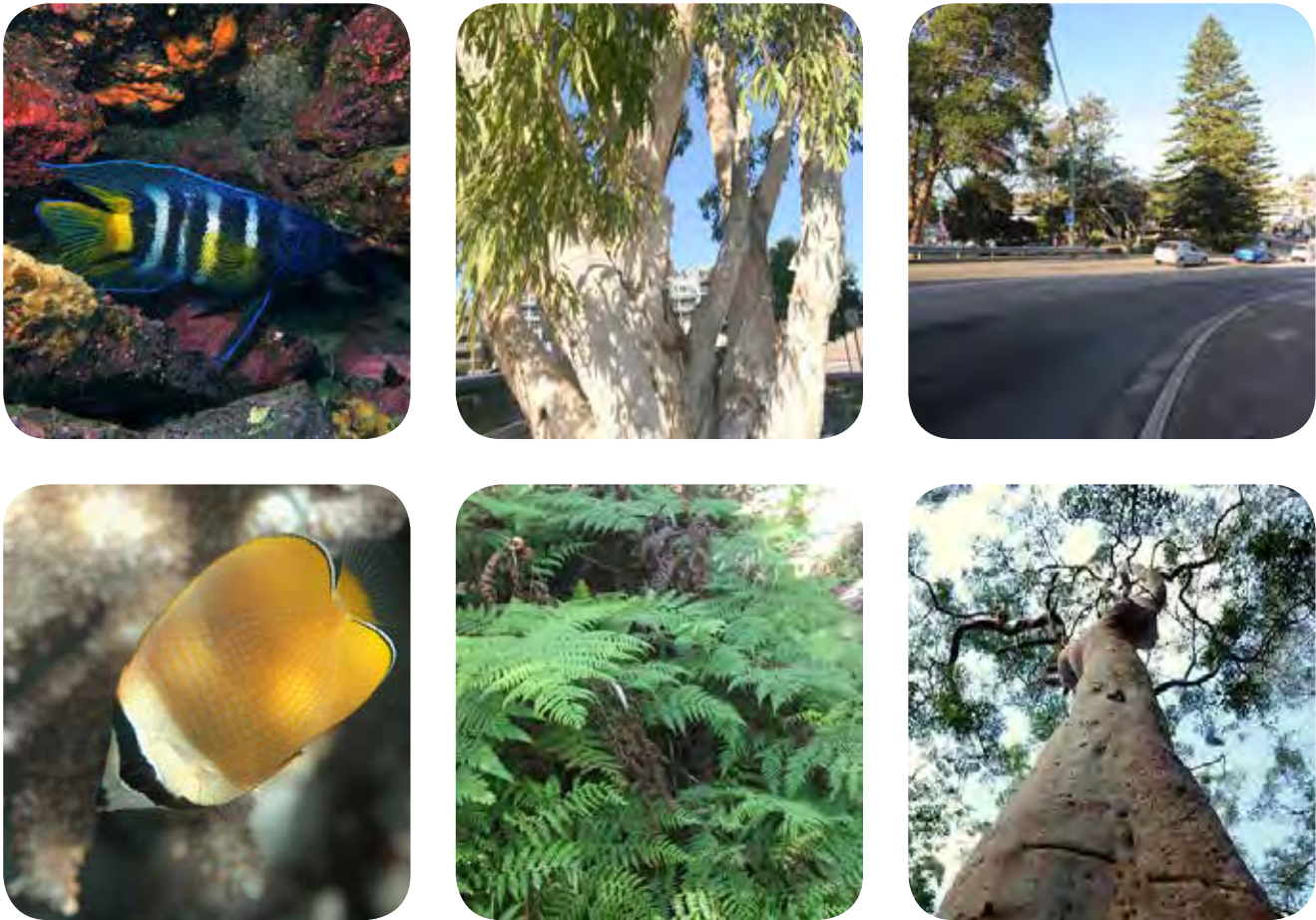
“It’s important to preserve our natural environment.”

“It’s good to have WSUD in place.”

- Stakeholder / Community Comments

## PRESERVE & CELEBRATE NATURAL ENVIRONMENT OPPORTUNITIES & RESPONSE

- It is important to preserve and celebrate the existing natural environment through:
- Connecting the waterfront with vegetated hilly backdrop through the urban fabric both visually and physically;
  - Enhancing the Green Network, e.g. street tree planting, through the Town Centre;
  - Implementing a Blue Network, i.e. storm water management via Water Sensitive Urban Design (WSUD) between the Town Centre and the Foreshore.





4.2 Understanding Pedestrian & Cycle Movement

EXISTING CONNECTIVITY ISSUES

Nelson Bay is currently heavily car dependant. Existing pedestrian and cycle movements are either disconnected or discouraged by a poor user environment.

- High volume by-pass traffic along Victoria Parade/ Government Road forms a pedestrian barrier between the Town Centre and the Foreshore.

- Traffic congestion happens at high pedestrian-volume areas, such as Magnus Street and the north end of Stockton Street, particularly during the peak tourist season. This is caused by limited and constrained street connections between the Town Centre and the Foreshore.
- Lack of alternative transit modes, such as public transport and cycle facilities. Public transport services and facilities are poor quality and limited.
- Disconnected footpath and cycle path around Town Centre and Foreshore area.

- Lack of disabled access, especially approaching the Foreshore area where the ground level changes.
- Laneways in the Town Centre are either in poor condition or feel unsafe for people to use.
- Lack of wayfinding signage, especially at key nodes and arrival points.

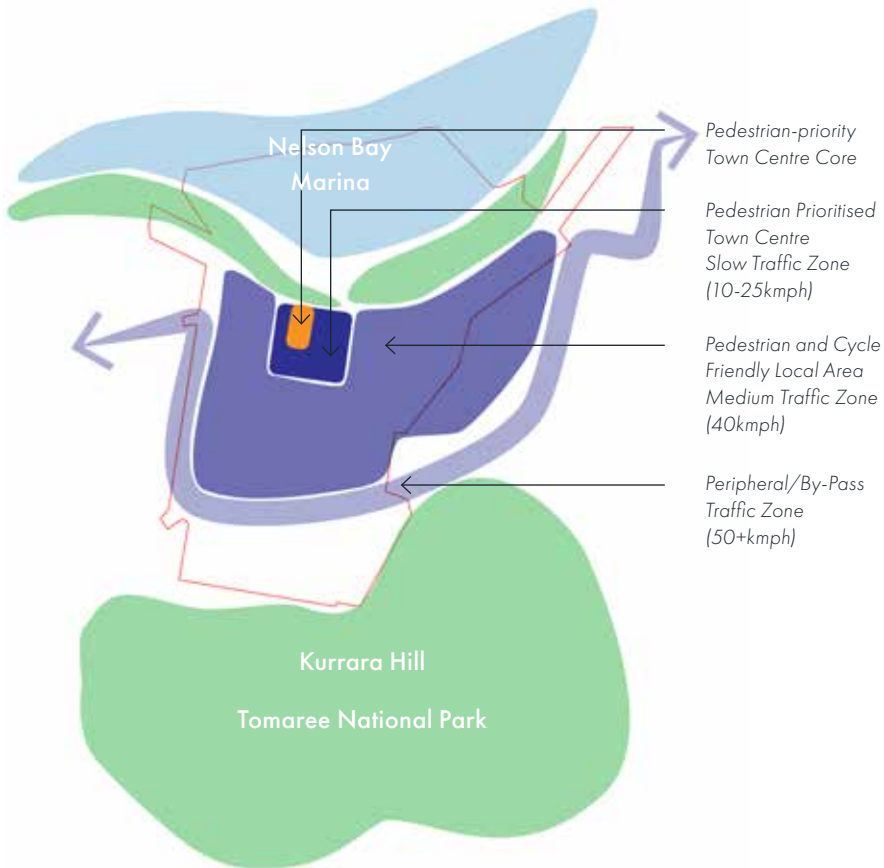
IMPROVE CONNECTIVITY & WALKABILITY  
OPPORTUNITIES & RESPONSE

The environment needs to be pedestrian and cycle friendly. Safe, weather-protected and well connctected linkages will promote and improve non-vehicular movement both at the Town Centre and the Foreshore. A few responses include:

- Prioritising pedestrians in the Town Centre Core and diverting traffic movements;
- Allowing for slow-medium speed traffic in the Town Centre;
- Marginalising fast traffic to the Town Centre periphery;
- Improving public transport and cycle facilities;
- Providing universally accessible environment for people of all ages and different needs and interests;
- Encourage revitalising of laneways to improve Town Centre permeability;
- Providing clear and legible wayfinding signage.



“Remove overhead bridge [on Victoria Parade] & Stockton Stage”  
“Really like Stockton St being a ‘Boulevard’.”  
- Stakeholder / Community Comments



## 4.3 Understanding Place Character

### EXISTING CHARM

**Situated among a stunning natural setting, Nelson Bay has evolved from a fishing village into a popular coastal holiday destination and lifestyle town with a relaxed character.**

At the Foreshore, it features:

- A large marina, particularly a busy working marian for fishing industry at western foreshore;
- Waterfront walkways and beaches;
- Restaurants and cafés specialising in fresh local produce and seafood;
- Green foreshore parklands;
- Water-based tourism activities and facilities;
- Heritage items, such the ANZAC war memorial.

At the Town Centre, it features:

- Magnus Street with a village character, offering boutique shops and restaurants/cafés, where people love to eat, drink, linger and mingle;
- Stockton Street as the main axis, providing direct connection to the Foreshore.

### EXISTING ISSUES

There are a large number of open air car parks dispersedly located along the Foreshore which dominate, constraining tourist activity and public domain opportunities at the waterfront.

Also Nelson Bay Town Centre currently lacks night-time activation and activities. The Foreshore hosts the Sacred Tree markets, however this is limited to the peak summer season.

**“Move Info Centre & have building as Art Gallery.”**

**“Consider multi-level parking in conjunction with other commercial functions e.g. educational facility.”**

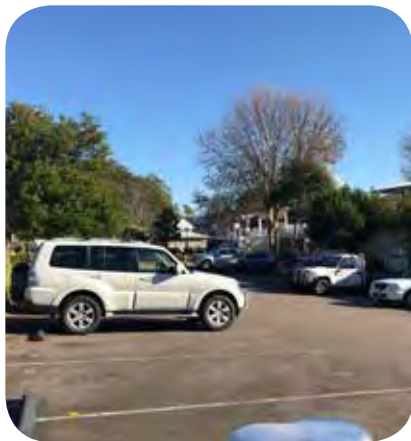
- Stakeholder / Community Comments



Foreshore Promenade



Village Character on Magnus Street



Foreshore On Grade Car Park



Apex Park



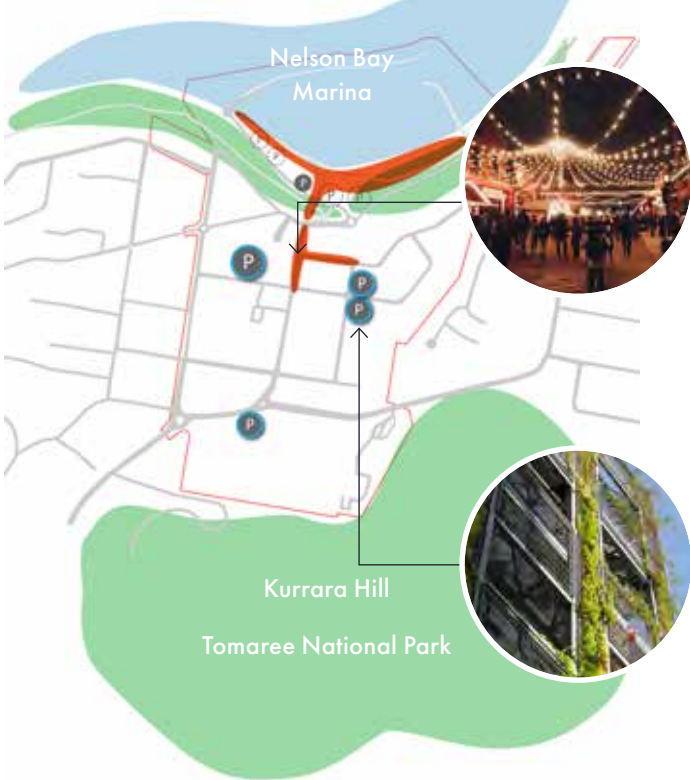
Sacred Tree Markets at the foreshore

Source: Visit NSW

### ENHANCE & ENLIVEN CHARACTER OPPORTUNITIES & RESPONSE

To further enhance and enliven the existing local charm and place character, there are opportunities, such as:

- Advocating Western Foreshore as a working marina while keeping Eastern Foreshore focused on recreational functions;
- Freeing up more foreshore open space for tourism, public recreation and event opportunities by relocating foreshore parking to nearby Town Centre multi-level facilities if available;
- Promoting Stockton Street into a pedestrian boulevard with a special focus at its northern end;
- Enhancing the village character at Magnus Street and Stockton Street Village Precinct via upgraded streetscape;
- Considering a year-round calendar of events, as well as the activation of streets in the evenings, such as bar and restaurant offerings, which boost the local economy and attract both tourists and permanent residents to the Bay.



## 5. Strategic Direction.

Three “Big Moves” underpin the vision for Nelson Bay Town Centre and Foreshore:

- Green & Blue Network
- Streets for People
- Places for People



## 5.1 Three Big Moves

These are the strategic design directions for the public domain, developed from our understanding of the existing natural environment, connectivity and place character.

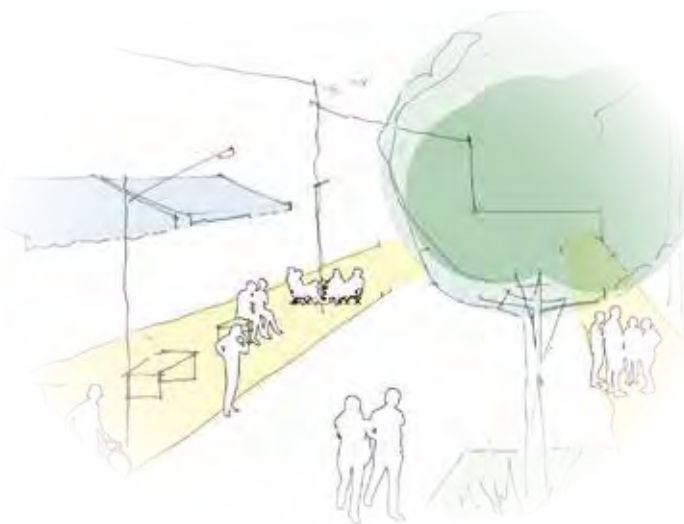
Any future improvements to the public domain to achieve the vision for Nelson Bay should be underpinned by these Big Moves.



### GREEN & BLUE NETWORK

Provide an integrated green and blue network connecting Nelson Bay to Tomaree National Park, that will reduce environmental impacts, improve public health and contribute to a beautiful urban environment.

- Establish street tree canopies and under-storey planting that will reinforce hierarchy of the street network and improve the urban ecology.
- Integrate the management of storm water and Water Sensitive Urban Design into the design of upgraded streets and public open spaces.
- Interpretive water features and landmark public art, which are ecologically sustainable, to create a more visually interesting and culturally diverse public domain.



### STREETS FOR PEOPLE

Create pedestrian- and cycle-friendly street environments that are easily accessible for all users. Prioritise people, by creating a traffic environment where priority is given to pedestrian movement, cycling infrastructure and public activity.

- Ensure streets and intersections are designed for pedestrian priority.
- Reduce traffic speed & congestion in high pedestrian areas.
- Improve physical and visual access through safe, activated and well connected streets and laneways.
- Improve footpath amenity, such as upgraded street furniture, lighting and paving.
- Provide weather protection for pedestrians.
- Provide clear and informative wayfinding.



### PLACES FOR PEOPLE

Offer places with a diverse range of year-round uses, high public amenity and distinct design quality, where the stories of Nelson Bay are represented and enhanced.

- Restore character of Town Centre and Foreshore with enhancement of existing charm, celebrating Indigenous and European heritage.
- Achieve desirable public open spaces with high level of amenity, addressing climate, safety, circulation, and activity.
- Provide a variety of spaces that are inclusive of particular needs and desires of different groups of people.
- Create an adaptable public domain, capable of accommodating a broad range of uses, events, experiences and public activities throughout different times of the day and year.

## 6. Design Strategies.

Each of the following public domain typologies and overlays, when coordinated, will provide the elements necessary to develop a consistent high quality public domain.

An overarching Structure Plan is developed to underpin the “Three Big Moves” set in Chapter 5.

This Structure Plan is further broken down into a series of design strategies and overlays, including:

### ENVIRONMENT & ECOLOGY OVERLAY

- Green Network Overlay
- Blue Network Overlay

### CYCLE NETWORK

### STREET TYPOLOGY

### PUBLIC DOMAIN CHARACTER & MATERIALS

- Public Domain Furniture
- Hardscape Treatment
- Public Domain Lighting

### EVENTS & ACTIVATION OVERLAY

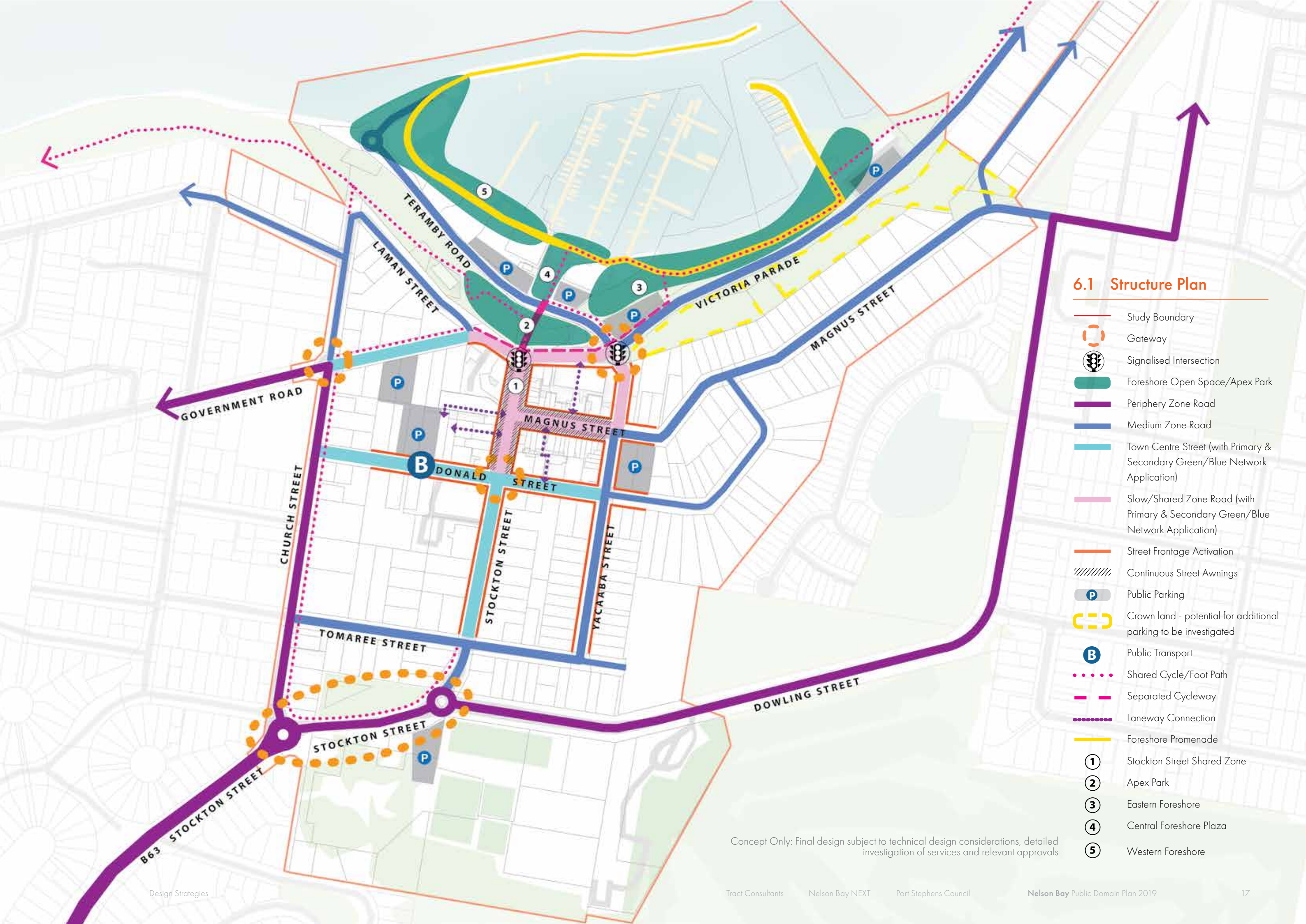
### PUBLIC ART OVERLAY

### PEDESTRIAN WAYFINDING OVERLAY

### STREET LIGHTING

These public domain strategies and overlays support the “LARGE Vision Concept”.





## 6.1 Structure Plan

- Study Boundary
- ⬢ Gateway
- ⬢ Signalised Intersection
- Foreshore Open Space/Apex Park
- Periphery Zone Road
- Medium Zone Road
- Town Centre Street (with Primary & Secondary Green/Blue Network Application)
- Slow/Shared Zone Road (with Primary & Secondary Green/Blue Network Application)
- Street Frontage Activation
- //// Continuous Street Awnings
- P Public Parking
- ⬢ Crown land - potential for additional parking to be investigated
- B Public Transport
- ⋯ Shared Cycle/Foot Path
- Separated Cycleway
- ⋯ Laneway Connection
- Foreshore Promenade
- 1 Stockton Street Shared Zone
- 2 Apex Park
- 3 Eastern Foreshore
- 4 Central Foreshore Plaza
- 5 Western Foreshore

Concept Only: Final design subject to technical design considerations, detailed investigation of services and relevant approvals



## 6.2 Environment & Ecology

### Overlay — Green Network

Streets can provide an interlinked green network, with planting and street trees offering a variety of benefits to the environment, people and places within the public realm, including:

- Conserving and enhancing biodiversity and increasing access to nature;
- Improving air quality and filtering pollutants;
- Providing canopy coverage for shade, encouraging pedestrian movement;
- Facilitating adaptation to climate extremes;
- Enhancing ‘sense of place’, providing distinctive destinations for visitors and residents;
- Providing a buffer between pedestrians and car movement; and
- Providing seasonal interest and natural beauty through foliage.

Primary and Secondary links reinforce street typology and character, and link the north-south axis from Tomaree National Park to the Bay. Tertiary links connect the local streets in an east-west axis, providing for a full network of green corridors.

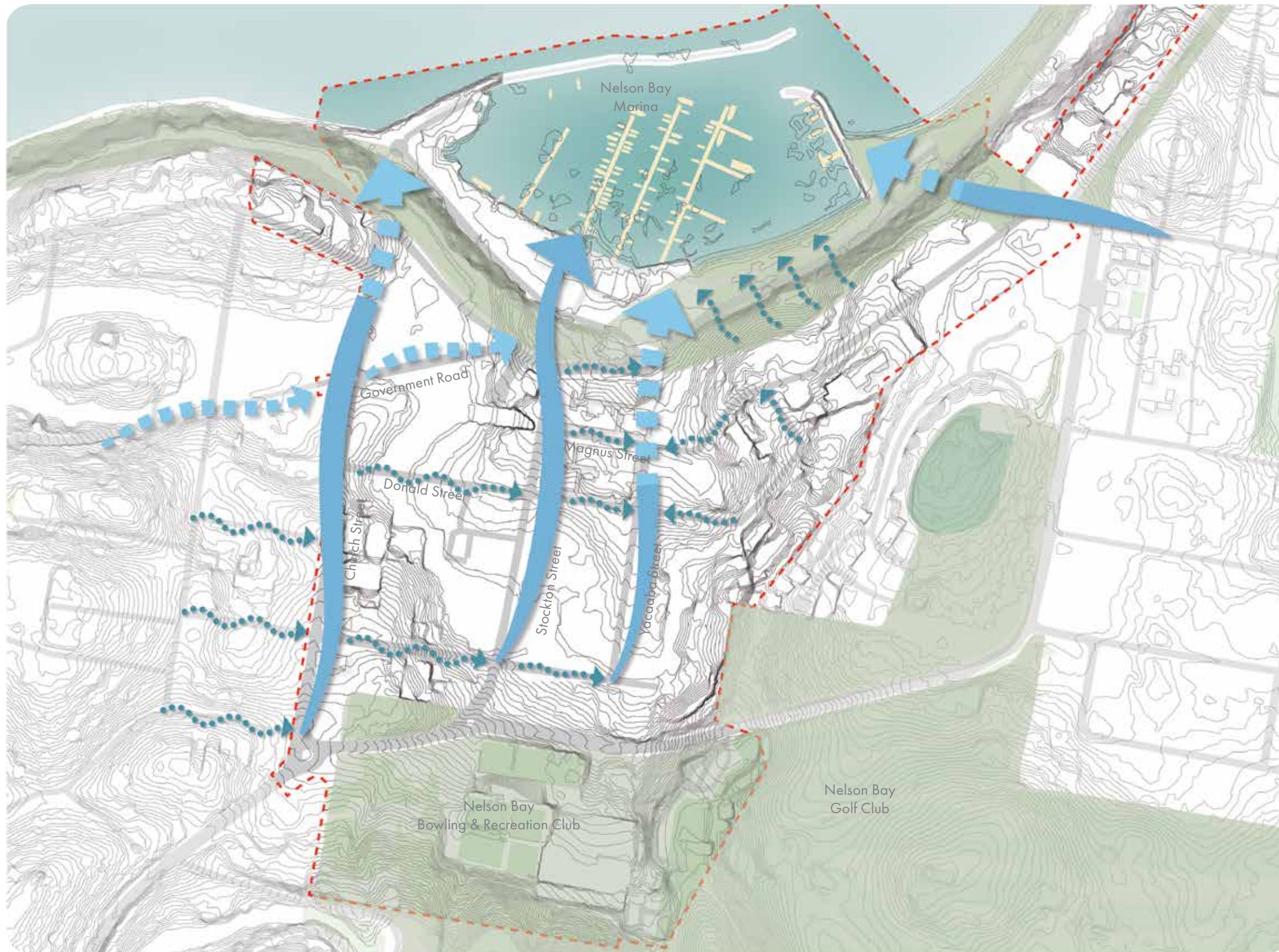


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#### LEGEND

- Study Boundary
- <---> Primary Green Connections - Stockton Street & Government Road
- <- - -> Secondary Green Connections - Church Street & Yacaaba Street
- . . . . . Tertiary Green Connections





Concept only, final design subject to technical design considerations, detailed investigation of services and relevant approvals

#### LEGEND

- - - - - Study Boundary
- Primary Blue Connections
- - - - - Secondary Blue Connections
- . . . . . Tertiary Blue Connections

### 6.3 Environment & Ecology Overlay — Blue Network

A blue network works in conjunction with the green network, with Water Sensitive Urban Design (WSUD) practices, to bring a variety of benefits, including:

- Minimising impervious surfaces to mitigate changes to the water balance;
- Reducing overland storm water runoff by providing temporary rainfall storage and re-use along streets;
- Protecting the sensitive marine environs by filtering pollution out of storm water, including litter, heavy metals and hydrocarbons (oil and grease);
- Supporting wildlife habitats and increasing biodiversity; and
- Contributing to the distinctive character and amenity of streets.

The primary blue connections play the major role of collecting the storm water from the secondary and tertiary blue connections, filtering it before it runs off into the natural system.



# 6.4 Street Typology

## Streets are the fundamental elements of the public domain.

They are critical to the liveability and sustainability of the urban environment and are important places for people to meet and socialise. Street typology must clearly reflect the street hierarchy and define the character.

- 1

**PEDESTRIAN ZONE**

Pedestrian Shared Zone: Level street treatment, one-way vehicle movement with capacity to close to vehicles - dedicated to pedestrian movement from Town Centre to Foreshore, with varied hardscape and ecological corridor
- 3

Pedestrian/Cycle Shared Path: finishes to be upgraded where necessary to integrate with Foreshore
- 1

Foreshore Promenade: Dedicated pedestrian zone, incorporates shared path along eastern section
- Laneways: encourage activation
- SLOW ZONE (10-25KMPH)**

1 Village Boulevard: Shared zone with level treatment for road and footpath, giving priority to pedestrians and allowing for closure for events
- 2

Pedestrian Priority Boulevard: Pedestrian priority to maximise permeability - into Town Centre and to Foreshore
- MEDIUM ZONE (40KMPH)**

3 Foreshore Service Road
- 2

Pedestrian Priority Road
- 2

Collector Road - Town Centre Treatment
- PERIPHERAL ZONE (50+KMPH)**

3 Collector Road
- 5

Sub-Arterial Road - By-Pass: Re-routed from the waterfront to allow for traffic to by-pass the Town Centre, reducing vehicular movements and thereby increasing pedestrian connectivity
- 4

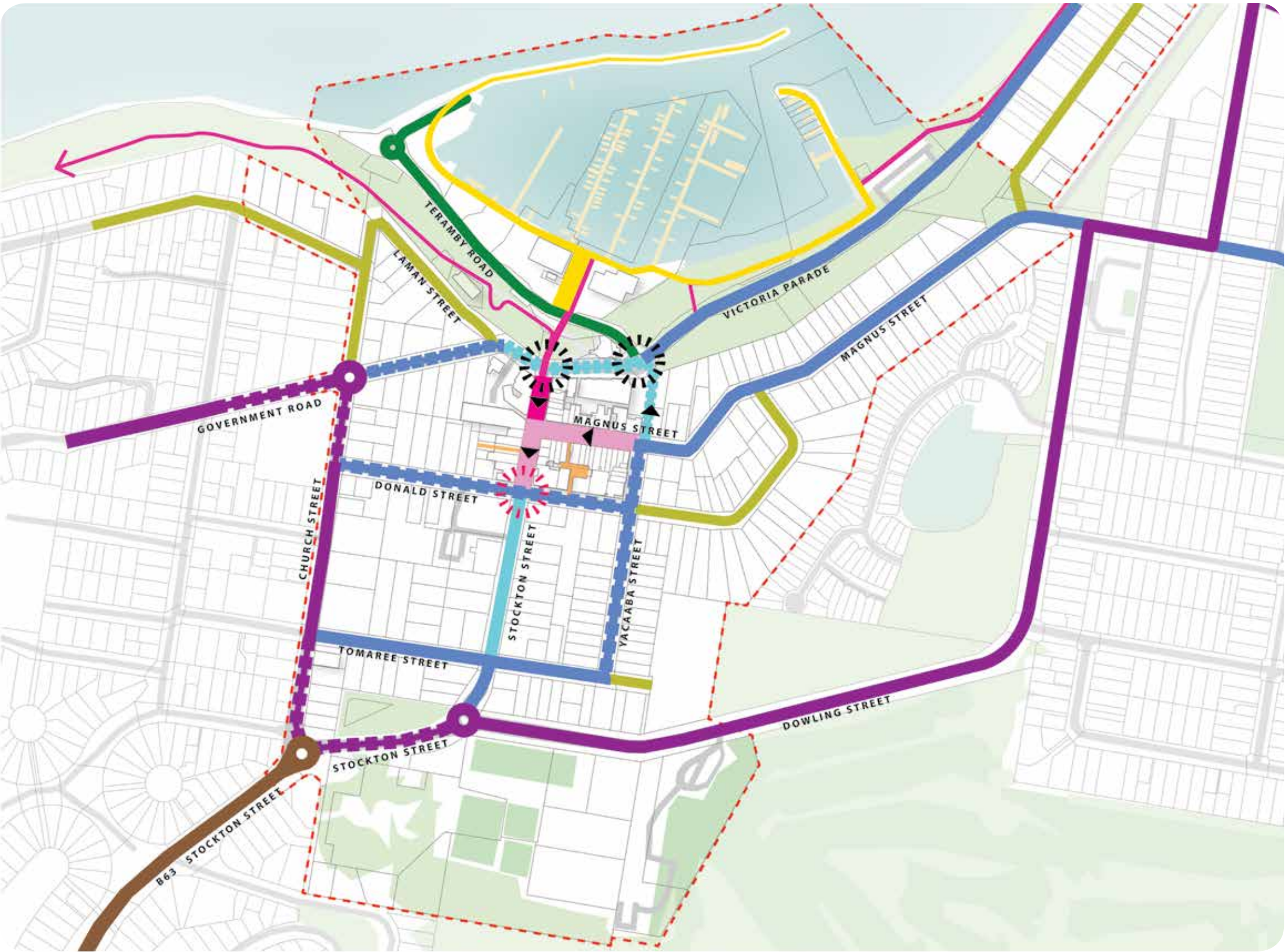
Sub-Arterial Road - Gateway Treatment
- 5

Arterial Road
- 4

Local Street

**Quality of Finishes Level**

1 = Highest treatment quality for key public space  
5 = Lowest treatment quality for public space



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- LEGEND

Study Boundary

Signalised Intersection

Intersection of Donald St & Stockton St - options include:

- Installation of traffic lights

- Extended shared zone

- Relocation of one or both crossings and construction of kerb extensions

One-way - Proposed direction
- 20 Nelson Bay Public Domain Plan 2019 Port Stephens Council Nelson Bay NEXT Tract Consultants





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## 6.5 Cycle Network

**Cycling, as a recreational activity and an alternative transit mode, is a low-cost, sustainable and healthy way to travel**

In order to facilitate a cycle friendly environment, it is important to improve the cycle network with safer and better connected paths, which are designed to minimise conflicts with pedestrians and vehicles.

### CYCLE ROUTE AND FACILITY

- Extent of Existing Shared Path to be retained and upgraded
- ~ Removal of conflict between pedestrians and cyclists at steep section in Apex Park - 'wiggle pathway'
- Proposed Shared Path, specially designed for family cycling, widened footpath on one side of the road allowing for pedestrians and two-way cycling
- Proposed Shared Zone, specially designed for Magnus Street Village Boulevard and Stockton Street, flush level treatment, cyclists give way to pedestrians
- Proposed On-Road Separated Cycleway, mostly as an extension of the existing separated cycleway, mainly caters for daily commuter
- Proposed On-Road Cycleway, generally throughout all Town Centre streets
- Proposed Cyclist Facilities, including bicycle storage/racks generally located near public transport or shop fronts as part of the street furniture, and shower rooms/lockers can be co-located with foreshore amenities and Visitor Centre, which is to be refurbished.

### LEGEND

- Study Boundary
- ⦿ Signalised Intersection
- ⦿ Intersection of Donald St & Stockton St - options include:
  - Installation of traffic lights
  - Extended shared zone
  - Relocation of one or both crossings and construction of kerb extensions
- ◀ One-way - Proposed direction



6.6 Public Domain Character & Materials

FORESHORE

The Foreshore celebrates the prime waterfront location of the Town with high-quality materials and elements that enhance the colours and textures of the natural environment of the Marina.



Quality of Finishes Level 1:  
high-quality paving and  
some bespoke elements/  
foreshore lighting

Public Domain Furniture



Seating with Integrated Planting



PSC Nelson Bay Next Bins



Hardscape Elements



Exposed Aggregate Paving



Sandstone Elements

Public Domain Lighting



Lights By The Bay

Pedestrian Scale Lighting



Integrated Lighting

PEDESTRIAN ZONE + SLOW ZONE (10-25KMPH)

The Town Centre accommodates and prioritises pedestrians, with high-quality, distinctive, contemporary features which reflect the NEXT Nelson Bay.



Quality of Finishes Level 1:  
high-quality paving  
and special integrated  
seating/feature lighting



Seating with Integrated Planting



PSC Nelson Bay Next Bins



Stone Paving Setts



Urban Furniture for Streets - Bollards



Opportunity for installations of feature lighting/integrated with public art



Smart Pole Lighting



Pedestrian Scale Lighting



Public Domain Furniture

Hardscape Elements

Street Lighting



**MEDIUM ZONE (40KMPH)**  
Areas surrounding the Town Centre will reflect a similar language of contemporary design features, and a consistent palette of upgraded elements.



Quality of Finishes Level 2-3:  
medium-quality paving,  
durable stainless steel  
street furniture



PSC Nelson Bay Next Bins

Bike Racks

Smart Pole Lighting



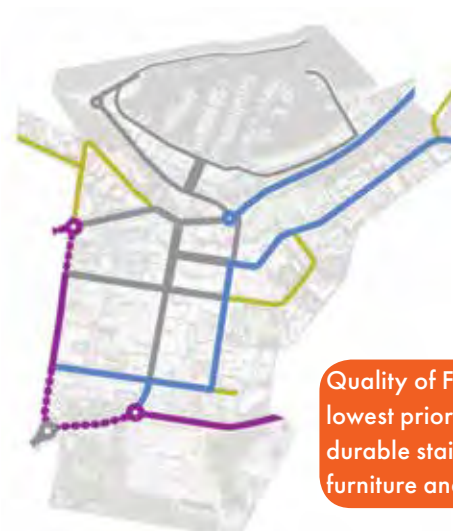
Timber furniture

Bike Racks

Insitu Concrete Paving



Peripheral areas surrounding the Town Centre will also have a consistent palette of upgraded elements of street furniture and lighting where necessary.



Quality of Finishes Level 3-5:  
lowest priority for quality,  
durable stainless steel  
furniture and concrete paving



Bus Stops

PSC Nelson Bay Next Bins

Smart Pole Lighting



6.7 Events & Activation Overlay

Regular community events and activation of the public domain provide social and economic benefits, supporting the local economy and contributing to the identity of place and community.

These should be programmed to activate the Town Centre and support local businesses throughout the year, with a variety of events that enliven public spaces during the day and evenings.

EVENT AREAS & ROLE/FUNCTIONS

- Apex Park:** Existing ANZAC and Remembrance Day services, as well as other festival and market events
- Stockton Street:** Proposed shared zone in heart of CBD gives opportunity for everyday/weekend pop-up activities and events that incorporate and celebrate local businesses and encourage late night activation
- Magnus Street, Village Precinct:** Proposed shared zone with level street treatment and potential for closure for year-round weekly or monthly market events and other pop-up activities such as Food and Wine Festivals
- Yacaaba Street:** Infrastructure for events (water, power, lighting) was added in the recent Yacaaba St Extension
- Foreshore Central Plaza:** Existing sculpture festival and other events, potential to link with Stockton St to reinforce connection from Marina to Town Centre
- Eastern Foreshore:** Focus on recreational activities and facilities for all ages, potential for educational programme/ events, such as a wide range of educational programs that are designed and offered by Port Stephens Council to increase environmental awareness for the community



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LEGEND

----- Study Boundary





Concept Only: Final design subject to technical design considerations, detailed investigation of services and relevant approvals

## LEGEND

----- Study Boundary

## 6.8 Public Art Overlay

Public art provides the opportunity to interpret the Town's rich history and look to the future whilst shaping our collective consciousness, creating inspiring, welcoming places.

It is essential that public art is programmed and located correctly, and is reflective of history and place, whilst also providing for ownership by the local community. It should be location specific and integrated with street lighting and signage.

A community-led procurement and design process will give opportunities to celebrate local artists. Port Stephens Cultural Plan recognises the importance of prioritising and integrating such cultural infrastructure.

### PUBLIC ART LOCATIONS

- 1 Gateway Park:** Opportunity for art work to form landmark entrance to Nelson Bay, celebrating the culture and history of the town. Gateway Art to boast boldly and to be visible from distance
- 2 Stockton Street & Magnus Street:** Linear art work to reinforce identity of Stockton Street as heart of Town Centre and celebrate views and proximity to Bay. Magnus Street artworks to be inkeeping with 'Village Precinct' designation, celebrating history and character of Town
- 3 Apex Park:** Art work to reinforce transition between Town Centre and Foreshore. Potential opportunity to highlight ANZAC memorial and eastern axis
- 4 Foreshore Central Plaza:** Gateway artwork to celebrate arrival at Nelson Bay Foreshore and link back to Apex Park and Stockton Street
- 5 Existing Artworks:** Whale tails trail
- 6 Eastern Foreshore:** Opportunity for artwork to celebrate activities and unique marine environment along Foreshore and at Ferry location
- 7 Western Foreshore:** Opportunity for artwork to celebrate Nelson Bay's fishing and maritime heritage



# 6.9 Pedestrian Wayfinding Overlay








An intuitive wayfinding system allows the delivery of a more legible public domain that encourages people to walk with comfort and confidence around Nelson Bay Town Centre and Foreshore and beyond.

Clear wayfinding will allow people to reach their destination easily and quickly by providing the cues and information to know: where you are, where you are headed, how to get there, and how long it will take.

Information, mapping and pedestrian direction signs together form a pedestrian wayfinding network throughout the Town Centre and the Foreshore.

The wayfinding system will be as inclusive as possible by providing information in formats accessible to mobility impaired, visually impaired and hearing impaired users.

## PEDESTRIAN WAYFINDING NETWORK

-  Pedestrian Route throughout the Town Centre and Foreshore, along which wayfinding signs are provided for connected navigation
-  Informal Foreshore Walking and Cycle Track, linking Nelson Bay and beyond
-  Laneways and Through-Site Links within Town Centre improve site walkability and permeability. Direction signs at each end of the laneways/through site links are necessary to highlight destinations.
-  Public Car Parks will be heavily used during the peak season. Directions are especially important for visitors and tourists.
-  Information and Mapping Signs are located at the entry points of the central gathering areas, e.g. the Town Centre Village Precinct, Apex Park, the Foreshore central plaza and the ferry wharf, where people tend to stop, read, understand and make decisions for travel.
-  Pedestrian Directional Signs are located at:
  - Areas with change of direction, e.g. street intersections;
  - Car Park entry/exits;
  - End of laneways/through-site links;
  - Mid-point of long routes.
-  Proposed Public Amenities



## LEGEND

 Study Boundary

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Concept Only: Final design subject to technical design considerations, detailed investigation of services and relevant approvals

## LEGEND

----- Study Boundary

## 6.10 Street Lighting

Street lighting works in conjunction with other street elements as an organising factor to establish the hierarchy of the streetscape.

Lighting design also contributes to public domain character and safety. Nelson Bay public domain lighting strategy specifies four overall treatments, which are serving four different character areas and purposes. Upgrading the lighting across the Town Centre provides an opportunity to integrate a consistent contemporary suite of products which employ sustainable low-energy technology and modular adaption for future flexibility.

### LIGHTING TYPES

- 1 **Stockton Street Shared Zone** lighting will celebrate an active and bustling Town Centre heart, with increased hours of activation year-round. A range of street lighting will be incorporated, including playful feature lights and lighting of public art & wayfinding
- 2 **Village Precinct** lighting at Magnus Street and Stockton Street shared zone and laneways will reflect the 'village' character. Smaller, pedestrian-scale street poles will support the finer grain of the streetscape
- 3 **Town Centre** street lighting will be upgraded with increased frequency and contemporary design to improve pedestrian amenity and safety. Smart poles will provide a modular system for future flexibility and upgrade.
- 4 **Foreshore Lighting** will reinforce connection to the Town Centre through Apex Park, whilst also celebrating the special character of the waterfront promenade. This will include pedestrian-scale lighting elements and lighting integrated into the promenade environment, such as timber handrails or sleepers.

## 7. Key Places & Spaces.

Four key places have been identified and considered in further detail in order to guide the delivery of the overarching vision. These places will reflect the nature of Nelson Bay as a Peninsula gateway, waterfront destination, and bustling Town Centre.





## 7.1 Key Places Overview

### LEGEND

- 1 Stockton Street Shared Zone & Magnus Street Village Precinct
- 2 Apex Park & Victoria Parade Interface
- 3 Eastern Foreshore
- 4 Nelson Bay Gateways

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# 7.2 Stockton Street Shared Zone & Magnus Street Village Precinct

The northern portion of Stockton Street is reinforced as the heart of the Town Centre, activated by boutique retail and cafes, with space to spill out onto a pedestrian priority low-speed shared environment.

Pedestrian priority is achieved here with a level street threshold, and a slow shared zone between, pedestrians, cyclists and vehicles, with respective priority. This allows for a connected, walk-able street, with activities spilling from cafés and the potential opportunity to close the street for certain pop-up events, such as village markets. Full pedestrianisation of the northern portion of Stockton Street is considered a long-term vision.

This northern portion is celebrated with a planting and paving design which celebrates the connection with the Foreshore, as well as public art opportunities to create a unique, memorable place.

Pedestrian wayfinding reinforces the more seamless connection through to Apex Park and the Foreshore, which is enhanced by upgraded landscaping.

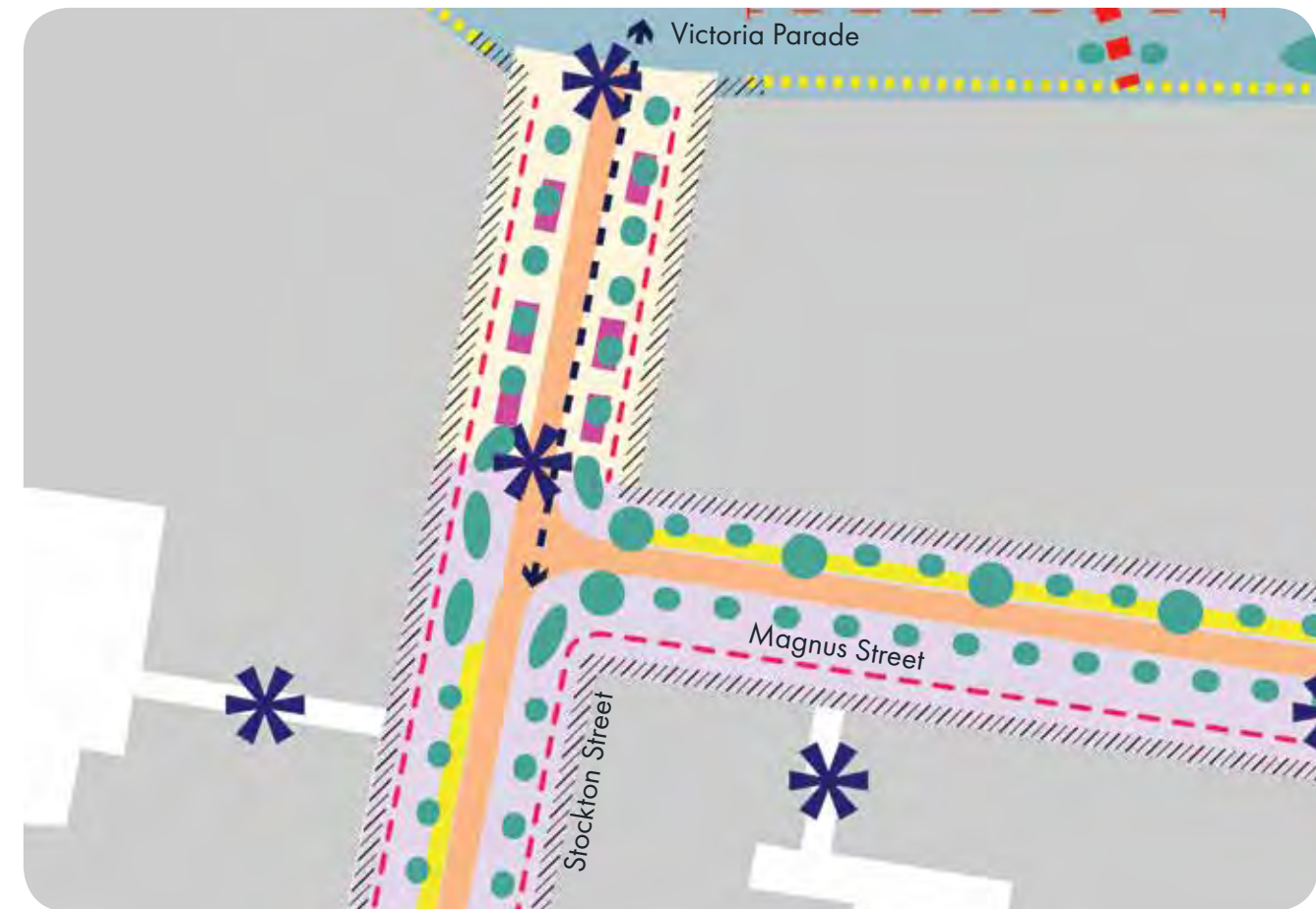
Complementing and connecting with the wide shared zone on Stockton Street, Magnus Street in contrast is to have a finer-grain and proportion.

Finer-grain retail and cafés have the ability to spill out onto the wider southern side of Magnus Street, taking advantage of the northern aspect. Parallel parking will only be available along northern side of Magnus Street. However the removal of the southern side street parking will depend on the availability of a commensurate number of additional car spaces in the town centre.

Note: Shared zone design would be subject to further detailed investigation in relation to drainage and stormwater design



FUNCTION DIAGRAM



Concept Only: Final design subject to technical design considerations, detailed investigation of services and relevant approvals



Source: Wikipedia



Source: Wikimedia



## KEY PLAN



## KEY SPACES



### Stockton Street Shared Zone

- Shared Zone with capacity to close as a Pedestrian Mall
- Feature planting
- Variety of seating with integrated planting
- Smart pole street lighting & feature lighting
- New public domain elements to include fountains, bike racks, bins, cafe umbrellas
- Wayfinding signage



### Magnus Street Village Precinct

- Fine-grain stone paving sets, with level threshold creating shared zone
- Slow-speed environment, one-way west
- Parallel parking along northern side with new feature Palm planting
- 9m wide footpath along southern side for outdoor dining, with new tree planting & garden beds
- New street and pedestrian lights
- New public domain elements



### Signalised Scramble Crossing

Donald St & Stockton St Intersection options to be investigated:

- Signalised Intersection
- Extended shared zone
- Relocation of one or both crossings and construction of kerb extensions



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STREET PERSPECTIVE [View 01]: Stockton Street Shared Zone

Concept Only: Final design subject to technical design considerations, detailed investigation of services and relevant approvals





STREET PERSPECTIVE [View 02]: Magnus Street Shared Zone

Concept Only: Final design subject to technical design considerations, detailed investigation of services and relevant approvals



7.3 Apex Park & Victoria Parade Interface

A key identified aim is to better connect the Town Centre with the Foreshore. The treatment of Victoria Parade, and its connection with Stockton Street and Apex Park, is crucial to encourage walkability and improve connection.

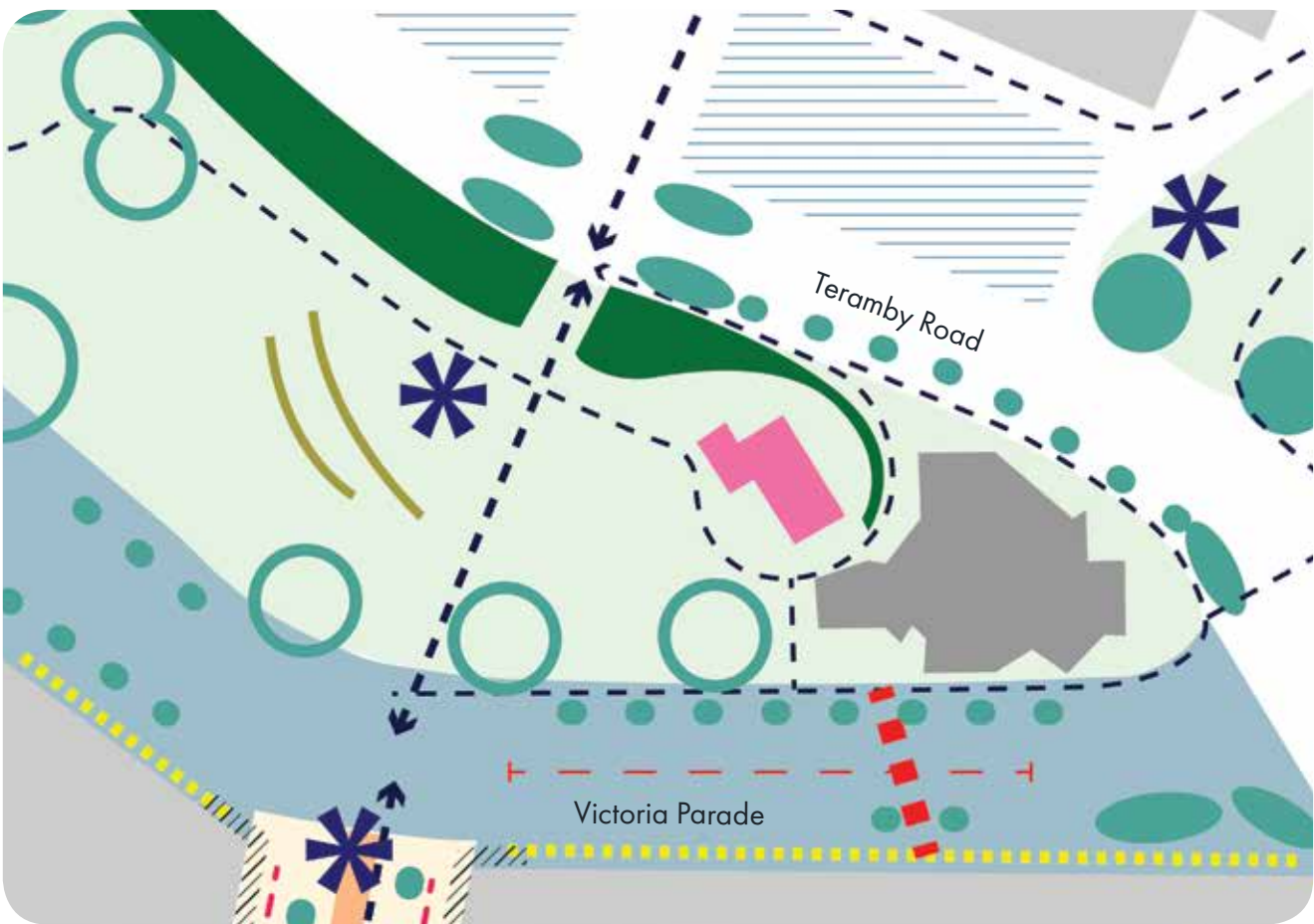
Cafés have the opportunity to spill onto the southern side of Victoria Parade, which is to be enhanced as an attractive, walk-able street with increased planting and drop-off zones provided at street frontages. A section of Victoria Parade is categorised as a slow (25kmph) Pedestrian Priority Boulevard, with signalised scramble crossings at the end of Stockton St and Yacaaba St.

Removal of the existing Skybridge and median creates a more generous pedestrian environment around the existing Information Centre, which is proposed to be transformed into a community facility, with café and upgraded public toilets.

This Plan is largely in-keeping with the 2015 Apex Park masterplan, which is extended to include the currently underutilised car parking space to the north east of Teramby Road. The ANZAC war memorial is retained and enhanced, with eastern facing seating and upgraded landscaping. Wayfinding and historical interpretation signage is to be provided throughout the Park.

- Apex Park Open Space
- Pedestrian Priority Boulevard (Slow Zone 25kmph)
- Cafe & Gallery Space converted from Existing Information Centre
- ANZAC Memorial
- Steep Bank
- Foreshore On-Grade Parking
- Existing Trees
- Feature Planting
- Street Tree Planting
- Key Connection
- Street Furniture Zone
- Potential Public Art Location
- Removal of the Existing Skybridge
- Removal of the Existing Median
- Street Frontage Activation with increased planting and drop-off zones

FUNCTION DIAGRAM



Concept Only: Final design subject to technical design considerations, detailed investigation of services and relevant approvals





## KEY PLAN



## KEY SPACES

### Victoria Parade

- 1** • Pedestrian-priority boulevard to encourage pedestrian movement, with reduced traffic speed and new cycleway on northern edge.
- Revitalise footpaths with new tree planting and street furniture elements
- Remove existing Skybridge and central concrete median
- 2** • Drop-off zone on southern edge of Victoria Parade

### Apex Park

Design generally aligns with Apex Park Masterplan 2015. Reinforce existing park planting with new feature planting to enhance the green connections to Foreshore

- 3** • Widened upgraded footpath and stairs
- 4** • Sandstone terraced seating
- 5** • Existing Visitor Centre building to be refurbished with public toilet upgrades and new cafe
- 6** • Reinstate existing embankment with new low shrub and ground cover planting to prevent erosion
- 7** • Narrow Teramby Road to slow traffic and improve pedestrian footpaths
- 8** • Increase tree planting at the edges of the existing car park to provide separation between the foreshore building and parking, as well as to form the entry plaza to the foreshore
- 9** • Existing foreshore parking to remain
- 10** • Reduced foreshore parking (relies on availability of additional public parking in other locations)



Signalised Scramble Crossing



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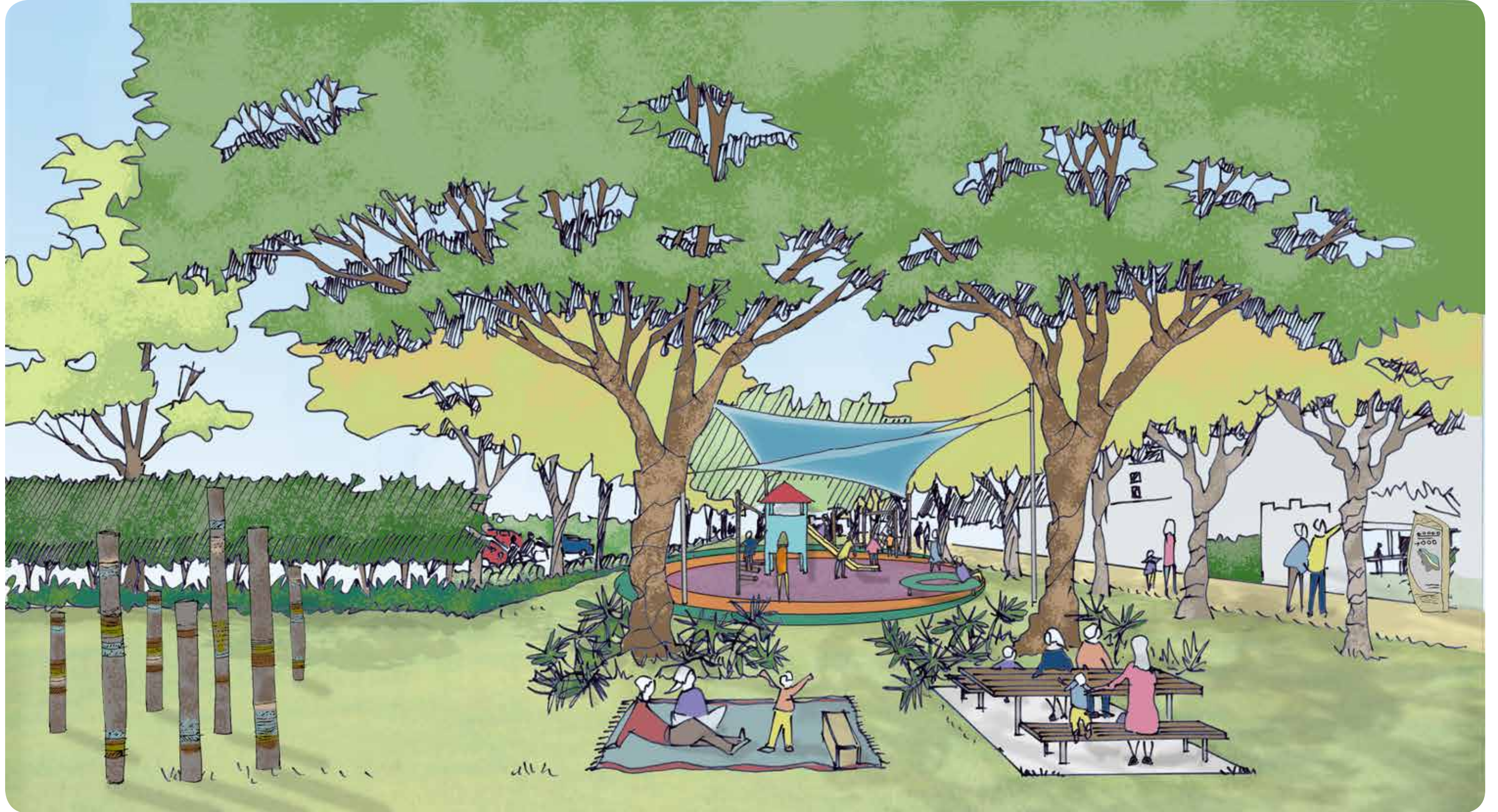




STREET PERSPECTIVE [View 03]: Victoria Parade Interface Between Town Centre and Foreshore

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OPEN SPACE PERSPECTIVE [View 04]: Eastern Foreshore Playground & Recreation Zone

Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals



# 7.4 Eastern Foreshore

Apex Park is the defining major public space within the Nelson Bay Town Centre and Foreshore, however it is relatively constrained due to its topography and existing features. The Western Foreshore contains working elements of an existing boat yard, and whilst we propose better walkability through this area, it is understood that car parking and marina functions are essential to its function as an active boat yard and fishing marina.










The Eastern Foreshore area, which extends from the intersection of Victoria Parade and Teramby Road to the ferry wharf, is a popular waterfront destination including a children’s play park and a linear reserve. It also contains a large amount of car parking. Should additional car parking capacity become available in other locations in Nelson Bay, there is potential for utilisation as public open space.

**A series of improvements in this area is proposed to create a memorable waterfront destination with a varied programme of activities that will attract residents and visitors of all ages.**

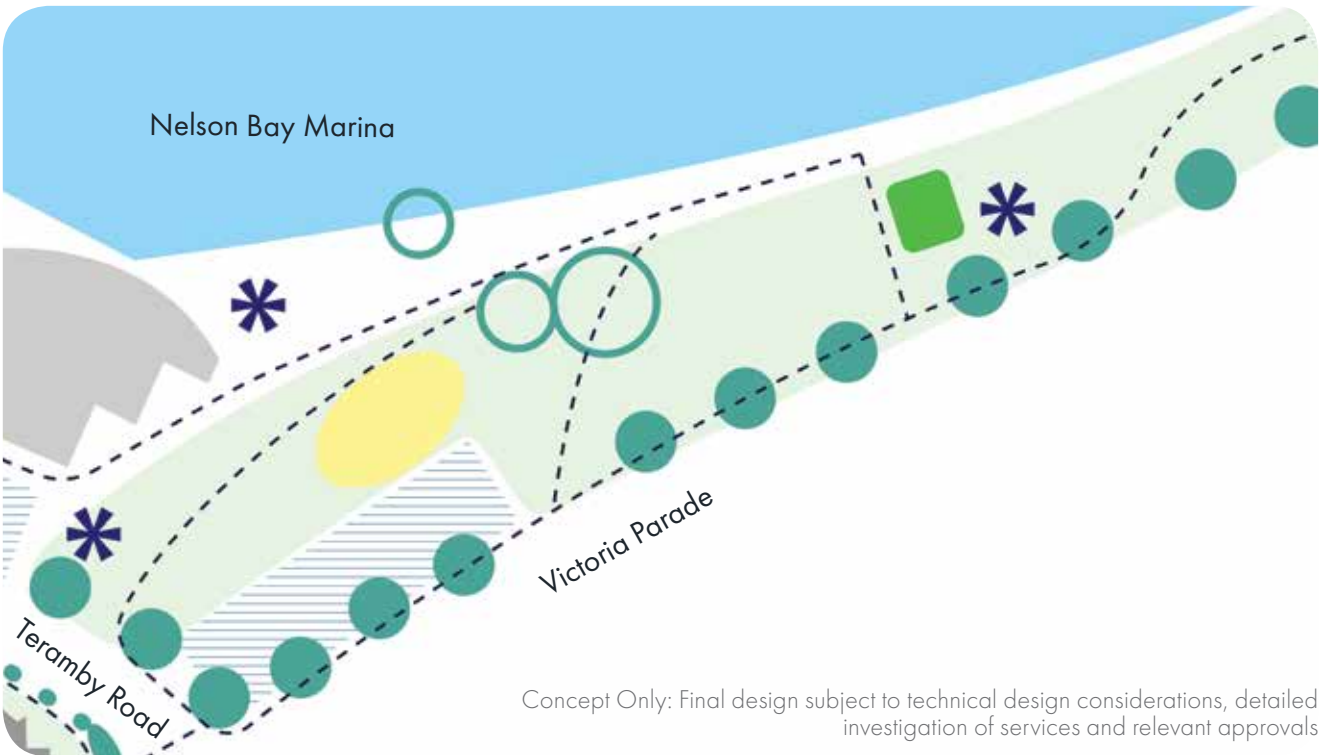
Some detailed proposals include:

- reducing the existing car park in size. However the removal of the car parking will depend on the availability of a commensurate number of additional car spaces in the town centre.
- creating new foreshore park by providing facilities / attractions suitable for all ages, such as half basketball court, shared shaded zone for recreational and educational uses and new BBQ and amenities block.

We propose this Foreshore area to be exemplary in its approach to protecting and conserving the marine ecology, and educating users and visitors to the issues affecting the Bay, and the role that their public domain plays in addressing these issues. This might include public artworks and educational displays, as well as celebrating Water Sensitive Urban Design (WSUD) features.

	Eastern Foreshore Open Space
	Existing Foreshore Building
	Playground relocated to free up open space on foreshore
	Upgrade BBQ area
	Foreshore On-Grade Parking (to be reduced dependant on availability of additional public parking elsewhere)
	Existing Trees
	Street Tree Planting
	Pedestrian Route
	Potential Public Art Location

## FUNCTION DIAGRAM



Concept Only: Final design subject to technical design considerations, detailed investigation of services and relevant approvals





## KEY PLAN



## KEY SPACES

### Waterfront Promenade East

- 1 • Reduce existing foreshore parking and change parking entry/exit to Victoria Parade (relies on availability of additional public parking in other locations becoming available)
- 2 • Playground relocated to provide more open space along foreshore
- 3 • Retain existing trees along Foreshore
- 4 • Upgrade & expand existing playground with new equipment & shade canopies
- 5 • Upgrade BBQ shelter, BBQ amenities and install new picnic settings along Foreshore reserve
- 6 • New feature Araucaria planting along Victoria Parade
- 7 • Upgrade shared path to reinforce pedestrian connections along Foreshore
- 8 • New planting to existing gathering area to reinforce the meeting point for tour groups
- 9 • Consolidate car park entries



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## 7.5 Nelson Bay Gateways

### NELSON BAY GATEWAY PARK

This reserve will provide an iconic gateway into Nelson Bay, celebrating the unique character and history of the Town, with public art, lighting and tree planting celebrating the arrival to the Town by the Bay.

The gateway can be either a public art element or a signage element or an integration of both. It is a great opportunity for the local artists' involvement.

This gateway park will provide clear wayfinding to delineate the direction to the Town Centre and to the by-pass continuing along Dowling Street to Shoal Bay and Fingal Bay.

### CHURCH STREET & GOVERNMENT ROAD INTERSECTION

This intersection serves as a secondary Gateway into Nelson Bay.

People approaches Nelson Bay Foreshore and Town Centre via this threshold mostly have gained their knowledge of direction once passed the primary Gateway Park.

There is limited public land to introduce a gateway statement and relatively understated but friendly wayfinding strategies are proposed in this area.

### KEY SPACES

- |   | Nelson Bay Gateway Park  |
|---|--|
| 1 | Lighting and wayfinding on roundabout to be upgraded to signify entry to Nelson Bay                                  |
| 2 | New interpretive public art/signage to celebrate arrival along Stockton St   |
| 3 | Existing trees retained  |
| 4 | New street trees and central median planting along Stockton St as part of arrival route                              |
| 5 | New street tree planting along Church St   |
| 6 | Consider improved pedestrian crossings at this intersection to link public car park with Town Centre via Stockton St |
- 
- |   | Church Street & Government Road Intersection   |
|---|--|
| 1 | Options to increase pedestrian connectivity and safety to be explored  |
| 2 | Gateway Palm planting, as a low-key gateway statement, at four corners of this intersection                              |
| 3 | New Nelson Bay Directional Sign  |
| 4 | Improved vehicular wayfinding to car park  |
| 5 | Increase street tree planting along Government Road to provide more shade and wind protection for pedestrian and cyclist |
| 6 | New street tree planting along Church St   |



Source: Flickr



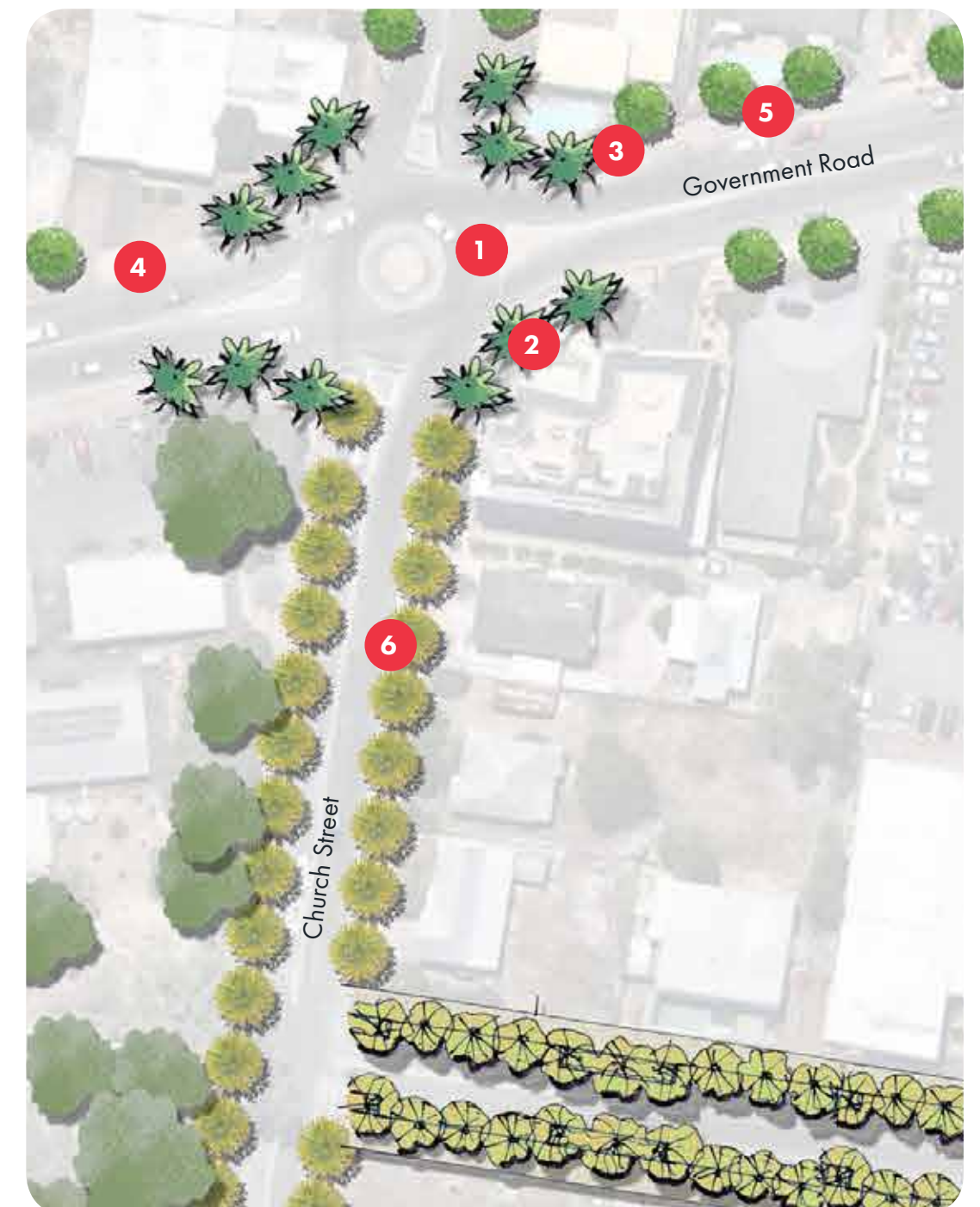


KEY PLAN



Nelson Bay Gateway Park

KEY PLAN



Church Street & Government Road Intersection

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## 8. Implementation.

Whilst this Plan has developed a long-term vision for Nelson Bay's public domain, we have considered a staged approach to implementation, with Small, Medium and Large moves.



8.1 Staging Approach

We understand that in some areas of the public domain, a staged incremental approach may be necessary. It allows for practical and effective steps to be taken in the immediate short-term, with restructuring and long-term investment to achieve the vision.

Three levels and/or stages of design and development are proposed for Nelson Bay public domain, which are:

SMALL

Base Concept: practical actions, short-term investment, improvements and upgrades

MEDIUM

Balanced Concept: feasible actions, mid-term investment, value adds

LARGE

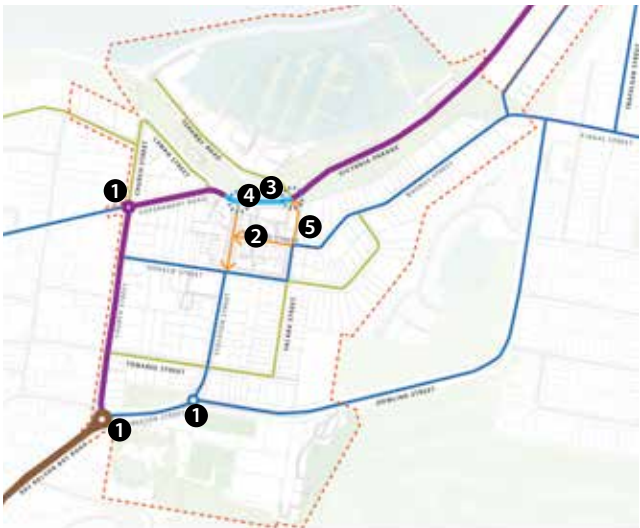
Vision Concept: bold actions, longer-term investment, re-structuring

This approach has been supported by Council and community stakeholders whilst developing the Plan, although support is for implementing the 'Vision' LARGE concept as soon as practicable.

For the purpose of this Plan and its supporting documents, the focus is on developing the LARGE concept. However the SMALL, MEDIUM and LARGE steps are outlined indicatively in this section, with the detailed staging scopes elaborated and compared in the following section.



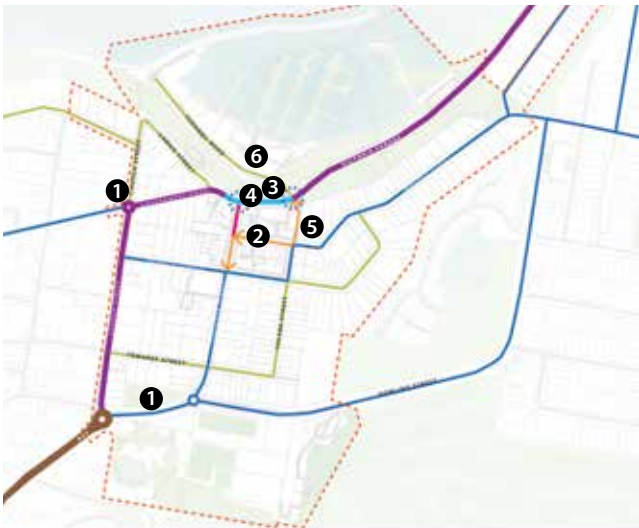
BASE CONCEPT



- 1 Gateway markers, i.e. wayfinding signage and feature tree planting, at key arrival intersections
- 2 Remove Stockton Street Stage; Activate street frontages and increase pop-up activities in Village Precinct
- 3 Connect Information Centre to the Foreshore and formalise perimeter footpath and connections to allow accessible pathways; Improve signage and lighting to assist visitor wayfinding
- 4 Apex Park interface: upgrade crossings at northern end of Stockton St and Yacaaba st to signalised scramble crossings.
- 5 Yacaaba Street Extension, is One-Way NORTH only, providing additional traffic access from the Town Centre to the Foreshore.
- 6 Upgrade/complete existing missing footpath in Town Centre and Foreshore



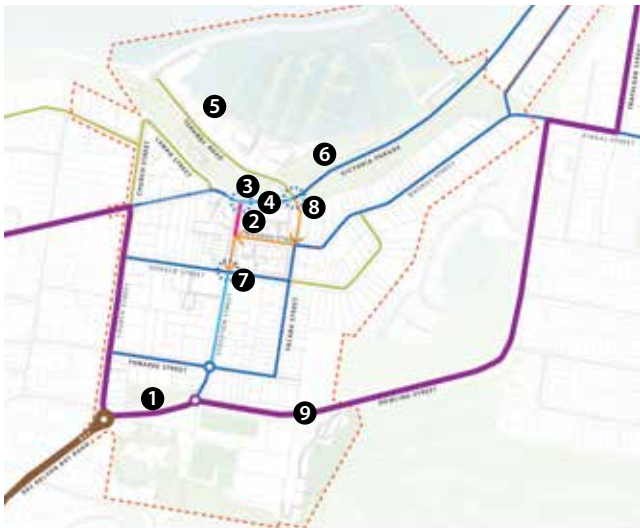
BALANCED CONCEPT



- 1 Create a Gateway park at the primary arrival point of Nelson Bay Road and Church Street intersection; Re-configure and upgrade streetscape along Stockton St and Government Rd
- 2 Undertake public domain upgrades to Magnus Street & Stockton Street intersection threshold and the shared zone of Magnus Street and Stockton Street (section between Donald Street and Victoria Parade)
- 3 Relocate Information Centre to centralised locations; Refurbishment of existing building for community use; Upgrade existing public amenities building;
- 4 Apex Park interface: Remove Skybridge and widen footpath along Victoria Parade; Remove median barrier and upgrade footpath paving
- 5 Yacaaba Street Extension remains as One-Way NORTH ONLY
- 6 Design and implement new Foreshore Central Plaza between existing buildings to improve pedestrian circulation and visual connection to the water
- 7 Undertake public domain upgrades to the Town Centre including consistent pavement, treatment, installation of street furniture and street tree planting; Underground existing overhead power-lines in the Town Centre



VISION CONCEPT



- 1 Design and implement art signage/gateway installation to Gateway Park
- 2 North end of Stockton Street revitalised into a Shared Zone, with potential to close off as Pedestrian Mall (Town Square)
- 3 Apex Park: Implement Apex Park Masterplan 2015
- 4 Apex Park interface: Implement 25kmph slow zone as a pedestrian prioritised boulevard on Victoria Parade between Yacaaba and Laman Street; Implement separated cycleway and widen footpaths along Victoria Parade
- 5 Design and implement new waterfront promenade connecting the Foreshore Central Plaza to the working marina
- 6 Reduce existing car park in size to allow construction of a new Eastern Foreshore park (if additional parking available elsewhere)
- 7 Consider options for Stockton Street and Donald Street intersection to improve traffic flow and improve pedestrian connectivity and safety
- 8 Consider converting Yacaaba Street Ext. to One-Way SOUTHBOUND, if north Stockton Street closed to traffic;
- 9 Redirect by-pass traffic to periphery of Town Centre along Dowling Street allowing pedestrian priority in the Town Centre and along the Foreshore
- 10 Undertake public domain upgrades and apply WSUD in Town Centre and Foreshore

LEGEND

	Study Boundary		Collector Road		Shared Zone
	Arterial Road		Local Street		Slow Zone in S & M schemes; Pedestrian Prioritised Boulevard in L scheme
	Sub-Arterial Road		One-Way Shared way		



Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals



8.2 Detailed Staging Scope



Time Frame	-	-	-	-	-	-
Order of Priority	1	2	3	4	5	6
Proposal / Location	<b>Village Precinct: Magnus Street; Stockton &amp; Magnus Threshold; &amp; Stockton Street</b> (Between Magnus Street & Donald Street)	<b>Stockton Street</b> (Between Victoria Parade & Magnus Street)	<b>Apex Park</b>	<b>Victoria Parade</b> (Between Yacaaba Street & Laman Street)	<b>Visitor Information Centre</b>	<b>Stockton Street Pedestrian Boulevard</b>
<b>SMALL</b> Base Concept	<p>Remove Stockton Street Stage to remove bottleneck at intersection and open the view corridor between town centre and Apex Park;</p> <p>Activate street frontages; Increase pop-up activities; Potential for temporary improvements to vacant shops, i.e. use space/windows for tourist information</p>	<p>Activate street frontages; Increase pop-up activities; Potential for temporary improvements to vacant shops, i.e. use space/windows for tourist information</p>	<p>Investigate methods to assist in stabilising northern embankment by use of planting;</p> <p>Strengthen the 'green edge' along Teramby Road whilst maintaining view corridors to the water.</p>	<p>Signalised scramble crossing at Yacaaba Street Extension; Convert existing Stockton Street traffic signals to allow pedestrian scramble and widen crossing;</p>	<p>Formalise perimeter footpath and connections to allow accessible pathways;</p> <p>Improve signage and lighting to assist visitor wayfinding</p>	<p>Complete missing footpath connections to provide safe, consistent and comfortable connections to the town centre;</p>
<b>MEDIUM</b> Balanced Concept	<p>Re-align parking and kerb extensions along Magnus Street shared zone to slow traffic;</p> <p>Upgrade existing lighting to encourage night time use of the Village;</p> <p>Selective removal of trees; pruning and maintenance and improvement of existing trees</p>	<p>Upgrade existing lighting to encourage night time use of the Village;</p> <p>Selective removal of trees; pruning and maintenance and improvement of existing trees</p>	<p>Formalise perimeter footpath and connections to allow accessible pathways; Improve lighting and wayfinding; Replace existing retaining walls with sandstone walls;</p> <p>Detailed design of interpretive signage and public art as interpretive of cultural and natural heritage of Nelson Bay; Reinforce the significance of the Anzac Memorial</p>	<p>Remove Skybridge (pending structural assessment) and widen footpath along Victoria Parade</p> <p>Remove median barrier and upgrade footpath paving; install street trees and feature tree planting</p>	<p>Refurbishment of existing building with new cafe. Upgrade existing public toilets; improve access and surveillance</p> <p>Investigate the relocation of the Visitor Information Centre to a location with parking available for caravans, campers &amp; trailers. If relocated, consider active uses for the building to contribute to the public domain.</p>	<p>Improve pedestrian crossing amenities at Tomaree intersection;</p> <p>Implement WSUD garden beds and street tree planting where possible to improve the green corridor connections</p>
<b>LARGE</b> Vision Concept	<p>Design and implement the revitalisation of Magnus Street shared zone and threshold; Install feature lighting, bespoke furniture, stone paving, flush kerbs at Magnus and Stockton threshold, wayfinding, public art and new feature planting</p>	<p>Design and implement the revitalisation of north end of Stockton Street into a slow-speed Shared Zone, bespoke furniture and stone paving, wayfinding maps, public art, Incorporate feature tree planting which are sensitive to the visual links (i.e. tall trunks.)</p> <p>Consider closing off Stockton Street north to vehicular traffic and implement Pedestrian-only Mall;</p>	<p>Implement "east" facing sandstone terraces to strengthen visual and physical connections to Anzac Memorial and the foreshore park beyond;</p> <p>Provide greater "level paved area" to assist with ceremonial events within Apex Park;</p> <p>Consider implementation of Apex Masterplan</p>	<p>Reduce speed along Victoria Parade to 25kmph between Yacaaba &amp; Laman St; Slow traffic to "flip" priority to pedestrian movements</p> <p>Implement a safe 3m wide separated cycleway to remove conflict with pedestrians in Apex Park; Cycleway to connect with shared path along Government Road and the foreshore promenade to the east.</p>	<p>Detailed Design for total renovation of current brick building to allow for a new transparent building structure which improves frontage and connection to Apex Park and Victoria Parade.</p> <p>Attract long term tenant i.e. cafe / restaurant to assist with the activation of Apex Park and surrounds whilst maintaining community use of "flexible floor space" within building</p>	<p>Underground existing overhead power lines;</p> <p>Re-align parking and kerb extensions to complete public domain footpath upgrades;</p> <p>Street tree planting and install new multi-function streetlights</p>

-	-	-	-	-	-	-	-	-	-	-	-
7	8	9	10	11	12	13	14	15	16	17	18
<b>Yacaaba Street &amp; Extension</b>	<b>Donald Street &amp; intersection with Stockton Street</b>	<b>Primary Gateway</b> Church Street/Nelson Bay Road Intersection	<b>Secondary Gateway</b> Government Road & Government Road /Church Street Intersection:	<b>Secondary Gateway</b> Teramby Road/Victoria Parade Intersection:	<b>Foreshore Central Plaza &amp; Western Foreshore</b>	<b>Eastern Foreshore</b>	<b>Church Street</b>	<b>Laman Street</b>	<b>Teramby Road</b>	<b>Laneway off Stockton Street</b>	<b>Laneway linking off Magnus Street</b>
Yacaaba Street Extension: as constructed One-Way NORTH traffic movement;  Increase Tree planting to adjoining pedestrian shared area to provide more shade and wind protection	Upgrade and complete missing footpath connections;  Selective removal of trees; pruning and maintenance and improvement of existing trees condition	Install feature gateway planting and upgrade wayfinding signage at gateway	Install feature gateway planting and upgrade wayfinding signage at gateway	Install feature gateway planting and upgrade wayfinding signage at gateway	Removed existing clutter to plaza area directly adjacent to Teramby Road - including relocating waste bins, poster signage;  Upgrade existing signage to D'Albora Marinas; Upgrade footpath paving and complete missing connections along Teramby Road	Upgrade/create a safe well lit pedestrian connection from the existing information centre to the eastern promenade adjacent existing car park;  Linking Apex Park and the Ferry Wharf via the open spaces along eastern foreshore	Upgrade/complete existing missing footpath and install street trees where possible	Upgrade/complete existing missing footpath	Upgrade/complete existing missing footpath and provide new pedestrian lighting to increase safety and surveillance	Encourage activation and upgrades to laneways - subject to private funding	Encourage activation and upgrades to laneways - subject to private funding
	Re-align parking and kerb extensions to complete public domain footpath upgrades, street tree planting and install new multi-function streetlights;  Upgrade streetscape and apply WSUD garden beds	Create Gateway Park;  Re-configure traffic lanes to allow inclusion of shared path;  Underground overhead power lines;  New verge planting, median treatments, new street lighting and banners	Re-configure and upgrade streetscape along Government Road to allow inclusion for shared path.  Underground overhead power lines	Re-configure and upgrade streetscape along Victoria Parade to allow inclusion for shared path;  Underground overhead power lines	Design and implement new gateway plaza between exiting buildings to improve pedestrian circulation and visual connection to the water;  Consider new feature lighting; New public domain furniture; New planting, and large grass area for users	Upgrade promenade;  Implement wayfinding and interpretative signage;  Upgrade promenade lighting;  Upgrade and expand existing playground, provide shade canopies, install new public domain furniture including picnic tables, litter bins and water station	Re-configure and upgrade streetscape along Church Street to allow inclusion for shared path	Implement street tree planting or low / median shrub planting in verges to maintain views	Teramby Road works to align with Apex Park and Marina upgrades;  Stabilisation of existing planting embankment	Encourage activation of laneways during the day and after hours with pop-up activities to draw locals and visitors into the town	Encourage activation of laneways during the day and after hours with pop-up activities to draw locals and visitors into the town
Consider pedestrianising Stockton Street north to traffic, and re-configure Yacaaba Street as One-Way SOUTHBOUND;  Provide suitable wayfinding signage to town centre parking areas	Consider options for Donald Street and Stockton Street intersection to improve traffic flow and improve pedestrian connectivity	Design and implement art signage / gateway installation to Gateway Park	Consider options for improving pedestrian connectivity and safety at Church Street and Government Road intersection	Signalised scramble crossing at Victoria Parade / Yacaaba intersection	Design and implement new waterfront promenade; connecting the new central plaza to the working docks at the CO-OP and existing breakwall;  Consider cantilevered timber boardwalk where space is restricted and bridge over existing boat ramp (bridge to swing opwn when ramp is in use); Upgrade promenade paving and lighting; Implement the art trail /wayfinding	Reduce existing carpark in size to allow construction of a new foreshore park by providing facilities / attractions suitable for all ages including half basketball court and new BBQ / amenities block;  Reinforce connections and extend foreshore park to include the Ferry Wharf, Cafe and meeting point	Underground overhead powerlines and complete street tree planting;  Install news streetlights		Formalisation of existing informal "goat track" access from Bridle Path to Teramby Road (timber steps)	Provide short lease tenancies to allow activation of laneways during high season;  Encourage new small bars and wine bars	Provide short lease tenancies to allow activation of laneways during high season;  Encourage new small bars and wine bars

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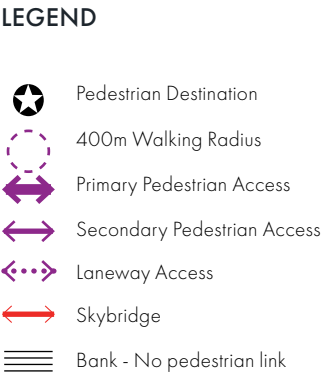
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Appendix A     Site Analysis Study

PEDESTRIAN CONNECTIVITY

- Stockton Street features strongly as the north-south axis across the Town Centre, providing pedestrians with direct physical and visual connection between the Town Centre and the Foreshore.
- The Yacaaba Street Extension, as an additional pedestrian and traffic link, has recently been constructed to increase accessibility from the Town Centre to the Foreshore. An opportunity exists to review its traffic arrangement so that the place character of Stockton Street as a central spine/pedestrian boulevard can be further enhanced.
- A few existing laneways/through-site links within the Town Centre core area are identified. Activation of these can be encouraged to increase site permeability and to create safe, vibrant destinations for tourists and local residents.
- The promenade provides a great opportunity for pedestrian access along the Foreshore, but could be improved and extended to increase connectivity.
- The existing Skybridge is currently under-utilised. Removing it provides an opportunity to free up more public space as well as to open up a better street view.

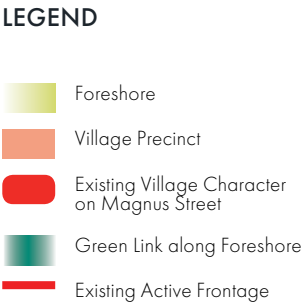


APPEALING LOCAL CHARACTER

The following Character Areas are identified in the Nelson Bay Town Centre and Foreshore Strategy 2012 and also within the DCP Section D 'Specific Areas'.

We see particular opportunities to enhance the public domain in:

- Existing Village Character on Magnus Street
- Foreshore area





GENEROUS OPEN SPACE, HERITAGE & COMMUNITY FACILITIES

- Apex Park, a significant public park located between the Town Centre and the Foreshore, is not currently able to provide a good connection between the two major functions. An opportunity exists to improve it into an attractive transition.
  - Council owned public open space, which is located on the northern side of Stockton Street, near the round-about intersection of Nelson Bay Road and Church Street, has a potential to be transformed into a Gateway Park to provide a sense of arrival.
- Existing heritage items at Apex Park should be retained.
  - Council owned Information Centre has potential to be either upgraded or relocated to the Town Centre.
  - Existing community facilities (including public park, playground, community college, child-care) provide good community services for local residents, which is to be enhanced to attract future population growth.



LEGEND

Visitor Centre (to be refurbished)
  Heritage/Historical Site
  Post Office
  Supermarket
  Ferry Terminal
  Educational Facilities (Tomaree Community College)
  Place of Worship
  Childcare/Pre-School
  Foreshore Playground
  Public Park

VEHICULAR CONNECTIVITY

- By-pass traffic along Victoria Parade forms a traffic barrier for pedestrians between Town Centre and the Foreshore.
  - One-way traffic together with high volume of pedestrian movements on Magnus Street and north end of Stockton Street leads to significant traffic congestion, especially during peak periods. Cars circulating through the Town Centre looking for available parking or certain destinations further exacerbate the congestion.
  - Yacaaba Street Extension provides additional traffic and pedestrian access from the Town Centre to the Foreshore. This one-way north access may help the traffic
- flow out of the Town Centre, however it also puts the traffic pressure back onto Victoria Parade and therefore aggravates it as a traffic barrier for pedestrians.

  - Large number of open air car parks dispersedly located along Foreshore which constrains the activity/commercial opportunities at the waterfront. There is a opportunity to intensify the parking within the Town Centre so as to free up the waterfront spaces for tourism and commercial activities.



LEGEND

Existing Arterial Road
  Existing Sub-Arterial Road
  Existing Traffic Barrier between Town Centre and Foreshore
  Existing Collector Road
  Existing Local Street
  Existing One Way
  Yacaaba St Extension (One Way North)
  Public Car Park
  Private Car Park
  Private Underground CP
  Dedicated Street Parking



### EXISTING TOPOGRAPHY

- Disconnection both visually and functionally between Town Centre and Foreshore
- Lack of disabled access to Waterfront via Apex Park due to existing topography/ level change



### LEGEND

- 0.5m Contours
- Existing Bank/ Steep Level Change
- ⓘ Lack of Disabled Access
- Visual Connection

### LIMITED CYCLE PATH & PUBLIC TRANSPORT

- Heavily car dependent, causing traffic congestion and parking issues during peak tourism time
- Poor public transport service
- Disconnected cycle path which discourage alternative transport modes, e.g. walking and cycling



### LEGEND

- Foreshore Cycle Route
- ! Level Change - Disconnected Cycle Path
- Bus Routes
- Bus Interchange



EXISTING INFRASTRUCTURE SERVICES

- Overhead power lines restrain the opportunities for street tree planting
- Substation constraints at Apex Park



LEGEND

- Overhead full power lines
- - Overhead communications or bunched power lines
- ! Apex Park sub-station

NIGHT-TIME ECONOMY

Currently, the Nelson Bay Town Centre lacks night-time activation and activities. We interpret this as a challenge which must be addressed to aid our vision for Nelson Bay to become a more attractive place for residents and visitors alike.

Currently, the Foreshore hosts seasonal Sacred Tree markets during the summer season (top left), but we propose to consider a year-round calendar of events, as well as the activation of streets in the evenings, with some bar and restaurant offerings which boost the local economy and attract both tourists and permanent residents to the Bay.



Sacred Tree Markets at the foreshore

Source: Visit NSW





Appendix B      Community Consultation Workshop 1



Consultation with key stakeholders was carried out in May 2018, with Tract and Dot Dash presenting their initial findings and ideas or ‘Key Moves’ to various stakeholders.

This session proved to be invaluable to the design team, with positive feedback and comments to guide the next steps in developing the Plan.

Green, amber and red dots were provided, with only the ‘positive’ green dots being utilised by stakeholders to demonstrate their preferences - see green star locations on following page. All comments captured on sticky notes are also included overleaf.



**Vision - Balanced - Base (Large - Medium - Small)**

**LARGE: Vision Concept**

Bold Moves - Long Term Investment - Re-structuring

**MEDIUM: Balanced**

Feasible Direction - Mid Term Investment - Value Add

**SMALL: Base Concept**

Practical Moves - Improvements and Upgrades



‘Vision’ Concept



‘Balanced’ Concept



‘Base’ Concept



**SUMMARY**

The community stakeholders overwhelmingly supported the ‘L’: Large Moves which presented visionary concepts for adapting the public realm.

Many comments praised the removal of the Skybridge and the pedestrianisation of Stockton Street, as well as the adaption of the information centre and the landscaping of Apex Park.

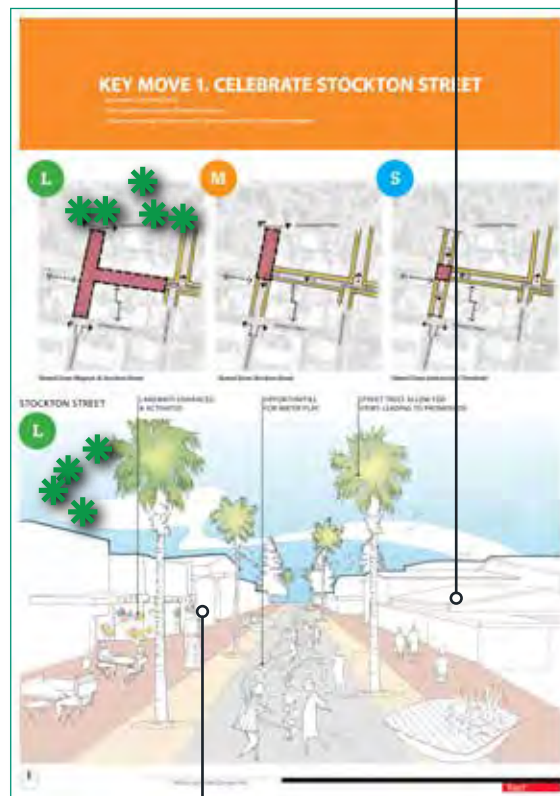


- \* Agreed
- \* Neutral
- \* Disagreed

### KEY MOVE 1: Celebrate Stockton Street

"Really like Stockton St being a 'Boulevard'"

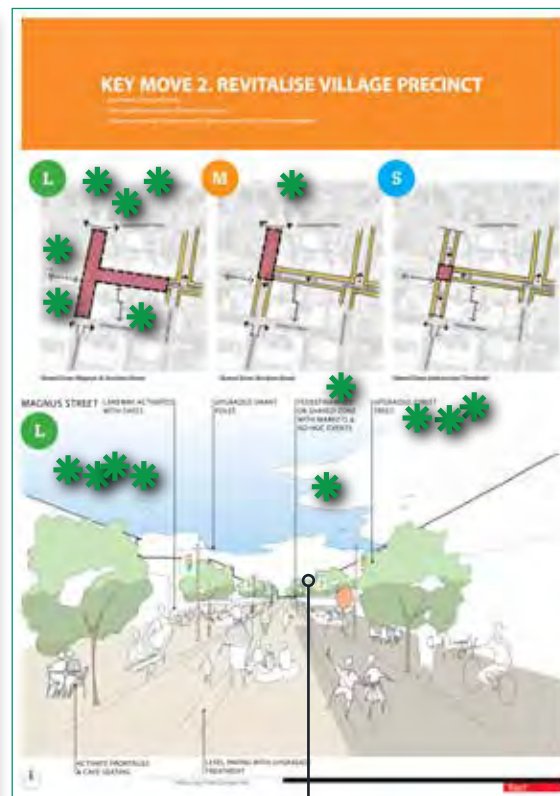
"PSC to buy Post Office - create town square"



"Get rid of stage" \*

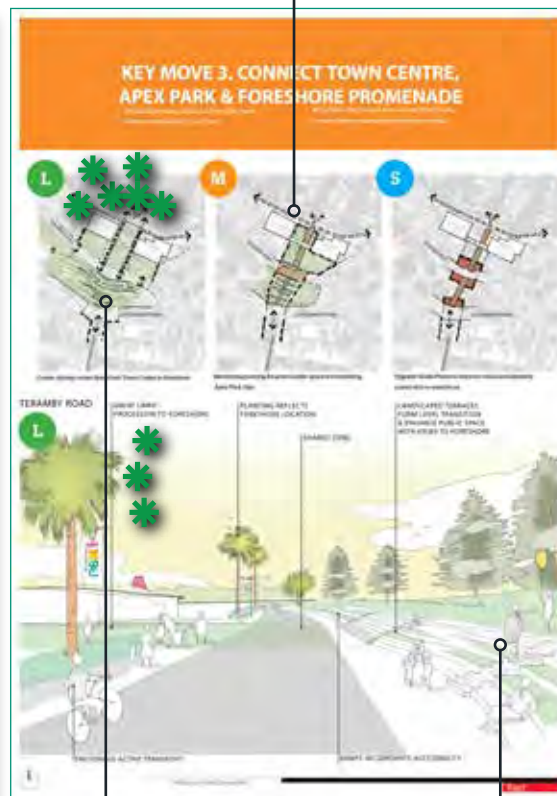
"Remove Stage"

### KEY MOVE 2: Revitalise Village Precinct



"If the Northern end of Stockton St was closed off, traffic would still be able to flow"

### KEY MOVE 3: Connect Town Centre, Apex Park & Foreshore Promenade



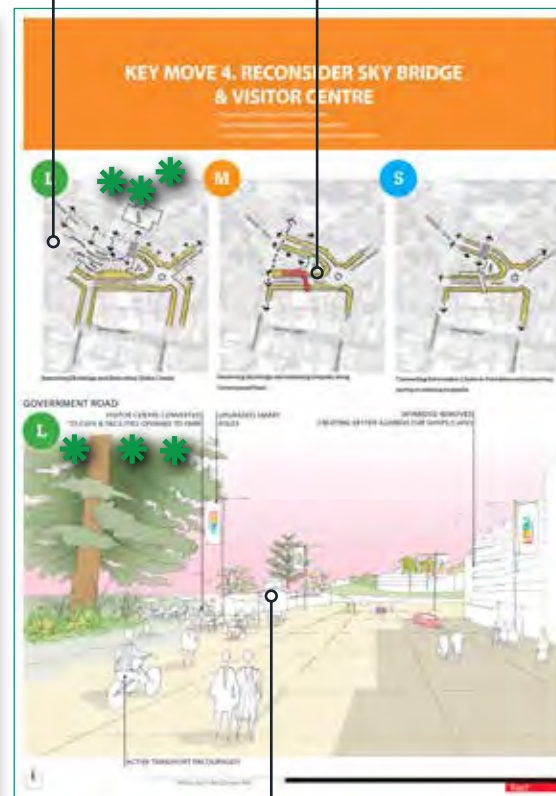
"Anzac Rising Sun - terracing should face due east"

"Love amphitheatre/tiered seating at Apex Park"

"D'Albora Marina need to be involved now in developmental stage"

"Retaining walls need to reflect the natural contours and work towards facing the Cenotaph"

### KEY MOVE 4: Reconsider Sky Bridge & Visitor Centre



"Move info centre and have building as Art Gallery"

"Open visitor centre to other side?"

"Info Centre to be easily accessed"

"Get rid of bridge" \*

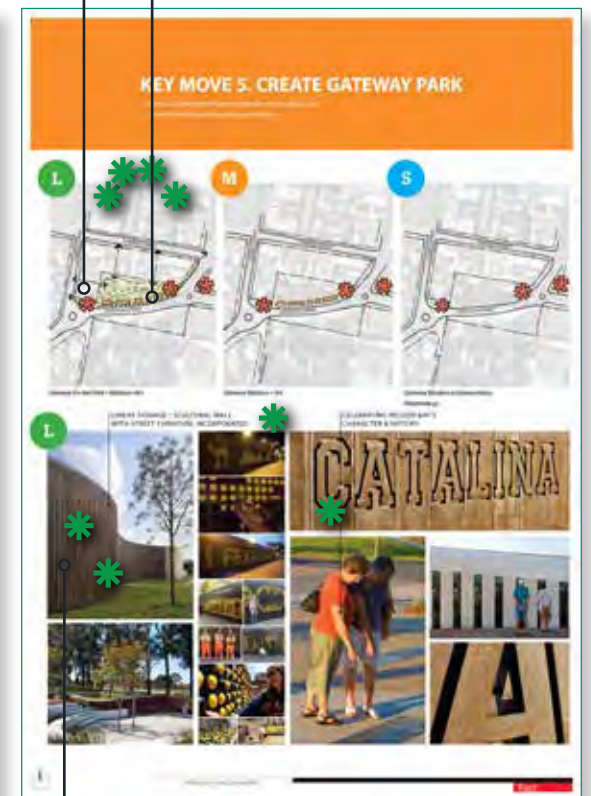
"I agree"

"Remove overhead bridge"

"What about upgrading the roundabout e.g. Welcome to Nelson Bay banner poles in the centre creating sense of arrival"

"Not a huge priority as it's only linked to NB via the road - people don't walk here"

### KEY MOVE 5: Create Gateway Park



"Signage only"

"Car Parking Behind"



Appendix C     Community Consultation Workshop 2



The second consultation with the community representatives and the key stakeholders was carried out on 5th July 2018.

Tract Consultants presented their draft Nelson Bay Public Domain Plan and Streetscape Design Guidelines, as well as the draft Wayfinding and Signage Design on behalf of Dot Dash.

The community and key stakeholders were well informed on the draft design approaches and concepts proposed to the Nelson Bay Public Domain. An A4 feedback booklet was distributed to each individual at the end of the presentation for their comments. Seven A1 boards were also on display for the stakeholders' votes and comments.

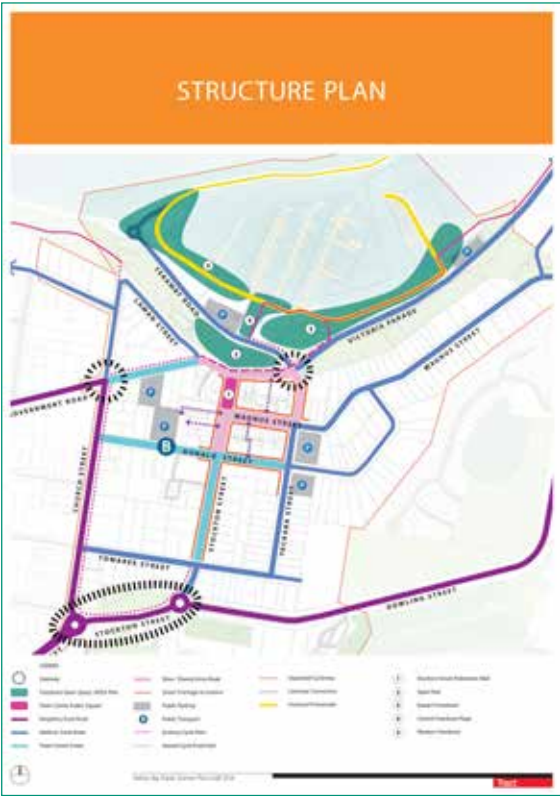
All comments captured on the A4 booklets and A1 boards are to be provided separately, with some key notes included overleaf.

**SUMMARY**

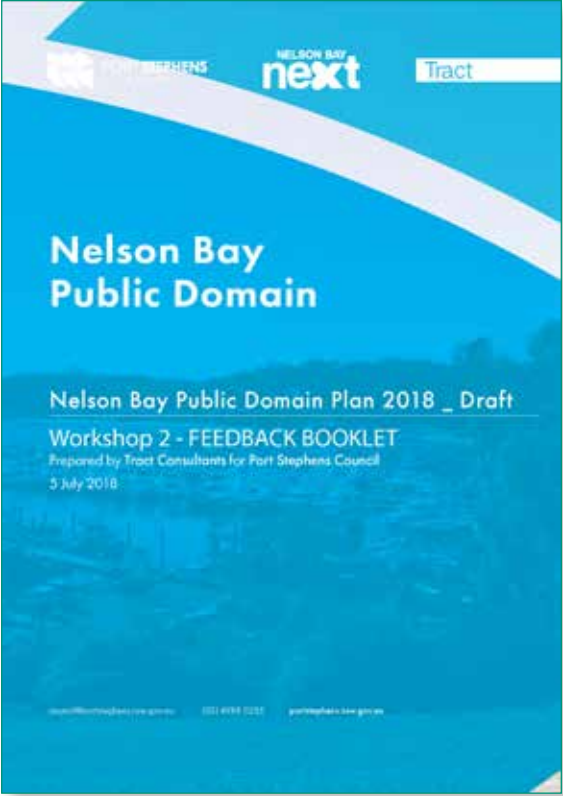
This session proved to be successful. The community stakeholders in general supported the draft Public Domain Plan.

Many comments praised the pedestrian friendly response and the proposals of the upgraded streetscape to the Town Centre and the Foreshore public domain. However, concerns of the traffic management and parking issues were also expressed.

Some detail comments on the tree planting, material and color selections and the wayfinding signage design were furthered communicated.







COMMUNITY COMMENTS

"Overall support for the revision of Nelson's Bay"

"Preference for the Gateway from Stockton St down to the marina to better allow foot traffic to flow down."

"Discourage large vehicles from Victoria Parade, priority via Dowling St and encourage large vehicles to use this route"



COMMUNITY COMMENTS

"Overall very good design, the streetscapes would vastly improve the look and feel of the town."

"Public spaces along the eastern foreshore - water features, nice places to sit and watch, interactive spaces, street art either temporary or permanent"

"Apex Park and Eastern Foreshore proposal results in a significant loss of parking east of the marina buildings – if implemented needs alternative provision"



COMMUNITY COMMENTS

"Village Precinct and Stockton Street Pedestrian Mall as a priority, priority of pedestrians and environment"

"Positive and pedestrian friendly response to Stockton St Pedestrian Mall"

"Stockton St Pedestrian Mall long term potentially but may be better as a shared zone initially"



COMMUNITY COMMENTS

"Tree lined streets are brilliant"

"Awnings should be continuous, coverage of Pedestrian Mall, shelter is a must, lots of rain!"



COMMUNITY COMMENTS

"Very important to do all of this planting- love it"

"Yes to deciduous trees"

"Palms good for the subtropical feel."

"Excellent proposal to increase planting – reserve on species – needs combination of professionals/ experts advice and local community preference"



COMMUNITY COMMENTS

"Natural stone paving is a great idea for pedestrian dedicated areas such as Stockton Pedestrian Mall or Eastern Foreshore"

"Precedent used for natural stone paving of the different coloured pavers gradient is favoured and reflects the "beach identity" and would be nicely paired with timber bench seating"



COMMUNITY COMMENTS

"Seating is great, there is a big lack of seating for a tourist area."

"Bus stop outside Woolworths unsatisfactory – limited shelter and shade"

"Local stone (granite pinkish, see marina breakwater walls)"

"Timber (history of bay as a port)"



COMMUNITY COMMENTS

"More signage is needed, but presented in a more natural form"

"Clearly legible from a distance and no confusing symbols for wayfinding"

"Encourage local artists to be involved in the wayfinding not just visual artists but local graphic designers too."



Appendix D     Stockton Street Pedestrian Mall\_ Alternative Concept

As a long-term vision, a bold concept is included for the closure of the northern portion of Stockton Street to vehicles, creating a Pedestrian Mall.

Rather than a street, this portion then becomes a town square. This treatment allows for a planting and paving design which celebrates the connection with the Foreshore, as well as public art and water play opportunities to create a unique, memorable place.

Stockton Street Pedestrian Mall

- Pedestrianised zone with bespoke stone paving & integrated public art
- Central Water Play Feature
- Feature Palm planting
- Variety of seating with integrated planting
- Smart pole street lighting with feature lighting
- New public domain elements to include fountains, bike racks, bins, cafe umbrellas
- Wayfinding signage

STOCKTON STREET NORTHERN PORTION \_ PEDESTRIAN MALL



Concept Only: Final design subject to technical design considerations, detailed investigation of services and relevant approvals



Manly Corso

Source: Wikimedia







STREET PERSPECTIVE [View 01]: Stockton Street Pedestrian Mall

Concept Only: Final design subject to technical design considerations, detailed investigation of services and relevant approvals





Tract

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# Nelson Bay Public Domain

## Streetscape Design Guidelines

Prepared by Tract Consultants for Port Stephens Council

Exhibition Draft

February 2019



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Supported by the



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# 1. Introduction

From the hinterland to the pristine coast, Nelson Bay's natural environment and scenic beauty is cherished and admired by locals and visitors.

Protecting, enhancing and strengthening the natural environment of Nelson Bay is the quintessential principle for all future improvements in the Town Centre and beyond.

# 1.1 Vision

Nelson Bay is a major tourism and service centre of Tomaree Peninsula within Port Stephens Local Government Area.

As the tourism industry continues to grow and place demands on the natural assets, urban facilities and transport infrastructure, Nelson Bay must rejuvenate its Town Centre and Foreshore to stay relevant for its future local community and visitors by providing well serviced, high quality streetscapes and amenities.

Nelson Bay will be a “one-of-a-kind” destination for both tourists and local residents, to live, work, play and stay.

This design guideline seeks to provide necessary information to ensure the following principles are achieved:

**Embrace Our Natural Environment:** Continue to strive for a sustainable future and to ensure the natural ecosystems and biodiversity are valued, cared for, improved and conserved.

**Foster an Urban Forest:** Implement continuous street tree planting and reinforce the green connections through the Town.

**Celebrate Our Local Character:** Build upon the qualities that captures Nelson Bay’s spirit and mystique. Acknowledge local heritage.

**Revitalise Our Urban Fabric:** Provide a town where people can lead active and healthy lifestyles, interact and feel safe through well designed public spaces. Explore new technologies.

**Be Inclusive and Accessible:** Ensure streetscapes and public spaces cater for all ages and abilities.

**Evoke Community Pride and Ownership:** Provide a safe, enjoyable town for the community to love and safeguard.

**Encourage Alternate Transport:** Reduce car dependency; Implement active transport infrastructure for cycling, encourage use of public transport by providing efficient and regular services. Consider a town shuttle, create safe pedestrian connections for walking

**Celebrate Culture and Creativity:** Include interpretive signage /art; community events and entertainment.

Be **Simple** in design, **Consistent** in material and **Economical** in construction.

## Note

Images within this document are representations of a 20 year vision. Subject to further detailed design requirements that may result from consideration of;

- Underground services - tree root zones, service corridors and utilities
- Overhead services - power lines
- Topography, WSUD or sustainability principles in the design



## 2. Landscape Masterplan

Let's live, work, play and stay here in Nelson Bay where environmental sustainable best practices, healthy living and greening the Town Centre becomes the new standard for our NEXT generation.

## 2.1 Landscape Masterplan



Nelson Bay Town Centre will be transformed into a vibrant, well connected network of landscape thoroughfares.

The green corridors will be distinctive, functional and appealing, with a focus on enhancement and showcasing of the local natural biodiversity.



0 50 100 150

Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals



2.2 Connecting the Hills to the Bay



Fig. 1 Existing Street Trees of Nelson Bay Town Centre



Fig. 2 Connecting the hills to the bay - Establish continuous green streets to enhance the streetscape experience, encourage walking and cycling  
— Powerlines to be removed/undergrounded to enable street tree vision

Concept Only, Final design subject to technical design considerations, detailed investigation of services and relevant approvals



## 2.3 Streetscape Design Principles

The Streetscape Design Guideline aims to provide a clear, consistent direction for Council, developers and stakeholders regarding the design, arrangement and materiality of the public realm within Nelson Bay's Town Centre.

The intent is to make streetscapes more consistent and legible, visually pleasing, integrated and cost-effective.

### Current Issues

The application of this guidelines across Nelson Bay Town Centre is intended to address the issues currently affecting the streetscape:

- Lack of street tree and other vegetation in the public realm (Refer Fig.1)
- Lack of streetscape hierarchy and urban character
- Obsolete and aging public domain furniture
- Inconsistent pathway widths and materials
- Incomplete pedestrian and cycle links.

### Streetscape Design Principles

Be **Simple** in design, **Consistent** in material and **Economical** in construction.

**Simple:** The structure of the street should be clear, balanced and equitable.

**Consistent:** Patterns and colours should be visually unifying and complementary. Materials to be durable and relevant to the local character.

**Economical:** Be easy to construct, replaced and maintained.

"Open space should remain priority even though the demand for car parking seems limitless."





### 3. Street Typology

Different street types serve different functions. Street types are not necessarily continuous along the entire length of a street; a single street may change typology as the FUNCTION changes.

### 3.1 Classification of Nelson Bay Town Centre Streets

Traditionally street design is predominately focused on the operational requirements of vehicles. Elements such as lane widths, speeds and geometry favour vehicles over pedestrian and cycle amenities. These traditional classifications should no longer continue to be the determining factors when designing an **INTEGRATED STREET**.

Street design must take into consideration local context and functionality. Different streets serve different functions based on location and the activities which occurs along it. For example, Stockton Street gateway entry will be more operational and visual compared to Stockton Street Village Precinct which will be highly integrated for pedestrian activity.

Integrated Street Design should be:

- Balanced to allow for equitable movement
- Promote healthy and active transportation modes
- Accommodate walking and cycling
- Provide generous footpaths
- Provide durable, quality and aesthetically pleasing street furniture
- Encompassing of street trees, garden beds elements and WSUD best practice.

The streets in Nelson Bay Town Centre will include:

- Special Streets (Pedestrianised for events)
- Shared Zones (Village Precinct)
- Boulevards
- Town Centre Main Streets
- Residential Local Streets.

#### Special Streets

Special streets focus mostly on pedestrian activities and require high quality, durable finishes. Special streets have the capacity to be closed to vehicles for events and often highlight design features such as water features, playground facilities, catenary lighting, attractive planting, natural material finishes and bespoke furniture.

Special streets are individually designed and detailed to be site specific. They are attractive, inviting, safe and often the showcase piece within the Town.

Example street: Stockton Street (north section)

#### Shared Zones - Village Precinct

A shared zone is a street with a single grade or surface that is shared by pedestrians, cyclist and vehicles within a slow speed environment. These streets support a variety of activities including retail, cafes and restaurants, outdoor entertainment and outdoor dining.

Shared zones are often surfaced with pavers. Traditional kerb and gutters are replaced with flush edging and combined into the paving treatment. Because these streets are at one grade, street furniture such as bollards, planters, garden beds, lights and benches assist with defining the edges.

The main design consideration for shared zones is to maintain a slow 10km/h speed environment to minimise conflict between users. Shared zones have limited short stay parking restrictions and loading zones, to ensure priority is pedestrian and cyclist focused.

Example streets: Stockton Street and Magnus Street (Village Precinct) Subject to future detailed design considerations.

#### Boulevards

Boulevard by definition is a broad tree lined avenue. Boulevards usually have areas along the side or centre for tree planting. Boulevards often have wide footpaths connecting important gateways, civic centres or natural features. Boulevards often feature longer block lengths and can support active transport or public transport routes.

Example streets: Stockton Street (south of Donald Street), Church Street / parts of Government Road.

#### Town Centre Main Streets

Main streets are primarily located within the core centre of town. They are the main service streets, providing residents and visitors the daily essentials with services ranging from local grocery stores, banking services, postal services, beauty salons, retail and support local businesses.

Main Streets are usually the meeting point for locals to gather. They prioritise cyclists and walking, support short stay parking and are serviced by public transport (bus routes).

Example streets: Donald Street and Yacaaba Street, parts of Government Road and Victoria Parade.

#### Residential Local Streets

Residential locals streets are those which serve the vast residential properties in the town. These streets are usually one travel lane each way and have lower vehicle and pedestrian volumes. Local streets can be well defined with footpaths and tree planting to encourage continuous and comfortable pedestrian and cycle connections. Street furniture is limited to "mid-trip" locations to provide relief.

Example street: Tomaree Street

#### Note:

Footpath must fall out to kerb and be a min 50mm below FFL of adjoining properties, subject to detailed design.

3.2 Stockton Street & Magnus Street: Shared Zones



STREET PERSPECTIVE: Stockton Street Shared Zone (Landscape design indicative only)

Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals



STREET PERSPECTIVE: Magnus Street Shared Zone (Landscape design indicative only)

Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals



### 3.3 Magnus Street: Shared Zone



Legend

- |  |  |
|--|--|
| <b>1 Main Paving</b><br>Stretcher Pattern: Paving to necessary engineering specification.  | <b>5 Shared Zone</b><br>Slow speed 10km/h stretcher pattern Paving to necessary engineering specification.   |
| <b>2 Outdoor Dining</b><br>Cafe licence areas for street eats. Allowance for cafe umbrellas, tables and chairs clear of main path of travel. | <b>6 Pedestrian Light</b><br>Paired arrangement with banners.  |
| <b>3 Street Tree</b><br>Trees to be planted into engineered root cells to ensure effective root zones.                                       | <b>7 Extended Landscape Zones</b><br>Kerb extensions allow for greater landscape areas with feature tree planting and passive irrigation to garden beds. |
| <b>4 Parallel Parking</b><br>Stretcher Pattern: Paving to necessary engineering specification.   | <b>8 Feature Palm Planting</b><br><i>Livistonia australis</i>  |
- 
- |          |                   |   |   |
|----------|-------------------|---|---|
| Planting | WSUD / Bio-Swales | Footpath                                    | Existing trees to be removed subject to professional arborists assessment |
| Parking  | Carriageway       | Shared Zone                                 |   |
| Cycleway | Public Transport  | Existing kerb lines to be removed/relocated |   |

#### KEY PUBLIC DOMAIN ELEMENTS

##### Street Type

- Shared Zone (Village Precinct)
- Slow Zone 10km/h.

##### Location

- Magnus Street Village Precinct.

##### Street Geometry

- 20m road reserve
- 9m wide southern verge for outdoor dining (existing width).
- 4.5m slow one way traffic lane (heading east).
- 2.5m wide 1P short stay parallel parking and loading zones.

##### Footpath, Kerbs and Carriageway

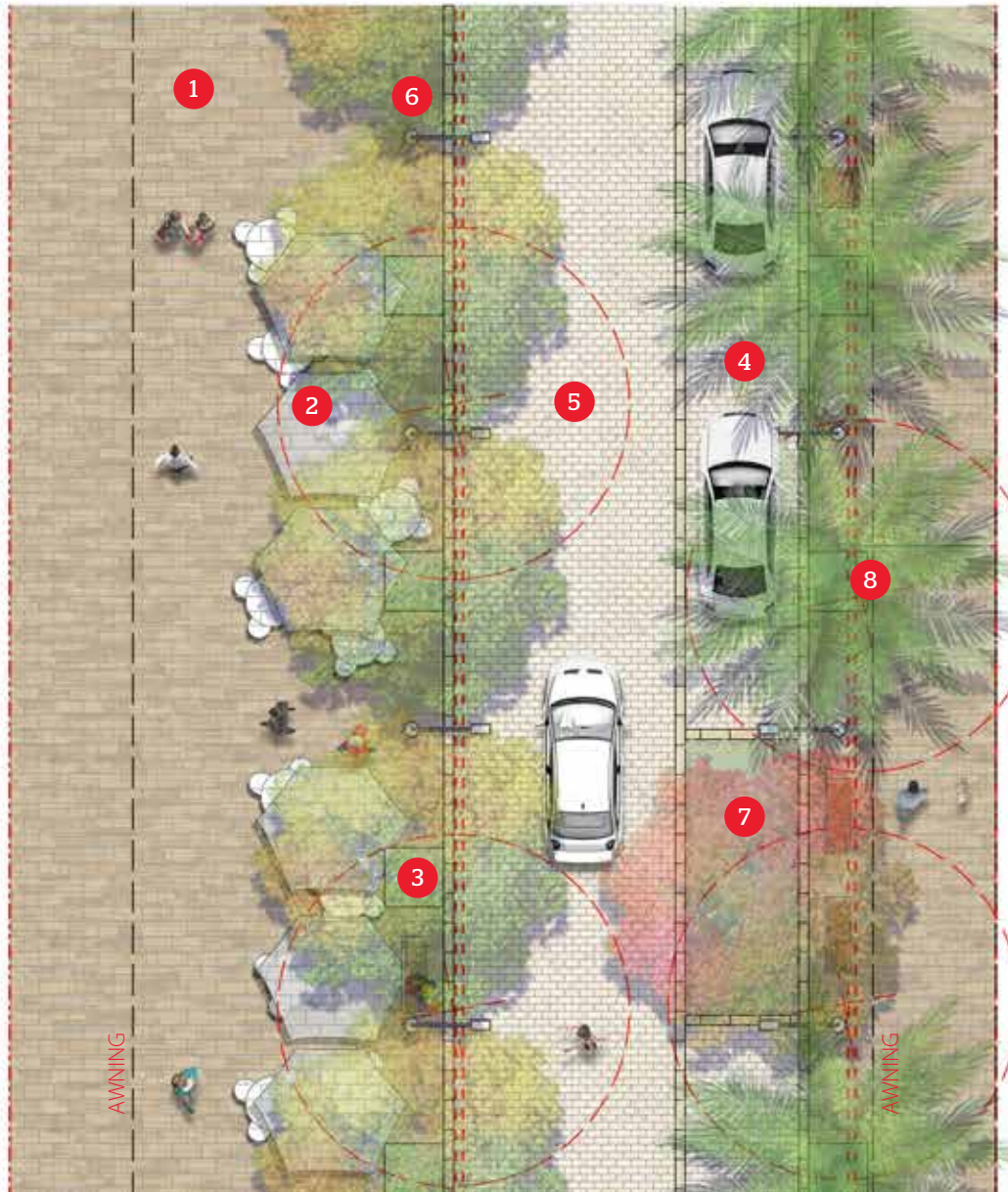
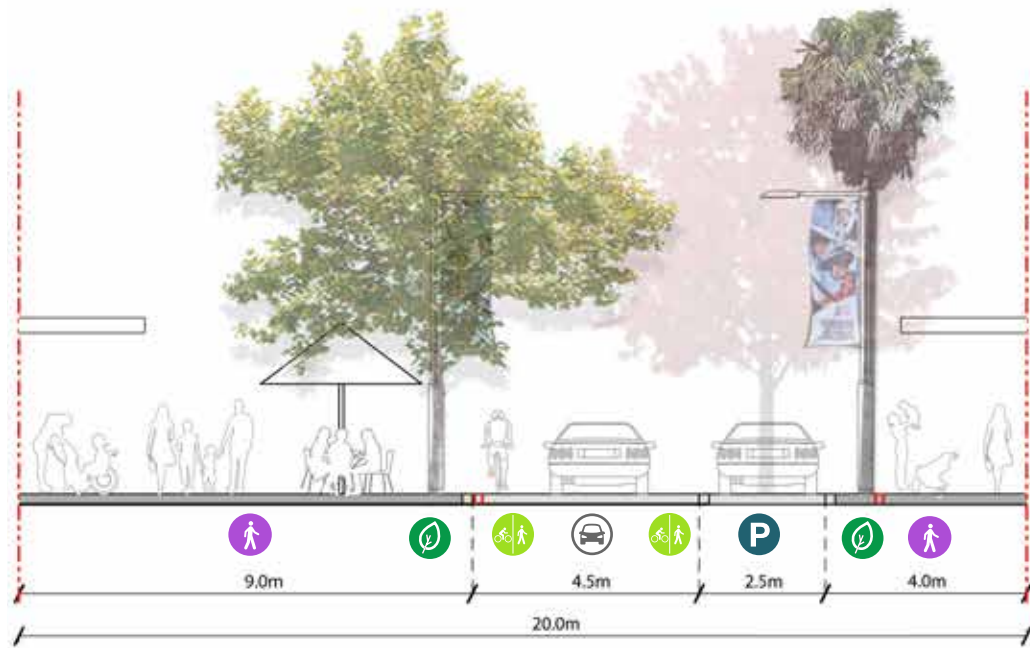
- Single grade surface.

##### Streetscape Elements

- Public domain furniture to assist with defining edges
- Stone paving surface treatments
- Feature art paving (subject to future design)
- Multi function street lights with banners and pedestrian lighting - paired arrangement.

##### Landscape Treatments

- Deciduous street tree planting
- Feature palm planting and flowering trees
- Kerb extensions with low mass WSUD garden beds (passive irrigation treatments)



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals



### 3.4 Stockton Street: Shared Zone



Legend

- 1

**Main Paving**  
 Stretcher Pattern: Paving to necessary engineering specification.

2

**Outdoor Dining**  
 Cafe licence areas for street eats. Allowance for cafe umbrellas, tables and chairs clear of main path of travel.

3

**Street Tree**  
 Trees to be planted into engineered root cells to ensure effective root zones.

4

**Parallel Parking**  
 Stretcher Pattern: Paving to necessary engineering specification.

5

**Shared Zone**  
 Slow speed 10km/h stretcher pattern paving to necessary engineering specification.

6

**Pedestrian Light**  
 Paired arrangement with banners and flower pots.
- Planting

WSUD / Bio-Swales

Footpath

Existing trees to be removed subject to professional arborists assessment

Parking

Carriageway

Shared Zone

Existing kerb lines to be removed/relocated

Cycleway

Public Transport
- #### KEY PUBLIC DOMAIN ELEMENTS
- ##### Street Type
- Shared Zone (Village Precinct)
  - Slow Zone 10km/ h
- ##### Location
- Stockton Street Village Precinct (between Magnus Street and Donald Street).
- ##### Street Geometry
- 20m road reserve
  - 6.5m wide footpaths
  - 4.5m slow one way traffic lane (southbound)
  - 2.5m wide 1P short stay parallel parking and loading zones.
- ##### Footpath, Kerbs and Carriageway
- Single grade surface
- ##### Streetscape Elements
- Public domain furniture to assist with defining edges
  - Stone paving surface treatments
  - Feature art paving (subject to future design)
  - Multi function street lights with banners and pedestrian lighting - paired arrangement.
- ##### Landscape Treatments
- Deciduous street tree planting with garden bed
  - Feature flowering trees
  - Passive irrigation to tree pits and garden beds.
- 
- 
- Concept Only; Final design subject to technical design considerations, topogrpahy, detailed investigation of services and relevant approvals
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Nelson Bay Public Domain Plan 2019

Port Stephens Council

Nelson Bay NEXT

Tract Consultants



3.5 Stockton Street Boulevard: Town Centre



Legend

- 1 Main Paving**  
Stretcher Pattern: Paving to necessary engineering specification.
- 2 Kerb Extension**  
Garden bed with feature tree planting and passive irrigation
- 3 Street Tree**  
Continuous deciduous street tree planting in WSUD garden beds
- 4 Parking**  
Parallel parking with occasional kerb build-outs
- 5 Street Furniture**  
Amenities located along street for pedestrian comfort

Planting

WSUD / Bio-Swales

Footpath

Overhead powerlines to be relocated underground

Parking

Carriageway

Shared Path

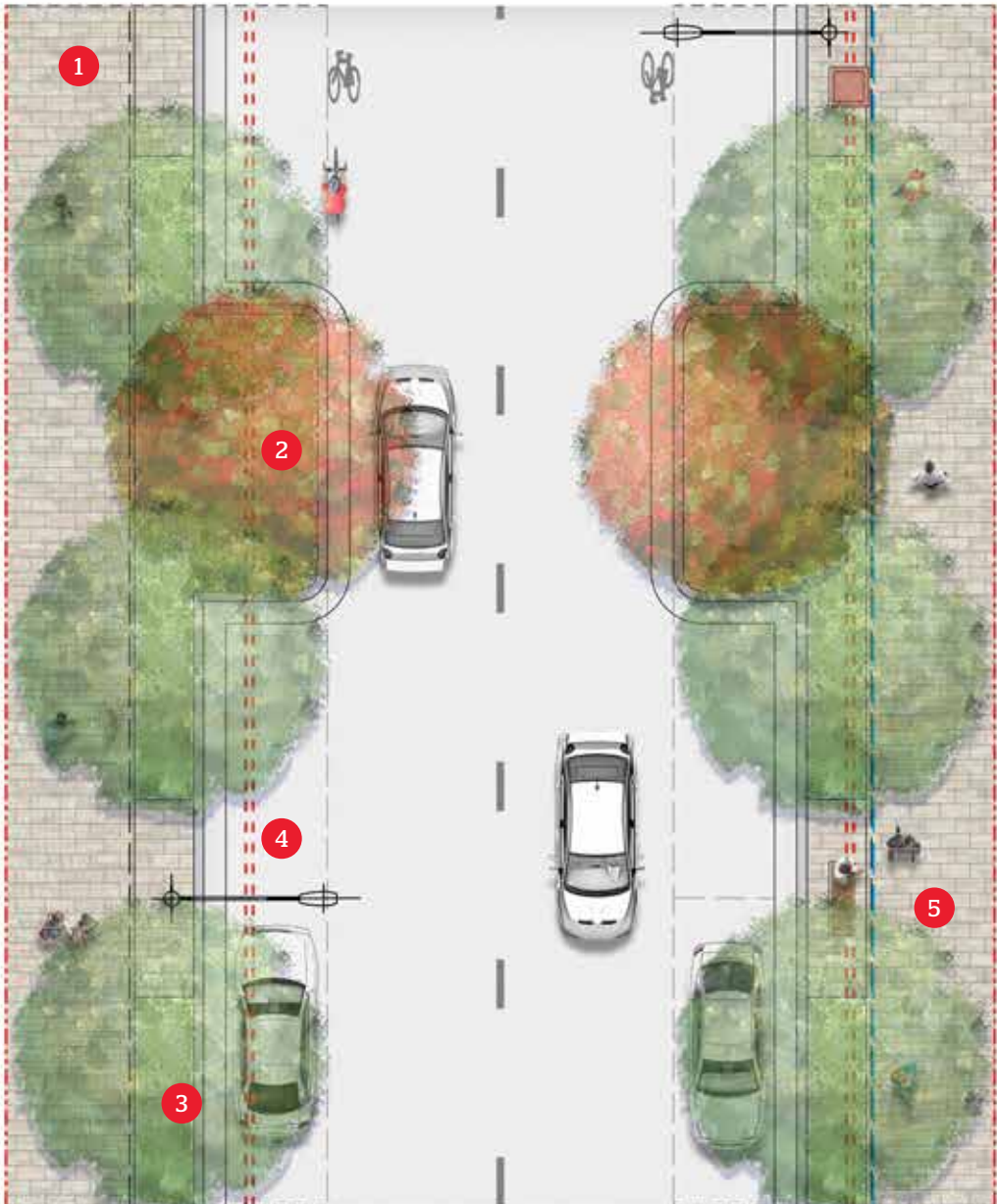
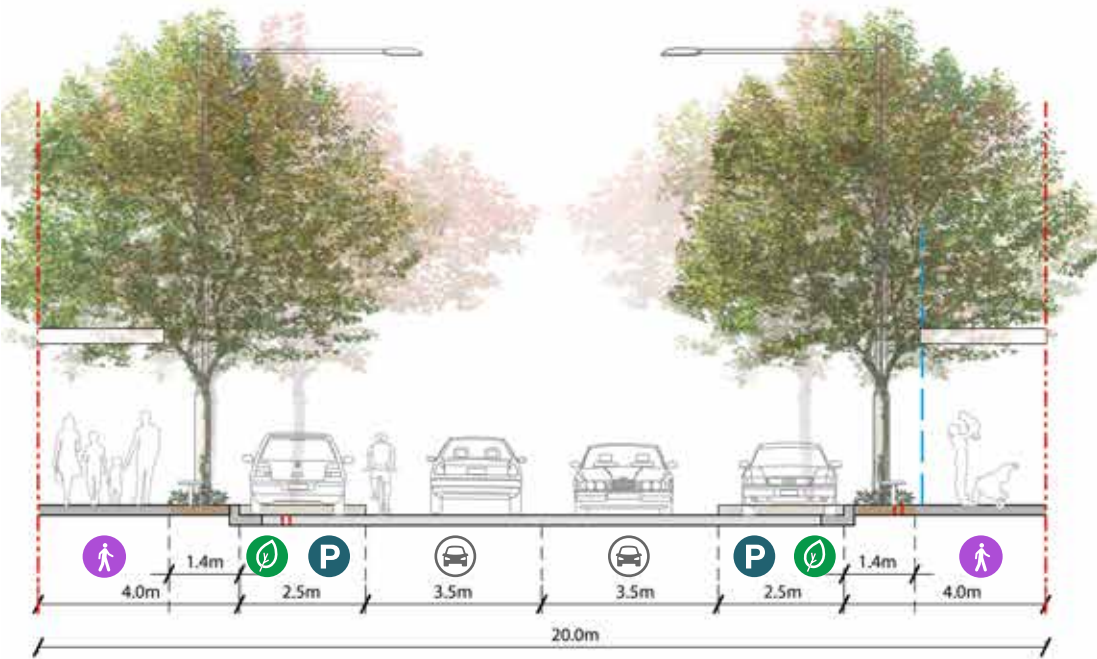
Cycleway

Public Transport

Existing kerb lines to be removed/relocated

KEY PUBLIC DOMAIN ELEMENTS

- Street Type**
- Boulevard (Pedestrian Priority)
  - Medium zone 40km/h.
- Location**
- Stockton Street Boulevard. (Tomaree Street to Donald Street)
- Street Geometry**
- 20m road reserve
  - 4m wide footpaths
  - 2.5m wide 1P short stay parallel parking
  - 3.5m travel lanes.
- Footpath, Kerbs and Carriageway**
- Traditional kerb and gutter treatment
  - Precast concrete paving.
- Streetscape Elements**
- Public domain furniture
  - Multi function street lights with banners - staggered arrangement.
- Landscape Treatments**
- Continuous street tree planting in WSUD garden beds
  - Kerb extension for feature tree planting.



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals



3.6 Stockton Street Boulevard: Southern Entry



- Legend
- 1 Shared Path  
Insitu concrete finish
  - 2 Native Planting  
Native tree planting along boundary
  - 3 Street Tree Planting  
Street tree planting in garden bed verge

- Planting
- WSUD / Bio-Swales
- Footpath
- Overhead powerlines to be relocated underground
- Parking
- Carriageway
- Shared Path
- Existing kerb lines to be removed/relocated
- Cycleway
- Public Transport

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Boulevard (Collector Road as per PDP)
- Peripheral 50km/h.

Location

- Stockton Street Southern Entry.

Street Geometry

- Road narrows from 30m to 20m road reserve
- Transition portion from Gateway Park to Town Centre
- Shared path: 3m wide insitu concrete path
- 3.5m travels lanes
- 2m wide planted verges for clearance to shared path.

Footpath, Kerbs and Carriageway

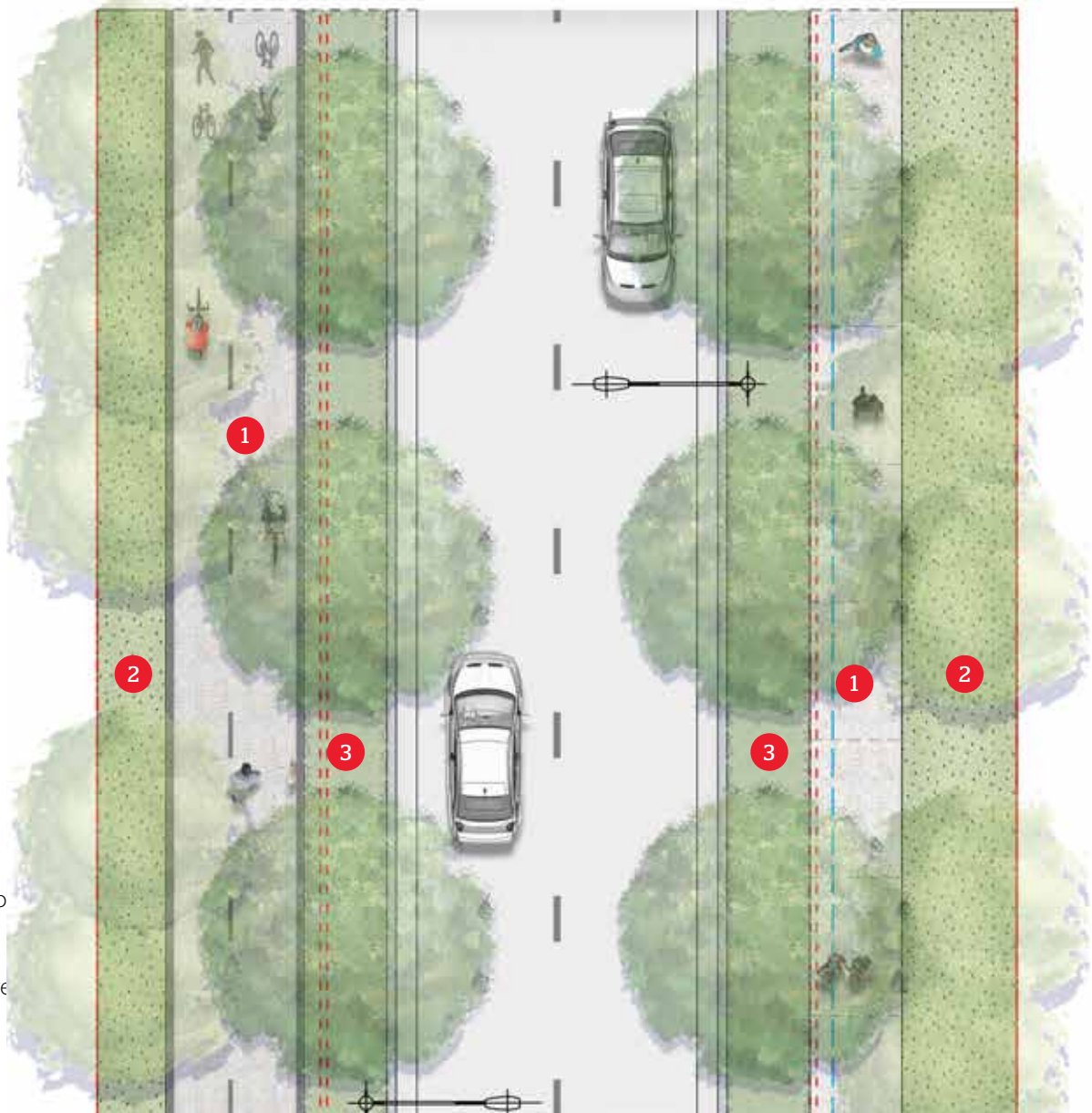
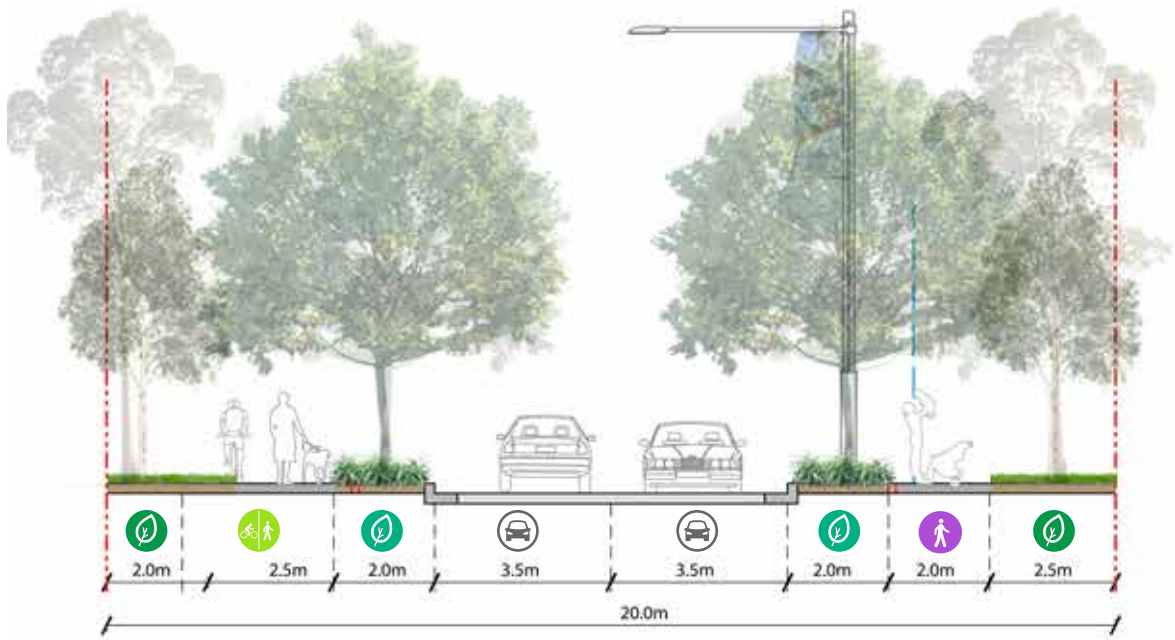
- Traditional kerb and gutter treatment
- No parking in this section.

Streetscape Elements

- Multi function street lights with banners - staggered arrangement.

Landscape Treatments

- Verge tree planting at 8-10m spacing with low understo planting
- Grass verge along boundary lines with informal small tre planting.



Concept Only; Final design subject to technical design considerations, topogrphahy, detailed investigation of services and relevant approvals



3.7 Stockton Street Boulevard: Gateway Treatment



Legend

- 1 Shared Path**  
Insitu concrete finish
- 2 Native Planting**  
Native tree planting along boundary
- 3 Feature Median Planting**  
Street tree planting in garden bed verge
- 4 Pedestrian Footpath**  
Insitu concrete finish

- Planting
- WSUD / Bio-Swales
- Footpath
- Parking
- Carriageway
- Shared Path
- Cycleway
- Public Transport
- Existing kerb lines to be removed/relocated
- Overhead powerlines to be relocated underground

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Gateway Treatment (Sub-Arterial Road as per PDP)
- Peripheral 50km/h.

Location

- Stockton Street Gateway.

Street Geometry

- 30m road reserve
- Gateway Park and Nelson Bay Gateway Sign (Northern Verge)
- Shared Path: 3m wide insitu concrete
- Separated 4m traffic lanes.

Footpath, Kerbs and Carriageway

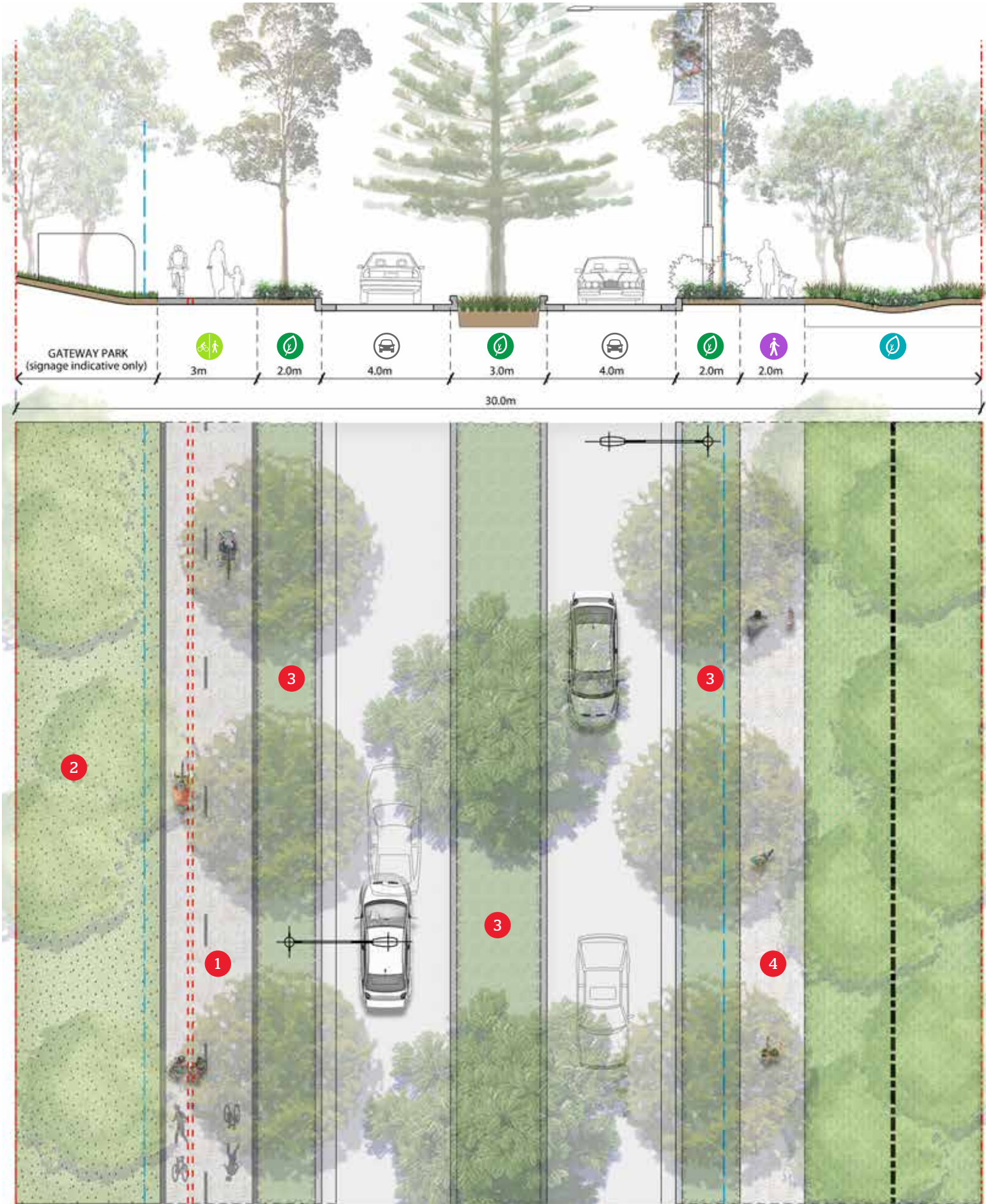
- No parking
- Traditional kerb and gutter treatment.

Streetscape Elements

- Gateway wayfinding signage and artwork
- Multi function street lights with banners - Staggered arrangement.

Landscape Treatments

- Green Gateway - Reinforce connection to adjacent vegetation reserves with native plant palette
- 2m wide planted verges
- 3m wide median with feature gateway tree planting
- Biodiversity Swale (Southern Verge).



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals



3.8 Victoria Parade: Foreshore Section



Legend

- 1

**On Road Separated Cycleway**  
Insitu concrete finish
- 2

**Grass Verge**  
With street tree planting
- 3

**Road Carriageway**  
With parallel parking
- 4

**Street Lights**  
Multi function poles in staggered arrangement
- 5

**Footpath**  
Stone paving to feature areas with Precast concrete paving as main footpath material
- 6

**Street furniture**  
Amenities located along street for pedestrian comfort
- 7

**Street Tree Planting**  
Trees to be planted into engineered root cells to ensure effective root zones. For all new trees in paving. Tree pit under to be 4m x 2.5m min.
- 8

**Main Paving**  
Stretcher Pattern: Paving to necessary engineering specification.
- 9

**Pedestrian Footbridge**  
Overhead pedestrian footbridge to be structurally assessed and retained only if feasible
- Planting

WSUD / Bio-Swales

Footpath

Parking

Carriageway

Shared Path

Cycleway

Public Transport

Existing kerb lines and median to be removed/relocated
- KEY PUBLIC DOMAIN ELEMENTS
- Street Type
- Boulevard (Pedestrian Priority)
  - Medium Zone 40km/h.
- Location
- Victoria Parade Foreshore Section.
- Street Geometry
- 20m road reserve
  - Separated cycleway along northern verge: 3m wide with 600mm wide separation median
  - Footpath:3.5m wide southern verge along retail strip
  - 2.5m wide parallel parking
  - 3.5m wide traffic lanes.
- Footpath, Kerbs and Carriageway
- Traditional kerb and gutter treatment.
- Streetscape Elements
- Public domain furniture - seats, litter bins, bike racks and wayfinding signage
  - Stone and/or precast paving footpaths with insitu concrete cycleway
  - Multi function street lights with banner and pedestrian lights.
- Landscape Treatments
- Grass verge with street tree planting along cycleway side.
  - Street trees in paving to be planted into engineered root cells to ensure effective root zones
- 
- Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals
- Note : Overhead pedestrian footbridge to be structurally assessed and retained only if feasible
- 18
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3.9 Church Street: Boulevard



Legend

- 1 Shared Path  
Insitu concrete finish
- 2 Grass Verge  
With street tree planting
- 3 Road Carriageway  
With parallel parking
- 4 Street Lights  
Multi function poles in staggered arrangement
- 5 Footpath  
Insitu concrete finish
- 6 Kerb Extension  
Garden bed with feature tree planting and passive irrigation

Planting

WSUD / Bio-Swales

Footpath

Overhead powerlines to be relocated underground

Parking

Carriageway

Shared Path

Cycleway

Public Transport

Existing kerb lines to be removed/relocated

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Boulevard (Sub-Arterial Road as per PDP)
- Peripheral 50km/h.

Location

- Church Street entire length.

Street Geometry

- 20m road reserve
- Allow southern gateway treatment at Nelson Bay Road and western gateway at Government Road
- Shared path: 3m wide insitu concrete paving (eastern verge)
- Footpath: 1.5m wide insitu concrete paving (western verge)
- 2.5m wide parallel parking (where turning lanes required, remove parking lane)
- 3.5m travel lanes.

Footpath, Kerbs and Carriageway

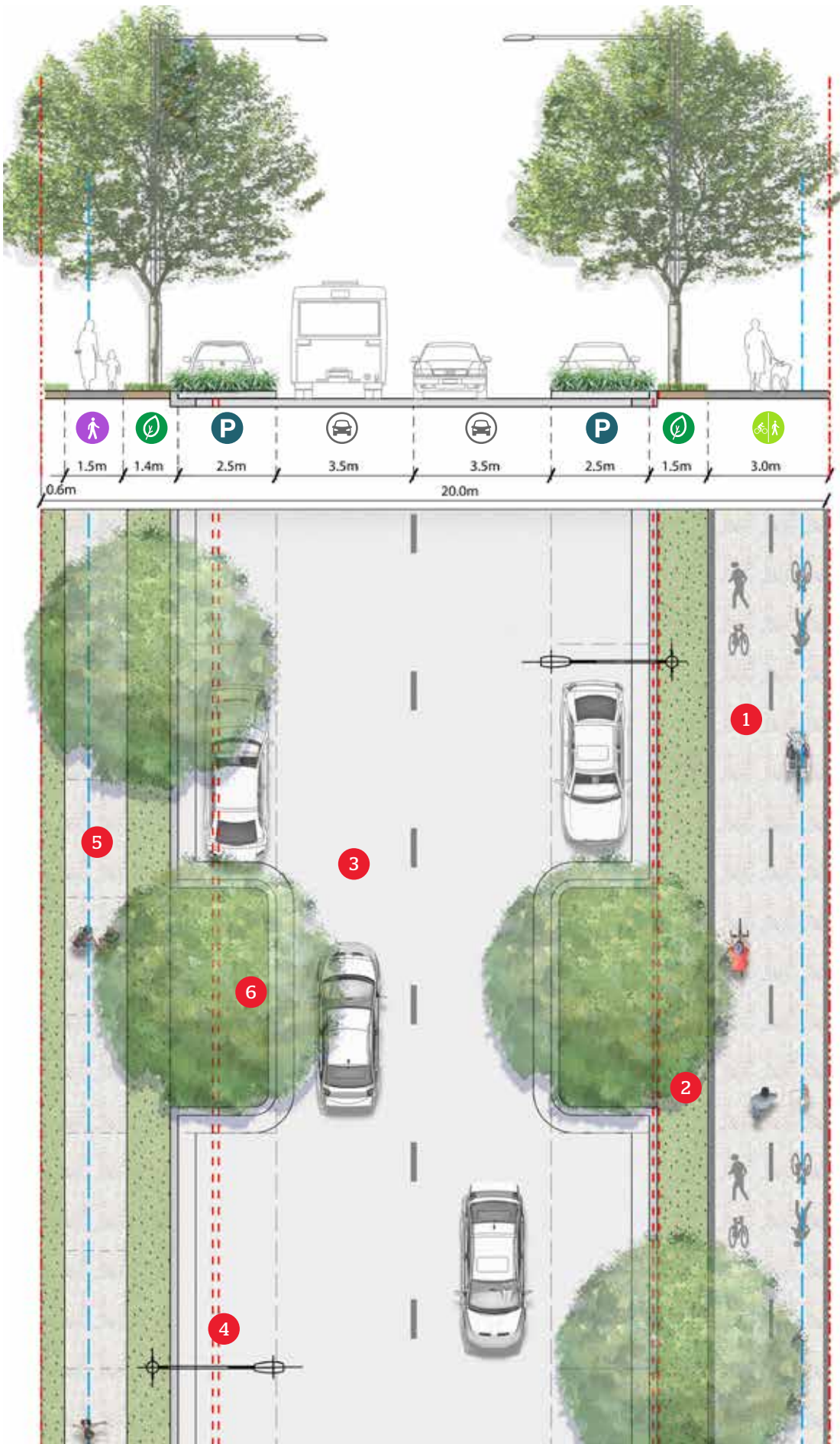
- Traditional kerb and gutter treatment.

Streetscape Elements

- Public domain furniture - limited to 'mid-trip' locations
- Multi function street lights with banner, flower pots and pedestrian lights.

Landscape Treatments

- 1.5m Grass verge with continuous street tree planting
- 600mm wide grass clearance strip along boundary.



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals



3.10 Donald Street: Town Centre Main Street



Legend

- 1

**Main Paving**  
Stretcher Pattern: Paving to necessary engineering specification.
- 2

**Highlight Paving**  
Stretcher Pattern: 1Paving to necessary engineering specification.
- 3

**Vehicle Crossovers**  
Stretcher Pattern: Paving to necessary engineering specification.
- 4

**Street Tree Planting**  
Trees to be planted into engineered root cells to ensure effective root zones. For all new trees in paving. Tree pit under to be 4m x 2.5m min.
- 5

**Streetlights**  
Multi-Function Poles (HUB) in staggered configuration
- Planting

WSUD / Bio-Swales

Footpath

Overhead powerlines to be relocated underground
- Parking

Carriageway

Shared Path
- Cycleway

Public Transport

Existing kerb lines to be removed/relocated

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Town Centre Main Street (Collector Road as per PDP)
- Medium Zone 40km/h.

Location

- Donald Street - Main Street.

Street Geometry

- 20m road reserve
- Commercial activity streets
- 4m wide footpaths with vehicle crossovers, outdoor dining and bus stops (refer to individual treatments)
- 2.5m parallel parking
- 3.5m wide traffic lanes.

Footpath, Kerbs and Carriageway

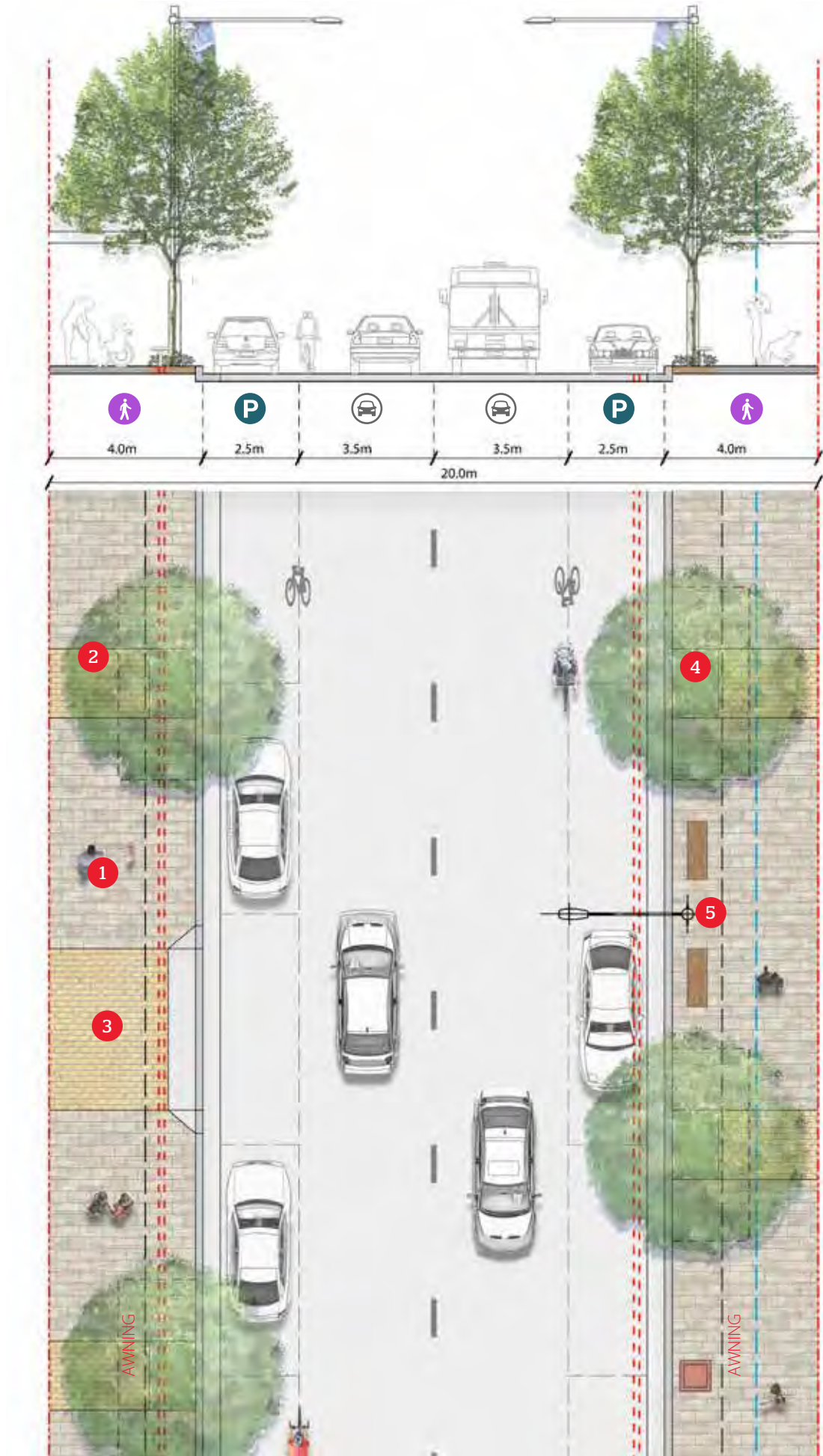
- Traditional kerb and gutter treatment

Streetscape Elements

- Public domain furniture - seats, litter bins, bike racks and wayfinding signage
- Precast concrete paving with highlight sections
- Multi function street lights with banner, flower pots and pedestrian lights.
- Continuous awning along shop fronts

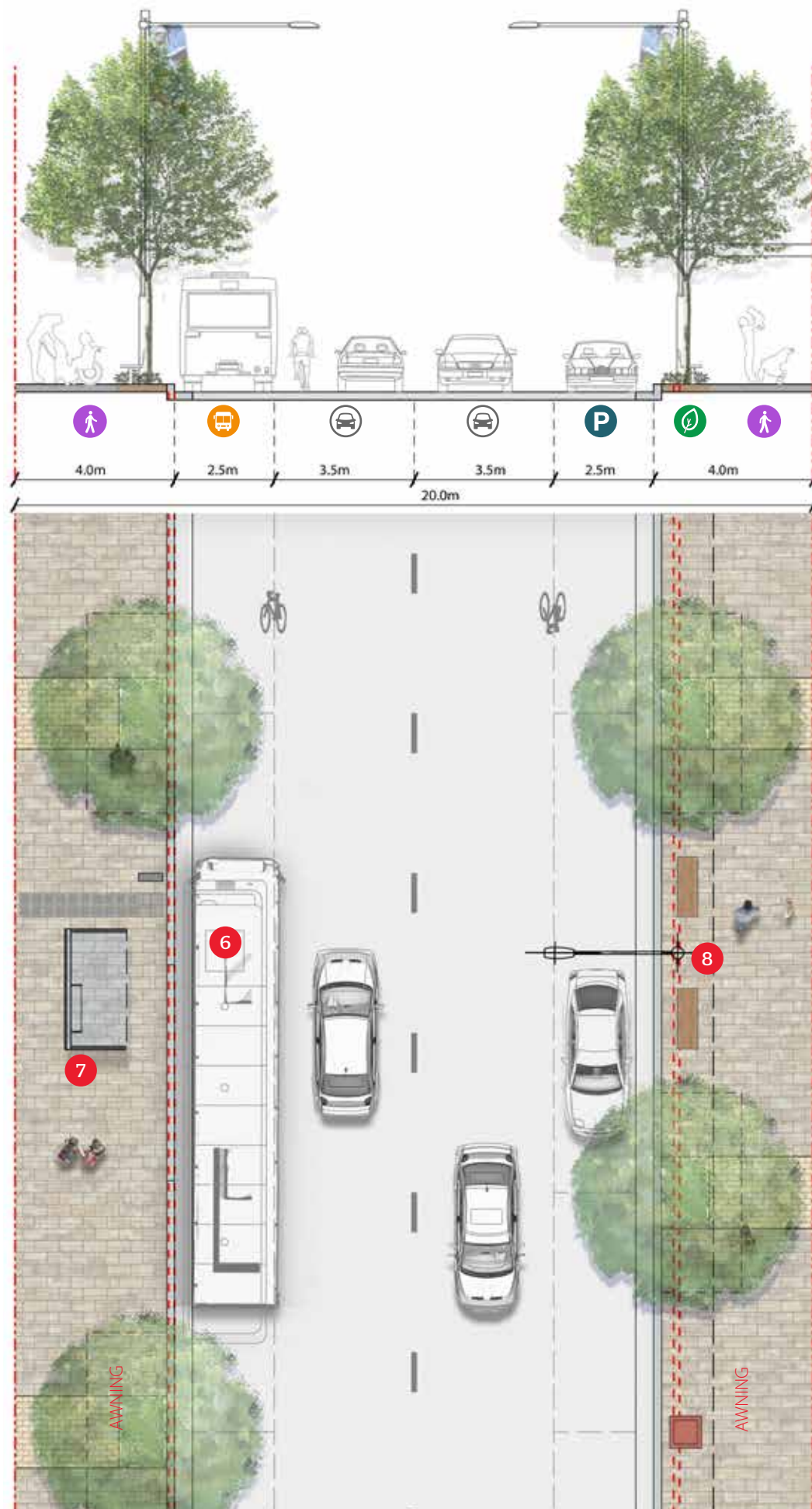
Landscape Treatments

- Deciduous street trees in paving Trees to be planted into engineered root cells to ensure effective root zones.
- Donal Street / Stockton Street Intersection subject to future design (Signalised intersection with kerb extensions)
- Extended landscape zones for greater landscape planting and feature tree planting.

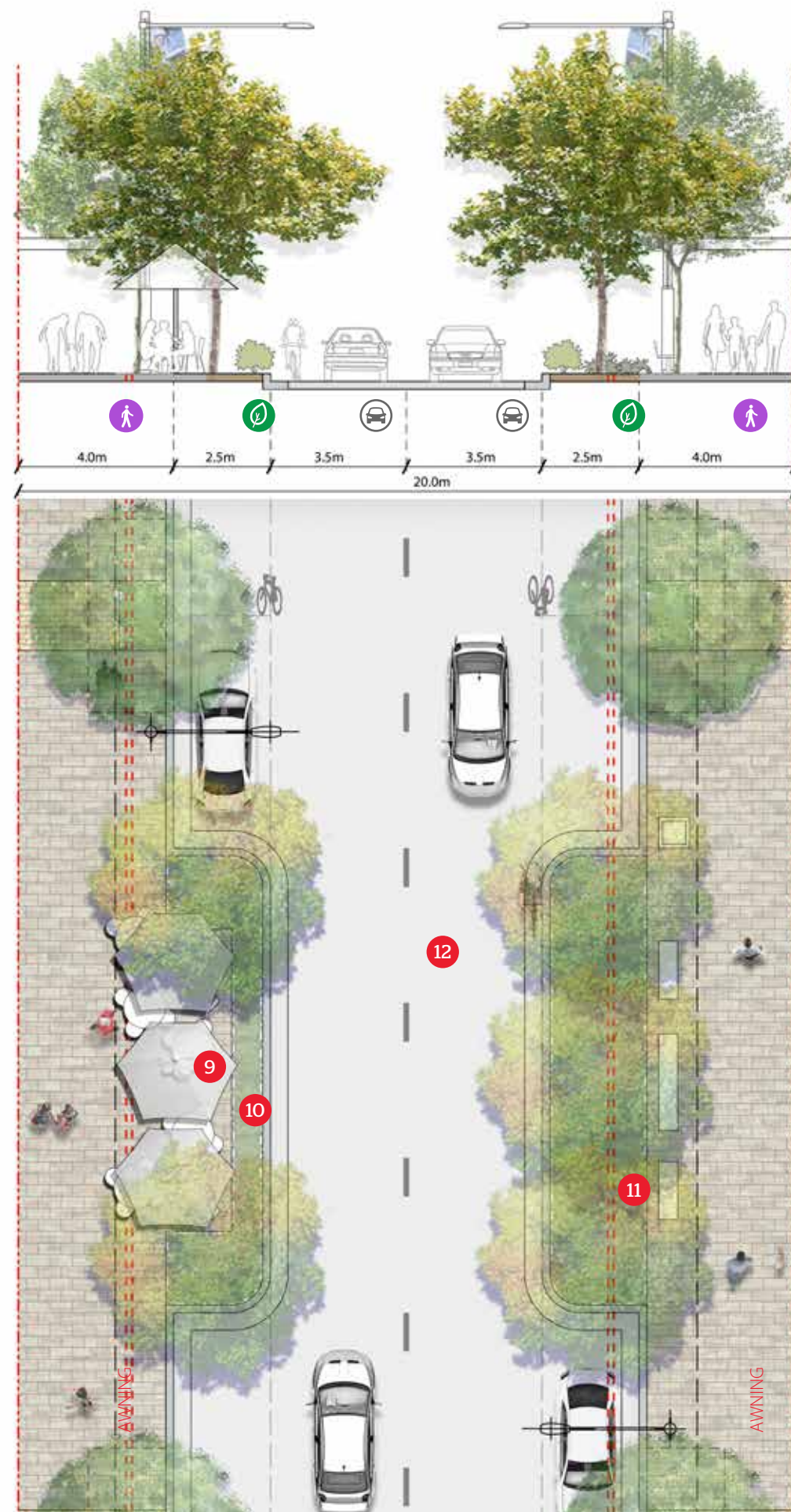


Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals





Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals

#### Legend

- 6 Bus Zone**  
Kerb side bus stop
- 7 Bus Shelter**  
Bus shelter, TGSIs and signage (Smart Streets Connections)
- 8 Street furniture**  
Amenities located along street for pedestrian comfort
- 9 Outdoor Dining**  
Cafe licence areas for street eats. Allowance for cafe umbrellas, tables and chairs clear of main path of travel
- 10 Hedge Planting**  
Planting along outdoor dining to ensure safety and comfort for diners.
- 11 Extended Landscape Zones**  
Kerb extensions allow for greater landscape areas with feature tree planting and passive irrigation to garden beds
- 12 Slow Vehicle Traffic**  
Reduce lane widths to slow traffic for pedestrian safety



3.11 Local Street: Residential Streets



- Legend
- 1 Grass Verge  
With street tree planting
  - 2 Road Carriageway  
With parallel parking
  - 3 Street Lights  
Multi function poles in staggered arrangement
  - 4 Footpath  
Insitu concrete finish

- |          |                   |   |
|----------|-------------------|---|
| Planting | WSUD / Bio-Swales | Footpath                                    |
| Parking  | Carriageway       | Shared Path                                 |
| Cycleway | Public Transport  | Existing kerb lines to be removed/relocated |

KEY PUBLIC DOMAIN ELEMENTS

Street Type

- Residential Local Street
- Medium Zone 40km/h.

Location

- Residential streets.

Street Geometry

- 20m road reserve
- Residential streets (low volumes) with vehicle crossovers
- Footpath: 1.5m wide insitu concrete paving
- 2.5m wide informal parallel parking.

Footpath, Kerbs and Carriageway

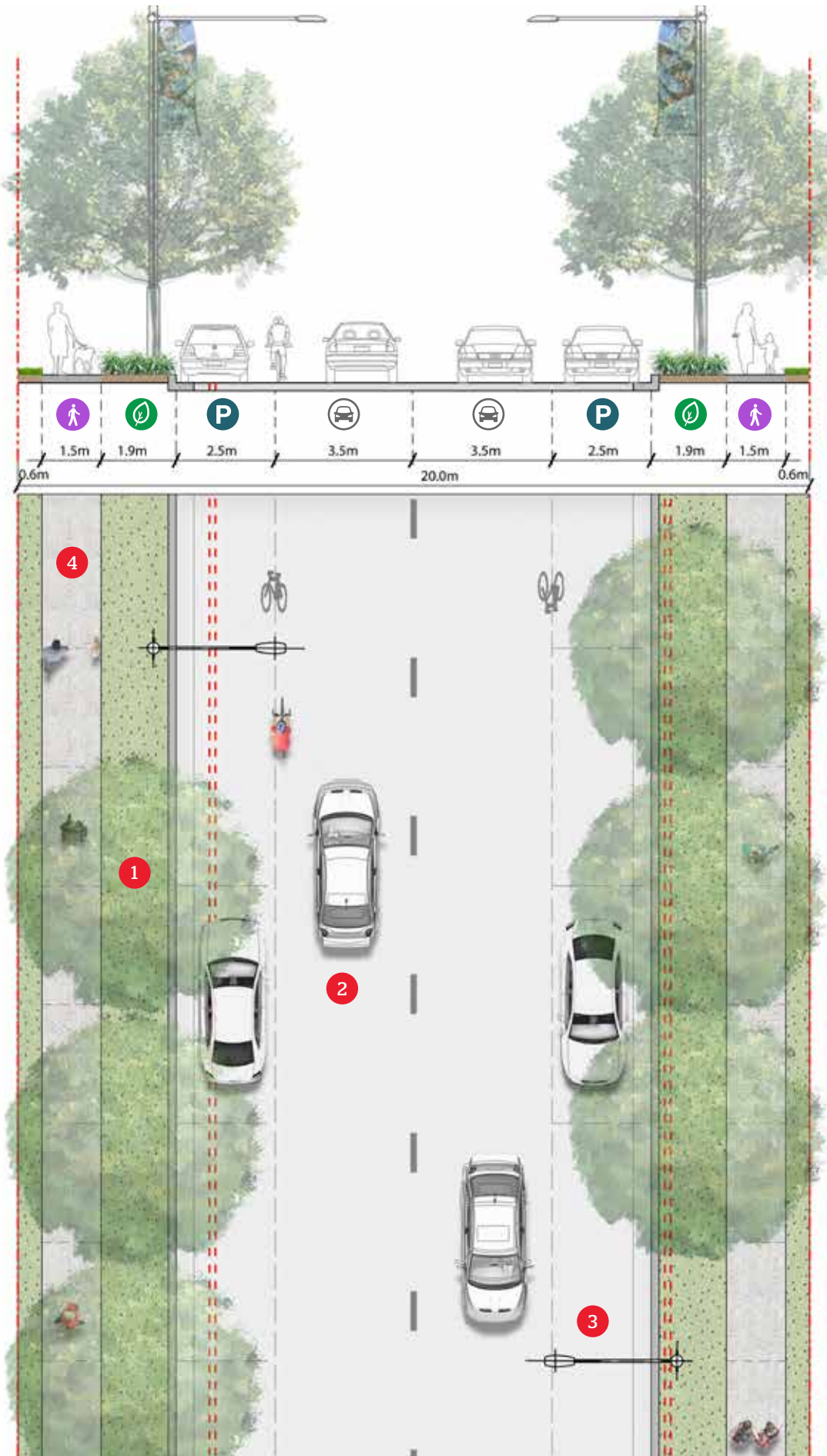
- Traditional kerb and gutter treatment.

Streetscape Elements

- Public domain furniture - limited to 'mid-trip' locations
- Standard streets lights.

Landscape Treatments

- 1.5m Grass verge with continuous street tree planting where possible, avoiding vehicle crossovers
- 600mm wide grass clearance strip along boundary.



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals



3.12 Stockton Street: Shared Zone [Balanced Concept]



Legend

- 1 Main Paving**  
Stretcher Pattern: Paving to necessary engineering specification.

**2 Outdoor Dining**  
Cafe licence areas for street eats. Allowance for cafe umbrellas, tables and chairs clear of main path of travel.

**3 Street Tree**  
Trees to be planted into engineered root cells to ensure effective root zones.

**4 Shared Zone**  
Slow speed 10km/h stretcher pattern to necessary engineering specification.
- 5 Pedestrian Light**  
Paired arrangement with banners

**6 Street Furniture**  
Custom seating along mall for pedestrian comfort

Note: Street can be closed for market and event days.
- Existing kerb lines to be removed/relocated

○ Existing trees to be removed subject to professional arborists assessment

KEY PUBLIC DOMAIN ELEMENTS

- Street Type**
- Shared Zone
  - Slow Zone 10km/ h
- Location**
- Stockton Street Village Precinct
- Street Geometry**
- 20m road reserve
  - 6.5m wide footpaths
  - 4.5m slow one way traffic lane
  - 2.5m wide 1P short stay parallel parking on western side of Stockton Street
- Footpath, Kerbs and Carriageway**
- Single grade surface
- Streetscape Elements**
- Public domain furniture to assist with defining edges
  - Stone paving surface treatments
  - Feature art paving (subject to future design)
  - Multi function street lights with banners and pedestrian lighting - paired arrangement
  - Continuous awnings to shop fronts
- Landscape Treatments**
- Deciduous street tree planting with garden bed planting at base of trees



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals





STREET PERSPECTIVE: Stockton Street Shared Zone (Landscape design indicative only)

Concept Only, Final design subject to technical design considerations,  
detailed investigation of services and relevant approvals



3.13 Stockton Street: Shared Zone [Pedestrianised for Events]



Legend

- 1

**Main Paving**  
Stretcher Pattern: Paving to necessary engineering specification.
- 2

**Outdoor dining areas**  
Activation of cafes, restaurants and bars within the plaza during the day and evening. Allow for continuous awning along shop fronts.
- 3

**Street Tree**  
Trees to be planted into engineered root cells to ensure effective root zones.
- 4

**Shared Zone**  
Slow speed 10km/h stretcher pattern 150 x 300 x 60mm stone paving with stone flush kerbs.
- 5

**Pedestrian Light**  
Paired arrangement with banners
- 6

**Variety of seating with integrated planting**  
Bespoke furniture and planters with feature planting.
- 7

**Market Stall**  
Street can be closed and become a fully pedestrianised mall where markets and events may be held
- 8

**Intersection Threshold**  
Formalise the intersection of Magnus and Stockton Streets to form "Town Square". Vehicle movement to be slowed with strategically placed bollards and street furniture elements to delineate between pedestrian only areas and vehicle access areas
- 9

**Deciduous Street Planting**  
Continuous deciduous street tree planting to ensure solar access to streets in winter.
- Existing kerb lines to be removed/relocated

○

Existing trees to be removed subject to professional arborists assessment



Concept Only; Final design subject to technical design considerations, topography, detailed investigation of services and relevant approvals



## 4. Paving Typologies

## 4.1 Paving Material

### PAVEMENT DESIGN CONSIDERATIONS

Street pavements are a significant part of the public realm and their quality has a direct effect on the pedestrian experience of a place.

- Pavements should be the unifying element in the streetscape, setting a clear canvas for other streetscape elements which may provide contrast, movement and texture.
- Pavements should provide clear distinction between pedestrian priority footpaths and vehicle use areas.
- Pavements should be comfortable and allow ease of movement for all users including people with different degrees of abilities.
- Pavements should be a consistent pattern with occasional textural, size and colour variations to alert users of change of conditions or hazards.
- Pavements should reinforce streetscape hierarchy.
- Pavement material should be high quality, durable, robust, easy to maintain and are easy to install, remove and relay.

Three main pavement materials have been identified for Nelson Bay Town Centre:

- Type 1 - Natural Stone Paving
- Type 2 - Precast Concrete Paving Units
- Type 3 - Insitu Concrete.

### MATERIAL

#### **Type 1 - Natural Stone Paving**

Natural Stone Paving to be reserved for public places of special significance. The main ‘heart’ of Nelson Bay (lower Stockton Street, Magnus Street, Apex Park) should be considered for a high percentage of natural stone paving.

Stone can be incorporated with other materials to reinforce the identity and character of the town centre.

Type 1 paving will require specific bespoke design.

#### **Type 2 - Precast Concrete Paving**

Precast concrete paving is currently being used in Nelson Bay Town Centre. The existing pavers are perceived as being “outdated”, however they have withstood years of wear and high traffic volumes.

High quality concrete unit pavers continue to be suitable for use within the central commercial streets of Nelson Bay’s Town Centre. Recommendation is to continue with existing colour palettes with the paving pattern updated to reflect current contemporary applications.

#### **Type 3 - Insitu Concrete Paving**

Insitu concrete paving to be used on the residential and peripheral streets around the city centre.

#### **Type 4 - Public Art Paving Feature**

Public Art Paving Feature to be an overlay within the Village Precinct and Apex Park. Design subject to future detailed design. Opportunity to engage local artist.

### PEDESTRIAN RAMPS

Pedestrian ramps to be paved with the same material as the surrounding footpath.

### KERB AND GUTTER

All kerb and gutters to be insitu concrete.

Flush stone kerbline to be applied in Stockton and Magnus Street shared zones.

### VEHICULAR CROSSOVERS

All vehicular crossovers to maintain adjacent pavement type to reinforce pedestrian priority.

### PARKING BAYS

All streets to be asphalt to match roadway.

Stone setts or small stone paving units to delineate parking bays in Stockton and Magnus Street Shared Zones.

4.2 Paving Material Palette

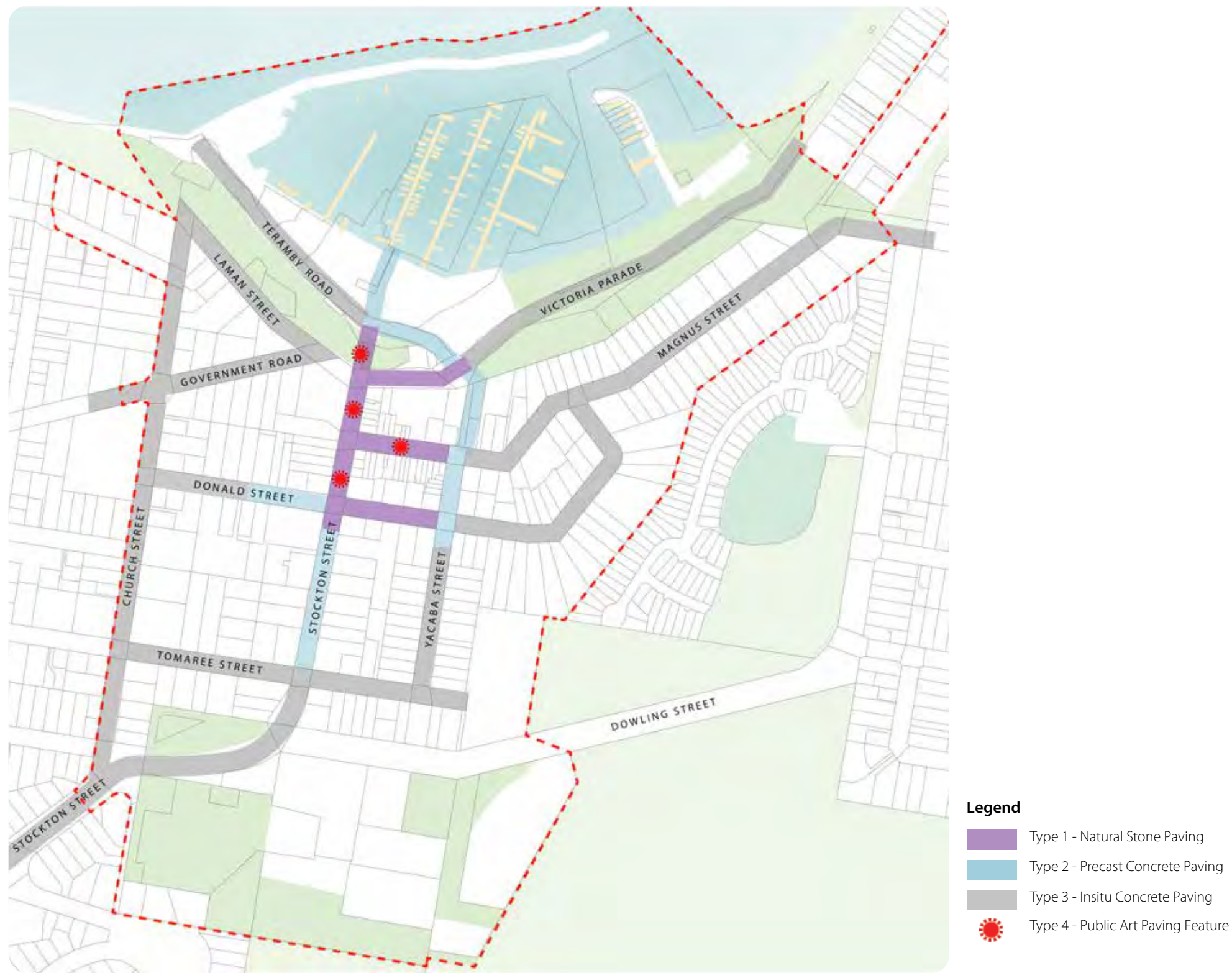


Fig. 3 Pavement Typology

Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals

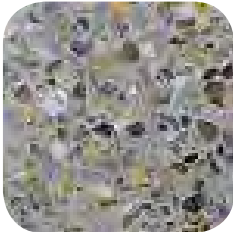


**Type 1**  
**Natural Stone Paving**



- PREFERRED STONE PAVING
- Selected stone varieties with warm tones and a variety of textures and finishes: Preferred – Granite
  - Selected granite stones and setts with a variety of warm sandy tones and a variety of warm and cool grey: Preferred - Porphyry
  - Selected stones and setts with rusty and blue grey tones

**Type 2**  
**Precast Concrete Paving**



- PREFERRED PRECAST CONCRETE UNITS
- Standard sized pavers with a variety of warm and grey tones
  - Warm colour mixes with brown / red aggregates
  - Urbanstone Golden Gunmetal, Albany Beige, River Topaz or approved equivalent

**Type 3**  
**Insitu Concrete Paving**



**Type 4**  
**Feature Public Art Paving**  
(subject to future design)

- PREFERRED INSITU CONCRETE PAVING
- Site poured concrete with colours, finishes and aggregates to be selected depending on the setting and location



## 5. Street Furniture

## 5.1 Street Furniture

### STREET FURNITURE CONSIDERATIONS

Streetscape furniture creates settings for resting, sitting, dining and social gatherings with friends and family. These settings are important for the elderly, less mobile and young families as they provide relief and comfort. Properly selected and placed furniture can encourage people to venture outside and enjoy/activate the public domain.

The furniture palette should be consistent across the town centre, with feature bespoke items dedicated to special streets and special places. The main objective is to create easily maintained, convenient and publicly accessible amenities that do not interrupt the pedestrian or traffic flow.

The placement of street furniture should be based on the street function and relate to the patterns and design of the hard landscape elements on site. Street furniture should not give an appearance of being cluttered, where possible amenities should be grouped and arranged in a linear sequence along a street.

Furniture should be selected to meet the different needs of different users and be constructed from safe materials to prevent injury, without sharp edges or entrapment gaps. Furniture shall be securely mounted onto the sub-surface blinding slab to conceal fasteners.

The choice of material should depend on the context and be suitable for the local character. The designs should be simple in form.

The following furniture palette should be considered for use in Nelson Bay Town Centre and surrounds.





5.2 Street Furniture Palette

Bench Seats

Foreshore/ Streets



Customised Seating (Subject to future design)



Bike Racks  
& Bollards

Foreshore/ Streets



Bus Stops

Foreshore/ Streets





Drinking Fountain  
and Re-fill stations

Multi Function  
Poles

Foreshore/ Streets



Foreshore Lighting

Foreshore/ Streets



Litter Bins and  
Recycling Centres

Foreshore/ Streets





## 6. Street Tree Masterplan

Street trees are a vital urban element that can transform streets and provide numerous environmental, aesthetic, cultural and economic benefits.

6.1 Street Tree Masterplan



Legend

Gateway Treatment	Church Street Boulevard
Southern Entry	Town Centre Trees
Stockton Boulevard	Local Streets
Village Precinct	Native Planting

Concept Only; Final design subject to technical design considerations, detailed investigation of services and relevant approvals

Street Trees

Street trees are a significant component of the urban fabric. Street trees have the ability to transform the physical appearance of the street, provide environmental, aesthetic and economical benefits.

Priority should be given to implementing street trees as they create a sense of place and enhance the public domain.

The environmental benefits of street tree planting include:

- Carbon storage and release oxygen
- Provide shade relief to footpaths, cars and buildings
- Remove gas pollutants
- Are natural pollution filters for the air and water system
- Captures and slow runoff to reduce erosion of soils
- Provide habitat and food source for fauna
- Reduction of urban heat island effects

The social benefits of street tree planting include:

- Improving attractiveness of streets
- Provide shade for pedestrian and creating feelings of relaxation and well being
- Calm and slow traffic by providing a barrier between pedestrians

Establishing a green city should be the main driver for Nelson Bay Town Centre. Connecting the Hills to the Bay through street tree planting will improve the overall appeal of the town for residents and visitors.

Note

Street tree species and other planting will be selected from the plant palettes by Council's technical staff taking into account a range of matters including aesthetics and streetscape character, environmental tolerances, and maintenance and other functional requirements.

6.2 Plant Schedule - Trees

The right tree for the right location

Gateway Treatment

*Araucaria cunninghamii* - Hoop Pine  
*Araucaria heterophylla* - Norfolk Island Pine  
*Corymbia maculata* - Spotted Gum  
*Corymbia ficifolia*- Red Flowering Gum  
*Eucalyptus pilularis* - Blackbutt  
*Eucalyptus piperita* - Sydney Peppermint Gum  
*Eucalyptus tereticornis* - Forest Red Gum  
*Livistonia australis* - Cabbage Tree Palm  
*Ulmus parvifolia* - Chinese Elm

- Median: Tall landmark trees providing link to Apex Park
- Verge: Species selection reflects existing vegetation character.
- Evergeen trees providing shade to pathway

Southern Entry

*Ulmus parvifolia* - Chinese Elm  
*Corymbia maculata* - Spotted Gum  
*Corymbia ficifolia*- Red Flowering Gum  
*Eucalyptus pilularis* - Blackbutt  
*Eucalyptus piperita* - Sydney Peppermint Gum  
*Eucalyptus tereticornis* - Forest Red Gum  
*Livistonia australis* - Cabbage Tree Palm

- Road Edge: Tall spreading deciduous trees to form a consistent canopy cover.
- Back of Verge: Predominately native species reflecting existing vegetation character with a smaller tree for solar access

Village Precinct

*Delonix regia* - Poinciana  
*Nyssa sylvatica* ‘NXSXF’ Forum - Nyssa  
*Zelkova serrata* “Green Vase” - Green Vase  
*Livistonia australis* - Cabbage Tree Palm  
*Pandanus tectorius* - Pandanus Palm

- Mixture of deciduous and evergreen trees to provide solar access, visual interest and seasonal colour.
- Sculptural form that characterise the village precinct.

Town Centre, Stockton & Church Street Boulevards

*Ulmus parvifolia* - Chinese Elm  
*Zelkova serrata* “Green Vase” - Green Vase

- Medium sized trees, in proportion to buildings
- Deciduous trees to allow for solar access,
- V-shaped or domed consistent canopy cover

Local Streets

*Lophostemon confertus* - Queensland Box Brush  
*Tristaniopsis laurina* - Watergum

- Evergreen trees providing shade to pathway
- Medium sized tree where no constraints, smaller tree in association with services and views.
- Spreading canopy to ensure consitent canopy cover.
- Non invasive root system.

Promenade

*Ficus rubignosa* - Port Jackson Fig  
*Magnolia grandiflora* - Magnolia  
*Melaleuca leucadendra* - Weeping Paperbark  
*Pandanus tectorius* - Pandanus Palm  
*Phoenix canariensis* - Canary Island Date Palm

- Parkland species of varying size and shape
- Species selection reflects existing vegetation character of the Promenade.

(Tree list subject to review)

BOTANICAL NAME	COMMON NAME	SIZE Height + Spread (m)	FORM	DECIDUOUS OR EVERGREEN
Angophora costata	Smooth Bark Apple	15-25 x 5-15m	Large, spreading to broad-domed	Evergreen
Araucaria cunninghamii	Hoop Pine	40 x 12m	Symmetrical, cone-shaped tree	Evergreen
Araucaria heterophylla	Norfolk Island Pine	20-35 x 10-15m	Symmetrical, cone-shaped tree	Evergreen
Backhousia citridora	Lemon Scented Myrtle	3-20 x 1-5m	Rounded crown, Dense canopy	Evergreen
Banksia serrata	Old Man Banksia	3-15 x 2-4m	Irregular	Evergreen
Buckhamia celsissima	Ivory Curl Flower	8-25 x 1-4m	Rounded crown, Dense canopy	Evergreen
Corymbia citriodora ‘Scentuous’	Dwarf Lemon Scented Gum	7 x3m	Oval	Evergreen
Corymbia ficifolia	Red Flowering Gum	10 x 5m	Spreading	Evergreen
Corymbia maculata	Spotted Gum	10-35 x 10-20m	Irregular	Evergreen
Cupaniopsis anacardioides	Tuckeroo	10 x 5m	Spreading, dense canopy	Evergreen
Cupaniopsis pavifolia	Small Leaf Tuckeroo	8 x 4m	Spreading, dense canopy	Evergreen
Delonix regia	Poinciana	5-12 x 5m	Spreading, vase	Deciduous
Eucalyptus pilularis	Blackbutt	30-70 x 10m	Tall, spreading	Evergreen
Eucalyptus piperita	Sydney Peppermint Gum	20 x 9m	Tall, spreading	Evergreen
Eucalyptus tereticornis	Forest Red Gum	20 x 10m	Tall, spreading	Evergreen
Ficus obliqua	Small Leaf Fig	60 x 30m	Domed, large trunk	Evergreen
Ficus rubiginosa	Port Jackson Fig	30 x 10m	Buttressed	Evergreen
Fraxinus excelsior	Common Ash	15 x 5m	Medium dome	Deciduous
Fraxinus oxycarpa ‘Raywoodii’	Claret Ash	12 x 7m	Oval	Deciduous
Hibiscus tilliaceus	Sea Hibiscus	4-8 x 4m		Evergreen
Livistonia australis	Cabbage Tree Palm	20 x 6m	Straight, Tall	Evergreen
Lophostemon confertus	Queensland Box Brush	10-25m x 5-15m	Spreading	Evergreen
Magnolia grandiflora	Magnolia	25 x 10m	Oval	Evergreen
Melaleuca leucadendra	Weeping Paperbark	10 x 8m	Weeping	Evergreen
Melia azedarach	White Feather Myrtle	15 x 6m	Rounded crown, Dense canopy	Deciduous
Nyssa sylvatica	Black Tupello	11 x 6m	Round	Deciduous
Pandanus tectorius	Pandanus Palm	8 x 4m	Spreading	Evergreen
Pistacia chinensis	Chinese Pistachio	8 x 6m	Round	Deciduous
Phoenix canariensis	Canary Island Date Palm	16 x 10m	Large spreading palm	Evergreen
Tristaniopsis laurina	Water Gum	10 x 6m	Spreading	Evergreen
Ulmus parvifolia	Chinese Elm	12 x 7m	Broad, Domed	Deciduous
Zelkova serrata ‘Green Vase’	Japanese Zelkova	14 x 10m	V-shaped	Deciduous

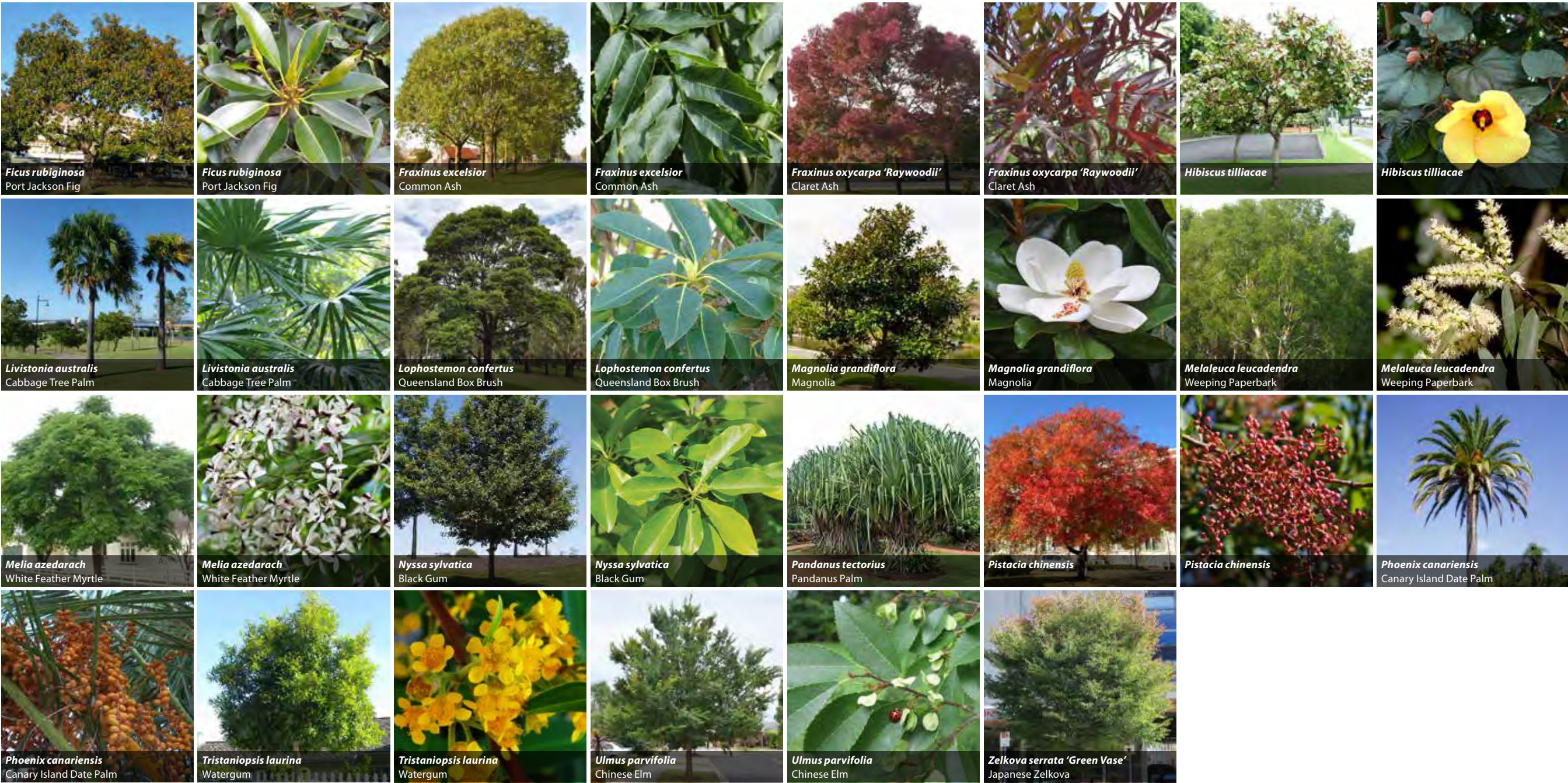


6.3 Plant Palette - Trees









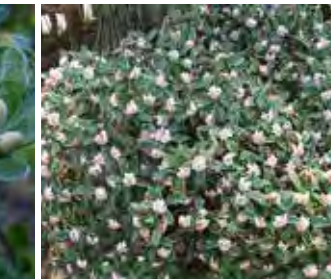

























6.4 Plant Palette - Trees





6.5 Plant Palette - Hedges, Shrubs, Grasses & Groundcovers

 <p><i>Acacia cognata</i> 'Limelight' Limelight Wattle</p>	 <p><i>Aspidistra elatior</i> Cast-Iron Plant</p>	 <p><i>Banksia spinulosa</i> 'Birthday Candles' Dwarf Hairpin Banksia</p>	 <p><i>Callistemon viminalis</i> 'Little John' Dwarf Bottlebrush</p>	 <p><i>Cordyline fruticosa</i> 'Kiwi' Hawaiian Ti</p>	 <p><i>Correa alba</i> White Correa</p>	 <p><i>Daphne odora</i> Winter Daphne</p>	 <p><i>Dianella revoluta</i> Black Anther Flax Lily</p>
 <p><i>Dichondra argentea</i> 'Silver Falls' Dichondra Silver Falls</p>	 <p><i>Diets grandiflora</i> Butterfly Iris</p>	 <p><i>Grevillea juniperina</i> 'Gold Cluster' Grevillea Gold Cluster</p>	 <p><i>Grevillea</i> 'Robyn Gordon' Robyn Gordon Grevillea</p>	 <p><i>Grevillea</i> 'Scarlet Sprite' Rosemary Grevillea</p>	 <p><i>Leptospermum lanigerum</i> Woolly Tea-Tree</p>	 <p><i>Liriope muscari</i> Lily Turf</p>	 <p><i>Liriope muscari</i> 'Royal Purple' Royal Purple Lily-turf</p>
 <p><i>Lomandra</i> 'Little Con' Mat Rush</p>	 <p><i>Lomandra longifolia</i> Spiny-headed Mat-rush</p>	 <p><i>Lomandra</i> 'Tanika' Fine-Leaf Lomandra</p>	 <p><i>Metrosideros thomasi</i> New Zealand Christmas Bush</p>	 <p><i>Philodendron domesticum</i> Spade-Leaf Philodendron</p>	 <p><i>Philodendron</i> 'Xanadu' Xanadu</p>	 <p><i>Poa ensiformis</i> Sword Tussock Grass</p>	 <p><i>Poa labillardieri</i> Common Tussock Grass</p>
 <p><i>Rhapis excelsa</i> Lady Palm</p>	 <p><i>Strelitzia reginae</i> Bird of Paradise</p>	 <p><i>Syzygium australe</i> 'Hinterland Gold' Lilly Pilly Cultivar</p>	 <p><i>Trachelospermum</i> 'Flat Mat' Flat Mat Star Jasmine</p>	 <p><i>Viola hederacea</i> Native Violet</p>	 <p><i>Westringia fruticosa</i> Coastal Rosemary</p>		





STREET PERSPECTIVE: Magnus Street Shared Zone (Landscape design indicative only)

Concept Only; Final design subject to technical design considerations,  
detailed investigation of services and relevant approvals



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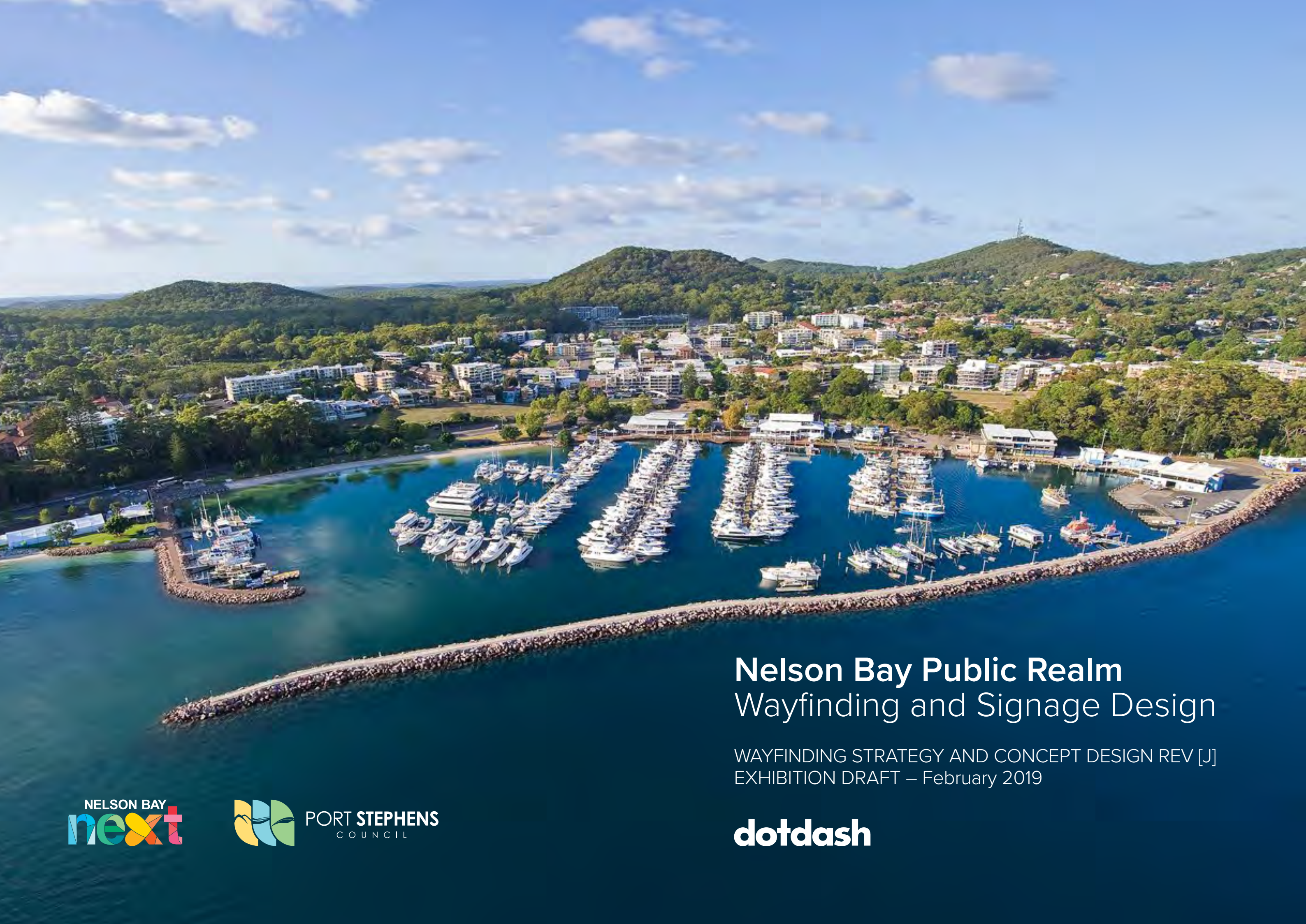
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# Nelson Bay Public Realm Wayfinding and Signage Design

WAYFINDING STRATEGY AND CONCEPT DESIGN REV [J]  
EXHIBITION DRAFT – February 2019





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Supported by the



*This project was funded by Port Stephens Council and the Australian Government, and administered on behalf of the NSW Government by the NSW Department of Industry.*

# Introduction

The wayfinding strategy report is based on our initial client and community meetings and site investigations. It is intended to demonstrate our understanding of the project needs and opportunities and propose strategic wayfinding and interpretation solutions for Nelson Bay Town Centre. Following feedback from this report, the design standards will be further developed.

Key design objectives for Wayfinding and interpretation signage design from the project brief are –

- relate to the built environment and help define the character and sense of place for Nelson Bay
- connect key precincts such as the town centre and the waterfront
- promote tourist information at key locations within the town centre and the foreshore
- provide directions with walking times to popular destinations including beyond Nelson Bay
- improved vehicular directional signage to car parks and key destinations
- direct traffic to Shoal Bay along Dowling Street
- interpretation signage that is educational and recognise ecology, indigenous and non-indigenous history
- be sustainable, safe and easily maintained







# Context

Nelson Bay is a suburb and major town in the Port Stephens local government area in the Hunter Region of New South Wales. It is 60kms from Newcastle and 200kms from Sydney. It has population of approximately 5,500. It is easily accessed by road, public and commercial transport services.



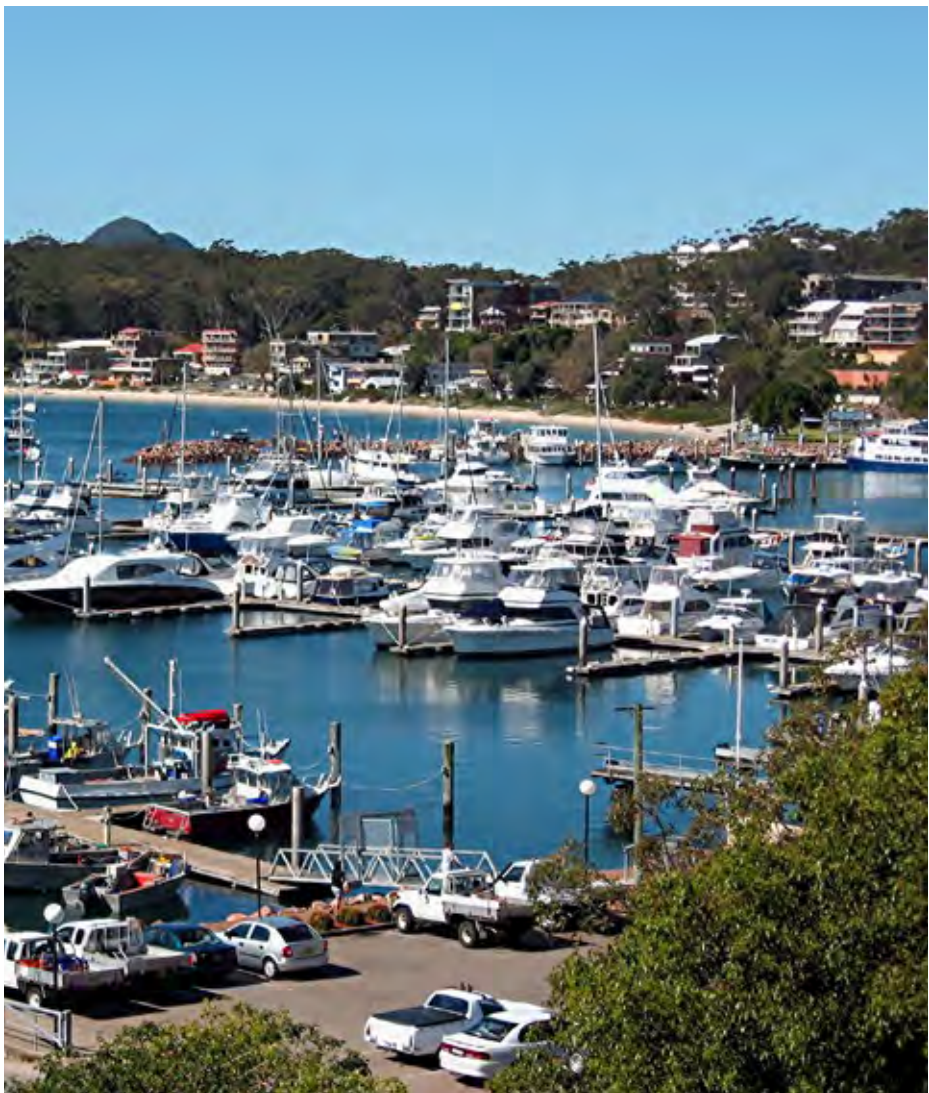


# Character

Situated among a collection of picturesque estuarine and marine bays and beaches, Nelson Bay has long been a destination for a holiday or retirement.

With it's recent growth in popularity, the coastal fishing village "treads a sensible line between tourism and charm".

The town centre sports a large marina in the bay, waterfront walkways and restaurants that specialise in fresh local produce and seafood.





# Charm

Bounded by an array of bay and ocean beaches that host significant aquatic recreation facilities, Nelson Bay is a friendly, community-driven town where you will more than likely be greeted with a heartfelt “Good morning” before noon.

Nelson Bay's appeal lies in it's unspoilt beaches, and myriad of water activities for young and old including –

- fishing,
- surfing for all abilities,
- snorkelling and diving,
- Dolphin Cruises and
- Whale Watching.












# Beyond Nelson Bay

- Toboggan Hill Park, Gan Gan Lookout and Nelson Bay Lighthouse are short walks from the town centre.
- Stockton Sand Dunes is the perfect location for 4WD driving, quad biking, sand boarding and camel beach rides.
- Broughton Island and ‘Looking Glass’, located just north of Nelson Bay, as well as Fly Point aquatic reserve host prolific, local marine life that can be observed by snorkelling and scuba diving.
- Tomaree and Worimi National Parks, are home to hiking and walking trails, Fort Tomaree and historic gun emplacements.
- The Hunter Valley, Australia's oldest wine region, is the backyard to Port Stephens and Nelson Bay's waterfront.



# Nelson Bay Destinations

Key destinations and services that are to be included in the wayfinding system in directions and maps.

Site Identification	Nelson Bay						
Precinct Identification	Foreshore			Town Centre			
Primary Destinations	Information Centre Nelson Bay Apex Park Nelson Bay Foreshore Reserve D’Albora Marina Laidler Walk Reserve			Post Office Places of Worship Education Facilities Community College			
Secondary Destinations	 Toilets	 Car Parks	 BBQ’s	 Playground	 Nelson Bay War Memorial	 Bus Stops Donald Street Government Road Magnus Street	 Ferry Terminal
Car Parks	Donald Street		Government Road		Victoria Parade		Yacaba Street
Beyond Nelson Bay	Port Stephens Shoal Bay Fingal Bay Salamanda Bay		Tomaree National Park Worimi National Park Tobboggan Hill Park		Gan Gan Lookout Nelson Bay Lighthouse Fly Point		



# Vehicular Circulation

## Gateways and Vehicular Directional Signage

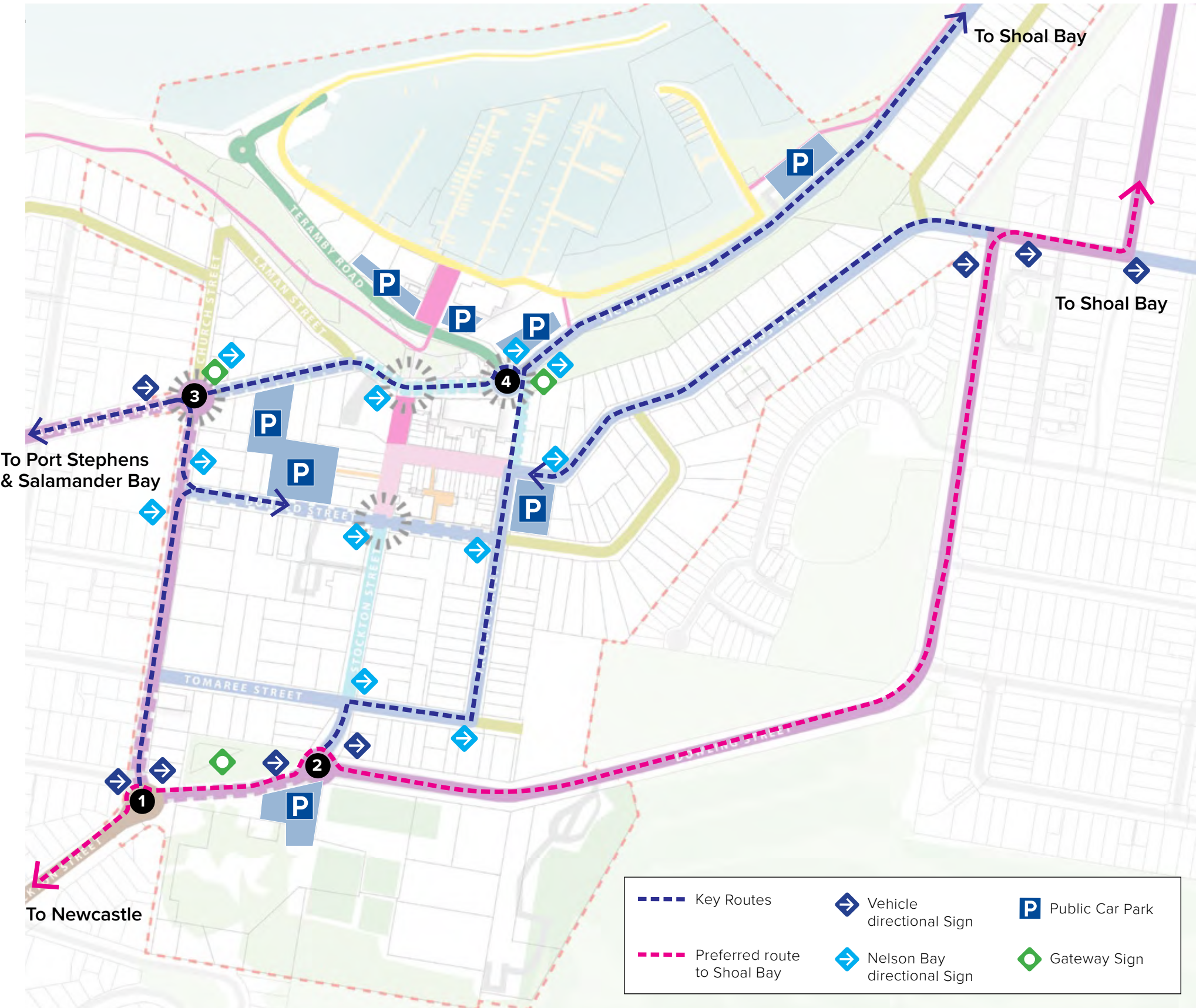
Shown in this plan are the primary vehicular routes proposed to travel into and bypass the Town Centre. This is intended to be achieved through standard traffic control (MUTCD) signage as well as bespoke vehicular directional signs that form part of the Town Centre signage suite.

In particular, traffic to Shoal Bay and Fingal Bay is directed to travel around the Town Centre on Dowling Street.

The proposed Gateway locations are shown on the plan with intersections one and two forming the primary gateway and intersections three and four as secondary gateways.

The final plan for all vehicular and Town Centre directional signs can be finalised based on confirmation of all traffic routes. The new and modified traffic control (MUTCD) signage will need to be assessed and planned by a traffic consultant.

**Note: Concept only – final design subject to technical design considerations, detailed investigation of services and relevant approvals.**





# Gateway Location

## Vehicular Arrival

- 1. Stockton and Church Streets
- 2. Stockton and Dowling Streets

## Proposed strategy

These two intersections, with the adjoining parkland are to provide vehicular traffic directions in line with the recent traffic plan as well as create a Nelson Bay gateway threshold.

## Traffic Control Signage

Update existing traffic control signs to show desired vehicle flows to Shoal Bay and Nelson Bay at both intersections as shown.  
Confirm if left directions to Nelson Bay Parking only is appropriate at Stockton and Church Streets.

## Gateway Threshold

The Gateway Threshold to include Nelson Bay announcement, other elements and possible public art on the park edge and be visible from Stockton and Church intersection.

**Note: Concept only – final design subject to technical design considerations, detailed investigation of services and relevant approvals.**



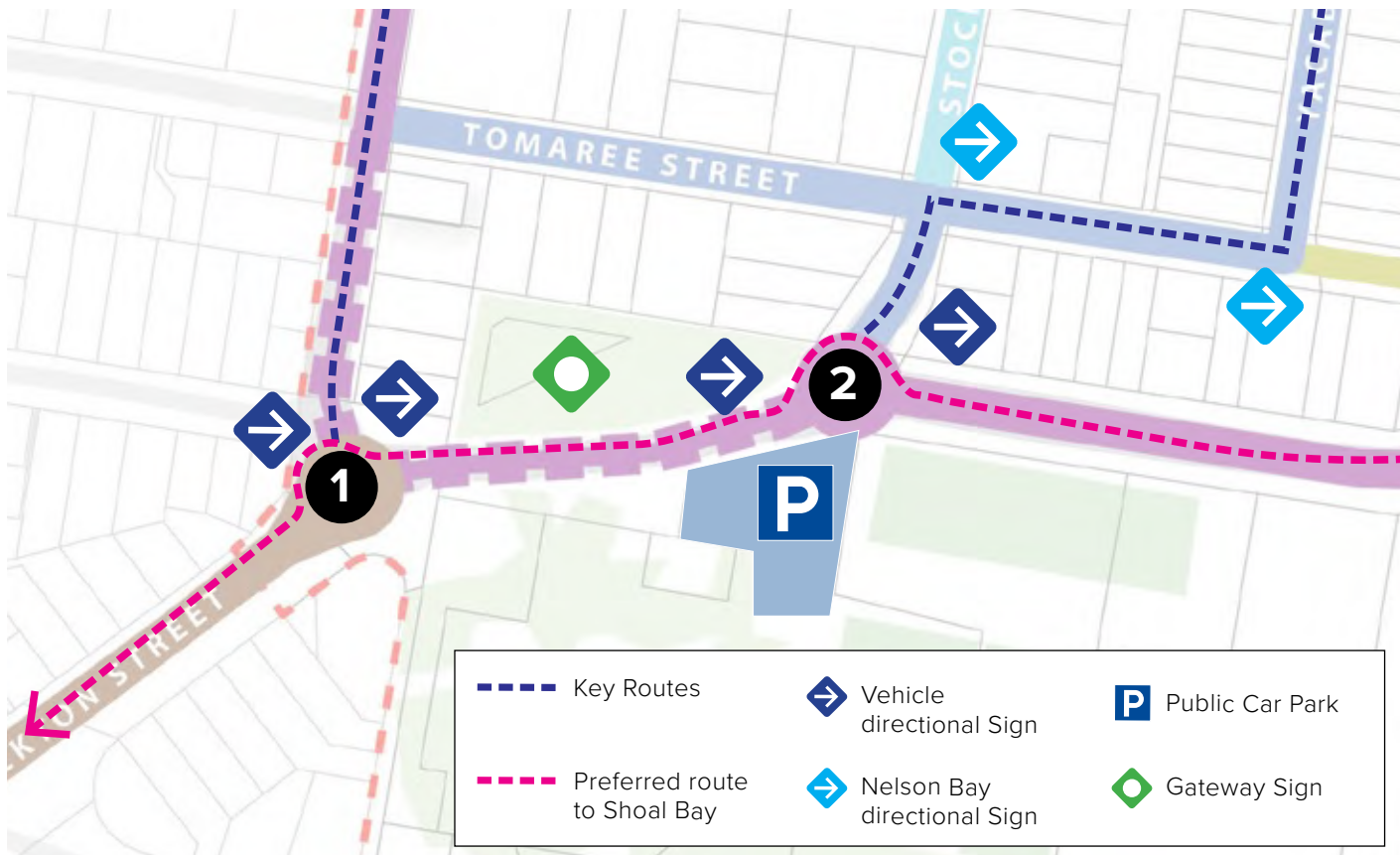
Approaching Stockton St roundabout.



Right on roundabout towards Shoal and Fingal Bays.



Stockton St after roundabout. Possible gateway on left.



Proposed MUTCD signage.



To be updated MUTCD signage.



Suggest removing this sign.



Existing approaching MUTCD signage.



# Gateway Location

## Vehicular Arrival

- 3. Church Street and Government Road
- 4. Victoria Parade and Government Road

## Proposed strategy

This intersection is considered as a Gateway Threshold into Nelson Bay. There is limited public land to introduce a gateway statement in this area.

## Car Park Directional

Directional signs to car parks can form part of the Nelson Bay signage suite rather than apply traffic control (MUTCD) sign types. Placement of these signs will still require coordination and approvals within Council and RMS.

**Note: Concept only – final design subject to technical design considerations, detailed investigation of services and relevant approvals.**



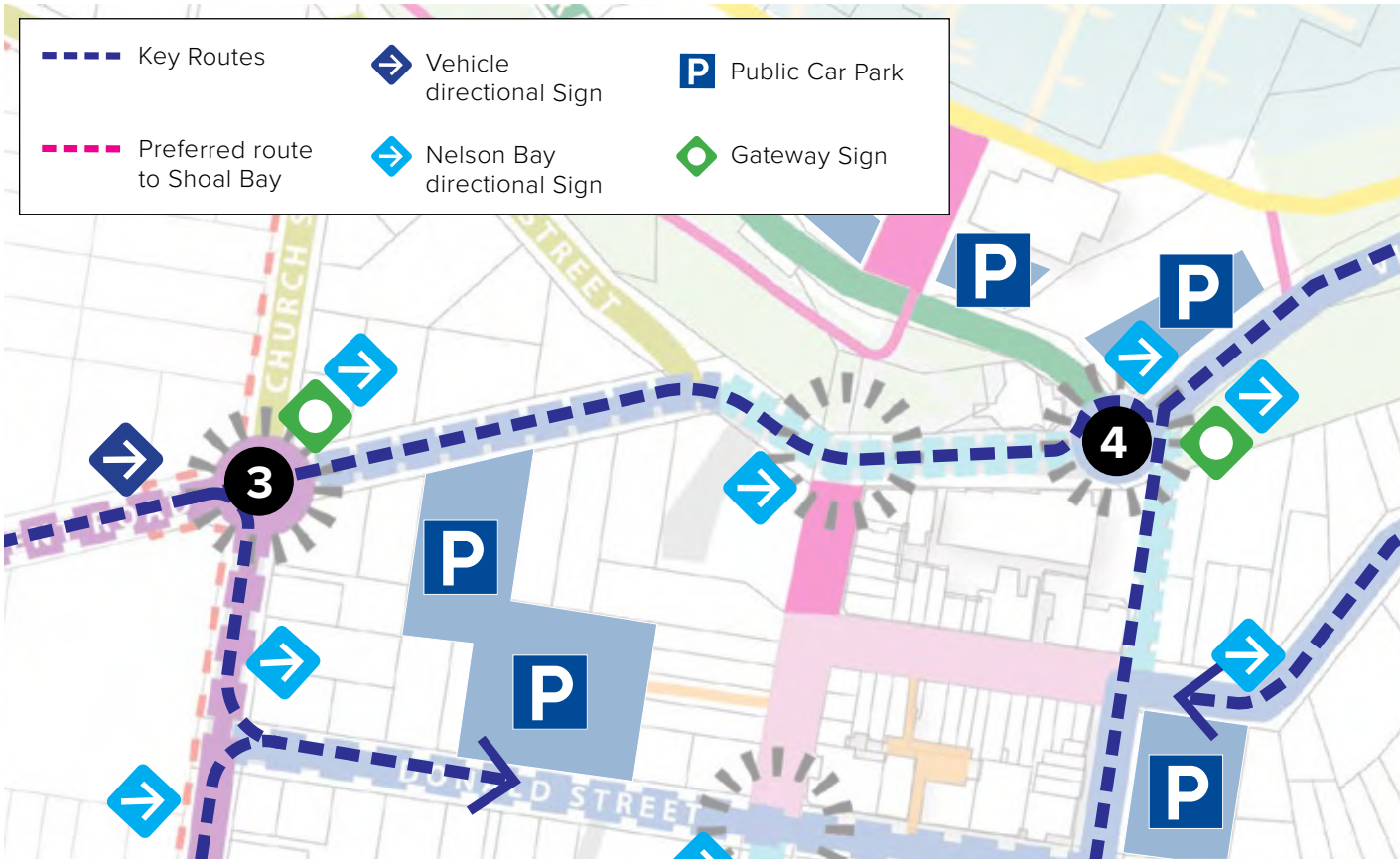
MUTCD directional sign on left



Church St roundabout ahead



Proposed gateway location



Existing approaching MUTCD signage.



Proposed approaching MUTCD signage.



Indicative gateway and directional signage.



Indicative parking directional signage.



# Pedestrian Circulation

High level pedestrian circulation and proposed sign locations are shown. This plan will develop as the Public Domain Plan is developed. Information and mapping and directional signs are used together for form a network of information across the Town Centre. Locations for information and mapping signs are proposed in central gathering areas within the Town Centre. Directional signs should be placed at high public traffic intersections and pathways around the Town Centre and Foreshore.

**Note: Concept only – final design subject to technical design considerations, detailed investigation of services and relevant approvals.**







Marine Culture





# Colour Studies

The colour palette developed for Nelson Bay draws from the area's rich marine culture. By focusing on the ocean life, the palette is authentic to place.



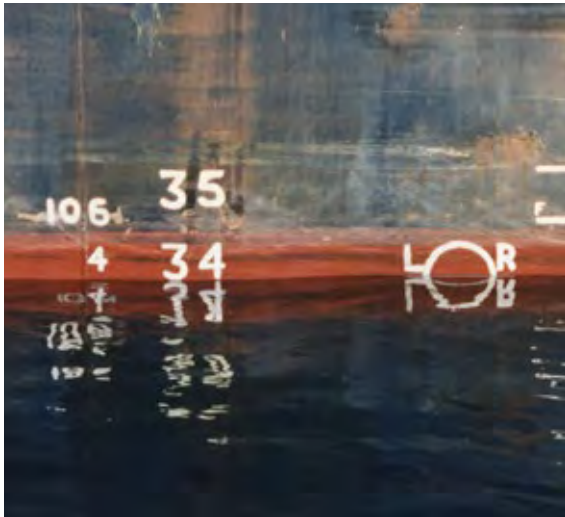
Port Stephens Logo Colours



# Plimsoll Line

## Above and Below the Line

Referencing the fishing and marine culture of the area, the Plimsoll Line used on a boat's hull has been explored as a graphic device to organise information and build authentic identity.





# The Oyster

The NSW north coast oyster industry is an integral part of the fabric of coastal communities providing employment, sustainable seafood and is a watchdog for estuarine water quality.

This distinctive shapes and colours provide opportunities to be applied to the visual language of the graphics and signage.



# Universal Pictograms

Universal pictograms are legible and understandable for all users and visitors. There is a range of general, water and marine related, and regulatory pictograms that will be used throughout the Wayfinding system.

The pictograms can be used to demonstrate the specific marine recreational activities of Nelons Bay and the surrounding areas – boating, fishing, walking, whale watching, sight-seeing and lookouts, etc.

Picotgrams provide readily recongisable information to support text. They work on their own and more importantly communicate with non-English speaking user groups.





# Bespoke Pictograms

There is opportunity to create a sense of place and character through the use of organic forms inspired by the oyster shell.



# Typography

Arial and Helvetcia are highly-legible, geometric sans serif fonts that are very well suited as a display text and for destination messaging across a Wayfinding system.

The typeface reflects the charming and laid back character of Nelson Bay.

It captures characteristics of marine life through its fluid form – a and 8 – and hook-like elements expressed in the tails of y, k and l.

Numerals are clear and easy to read.

Arial

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz  
0123456789

Helvetica

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz  
0123456789

Helvetica bold

**ABCDEFGHIJKLMNOPQRSTUVWXYZ**  
**abcdefghijklmnopqrstuvwxyz**  
**0123456789**

a k l y 8

# Nelson Bay

Primary Message - Site Identification

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FORESHORE  
TOWN CENTRE

Apex Park  
Foreshore Reserve  
D'Albora Marina  
Laidler Walk Reserve

Precinct Identification

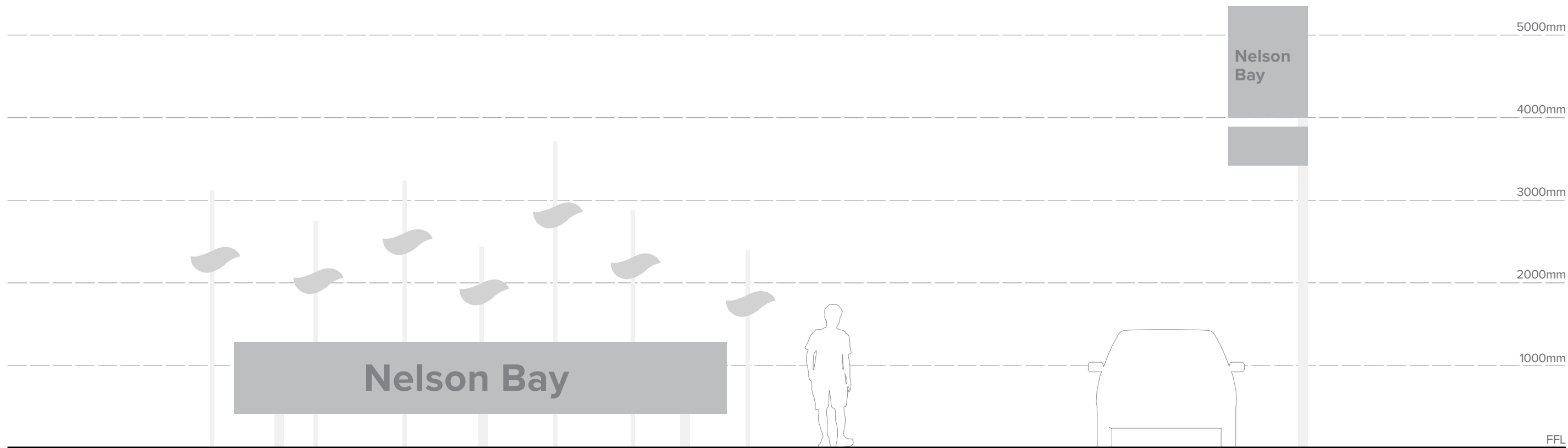
Secondary Message - Primary Destinations





# Schematic Sign Family

The Schematic Sign Family is intended to show the range of sign types that will be required based on their Wayfinding function. It does not demonstrate the design of the signs.



### ID1a - Gateway Major Entry Identification

Announcement of arrival to Nelson Bay

#### Typical Location

- Gateway Park on Dowling Street

#### Description

- Possible sculptural/art statement
- Identifies Nelson Bay
- Illumination



### ID1b - Gateway Major Entry Identification

Announcement of arrival to Nelson Bay

#### Typical Location

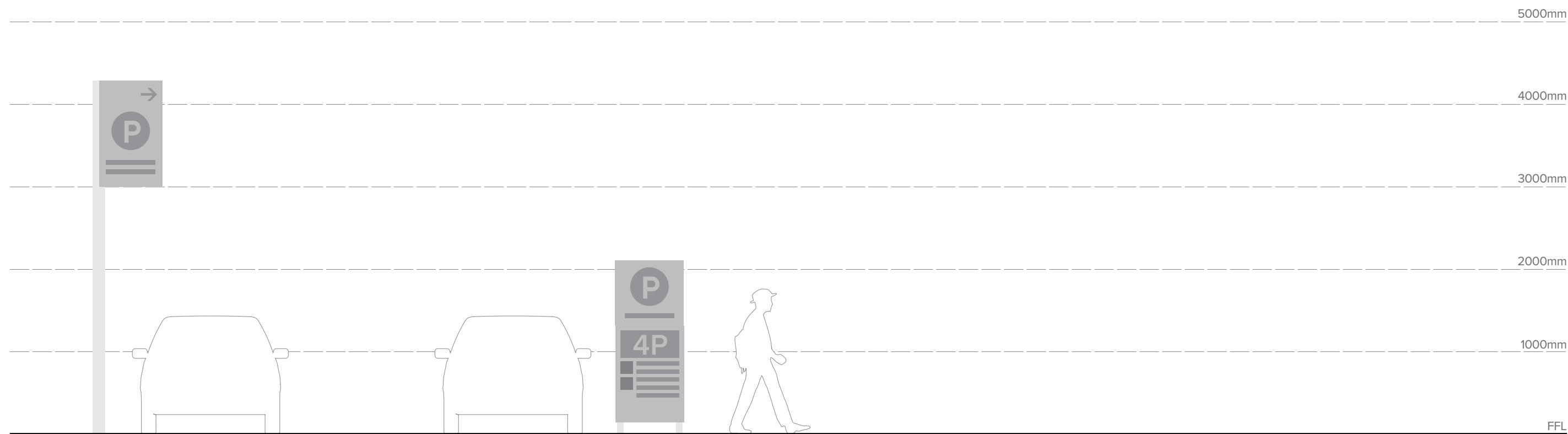
- Church Street and Government Road intersection

#### Description

- Sculptural statement
- Identifies Nelson Bay
- Illumination
- Can include directional information

# Schematic Sign Family

The Schematic Sign Family is intended to show the range of sign types that will be required based on their Wayfinding function. It does not demonstrate the design of the signs.



**DR1 - Vehicular Direction**  
Direct vehicles to parking areas

**Typical Location**  
Key vehicle circulation streets

**Description**  
– Directional information and pictogram  
– Includes P symbol, area name and distance



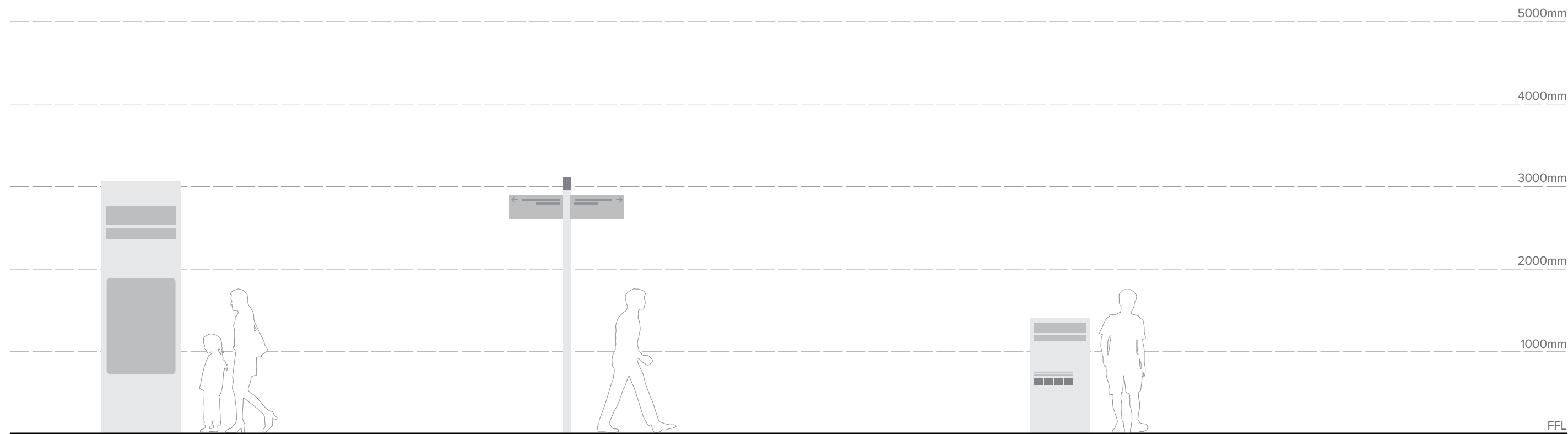
**ID2 - Car Park Identification**  
Identify parking areas  
Inform visitors of car park regulatory advice  
eg time limit, fines and responsibilities

**Typical Location**  
Car park entrance

**Description**  
– Freestanding

# Schematic Sign Family

The Schematic Sign Family is intended to show the range of sign types that will be required based on their Wayfinding function. It does not demonstrate the design of the signs.



**IF1 - Information Map Sign**  
Provide orientation, direction, regulatory and safety.

**Typical Location**  
Locate on pedestrian pathways at major arrival and gathering points

**Description**

- Double sided. Map on one side, digital screen on the other
- Identifies precinct
- Local and surrounding area mapping
- Destination information
- Digital content managed by PSC
- Heavy duty outdoor screen
- Power, data or 4G connection

**DR2 - Pedestrian Direction**  
To direct pedestrians to destinations.

**Typical Location**  
At key decision points within a precinct.

**Description**

- Destination name
- Directional information, pictograms and walking time

**ID3 - Identification Sign**  
Inform pedestrian of destination arrival eg Apex Park, Foreshore Walk or Worimi Park

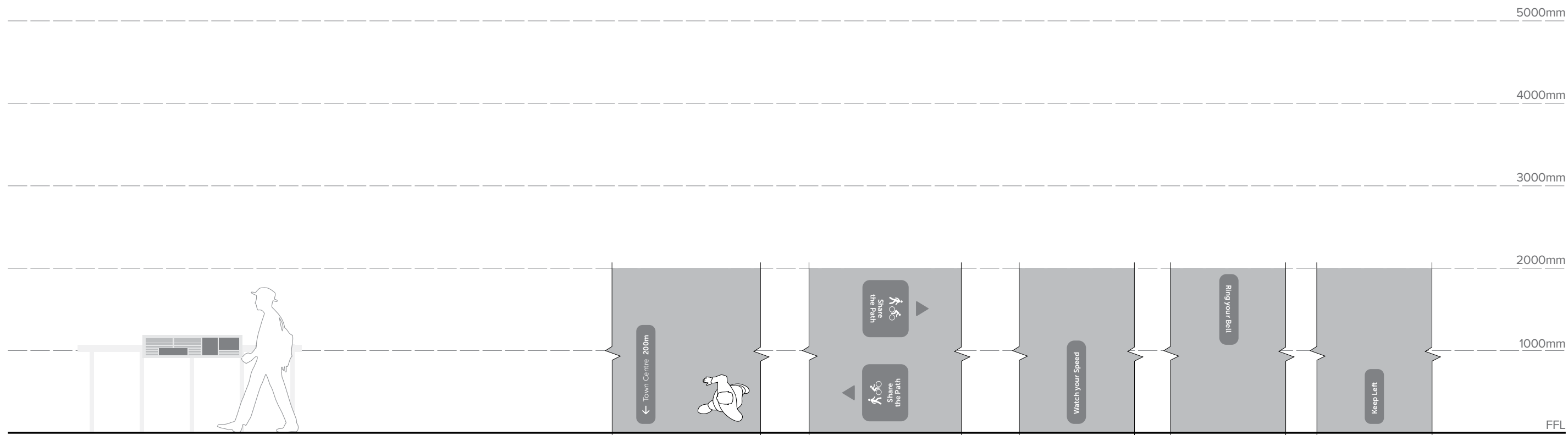
**Typical Location**  
At key destinations within a precinct.

**Description**

- Destination name
- Behavioural advice
- Possible interpretation about the site

# Schematic Sign Family

The Schematic Sign Family is intended to show the range of sign types that will be required based on their Wayfinding function. It does not demonstrate the design of the signs.



## IN1 - Interpretive Signage

Interpretive stories about Nelson Bay

### Typical Location

Interpretive locations throughout the site. Integrate with urban elements such as balustrades and seating.

### Description

- Design is highly specific to location and content
- Design guide for materials and graphic standards
- Link to digital content
- Local area knowledge
- Historical, cultural, ecological stories and themes

## Pathway Ground Markings

Behavioural and directional information

### Typical Location

Placed on the ground of shared bike and pedestrian pathway.

### Description

- Intended to minimise conflict between pathway users
- Directions to significant locations
- Supported by the MUTCD cycle signage



# Accessibility

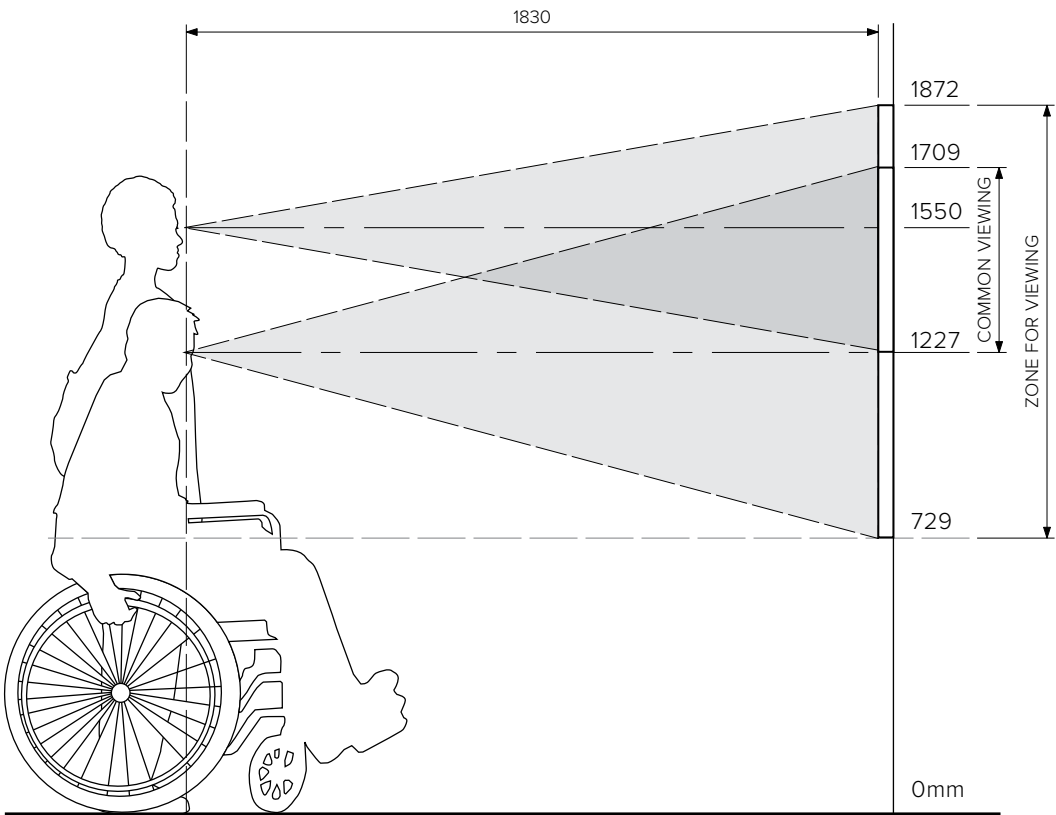
Clear communication of wayfinding information should be inviting, accessible and legible to all user groups, including those with a disability.

This can be achieved through applying Australian accessibility standards and the following strategies to address the needs of all visitors:

- Minimum 30% luminance/colour contrast values between base colour, text and pictograms
- Highly legible font for wayfinding
- Appropriate text sizes for required reading distances
- Functional pictograms to support text messages
- Clear and consistent message layouts/graphic zones
- Appropriate sign placement for optimum viewing
- Braille and tactile graphics where mandated

All signage for Nelson Bay will be designed to meet Australian Standard 1428.1 & 1428.2 Design for Access and Mobility (Parts 1 and 2) and the Disability Discrimination Act (Access to Premises) in regards to sign placement, letter heights and luminance contrast.

If there are other specific requirements based on Port Stephens Council’s accessibility policies, please advise us as part of the response to this report.



**AS1428.2-1992 - Figure 30**  
Zones for viewing and for common viewing



**Minimum 30% luminance contrast**

Required viewing distance (m)	Minimum height of letters (mm) (cap X-height)
2m	6mm
4m	12mm
6m	20mm
8m	25mm
12m	40mm
15m	50mm
25m	80mm
35m	100mm
40m	130mm
50m	150mm

**AS1428.2-1992 - Table 3**  
Height of letters for varying required viewing distances

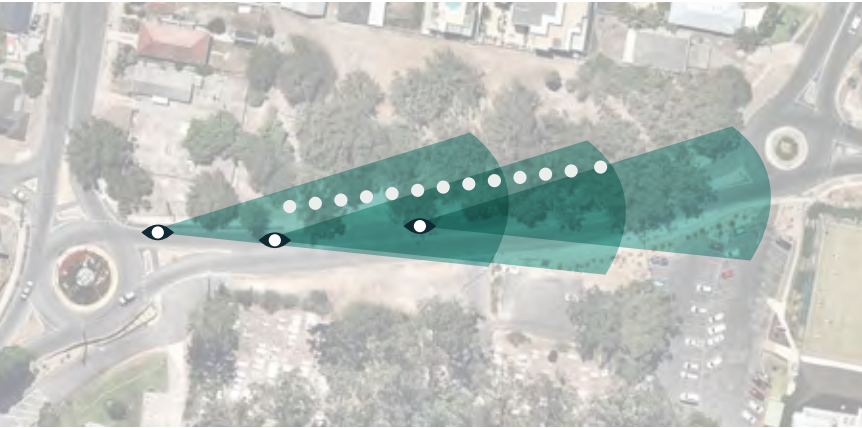


# Major Gateway

The signage element at the gateway park on Stockton Street should clearly announce Nelson Bay to passing motorists. The signage element should integrate into the park landscape coordinating with elements such as retaining walls, planting and other structures. Ideally it creates a strong street presence during the day and night and does not present a visual barrier into the park.

As drivers pass the wide park frontage, there is potential to use a linear sequence of repeating elements along the frontage rather than one single large element.

The gateway can be either a public art element or a signage element or an integration of both. These options are considered in this section.



Potential for linear sequence of repeating elements that creates a memorable arrival experience.



Grand scale Melbourne Gateway - repeated urban markers create a linear arrival experience.



Nelson Mandela Monument in South Africa uses a composition of sculptured posts to create a photographic quality image when seen from a specific viewpoint.



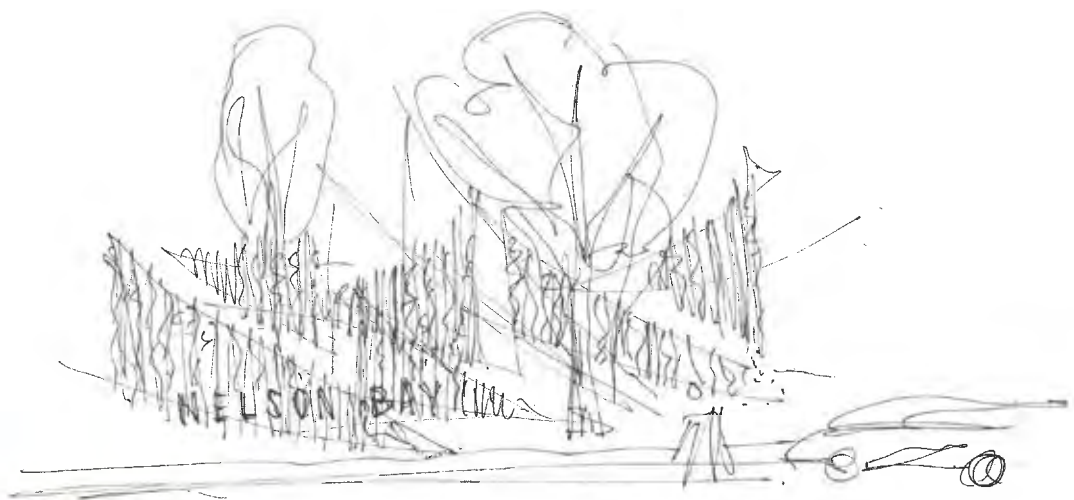


# Major Gateway

The integration of signage to announce Nelson Bay can build on the notion of the repeated sequence of elements.

It could use recycled local wharf timbers and incorporate illumination and reflective elements for night time activation.

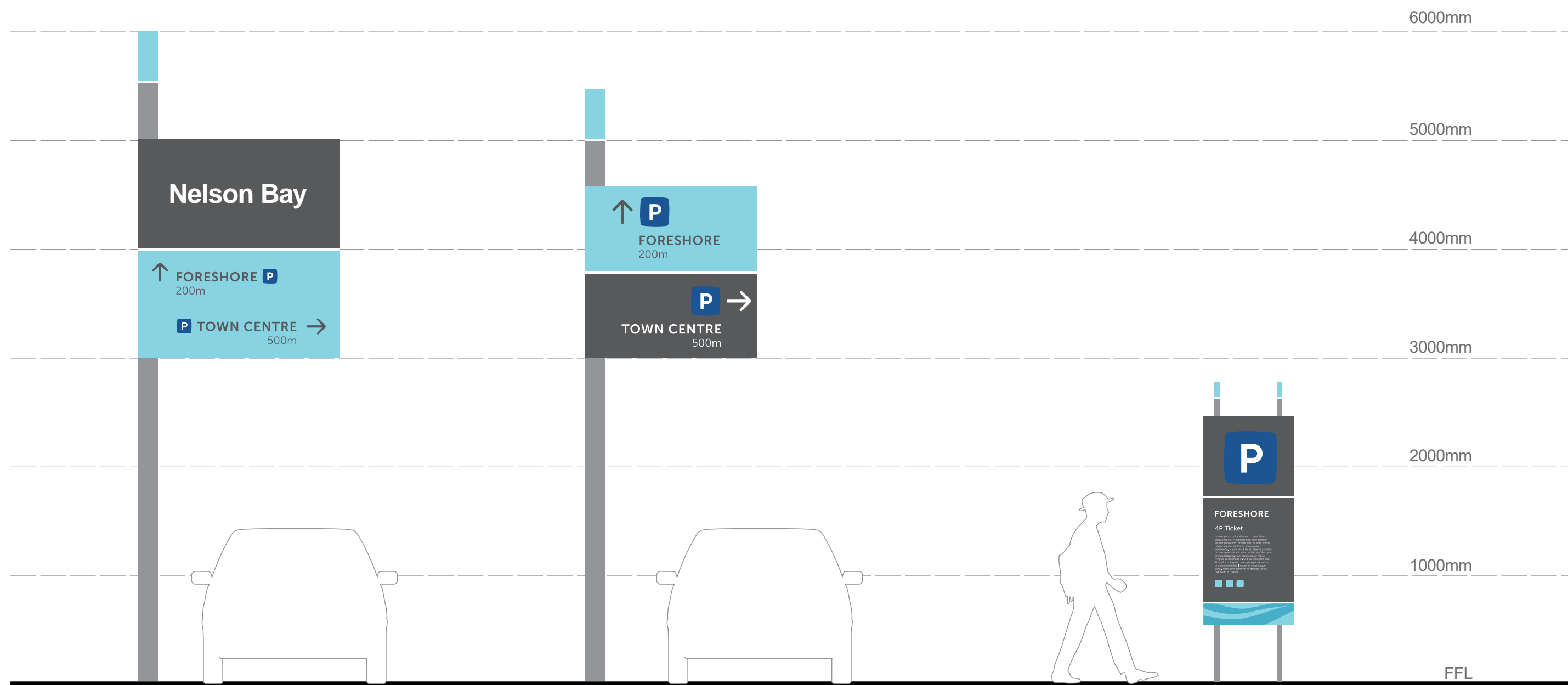
We see this as a unique town gateway statement that does not need to coordinate with the Port Stephens signage suite by Danthonia.



# Vehicular Directional Signs

The vehicle directional sign directs to public Car Parks around the Town Centre and is readable from a moving vehicle. It nominates precinct car parks and distance to travel.

The car park identification is a freestanding non illuminated sign and should clearly announce the public car park upon approach from both directions. Upon entry, general advice, such as time limits, owner responsibilities and applicable fines are to be provided. This content should be prepared by Council.





# Information Map Sign

This sign is intended to provide a clear diagrammatic map overview of the Town Centre with connections to other areas. It should highlight the important public destinations and encourage exploration and circulation around the Town Centre.

Refer to the map design page.

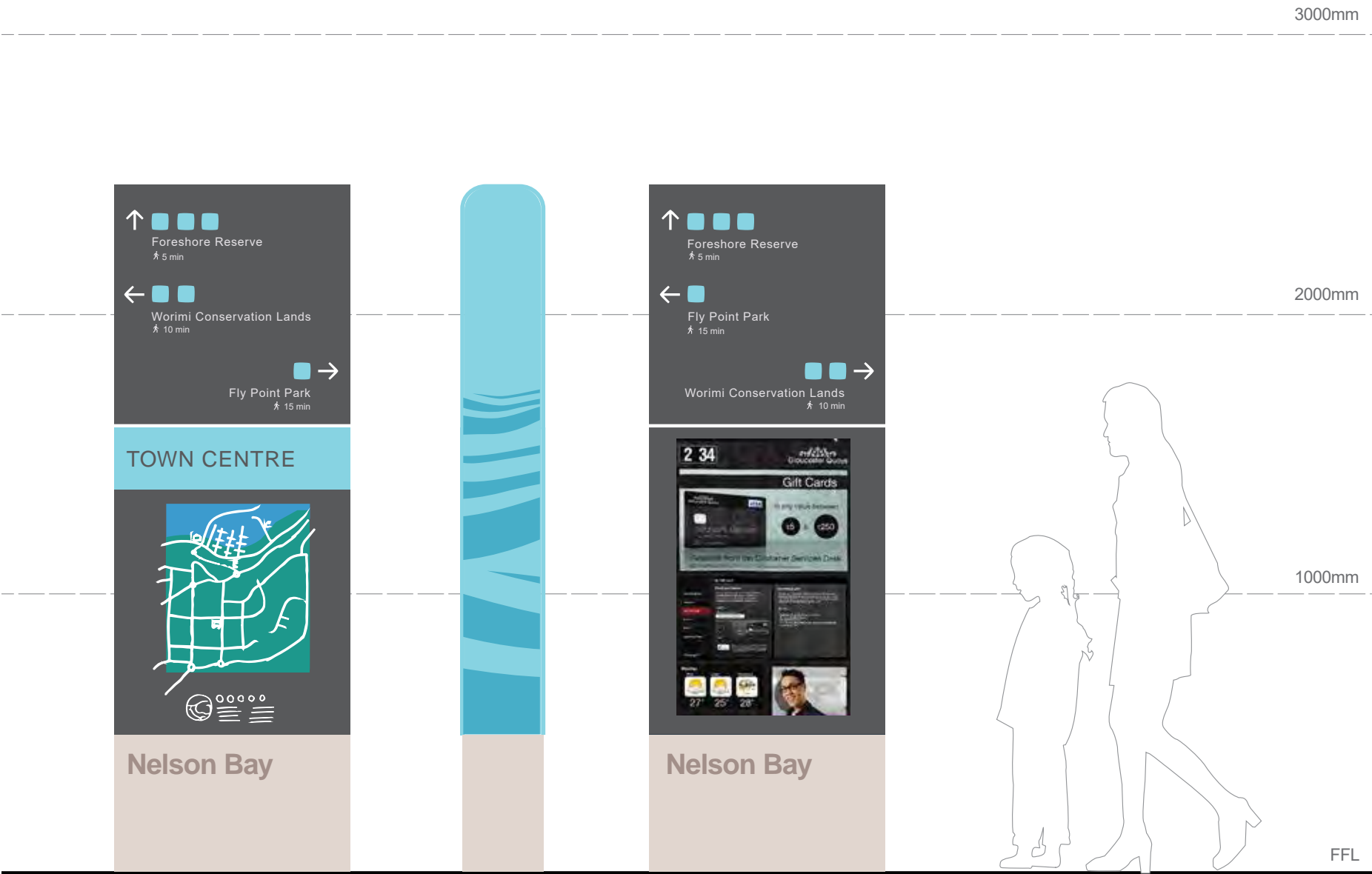
This reverse side of this sign will incorporate the digital information screen. The sign is intended to provide up to date information and promotion of ongoing Council events and services. It requires, power, data or 4G connection.

It will require technical advice as to the feasibility of this element in a coastal location.

Information map signs may include opportunities for sponsored community projects to be incorporated in the design.

Sign base to be clad in sandstone.

The sides of the sign may incorporate visual texture and pattern through the works of local artists or elements from the Port Stephens branding guidelines.





# Mapping Strategy

We propose two types of map to be used for pedestrian circulation and exploration.

## 1. Town Centre Map

This is the primary map. The immediate Town Centre is mapped showing key public destinations, streets, parks, foreshore, information centre, police, health services, ‘you are here’ location, walking distances and other information.

## 2. Context Map

The context map is a simpler map that shows areas beyond the town centre and promotes exploration around Nelson Bay and into Shoal Bay. For instance any achievable walks can be highlighted and supported with typical travel times and degrees of difficulty such as the Lighthouse Walk and Gan Gan Walk.

The maps design be clearly legible and provide information to support all visitors. The map may also contain contact details for assistance and link to other digital services such as a downloadable map in multiple languages.





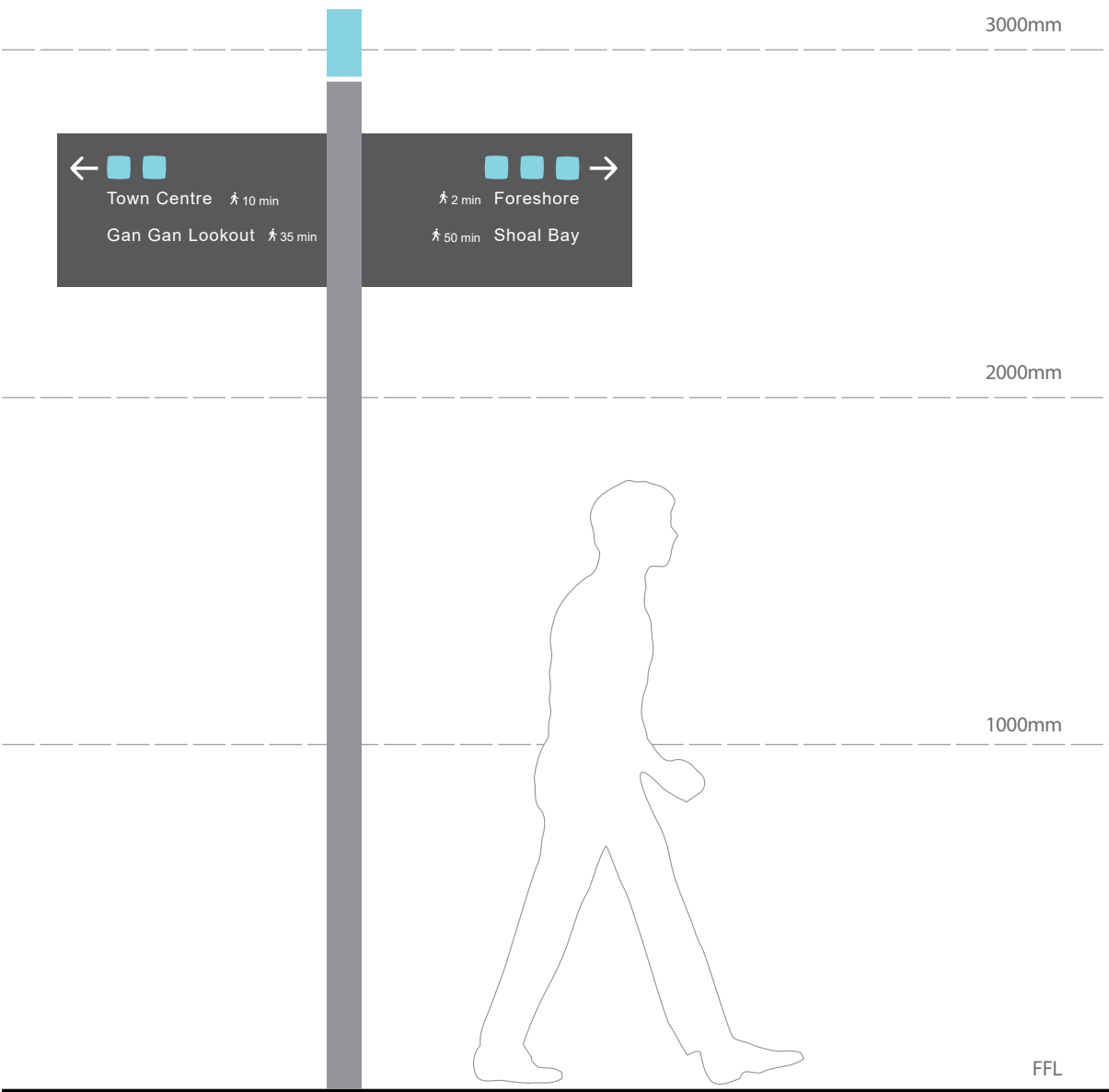
Mapping Exemplars



The characteristics and feel of Nelson Bay should be expressed in the mapping. It should be visually friendly and inviting as it serves as a major piece of visual information in the built environment.

# Pedestrian Directional Sign

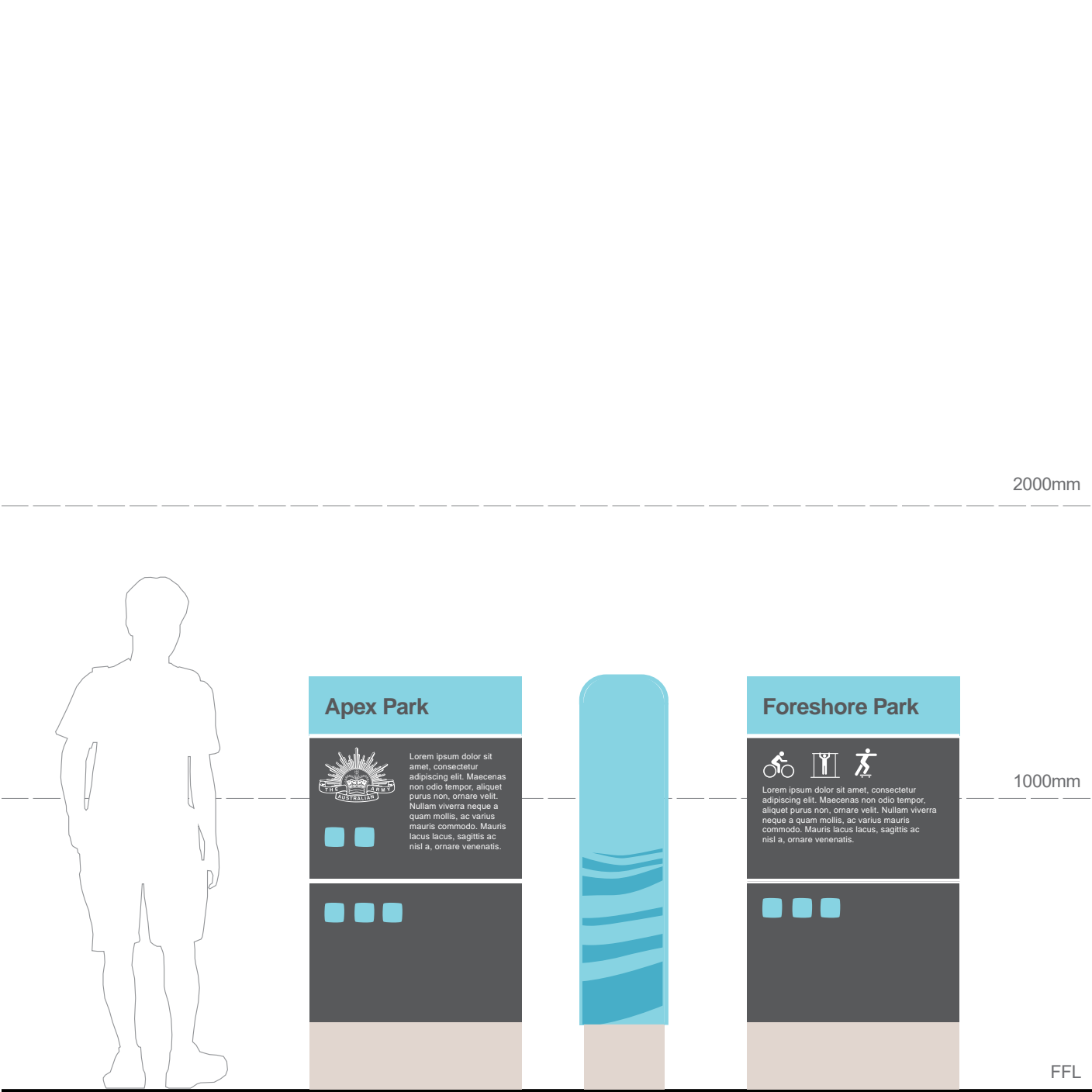
This sign type directs to the main destinations and precincts shown on the Town Centre map incorporating pictograms and walking times. This is intended as a freestanding sign type, however there may be circumstances where the sign panel is wall mounted or fixed to an existing pole.





# Place Identification

This sign type names a public space such as parks or coastal walkways. It should announce the site at major arrival points as well as provide any pedestrian behavioural advice (in a positive tone). It may also incorporate specific interpretation about the site. There may be variations in scale or use of materials for this sign type dependant upon the type of environment.



# Interpretation

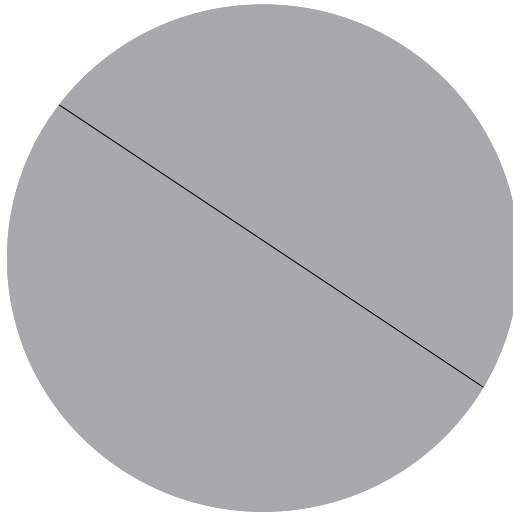
There is an opportunity to express themes and stories about Nelson Bay through interpretation elements that are integrated into the built environment and landscape. These themes and stories can explore all aspects of the history and culture of the town as well as the diverse ecology of the ocean and land environments.

Interpretation may be didactic. That is, it provides simple objective facts and information about a place, past events, or ecologies that raise awareness. Information is absorbed by reading and may promote specific actions or behaviours, such as encouraging the preservation of the natural environment.

Or it may be impressionistic, such as a landmark public artwork that celebrates site specific themes in a prominent location. People may interact with these elements to fully experience them.

Or interpretation may be both didactic and impressionistic providing both information, emotional connections and create curiosity through texts, images, forms, shapes, materials and lighting that fully engage the senses.

All forms of interpretation are appropriate to Nelson Bay and they all contribute to a richer and more memorable visitor experience.



## Didactic

*Requires consultation, research and writing*

- Signs
- Information
- Facts
- Stories

## Impressionistic

*Community consultation, commissioning artists*

- Site specific artworks
- Patterns / textures in environment
- Collaboration within design disciplines



# Stories and Themes

The stories and themes should be authentic and valued by the whole Nelson Bay community.

## History and Culture

These themes should explore the indigenous stories, and the stories that formed the character and culture of Nelson Bay.

Industries such as oyster farming and other maritime themes around shipping and fishing can be explored.

## Ecology

Marine ecology and the natural landscape provide abundant sources of material for people to discover as they move around Nelson Bay. They provide explanations about the immediate environment and also can describe what is hidden from view.

## Next Steps

Port Stephens Council should determine key themes and stories to be expressed based on research and consultation with appropriate groups and community representatives.

An interpretation strategy should be developed that considers how these themes and stories are planned and integrated within the Nelson Bay environment.

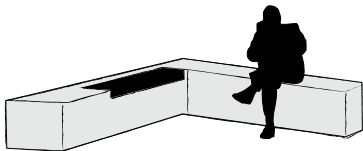




# Interpretative Signage Types

## Intergrated into Structures

- Coordinate with landscape and architectural elements
- Located at key waiting and gathering points
- Integrate into seating



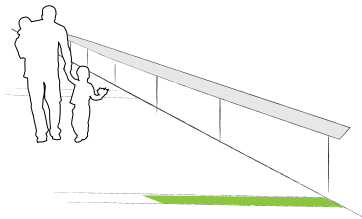
## Freestanding and projecting

- Freestanding structures projecting from handrails and walls
- Located at key waiting and viewing points



## Embedded into ground plane

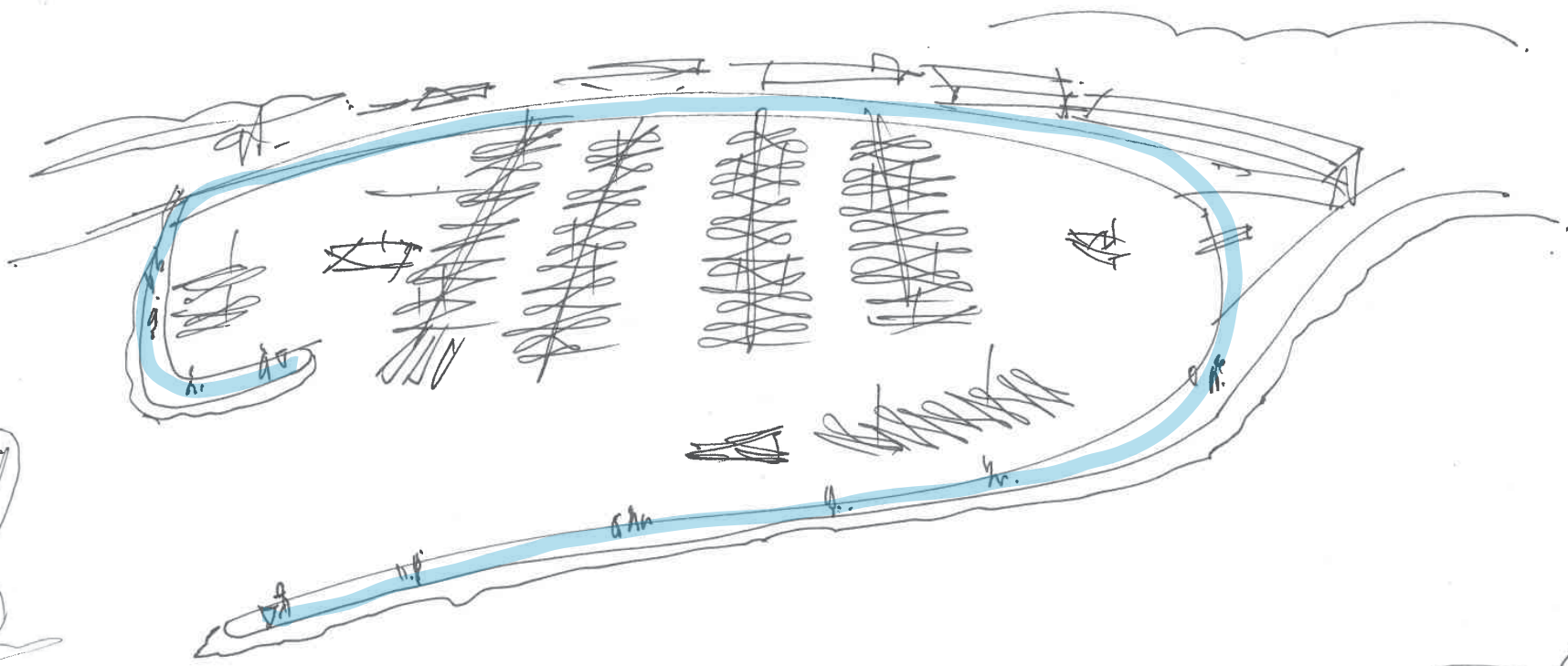
- Linear visual narrative along boardwalk
- Can assist pedestrian movement through site



## Consider the whole Waterfront Promenade as an interpretive walk.

### Waterfront Promenade East

Interpretes local marine ecology themes.



### Waterfront Promenade West

Interpretes local commercial marine industry themes.







## **Appendix 13 – Nelson Bay Citizens Parking Panel Report**

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Centre for  
Local Government

# Parking in Nelson Bay: Engagement Report

Centre for  
Local Government

Roberta Ryan, University of Technology Sydney, Centre for Local Government, Ultimo NSW 2007, Australia

Sophie Le Mauff, University of Technology Sydney, Centre for Local Government, Ultimo NSW 2007, Australia

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# Executive Summary

Port Stephens Council (Council) commissioned the Centre for Local Government at the University of Technology Sydney (CLG) to engage the community on short-term and long-term parking options for Nelson Bay.

The engagement responds to concerns raised by members of the Port Stephens community regarding the availability of parking in and around Nelson Bay, and a series of traffic management technical studies undertaken by Council. Council resolved through adoption of the *Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program* to form a Citizens Panel that provides an objective community perspective on options for short-term and long-term parking.

## **Purpose of the Panel**

The Citizens Panel will consider the views of parking users and evidence on parking in Nelson Bay, including data collected via survey instruments, receive presentations from various experts, and provide recommendations to Council on short and long-term parking options.

## **The Panel Workshop**

The Panel Workshop took place on Friday 16 November from 4pm to 7pm at the Little Nel, and on Saturday 17 November from 9.15am to 4pm at the Nelson Bay Golf Club. There were 16 attendees on the Friday and 17 attendees on the Saturday.

Participants discussed the range of needs that parking had to address and the most important things about parking. They discussed targeted solutions for various demographic or user groups and considered CBD and out of CBD solutions.

## **Outcomes of the Panel Workshop**

The Panel agreed on a series of short and long term recommendations, including:

- Improvements to traffic flow, such as wayfinding, road marking, one way streets, and drop off areas for tourist buses
- Improvements to utilisation, such as enforcement of parking limits, improvements to parking facilities, improved cycling infrastructure
- Investigations on the potential of additional parking areas including out of centre areas, as well as smart parking opportunities
- Collecting additional data to better inform parking management.

These recommendations will be presented to Council early 2019.

# 1 Introduction

In 2012, Port Stephens Council adopted the Nelson Bay Town Centre and Foreshore Strategy. The Strategy sought to make the city “more attractive to tourists, the business community and residents.” Despite significant growth in the housing industry, private investment in the town and foreshore has not been as successful as initially anticipated.

In order to understand this limited growth and investment, a Discussion Paper on the Strategy was exhibited in February 2017. A total of 149 submissions were received, of which 52 addressed traffic and parking issues.

The submissions indicated concern amongst the community about the provision and availability of parking in and around the foreshore. The submissions expressed a range of views and solutions to parking issues, and some also questioned whether a parking problem existed.

The most common concerns raised in the submissions were:

- The town centre experiences significant traffic and parking problems, especially during peak periods
- The current dilapidated state of the partially closed Donald Street Car Park is an eyesore, with the community concerned about a feasible long-term solution given that two of the existing car parks in the town centre are only temporary solutions
- Some submissions question the accuracy of the GHD Traffic and Transport Study that was completed in 2012.

A number of submissions also identified that the town centre needs more and/or improved car parking in order to compete with the nearby Salamander Shopping Centre.

Consultation culminated into a revised Strategy. Considering the above, the revised Strategy recommends a Citizens Panel be formed to discuss options for short-term and long-term parking.

Citizens panels are a deliberative form of engagement that simulate government decision-making. They bring together community members with diverse views on an issue, expose them to a range of views and evidence on the issue, and then ask the community members to provide non-binding recommendations on how to proceed with the issue.

UTS Centre for Local Government (CLG) has been commissioned by Council to organise and facilitate a Citizens Panel to discuss short and long-term parking solutions in Nelson Bay.

## 1.1 The Panel Workshop

The Panel Workshop took place on Friday 16 November from 4pm to 7pm at the Little Nel, and on Saturday 17 November from 9.15am to 4pm at the Nelson Bay Golf Club. There were 16 attendees on the Friday and 17 attendees on the Saturday.

Participants discussed the range of needs that parking had to address and the most important things about parking. They discussed targeted solutions for various demographic or user groups and considered CBD and out of CBD solutions.

Facilitated discussions included:

- What needs does parking address?
- What is the most important about parking?
- Suggestions for improvement.

The Panel then formed a series of recommendations which will be presented to Council.

## 1.2 This Report

This Report describes the process followed during the Panel Workshop, the information provided to the Panel, key topics of discussions and outcomes of these discussions.

It lists a series of recommendations which were agreed on during the Panel Workshop.



## 2 The Panel Workshop

The Panel Workshop took place on Friday 16 November from 4pm to 7pm at the Little Nel, and on Saturday 17 November from 9.15am to 4pm at the Nelson Bay Golf Club.

CLG facilitated the event.

### 2.1 Panel recruitment

Recruitment of the Panel occurred during pre-Panel Workshop activities (refer Section 2.3).

There were 16 attendees on the Friday and 17 attendees on the Saturday. Table 1 below provides high level demographic characteristics of Panel members.

**Table 1 Demographic Characteristics of Panel members**

Characteristics	
Gender	
Female	7
Male	10
Age	
25-35	2
35-44	1
45-54	1
55-64	5
65-74	4
75+	4
Suburb of residence	
Nelson Bay	14
Corlette	2
Soldiers Point	1
Fingal Bay	1
Shoal Bay	1

### 2.2 Key information presented

Participants were first presented with an introduction on the Citizens Panel Workshop process and purpose, and overview of the two days.

Council staff then presented the following:

- The strategic context which led to the formation of the Panel, from the Hunter Regional Plan to the Nelson Bay Strategy
- The geographical area to be the focus of the Panel Workshop

- Existing knowledge and parking surveys showing parking space utilisation in the town centre
- What Council have done to address traffic and parking (e.g. shared zones, temporary car parks)
- Some of the local challenges including topography
- Council land/assets and leased sites
- Opportunities including technology, shared mobility, cameras.

CLG presented:

- Demographics and forecasts, including tourism trends
- Brief overview of previous work undertaken by GHD and key findings. It is noted that some panel members did not agree with the GHD finding that there is capacity in the town centre at all times during a typical weekday (with the exception of Tomaree Street and Government Road temporary car parks, and Donald St West close to capacity)
- Key findings from CLG research (pre-Panel Workshop activities – refer to next section)
- Overview of challenges for managing parking in centres and coastal areas, noting that behind parking pressures exists an important tourism role played by Nelson Bay, with many benefits on the town.

CLG facilitated discussions including:

- What needs does parking address?
- What is the most important about parking?
- Suggestions for improvement.

## 2.3 Pre-Panel Workshop activities

In order to inform the Panel and gather additional evidence on community views about parking, CLG conducted a series of surveys prior to the Panel Workshop, which also served as the recruitment method for the Citizens Panel.

Analyses of all surveys and a sample of the survey instrument are provided in Appendices A to D.

### 2.3.1 Survey Format

The surveys included:

- **Computer Aided Telephone Interviewer Phone Survey:** Between 10 and 17 September 2018, a phone survey of 255 people from Nelson Bay and surrounding areas was conducted by YouGov Galaxy on behalf of CLG. The survey followed a random dial methodology and the respondent profile was closely matched to the Census profile of Port Stephens local government area to ensure representativeness
- **On-Ground Survey in Nelson Bay:** CLG conducted intercept surveys in the Nelson Bay town centre on Sunday 30 September 2018. On ground interviews were used to capture the views of non-resident parking users.

Both surveys collected information on how respondents use and experience parking in Nelson Bay and their views on different short and long term parking options.

Council also ran a self-selected online survey hosted on Council's Have Your Say website during the same period (10 September to 8 October 2018). The survey also collected information on how the respondents use and experience parking in Nelson Bay and their views on different short and long term parking options, however it was open to anyone to participate in and is not considered representative of the views of the broader community.

The total number of survey participants is summarised in Table 2.

**Table 2: Survey responses**

Survey	Survey Responses
Phone survey	255
Online survey (Have Your Say)	73
On-ground surveys in Nelson Bay	47
<b>Total Responses</b>	<b>375</b>

### **2.3.2 Content of surveys**

The surveys explored how people use and experience parking in Nelson Bay town centre and the views of parking users toward a range of potential solutions.

The surveys were divided into three parts. The first part focused on how people use and experience parking in Nelson Bay. The second addressed potential solutions to parking issues in Nelson Bay. The final part included demographic questions.

#### **Part One – Parking Usage and Experience**

The first part of the survey focused on how respondents use parking in the Nelson Bay town centre, including:

- Purpose of driving to the town centre and requiring a park
- Locations where parking is used
- Length of time that parking is required
- Frequency of driving and requiring a park
- Time of the year
- How well parking meets their needs
- Levels of parking provision.

#### **Part Two – Potential Options for Solutions**

Six potential solutions to parking issues in Nelson Bay were designed by Council. Survey respondents were asked to rate the usefulness of these and/or identify other potential useful solutions. The options were:

1. Install parking metres in the town centre and remove parking metres at the foreshore to ensure better turnover
2. Use of parking technology including road sensors and CCTV monitoring to better manage demand
3. Extension of one-way traffic flow on Stockton and Yacaaba streets to increase on street parking provision
4. Re-development of parking stations and Donald Street east and west car parks to increase parking provision
5. Park and ride shuttle bus service to better manage demand for major events and workers
6. Permits for free parking for local residents, ratepayers and businesses.

#### **Part Three – Demographic Questions**

These questions sought to ensure representativeness of the samples, with questions in relation to age, employment, education, household, home ownership, length of time residing in Nelson Bay, type of dwelling, industry of business.

### 2.3.3 Key Findings

In terms of using parking in Nelson Bay, the surveys indicate that:

- Most residents in the area use parking in the town centre a couple of times a week or daily, whilst visitors from further afield use parking a few times a year
- Most residents in the area travel to the town centre for grocery or retail shopping
- Generally, people who travel to Nelson Bay to visit the foreshore, the marina, friends or family do not park in the town centre
- Residents of Nelson Bay and surrounds tend to require parking for a couple of hours or less, while visitors tend to require parking for a couple of hours or more.

In terms of concerns in relation to parking in the town centre:

- The majority of respondents think parking does not meet needs well whilst a quarter of them think it does meet needs well. People aged 45-64 are more likely to think that parking does not meet the needs of users
- Those parking users whose needs are not well met include cars with boats, trailers and caravans, visitors, local businesses and local workers, and local residents, whilst the needs of buses and coaches are relatively well met
- There is some uncertainty as to whether parking meets the needs of people with mobility issues, parents with prams, and trucks and delivery vehicles
- Residents from the broader Tomaree Peninsula tend to experience greater difficulties finding a park than residents of Nelson Bay suburb
- Respondents are not as concerned about finding a park when they go shopping, when going to work, or visiting friends/family. Most users find it hardest to park in the town centre, and at the marina and foreshore, with parking at businesses or services also difficult
- In general, people think there is not enough parking outside shops in the Nelson Bay centre, along the foreshore, at the marina, at the visitor information centre. In particular, residents living outside Nelson Bay or people aged 45-64 tend to think there is not enough parking
- Most concerns are for parking for longer than two hours
- Residents who live outside Nelson Bay suburb are more concerned about finding a park and experience more difficulties during holiday periods than Nelson Bay residents
- Visitors are also concerned with finding a park. They think that there is not enough parking at shops in the Nelson Bay centre, at the foreshore, the marina, the visitor information centre, Donald Street and Little Beach
- “Not enough parking” is not always the explanation for parking concerns. For example, while people aged 18-44 are more likely to be concerned about parking along the foreshore than other age groups, they are more likely to say that there is enough parking at the foreshore. On the other hand, while respondents aged 65+ are less likely to think that there is enough parking at the marina or at the foreshore, they are also less likely to be concerned with parking at the marina or at the foreshore.

In terms of potential options for solutions:

- Most people think that redeveloping parking stations, issuing parking permits and introducing shuttle bus services with a park and ride station are the most useful ways to address parking issues in Nelson Bay
- Most people do not think that installing parking metres in the town centre and removing them at the foreshore or parking technology would be useful
- The majority of respondents who suggested additional solutions indicated a need for more public off-street parking through the construction of a new multi storey car park or an upgrade of the Donald Street car park.

There are differences of experiences and opinions between age groups (e.g. 18-44, 45-64 and 65+) and places of residence (e.g. resident of Nelson Bay suburb, resident of the wider Tomaree Peninsula or visitor) which are further described in the following section.



### 2.3.4 Demographic subgroups

Results from CLG research were refined into a profile of demographic subgroups as per Tables 3 and 4, by age group and by origin.

**Table 3 Age groups**

Age group	
18-44	<ul style="list-style-type: none"><li>• A larger proportion travel and require a park in the town centre daily</li><li>• Travel to the town centre mostly for shopping (like other age groups) but also work</li><li>• More likely to need a park for the whole day (but a majority need parking for a couple of hours or less)</li><li>• More positive about parking in general for local residents</li><li>• Concerned about parking in the town centre generally though, and at the foreshore and marina</li><li>• More likely to think that there is enough parking</li><li>• More preoccupied with parking for parents with prams</li><li>• More likely to think that a shuttle bus services/park and ride facility is useful, as well as the use of parking technology, but do not think that they are the most useful solutions.</li></ul>
45-64	<ul style="list-style-type: none"><li>• Travel to the town centre and require parking a couple of times a week</li><li>• Travel to the town centre mostly for shopping, but also for entertainment/ food/ dining, to access health, banking or other services, then work</li><li>• Less likely to think that parking responds to needs, and less positive about parking in general for local residents</li><li>• More preoccupied with local businesses, people who work in local businesses, local residents and people with mobility issues. Also more concerned with buses and coaches, and cars with boats, trailers, caravans</li><li>• More likely to think there is not enough parking</li><li>• Less likely to support the extension of way traffic flows</li></ul>
65+	<ul style="list-style-type: none"><li>• Travel to the town centre a couple of times a week or less</li><li>• Travel to the centre for shopping and also to access health and other services, then for entertainment/food/dining</li><li>• Preoccupied with mobility issues</li><li>• Less certain about issues for parents with prams, buses and coaches, people who work in local businesses, cars with boats, trailers and caravans and trucks and delivery vehicles</li><li>• Higher level of unconcern for parking when going shopping, along the foreshore, at the marina, at businesses or services</li><li>• More likely to think there is not enough parking at the visitor information centre</li><li>• More likely to be uncertain about parking technology and extension of one-way traffic flows.</li></ul>

**Table 4 Origin**

Origin	
Residents of Nelson Bay suburb	<ul style="list-style-type: none"> <li>• Travel daily more often</li> <li>• Require parking for less time than people from outside Nelson Bay: less than a couple of hours</li> <li>• Significant majority of residents travel to the town centre for shopping</li> <li>• More likely to think that parking responds well to needs, including needs of local residents, people with mobility issues, cars with boats, trailers, caravans</li> <li>• Less likely to be concerned about parking when going shopping, to businesses, or in the town centre than non-Nelson Bay suburb residents</li> <li>• Preoccupied about parking at the foreshore, at the marina and in the town centre, particularly during holiday periods, major events and weekends</li> <li>• Think that redeveloping parking stations is useful, but less certain than non-Nelson Bay suburb residents</li> <li>• More likely to think that parking metres in the town centre (and removal at the foreshore) is useful</li> <li>• More likely to think that shuttle bus services represent the most useful solution.</li> </ul>
Tomaree Peninsula residents (not Nelson Bay suburb)	<ul style="list-style-type: none"> <li>• Travel to Nelson Bay a couple of times a week, mainly for shopping, but also for entertainment, dining, food or to access health and services</li> <li>• Need parking for a couple of hours</li> <li>• More preoccupied about parking in general, also in relation to cars with boats, trailers, caravans and people with mobility issues</li> <li>• Find it harder to park at all times of the year in all locations</li> <li>• More likely to think that there is not enough parking than Nelson Bay residents, particularly outside shops, along the foreshore, at the visitor information centre, or anywhere</li> <li>• More likely to be critical of installing parking meters in the town centre and removing them at the marina. Instead, more likely to favour the extension of one-way traffic flows and redevelopment of parking stations.</li> </ul>
Visitors	<ul style="list-style-type: none"> <li>• There is a level of concern with finding a park in Nelson Bay</li> <li>• In particular, there may not be enough parking in the centre in general, along the foreshore, at the marina, at the visitor information centre</li> <li>• Visitors park for a range of different durations but a majority park for at least a couple of hours</li> <li>• Preferred solutions are parking permits for local residents, ratepayers and businesses and a shuttle bus service.</li> </ul>

### 2.3.5 Implications for the Panel Workshop

Considering the findings of the surveys, it was recommended that the Panel Workshop investigates the following:

- Users with needs that are not met well, in particular cars with boats, trailers and caravans, visitors, local businesses and local workers, and local residents
- Specific needs that are more uncertain than others: people with mobility issues, parents with prams, trucks and delivery vehicles

- Geographical areas of concern: town centre, marina, foreshore, shops in the town centre, visitor information centre
- Reasons for concern other than a potential shortage of car spaces
- Times of the year when parking difficulties occur most: weekends, major events, holiday periods
- Parking movements between the town centre, marina and foreshore
- Preferred options: redeveloping parking stations, issuing parking permits and introducing shuttle bus services with a park and ride station, and extending one way traffic flows.

## 3 Key areas of discussion

This Chapter describes the key topics that were discussed during the Panel Workshop, and outcomes of these discussions.

### 3.1 Needs addressed by parking and importance of parking

CLG facilitated a discussion with the Panel about participants' needs in relation to parking, and about the most important aspects of parking.

#### 3.1.1 Needs addressed by parking

Participants agreed that parking needs to be provided in a range of "types", including public and private, on and off street, but also with suitable parking timing for different services and different times of the year (for example limited in time for peak periods), paid or free, long stay/short stay.

According to the Panel, parking addresses a range of needs and purposes every day of the week, including when:

- Shopping (with strong reference made to Woolworths)
- Going to services including medical, government, banking, post office, beauty, real estate, as well as churches
- Using entertainment facilities (including cinema), and dining/ takeaway
- Recreating, including at the foreshore and marina.

Participants also identified that parking is to address the needs of the following user groups:

- People with disabilities or sickness, and elderly people
- Professionals, workers, including trade workers, with different sub-needs. For example, it was mentioned that parking early in the morning was usually manageable (e.g. prior to 8.30am), which was difficult for workers who need to park after that time, sometimes for the whole day, and for others who may need to come and go for short term periods only throughout the day
- Businesses and business keepers/employees in the CBD, that need easy access to shops for their customers as well as for themselves, and also need parking turnover
- Locals, residents of Nelson Bay and adjoining areas
- Tourists, with long term parking
- Emergency vehicles
- Taxis
- Buses and mini-buses. Tourist buses need to operate, and therefore need space, but it was identified that they require larger spaces
- Walking was also mentioned, including a need to ensure accessibility for parents with prams and young families, well designed footpaths, efficient lighting, and safety.

#### 3.1.2 What is most important about car parking?

A second aspect of the discussion asked participants to state the most important aspects of parking.

The Panel's answers are summarised below:

- Availability of parking spaces
- Adequacy



- Convenience
- Parking space sizes and line positioning
- Consistency / appropriateness on timing restrictions
- Directional signage, maps, phone applications
- Turnover
- Traffic flow
- Affordability
- Ease of access/accessibility
- Safety, including better lighting at night
- Good condition, with some car parks currently not structurally sound, poorly lit, or difficult to access for people with disabilities
- Destination
- Proximity to services.

### 3.1.3 General directions

Based on the general needs, specific user groups' needs and important elements of parking identified above, common themes and general directions were identified to guide the next discussion. These are listed below:

- a) Accessibility
- b) Safety
- c) Place management: traffic flow and utilisation
- d) Active
- e) Public
- f) Businesses, such as retail, services, tourism, dining/entertainment
- g) Future thinking
- h) Additional data.

## 3.2 Suggestions for improvement

Participants were asked to suggest potential solutions for each general direction during a World Café exercise.

### a) Accessibility

In relation to accessibility, the Panel suggested the following potential solutions:

- There should be more and clearer directional signage
- Traffic management flows should be improved
- Loading zones should be adequate and rationalised, in particular their location should be reviewed
- There should also be a review of afterhours parking (from 6pm, 7 days a week)
- There should be more 5, 10, 15 minute parking to increase turnover
- Footpaths should be upgraded to improve accessibility particularly for parents with prams and people with disabilities.

## **b) Safety**

In relation to safety, the Panel suggested the following potential solutions:

- “Awareness” of shared zones should be improved
- The location of pedestrian crossings should be improved, potentially by connecting to car parks, as well as street lighting
- There should be more police in town.

## **c) Place management: traffic flows and utilisation**

### **Traffic flows**

Traffic flows could be improved which could be achieved by creating more one way streets, for example on Yacaaba and Stockton streets. This in turn would create opportunities for more angle parking.

It was mentioned that existing shared zones were not clearly marked. Awareness of shared zones should be increased with better marking. Stockton Street could potentially become a shared zone.

Improving parking infrastructure, including better line marking, directional signage, and improved grading, would also have benefits in terms of traffic flows.

A potential bypass for people not coming into Nelson Bay was also discussed, which could be achieved by extending Dowling/ Austral Street to Government Road – Shoal Bay. It is noted that this bypass has already been discussed in the community in the past.

### **Utilisation**

There is a tension between all day parking and a need for increased turnover.

Improved time management of parking (i.e. restricted vs unrestricted times) could help to address this tension, potentially in the following forms:

- Parking time limits need to be rationalised (and better enforced)
- Parking should be paid in certain areas. Car parking facilities/off street such as Donald Street East could be paid parking if necessary
- In addition, locals should benefit from parking permits.

The underutilisation of loading and emergency zones, was also discussed. A review of loading and emergency zones, including their locations, is warranted.

The underutilisation of the Donald Street East site was also identified.

Coach parking management should also be improved, with a review of location and times noted as essential by the Panel. A five minute drop off/pick up zone with active enforcement was discussed.

## **d) Active**

Different modes of visiting the town and alternatives to individual driving were discussed.

In terms of active movements, a range of solutions were discussed and are described in Table 5. The idea of an “active centre” emerged.

**Table 5 Active movements**

	Walking and cycling	Cycling	Walking
Infrastructure	Rationalise shared paths (and complete construction) One coastal path (e.g. to Fingal and Shoal Bay) Widen footpaths to allow for walking, riding and use of mobility vehicles Safe access and surfaces for all pathways Better lighting in CBD Security / CCTV	Rationalise bike paths and improve connections Provide bike racks and locked storage	Rationalise walkways Address access for people with disabilities Parents/prams: better and continuous footpaths Better located pedestrian crossings
Information	Signage including directional and distance Mapping available including at Visitor Information Centre Yellow brick road wayfinding (all poles to be marked/painted to indicate directions)		

**e) Public**

The term “Public” was mostly understood by the Panel as “Public transport”.

Improved public transportation and bus routes were discussed, as well as the potential for private buses/minibuses, particularly in relation to people with mobility issues.

Bus parking was also discussed, suggesting that enforcement was a problem and recommending that 5 minutes drop off/pick up areas be developed. There could be designated out of town parking for buses (potentially next to the Council depot).

Other understandings of the term “Public” were in relation to public realm:

- Using other areas such as the Tomaree Sports complex
- Available parking could benefit from signage, applications and technology
- Donald Street East car park needs addressing.

**f) Businesses**

Recognising the needs of businesses in Nelson Bay, the Panel also worked on preparing suggestions for different types of businesses, as identified by Table 6.

**Table 6 Solutions per business group**

Businesses	
Retail	<ul style="list-style-type: none"> <li>Utilising vacant areas behind businesses (and develop signage for them)</li> <li>Shorter parking times (area specific)</li> <li>Paid parking (not for locals)</li> <li>Close proximity to work</li> <li>Pre-paid staff parking</li> <li>Time parking in Woolworths (1 to 3 hours) and improve enforcement</li> </ul>
Trade workers	Buy a parking spot
Tourism	<ul style="list-style-type: none"> <li>Hop on - hop off shuttle services</li> <li>Local mini buses</li> <li>Designated areas for tourist buses and better enforcement in drop off zones</li> <li>Relocate visitor centre to the intersection of Nelson Bay Road and Port Stephens Drive OR retain existing location. Establish portable Visitor information centre – perhaps only during the peak season</li> <li>Keep spaces for caravans, boat trailers</li> <li>Out of town centre parking for vans and trailers, possible free parking on sports grounds (RVs/campers)</li> <li>Improve signage and develop phone applications. Large digital sign indicating available parking in Nelson Bay and Church Street roundabout</li> </ul>
Entertainment	<ul style="list-style-type: none"> <li>Creation of “special” parks e.g. on Crown Land around the New Year period</li> <li>Introduce special event parking including shuttle services</li> <li>Provide bus into town from outers areas</li> <li>Well lit parking with safe and secure night lighting and signage. Important for walking and parking.</li> <li>Flexible parking during evening and day</li> <li>Some parking spaces that are “no parking” during the day could be made available to support night time economy</li> </ul>
Services	<ul style="list-style-type: none"> <li>Parking close to services</li> <li>No time restrictions</li> <li>More disabled parking nearby</li> </ul>
Loading zones	Some spaces that are currently loading zones could be made available for portion of the day, for example some spaces are loading zones for morning deliveries, and could be available for the public the rest of the time



#### **g) Future Thinking**

“Future thinking” was mainly thought about by the Panel in relation to technology. Technology was mentioned multiple times as a way to improve parking in Nelson Bay, via plate recognition, cameras, phone applications, signs and sensors that include information on the location and number and available spots, and “smart” parking solutions to identify vacant spots. More advanced technology was also mentioned, such as Artificial Intelligence and drone parking.

“Future thinking” was also considered by the Panel in terms of future planning. It was suggested that a covered car parking facility (secure and safe) would make parking a more pleasant experience, and the Nelson Bay Bypass should be considered.

#### **h) Additional data**

The Panel was asked to consider which type of additional data should be collected in order to support and improve parking management. Suggestions included the following:

- How long are vehicles staying
- How many workers come into town to park
- Count night-time occupancy of units/apartments
- Better data on day-trips into town and “Visit Friends and Relatives” market
- Two/three day visitors
- Data in relation to bike riding (including Visitor Centre bikes)
- Tourism trends – what will tourism look like in the future
- Grocery trends
- Tourist buses/minibuses – numbers, length of stay. What is the future of tourism (mini buses, self-drive, other)?
- When are deliveries needed in order to rationalise loading zones (consult with businesses)
- Traffic movements.

It was noted that Destination Port Stephens (DPS) could provide some of this information, in particular visitation figures.

### **3.3 Additional parking**

During the discussion on general directions, and as identified in the previous section, the Panel interrogated whether the use of Council parking areas and the use of vacant land had been maximised.

This topic was further discussed and refined during a separate facilitated discussion, and suggestions for investigations are listed below:

- Council land/Council owned facilities:
  - o Parking at Tomaree Sports Complex/Anna Bay Oval, including for special events as a designated area
  - o Underutilised Donald Street East parking site: the block could be redeveloped with an active street frontage, which would be consistent with the overall strategy to create a link from the foreshore to the town centre. A concept plan exists for commercial/mixed use (4 storeys), noting that views may need addressing. It is also noted that Council has resolved to prepare a feasibility report on the redevelopment of this site
  - o Donald Street West parking site: an additional storey could be provided, or an underground expansion. Could this be a transport hub?
- Crown land (Council is trustee):
  - o Two locations on Magnus Street (between Magnus Street and Victoria Parade)

- Bowling club – some participants suggest that this is public parking and that better signage would suffice to increase utilisation
- Tennis courts.
- Private land:
  - Corner of Yacaaba Street (with a development application lodged) – opportunities are limited.
  - Rear of businesses, including cinema complex.

It was also mentioned that there was a shortage of private garage parking spaces (e.g. in residential units) and that there was a strong demand for these.

Funding sources for the provision of additional parking were discussed, including the possibility of a business levy, special rate levy, or loans.

It was mentioned that Council should have a look at other coastal areas and how they manage parking.

### 3.4 Parking out of the town centre

Discussions about general directions also identified parking out of the town centre as a potential solution in a range of ways.

It was mentioned that workers, a number of which need all day parking, could park outside the town centre and use other means to get to their workplaces. It was also mentioned that some offices/workplaces may not need to be based in the town centre. Validated parking was suggested (e.g. encourage to park outside the town centre by “purchasing” a park elsewhere, as an entitled private space).

The visitor centre was suggested to be relocated, which created contention in the group. Another suggestion was to create a portable facility, particularly during peak season.

Parking outside the town centre was also discussed for special events, and for vans and trailers.

A shuttle bus into town was discussed, which could be operating at certain times only (peak times).

A scenario proposed by some of the participants which would address parking particularly during peak periods is described below:

Visitors coming into Nelson Bay (from west) are offered the opportunity to decide whether or not they wish to drive into the town centre. On the way to the town centre, a facility, much like a “transport hub”, offers signage boards displaying constantly updated information on available parking spaces in the town centre.

Should visitors decide not to travel to the town centre, they can park in this facility and use a shuttle bus into the town centre.

Should visitors decide to travel to the town centre, a plate recognition system applies which will charge every visitor after an agreed amount of time. This can function through a phone application.

All locals and business workers are exempted. People with disabilities can also be exempted. This system will also allow constant monitoring of traffic movements in and out of Nelson Bay.

## 4 Recommendations of the Panel

Based on the identified suggestions and potential solutions, the below recommendations were agreed to by the Panel at the Workshop.

There was a general consensus around the importance of considering the regional context around Nelson Bay. The town centre services a wider area across the Peninsula. While there may not have been a lot of development in Nelson Bay, development has happened in surrounding areas.

Tourism is also a key aspect of how the town functions and tourism trends are changing and will continue to change in the future. Many day trippers and people who travel to Nelson Bay to visit friends and relatives are often not counted (e.g. Census) but impact on traffic and parking. If parking is too difficult, there is a risk that some visitors may bypass Nelson Bay to go to other areas.

The Panel also recognised that parking was closely linked to traffic flows and traffic infrastructure. It was also accepted that technology could be useful to address parking, however was only one aspect of the solution and had to be part of a wider complementary system.

Tables 7 and 8 below provide a summary of the Panel's recommendations for Council to consider.

Short term recommendations, as per Table 7, focus on improvements that could occur within a relatively short time by making changes to traffic flows and generally improving parking utilisation around the town centre.

**Table 7 Short term recommendations**

Number	Short term recommendations
	<b>Improvements to traffic flow</b>
1	Improve wayfinding in Nelson Bay, with additional and clearer signage, including directions, but also distances to landmarks, businesses and parking spaces, duration of parking, signage for walkers and cyclists, and grading system for walks ("easy", "difficult")
2	Make improvements to road markings and to the visibility of shared zones
3	Investigate the creation of additional one way streets, for example Yacaaba and Stockton streets. This in turn will create opportunities for additional angle parking (approximately 30-40 spaces on Yacaaba Street for example based on Council staff estimates). Thorough consultation will need to occur around this particular recommendation (e.g. residents, business owners)
4	Improve cycling/ walking in the town centre and wider Nelson Bay, including: <ul style="list-style-type: none"><li>• Rationalisation of bike paths and walkways</li><li>• Additional bike racks and locked storage</li><li>• Council to amend the Pathways Plan in order to connect bike tracks to schools. It is suggested by the Panel that improved bike connections to schools might generate less car traffic to schools (e.g. children can ride to schools as opposed to being driven and dropped off)</li></ul>
5	Investigate the creation of a five minute drop off/pick up areas for tourist buses, with designated areas created for bus drivers to stay between drop off and pick up, which would provide necessary facilities (e.g. toilets, food/beverage)
	<b>Improvements to utilisation</b>

6	Improve the enforcement of parking limits
7	Prepare material with information in relation to parking, including maps for visitors indicating where parking facilities/spaces are, but also distances to activities etc.
8	Undertake improvements to parking facilities including line marking, better lighting, disabled access, grading, CCTV, covered parking
9	Rationalise parking limits and times, with: <ul style="list-style-type: none"> <li>• A review of the different time zones (e.g. 5, 10, 15 minute parking zones) and of their location</li> <li>• Paid parking in certain areas/ car parks</li> <li>• Permits/times for locals</li> </ul>
10	Prepare a review of: <ul style="list-style-type: none"> <li>• Coach/bus parking</li> <li>• Afterhours parking from 6pm 7 days a week</li> <li>• Loading and emergency zones</li> </ul>
	<b>Additional provision</b>
11	Investigate the potential of some areas/ land to be used for parking, to ensure a maximised utilisation of Council parking areas and vacant land: <ul style="list-style-type: none"> <li>- Council land/Council owned facilities:               <ul style="list-style-type: none"> <li>o Parking at Tomaree Sports Complex/Anna Bay Oval, including for special events as a designated area</li> <li>o Donald Street East, noting that Council has resolved to prepare a feasibility report on the redevelopment of the Donald Street East site</li> <li>o Donald Street West, partially Council owned (for additional parking)</li> </ul> </li> <li>- Crown land (Council is trustee):               <ul style="list-style-type: none"> <li>o Two locations on Magnus Street (between Magnus Street and Victoria Parade)</li> <li>o Bowling club</li> <li>o Tennis courts</li> </ul> </li> <li>- Private land:               <ul style="list-style-type: none"> <li>o Rear of businesses</li> </ul> </li> </ul>

In terms of longer term recommendations, and as per Table 8 below, the Panel recognised the usefulness of technology to improve the utilisation of parking in Nelson Bay, in association with other solutions.

Out of town centre solutions also exist which acknowledge and address the changing nature of parking challenges in Nelson Bay during peak periods.

**Table 8 Medium to long term recommendations**

Number	Medium to long term recommendations
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12	<p>Investigate “designated areas” for parking outside of the town centre in association with a shuttle bus/circular bus route, potentially for certain times of the year only.</p> <p>Such designated areas may also exist, to some extent, on a permanent basis, in order to encourage drivers, for example business employees, to park outside the town centre by “purchasing” a park elsewhere (“entitled space”).</p> <p>The Panel noted that a car parking facility outside the town centre would need to be attractive to drivers and be developed with high standards (e.g. shade, toilets etc).</p>
13	Resume previous work done on a potential alternative route to outer areas (Shoal Bay/Fingal Bay)
14	Implement Pathways Plan
15	<p>Investigate “smart parking” opportunities, including but not limited to the following:</p> <ul style="list-style-type: none"> <li>- Signage to include count of available spaces and direction/distance to them</li> <li>- Cameras linked to signage to identify and direct to available spaces</li> <li>- Plate recognition to identify parking users, generate data, but also enable remote payment i.e. users (potentially only non-locals) are identified by a sensor as they enter the CBD and start paying a fee after a given number of hours (or straightaway depending on the time of the year)</li> <li>- Technology linked to smartphones via applications</li> <li>- Use Artificial Intelligence (drone parking)</li> </ul>
16	<p>Collect additional data in order to improve parking management, on an ongoing basis and in collaboration with relevant stakeholders, shop owners, and potentially volunteers, including but not limited to the following:</p> <ul style="list-style-type: none"> <li>- How long are vehicles staying</li> <li>- How many workers come into town to park</li> <li>- Count night-time occupancy of units/apartments</li> <li>- Better data on day trips into town and “Visit Friends and Relatives” market</li> <li>- Two/three day visitors</li> <li>- Data in relation to bike riding (including Visitor Centre bikes)</li> <li>- Tourism trends – what will tourism look like in the future</li> <li>- Grocery trends</li> <li>- Tourist buses/minibuses – numbers, length of stay. What is the future of tourism (mini buses, self-drive, other)?</li> <li>- When are deliveries needed in order to rationalise loading zones (consult with businesses)</li> <li>- Traffic movements.</li> </ul> <p>The Panel notes that Destination Port Stephens (DPS) could provide some of this information, in particular visitation figures.</p>

These recommendations will be presented to Council early 2019.

An analysis of the evolution of views of Panel members is also included at Appendix E.

## 5 Conclusions and Next Steps

CLG was engaged by Port Stephens Council to organise and facilitate a Citizens Panel Workshop to discuss short and long term parking in Nelson Bay with the community.

The Panel Workshop took place on Friday 16 November and Saturday 17 November in Nelson Bay.

In order to inform the Panel and gather additional evidence on community views about parking, CLG conducted a series of surveys to collect information on how the community and visitors use and experience parking in Nelson Bay and their views on different short and long term parking options.

These surveys included:

- A random dial phone survey of Tomaree Peninsula residents
- An on-ground survey in Nelson Bay to target visitors in Nelson Bay.

Council also ran a self-selected online survey hosted on Council's Have Your Say website during the same period.

At the Panel Workshop, participants discussed the range of needs that parking had to address and the most important things about parking. They discussed solutions for various demographic or user groups and considered CBD and out of CBD solutions.

There was a general consensus around the importance to consider the regional context around Nelson Bay. The town centre services a wider area across the Peninsula.

Tourism is also a key aspect of how the town functions and should continue to be encouraged, noting that this sector continuously changes in terms of visitor profiles and travelling characteristics.

The Panel agreed on a series of short and long term recommendations.

Short term recommendations focus on improvements that can be addressed within relatively short timeframes by making changes to traffic flows and generally improving parking utilisation around the town centre.

In terms of longer term recommendations, the Panel recognised the usefulness of technology to improve the utilisation of parking in Nelson Bay, in association with other solutions.

Out of town centre solutions also exist that acknowledge and address the changing nature of parking challenges in Nelson Bay during peak periods.

These recommendations are to be presented to Council by Council staff and/or Panel members early 2019.

# Appendix A – Phone Survey

A random phone survey of residents from the Nelson Bay suburb and wider Tomaree Peninsula<sup>1</sup> was conducted from 10 September to 17 September 2018. The sample was sourced from an independent provider and included a mix of landline and mobile phone numbers.

Quotas for place of residence, age and gender were set so respondent demographics represented the Census profile for the area as accurately as possible. Respondents were advised the survey related to parking in Nelson Bay, their responses were confidential, and that participation was voluntary and they could withdraw at any time.

## Survey questions

Survey questions covered the following areas:

**Part 1** Questions focused on how people use and experience parking in Nelson Bay.

**Part 2** Questions focused on potential solutions to parking issues, based on a series of Council-designed potential solutions.

**Part 3** Demographics

A sample of the survey is included at Appendix B.

## 1. Demographics

In total, 255 respondents participated in the survey. Key demographics are listed in Table 9 below, and compared to Census data.

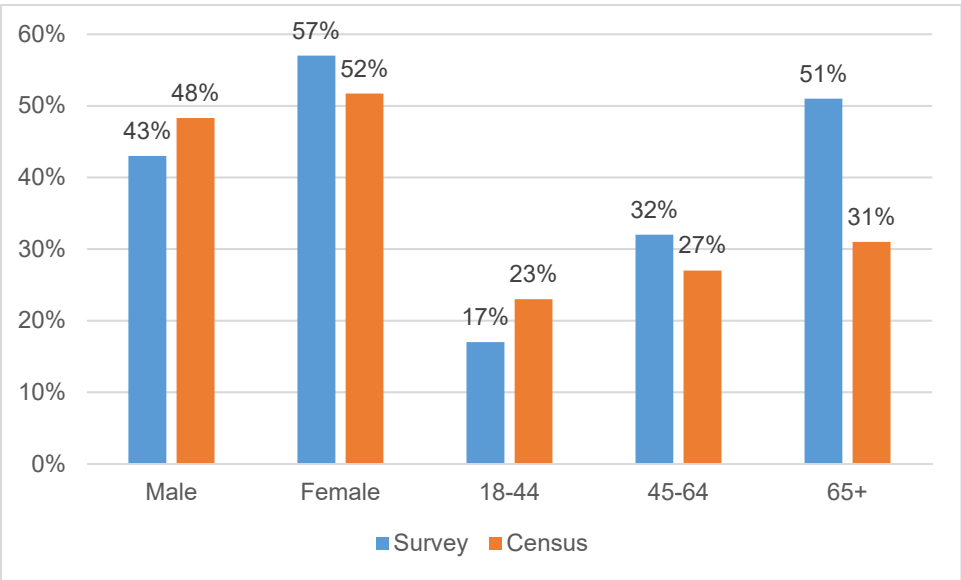
**Table 9: Demographics**

Respondents	Sample	Census 2016 (SA2)
Place of residence	<ul style="list-style-type: none"><li>56% of respondents lived in Nelson Bay (n=142)</li><li>44% lived in the wider Tomaree Peninsula (n=113).</li></ul>	27% of the Nelson Bay Peninsula (SA2) lives in Nelson Bay

<sup>1</sup> Including: Corlette, Salamander Bay, Soldiers Point, Fingal Bay, Shoal Bay

Figure 1 below compares survey and Census data in relation to gender and age.

**Figure 1 Gender and age (Survey vs Census)**



In addition:

- 64% of respondents were ratepayers (n=163)
- 36% lived at their current address for up to 10 years (n=93)
- 64% lived at their current address for more than 10 years (n=162).

## 2. Results

### i. Parking Usage and Experience

Most people use parking in the town centre a couple of times a week (57%) or daily (25%). Only a small proportion do not use a car when travelling to the town centre (2%). Those who travel to the town centre a couple of times a week by car are more likely to be aged 45 to 64 or live outside the suburb of Nelson Bay, whilst those who use parking daily are more likely to be under 45 or live in the suburb of Nelson Bay.

Answers to this question are shown in Table 10 below.

**Table 10 Frequency of travel to town centre and require parking**

Total	
Daily	25%
A couple of times a week	57%
A few times a month	12%
About once a month	4%
Never	2%



Most people travel to the town centre for grocery or retail shopping (61%), particularly residents of Nelson Bay suburb (83%). Those who travel to the town centre for this purpose are more likely to be under 45.

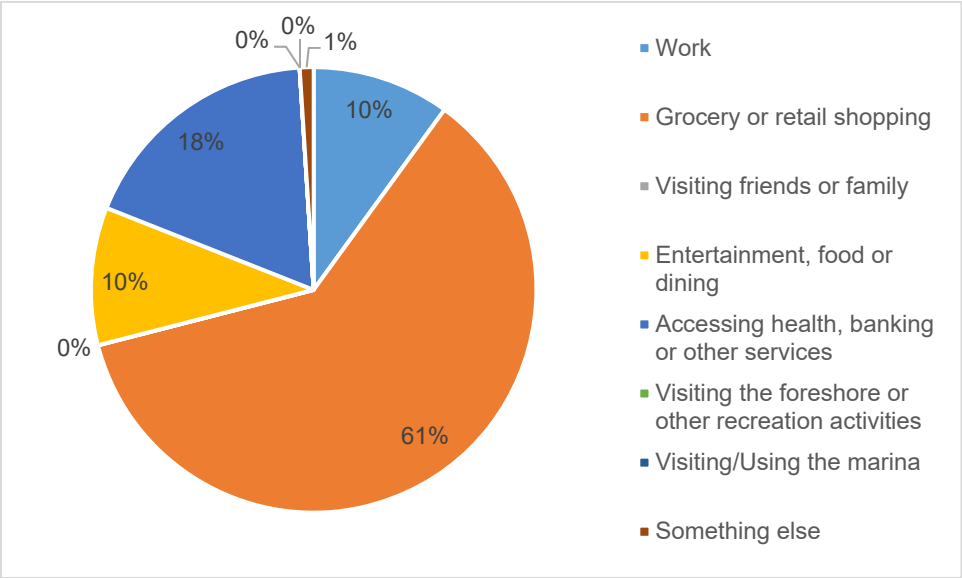
The second main reason for travelling to the town centre is to access health, banking or other services (18%). Those who travel to the town centre for this are more likely to be aged 65+, or live outside the Nelson Bay suburb.

Similar proportions of respondents travel to the town centre for entertainment, food or dining, or work (all about 10%). People who live outside the Nelson Bay suburb are more likely to travel to the town centre for entertainment, dining, and food.

Very few residents travel to the town centre to visit the foreshore, marina, or visit friends and family.

Answers to this question are shown in Figure 2 below.

Figure 2 Main purpose of trip to town centre



Most people use parking for a couple of hours or less (92%). People who use parking for less than half an hour are more likely to live in the Nelson Bay suburb, whilst people living outside the Nelson Bay suburb are more likely to require parking for longer (generally, a couple of hours).

Answers to this question are shown in Table 11 below.

Table 11 Length of time parking is required in town centre

Total	
Less than half an hour	5%
About half an hour	20%
An hour or so	42%
A couple of hours	25%

Total	
More than a couple of hours	4%
All day	3%
Not applicable	1%

Overall, when asked how well parking in Nelson Bay meets the needs of different users, most respondents indicated not that well or not well at all (70%) across almost all user categories, with higher rates for cars with boats, trailers and caravans, visitors, local businesses, and local worker, and local residents.

A larger share of respondents thought that needs were not met at all for cars with boats, trailers and caravans, local residents, people with mobility issues, trucks and delivery vehicles, and visitors.

Parking is also not considered to meet the needs of people with mobility issues, parents with prams, and trucks and delivery vehicles. However, the survey recorded some uncertainty over whether parking meets the needs of these users.

People who do not think parking needs are met are more likely to be females, aged 45-64, or ratepayers. Respondents over 45 are more likely to think parking does not respond well to the needs of people with mobility issues when compared to those aged 44 and under (58%). Respondents aged 45 to 64 (72%) are more likely to think this than those aged 65 and over (67%).

Overall, about a fifth of respondents indicated parking meets the needs of users well or very well (19%).

Respondents are more likely to indicate parking responded well to the needs of buses and coaches (34%) when compared to other user groups.

Residents of Nelson Bay are more likely to think parking responded very well to the needs of people with mobility issues (27%) when compared to those living further afield (17%).

Overall, people aged 45 to 64 are most likely to think parking does not respond well to the needs of different users. Those aged 65 and over are more likely to think parking does not respond well to the needs of different users than those aged 44 and under.

In particular, respondents aged 45 and over are more likely to think parking does not respond well to the needs of residents. Those aged 45 to 64 are more likely to hold this view than those aged 65 and over whilst respondents under 45 are more likely to think parking does respond well to the needs of residents. Respondents under 45 are also more likely to think the parking needs of parents with prams are not well met.

Respondents aged over 45 are more likely to think the needs of delivery vehicles and trucks and local businesses are not met well, particularly those aged 45-64 who are more likely to think they are not met well at all.

Respondents who think that parking does not meet the needs of cars with boats, trailers, caravans are less likely to be residents of Nelson Bay suburb.

Answers to this question are shown in Table 12 below by category.

**Table 12 How well does parking in Nelson Bay meet needs?**

	Extremely well	Very well	Not that well	Not well at all	Don't know
Local residents	1%	23%	35%	<b>39%</b>	1%
People with mobility issues	0%	19%	28%	<b>39%</b>	14%

Parents with prams	1%	17%	<b>32%</b>	24%	26%
Visitors	0%	19%	38%	<b>39%</b>	4%
Buses & coaches	3%	31%	<b>33%</b>	21%	12%
Local business	1%	17%	<b>44%</b>	33%	5%
People who work in local business	1%	15%	<b>43%</b>	34%	8%
Cars with boats, trailers, caravans etc.	1%	7%	24%	<b>61%</b>	7%
Trucks & delivery vehicles	0%	16%	28%	<b>38%</b>	18%

Most people indicated they are concerned about finding a park in the town centre (81%), the marina (75%), when accessing businesses or community services (73%), or the foreshore (73%). They are not as concerned about finding a park when shopping (62%).

People aged 18-44 are more likely to be concerned about finding a park at the foreshore, marina, and town centre. Those aged 45-64 are more likely to be concerned about finding a park when going shopping. Residents of Nelson Bay suburb and those aged 65 or over are generally less concerned.

Residents of Nelson Bay suburb are less concerned about finding a car park when going shopping, to businesses or services, in the town centre, than those living outside Nelson Bay.

People are less concerned about finding a park at work (17%), outside their own house, or when visiting friends & family (28%).

Answers to this question are shown in Table 13 below.

**Table 13 Concern with finding a car park**

	Unconcerned	Slightly concerned	Somewhat concerned	Very concerned	Extremely concerned
When you go shopping	<b>38%</b>	19%	19%	15%	9%
Along the foreshore	<b>26%</b>	16%	20%	19%	18%
At the marina	<b>24%</b>	15%	16%	21%	23%
When you go to work	<b>84%</b>	2%	5%	4%	6%
Outside your house or when visiting friends & family	<b>72%</b>	9%	8%	7%	4%

	Unconcerned	Slightly concerned	Somewhat concerned	Very concerned	Extremely concerned
When you go to businesses or community services	<b>27%</b>	17%	24%	19%	13%
In the town centre	18%	17%	21%	<b>24%</b>	19%

When asked what times and locations they experience difficulties finding a park, most respondents indicated they find it hard to park at the marina, town centre, and businesses/services and along the foreshore, particularly during holiday periods, major events and on weekends.

The majority of residents of Nelson Bay suburb are not concerned with finding a park, but their level of concern is higher at the foreshore, at the marina and in the town centre, particularly during holiday periods, major events and weekends.

Residents living outside Nelson Bay find it harder to park at all times for all categories (except the “outside your house or when visiting friends and family” category) than residents of Nelson Bay suburb.

During the week, about a fifth of respondents experience difficulties in all locations, although this rises to about a quarter of people experiencing difficulties in the town centre.

In contrast, more people indicated they do not find it as hard to park when they go to work, outside their house, or when visiting friends/family, or when grocery shopping.

Answers to this question are shown in Table 14 below.

**Table 14 Time when experience difficulties finding a park**

	During holiday periods	During major events	During weekends outside of holidays	During the week outside of holidays	Not concerned
When you go shopping	23%	15%	14%	12%	76%
Along the foreshore	35%	28%	29%	15%	63%
At the marina	41%	34%	33%	19%	56%
When you go to work	9%	8%	7%	6%	90%
Outside your house or when visiting friends & family	10%	6%	6%	6%	89%
When you go to businesses or community services	32%	25%	22%	18%	68%



	During holiday periods	During major events	During weekends outside of holidays	During the week outside of holidays	Not concerned
In the town centre	41%	35%	35%	27%	56%

When asked if there is enough parking in certain locations, about a third overall think there is not enough in any of the locations tested. These people are more likely to live outside the Nelson Bay suburb and be aged between 45 and 64 years.

Over a third indicated there is enough parking along the foreshore (36%) and slightly fewer indicated there is enough parking at the marina (29%). Fewer still indicated there is enough parking outside shops in the town centre (20%) and at the visitor information centre (13%). About half think there is enough parking outside the town centre (50%)

People aged 18-44 were typically more of the view there is enough parking across all the locations tested.

Answers to this question are shown in Table 15 below. Multiple answers were accepted.

**Table 15 There is enough parking**

	Total	Nelson Bay	Other area
Outside shops in the Nelson Bay centre	20%	28%	17%
Along the foreshore	36%	42%	34%
At the marina	29%	31%	28%
At the visitor information centre	13%	20%	10%
Outside the town centre	50%	55%	48%
None of these	33%	21%	38%

Respondents were asked to suggest locations where there needs to be more parking.

Of relevance to Nelson Bay:

- Town centre in general/CBD area
- Beaches
- Hospital
- Medical centre in Stockton Street
- Gan Gan Hill
- Little Beach boat ramp
- Lighthouse
- Skate parks
- Bowling club.

Specific streets are also mentioned: Wallawa Road, Yakabah Street, and Magnus Street.

Some suggestions include locations outside of Nelson Bay. The first location mentioned was Salamander Bay/shopping centre (54% of responses), then Shoal Bay.

## ii. Potential Options for Solutions

Respondents were asked to rate the perceived usefulness of six different parking solutions, and were given the opportunity to raise their own solution.

Most people indicated redeveloping parking stations, issuing parking permits and introducing shuttle bus services with a park and ride facility are the most useful ways to address parking issues. There are mixed views about the usefulness of parking technology, such as sensors. Most people do not think installing parking metres in the town centre and removing them at the foreshore would be useful.

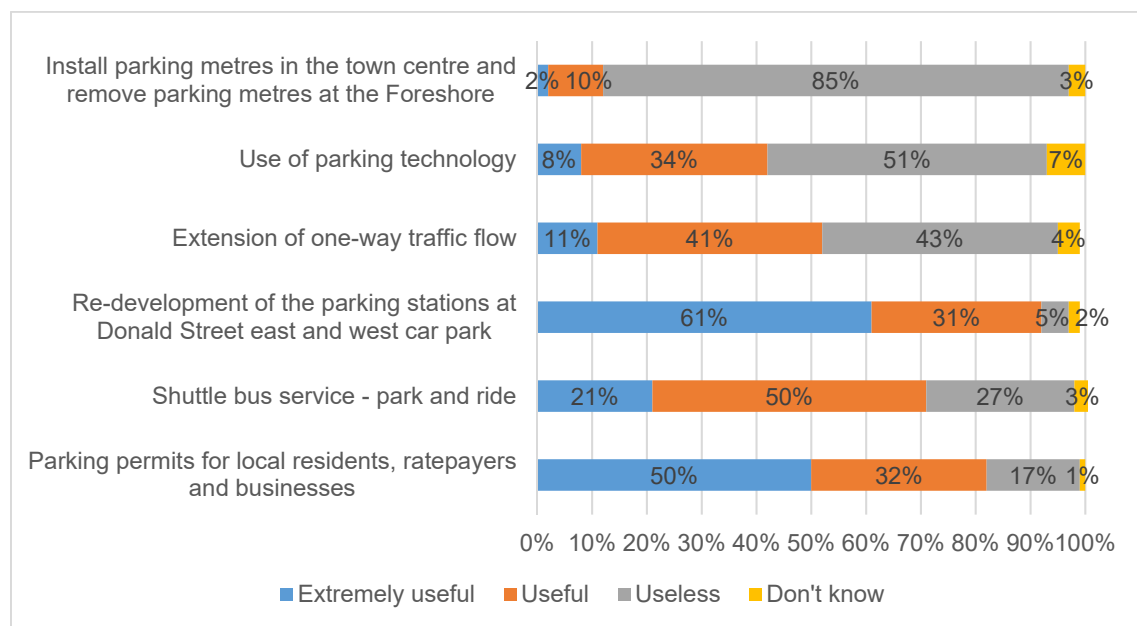
People living outside Nelson Bay suburb are more likely to be critical of installing parking meters in the town centre and removing them at the marina. Instead, they are more likely to favour the extension of one-way traffic flows and redevelopment of parking stations.

Residents of Nelson Bay suburb are less certain of the usefulness of redeveloping parking stations.

Ratepayers are more likely to favour the idea of redeveloping parking stations at Donald Street, whilst those aged under 45 are less likely to favour this and, instead, favour a shuttle bus service with park and ride facilities.

Answers to this question are shown in Figure 3 below.

**Figure 3 Usefulness of potential solutions**



Overall, redeveloping parking stations is considered the most useful solution (60%), followed by parking permits (18%). The redevelopment of parking stations is more likely to be supported by people who are not residents of Nelson Bay suburb, or ratepayers.

Parking permits are more likely to be supported by residents of Nelson Bay suburb, as well as a shuttle bus.

One way traffic flows are less likely to be supported by people aged 45-64.

Answers to this question are shown in Table 16 below.

**Table 16 Single most useful solution**

Solution	Total
Install parking metres in town centre & remove parking metres at foreshore	2%
Use of parking technology	3%
Extension of one-way traffic flow	8%
Re-development of Donald St east & west car park	<b>60%</b>
Shuttle bus service and Park & Ride	8%
Parking Permits for local residents, ratepayers and businesses	18%
None/unsure	2%

Fifty respondents suggested alternate parking solutions, as summarised in Table 17 below.

Most suggestions relate to providing more parking through a new multi storey or underground car parking facility or upgrading the Donald Street car park.

Some think that parking issues can be addressed through amendments to planning controls relating to the provision of car parking in residential development. A small number of respondents indicated active transport (walking and cycling), parking permits, and better managing demand from certain users through pick up and drop off zones (particularly buses and coaches and cars with trailers and caravans) as potential solutions. A small number of respondents indicated they do not agree with the use of parking meters.

**Table 17 Suggestions for parking solutions**

Topic	Examples
12 mentioned a form of multi storey car park	<p><i>Build a multi storey parking complex like Wilson parking to accommodate everybody.</i></p> <p><i>We need to build another car park, probably a multi storey one.</i></p> <p><i>Multi story car park in the town centre somewhere.</i></p>
8 mentioned the Donald Street car park	<p><i>Fixing the multi level car park on corner of Magnus Street</i></p> <p><i>Redevelop Donald St east and west as a car park only, not multi story development; if multi story have only as a multi story car park; need car parks for the future.</i></p> <p><i>Multi story car park up to 3 stories not necessarily underground with the Donald street redevelopment</i></p>
6 mentioned the need to acquire more land or use vacant land for new parking	<p><i>Purchase more land for Parking</i></p> <p><i>Looking at undeveloped land for single-level car park</i></p> <p><i>Purchase residential properties , demolish the house and turn them into car parks</i></p> <p><i>Use vacant blocks on Stockton Street</i></p>

5 mentioned development approvals and need to incorporate private parking	<p><i>New building of residential units need to have incorporated parking areas to accommodate these new units</i></p> <p><i>Any new developments need at least 2 bays for each unit</i></p> <p><i>Block of apartments in Nelson Bay should have underground parking</i></p> <p><i>Building applications should take into account the parking requirements before approval is given</i></p>
5 mentioned less driving and more walking, cycling, motorcycling	<p><i>Close some areas and have pedestrian use only</i></p> <p><i>Encourage more cycling by developing cycle infrastructure</i></p> <p><i>Encourage people to walk and more cycle lanes</i></p> <p><i>Stop driving cars, more walking</i></p> <p><i>More motorcycle friendly car parks</i></p>
3 mentioned underground car parking	<p><i>Underground parking could be considered</i></p>
2 mentioned meters	<p><i>Policing the parking times</i></p> <p><i>Remove parking metres (sic) to encourage growth</i></p>
2 mentioned coaches	<p><i>Create drop off and pick up zones for coaches rather than have them park at the Marina</i></p> <p><i>Design better parking for buses and coaches; designated parking needed.</i></p>
2 mentioned permits	<p><i>Allowances for Locals</i></p> <p><i>Have no-charge parking for local ratepayers at marina and foreshore</i></p>
2 mentioned the rivers car park	<p><i>Rivers carpark- build it up</i></p> <p><i>Carpark near Rivers should be expanded</i></p>
Other (3)	<p><i>Build on-ground parking</i></p> <p><i>Caravans and boats banned from parking in Nelson Bay precinct</i></p> <p><i>Shuttle service</i></p>

### iii. Interest in a face to face discussion

Respondents were also asked if they were interested in joining a face-to-face discussion to continue the conversation on parking. This was the question which served as the recruiting mechanism for the Panel.

A total of 18% (44) said there were interested.



# Appendix B – Sample Survey – Content questions

This is an extract of the phone survey (Parts 1 and 2).

## Q1. Overall, how well would you say car parking in Nelson Bay meets the needs of?

ROTATE STATEMENTS	1) Extremely well	2) Very well	3) Not that well	4) Not well at all
a) Local residents				
b) People with mobility issues				
c) Parents with prams				
d) Visitors				
e) Buses and coaches				
f) Local businesses				
g) People who work in local businesses				
h) Cars with boats, trailers, caravans and campervans etc.				
i) Trucks and delivery vehicles				

## Q2. How often do you travel to the town centre by car and require parking?

1. Daily
2. A couple of times a week
3. A few times a month
4. About once a month
5. Never

### Q2a. And, when you visit the town centre, what is usually the main purpose of your trip?

1. Work
2. Grocery or retail shopping
3. Visiting friends or family
4. Entertainment, food or dining
5. Accessing health, banking or other services
6. Visiting the foreshore or other recreation activities
7. Visiting/using the marina
8. Something else (please specify):

### Q2b. And, when you visit the town centre, how long do you normally require car parking for?

1. Less than half an hour
2. About half an hour
3. An hour or so
4. A couple of hours
5. More than a couple of hours
6. All day

## Q3. Are you personally concerned or unconcerned about finding a car park each of the following?

	1. Unconcerned	2. Slightly concerned	3. Somewhat concerned	Very concerned	Extremely concerned
a) When you go shopping					
b) Along the foreshore					
c) At the marina					
d) When you go to work					
e) Outside your house or when visiting friends and family					
f) When you go to businesses or community services					
g) In the town centre					

**Q3a2. When do you tend to experience difficulties finding a park in each of these places at the following times?:**

a) When you go shopping	During holiday periods	During major events	During weekends outside of holidays	During the week outside of holidays
b) Along the foreshore	During holiday periods	During major events	During weekends outside of holidays	During the week outside of holidays
c) At the marina	During holiday periods	During major events	During weekends outside of holidays	During the week outside of holidays
d) When you go to work	During holiday periods	During major events	During weekends outside of holidays	During the week outside of holidays
e) Outside your house or when visiting friends and family	During holiday periods	During major events	During weekends outside of holidays	During the week outside of holidays
f) When you go to businesses or community services	During holiday periods	During major events	During weekends outside of holidays	During the week outside of holidays
g) In the town centre	During holiday periods	During major events	During weekends outside of holidays	During the week outside of holidays

**Q4. Overall, would you say there is enough parking?**

	1) Yes	2) No
a) Outside shops in the Nelson Bay town centre		
b) Along the foreshore		
c) At the marina		
d) At the visitor information centre		
e) Outside the town centre		

**Q4a. Are there any other locations where there is not enough parking? What are they? OPEN ENDED**

**Q5. I'm going to read some potential solutions to parking issues in Nelson Bay. Please tell me whether you believe each is useful or not useful.**

Solution	Don't know (1)	Useless(2)	Useful (3)	Extremely Useful (4)
a) Install parking metres in the town centre and remove parking metres at the Foreshore				
b) Use of parking technology: in-road sensors to direct drivers to available spaces and overstay alerts, introduction of a smartphone parking APP				
c) Extension of one-way traffic flow: Extension of one way traffic in Stockton Street and part of Yacaaba Street to allow additional angled parking				
d) Re-development of the parking stations at Donald Street east and west carpark				
e) Shuttle bus service / park and ride: For major events and/or town centre workers. Potential locations include Tomaree sports complex, West Diggers or Tom O'Dwyer Oval.				
f) Parking permits for local residents, ratepayers and businesses				

**Q6. Thinking about solutions to parking issues in Nelson Bay I have just read, which would you say is the single most useful from your perspective,**

- a) Install parking metres in the town centre and remove parking metres at the Foreshore
- b) Use of parking technology
- c) Extension of one-way traffic flow: Extension of one way traffic in Stockton Street and part of Yacaaba Street to allow additional angled parking
- d) Re-development of the parking stations at Donald Street east and west carpark
- e) Shuttle bus service / park and ride: For major events and/or town centre workers. Potential locations include Tomaree sports complex, West Diggers or Tom O'Dwyer Oval.
- f) Parking permits for local residents, ratepayers and businesses

**Q7. In a few words, do you have any suggestions for parking solutions in Nelson Bay that are not listed in this survey?**

# Appendix C – Intercept Surveys

Two CLG staff surveyed members of the general public in Nelson Bay on Sunday 30 September (long weekend) from 10am to 12pm, and 12.30pm to 2.30pm.

The survey was fielded along two routes. The first was from the Visitor Information Centre, to the marina and along Victoria Parade, and the second was in the area consisting of Magnus Street, Yacaaba Street, Donald Street and Stockton Street.

The questions for this survey were adapted from the phone survey with some slight variation to reflect differences in the delivery mode of this survey. It was shorter in duration, lasting approximately seven minutes.

## 1. Demographics

46 people completed the survey<sup>2</sup>, of which:

- 57% (n=26) were male and 43% (n=20) were female
- 47% were in the 18-44 age range (n=21)
- 45% were in the 45-64 range (n=21)
- 8% were aged 65+ (n=4).

The majority of people who participated in the survey were:

- Visitors to Nelson Bay (79%), 2.7% of which were from the Port Stephens area and 25% from the Hunter Region. 68% were from elsewhere in NSW
- Most visitors had driven into Nelson Bay and used parking facilities in the area (77%)
- Approximately 21% had used parking facilities elsewhere and arrived by other means e.g. taxi, public transport etc.

21% of respondents were residents from the area (including Nelson Bay, Corlette, Salamander Bay, Fingal Bay and Shoal Bay). A total of four participants (8.7%) were from Nelson Bay.

77% of participants had driven into Nelson Bay and used parking there. 21% had used parking facilities elsewhere such as a hotel or caravan park, and arrived to the town centre by other means such as public transport or walking.

## 2. Results

### i. Parking Usage and Experience

Respondents were asked what the purpose of their visit to Nelson Bay was. The majority of respondents were visitors, and had come to Nelson Bay to visit the foreshore (46%), followed by visiting friends or family (15%), and entertainment, food or dining (11%).

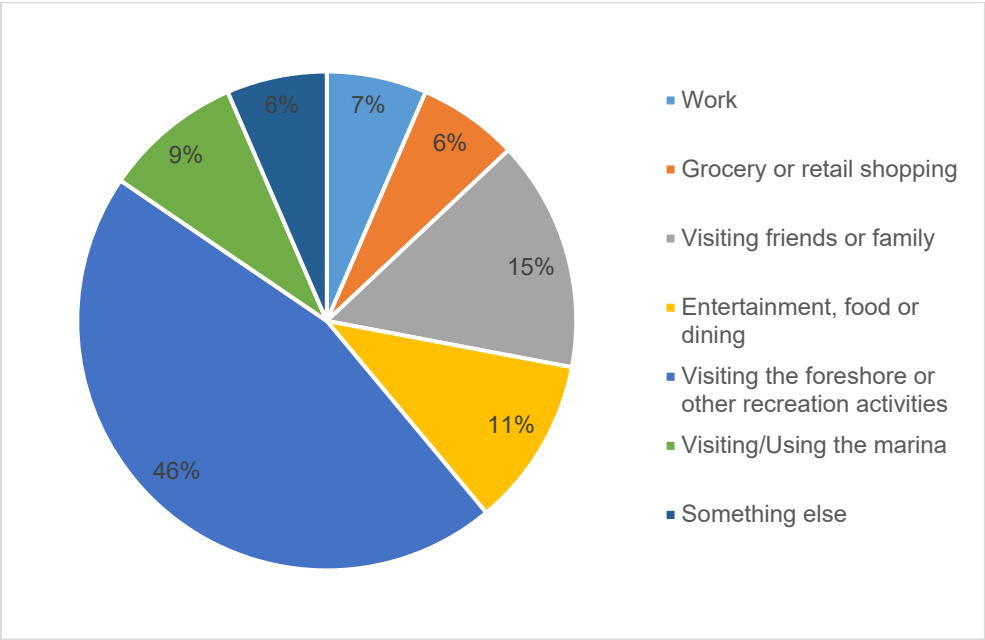
Answers to this question are shown in Figure 4 below.

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<sup>2</sup> There were options to terminate if the respondent wanted or needed to withdraw from the survey. One respondent terminated the survey.



**Figure 4 Purpose of Visit to Nelson Bay**



Respondents were asked how they had travelled to Nelson Bay. The majority came to Nelson Bay by car. Very few respondents use public transport.

Answers to this question are shown in Table 18 below.

**Table 18 How do you generally travel to Nelson Bay?**

Total	
Car	93.5%
Public transport	4.5%
Coach	2%
Taxi	0%
Other	0%

When asked how often they travelled to Nelson Bay and required parking, the majority of respondents say once a month/ a few times a year or less. Some respondents travel to Nelson Bay and require parking a couple of times a week, presumably those respondents who live in the Tomaree Peninsula area.

Answers to this question are shown in Table 19 below.

**Table 19 How often do you travel to Nelson Bay and require parking?**

Total	
Daily	9%
A couple of times a week	17%

Total	
A few times a month	2%
A few times each year	20%
About once a month	7%
Less than once per year	20%
Never	9%
Once a year	7%
This is my first visit to Nelson Bay	11%

Most respondents need parking for a couple of hours or more (78%). Some respondents need parking for the whole day (17%).

Answers to this question are shown in Table 20 below.

**Table 20 Length of time required for parking**

Total	
Less than half an hour	2%
About half an hour	2%
An hour or so	9%
A couple of hours	28%
More than a couple of hours	<b>33%</b>
All day	17%
Not applicable	9%

Most respondents indicated they were concerned with finding a car park in Nelson Bay (85%). A total of 15% are not concerned with finding a car park, while a total of 22% are very or extremely concerned.

Answers to this question are shown in Table 21 below.

**Table 21 Level of concern**

Total	
Unconcerned	15%
Slightly concerned	26%
Somewhat concerned	<b>37%</b>
Very concerned	11%
Extremely concerned	11%

The majority of respondents think there is not enough parking at the marina (61%), at the visitor information centre (56%), outside shops in the Nelson Bay Centre (52%) and along the foreshore (52%).

However, the survey recorded some level of uncertainty over whether there is enough parking at the visitor information centre or outside the town centre, and to a lesser degree at the marina or outside shops. This may be because these users park in one given area and are not familiar with other locations.

Answers to this question are shown in Table 22 below.

**Table 22 There is enough parking**

	Yes	No	Don't know
Outside shops in the Nelson Bay centre	28%	52%	19%
Along the foreshore	45%	52%	2%
At the marina	19%	61%	19%
At the visitor information centre	15%	56%	28%
Outside the town centre	61%	9%	30%

Respondents were asked to suggest locations where there needs to be more parking.

Of relevance to Nelson Bay:

- Parking on lanes
- Donald Street
- Little Beach.

Some suggestions include locations outside of Nelson Bay (e.g. Shoal Bay and Birubi Beach).

## **ii. Potential Options for Solutions**

Respondents were asked to rate the perceived usefulness of six different parking solutions, and/or raise their own solution.

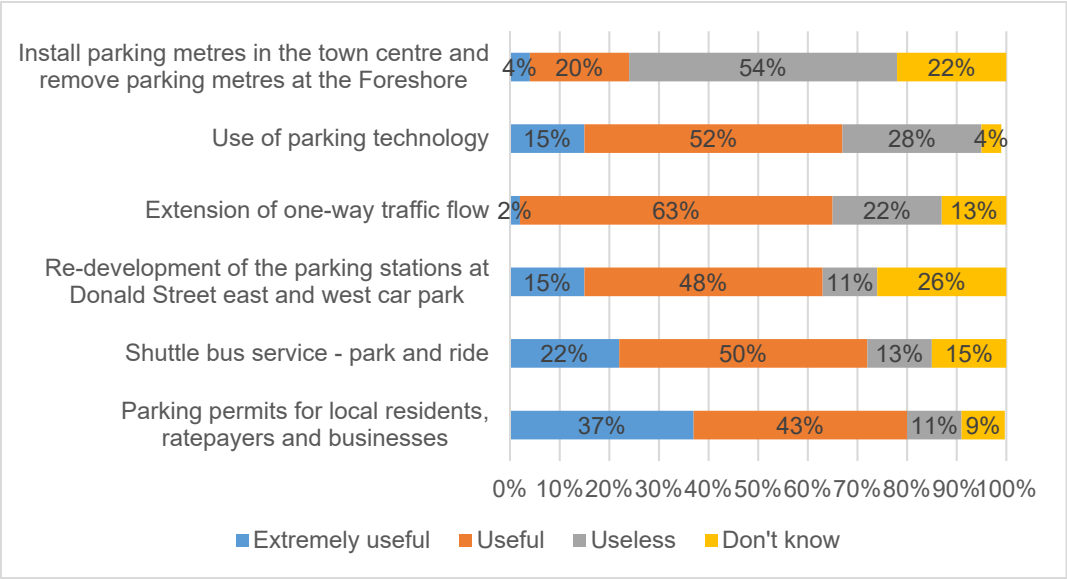
Most people indicated issuing parking permits was the most useful way to address parking issues in Nelson Bay. This is followed, in relatively similar proportions, by the introduction of shuttle bus services with a park and ride station, the extension of one-way traffic flows and redeveloping parking stations.

Most people do not think installing parking metres in the town centre and removing them at the foreshore would be useful.

The survey recorded some level of uncertainty in relation to the parking metres and redevelopment of the parking stations at Donald Street. This is likely to be because these options are more specific and tied to the Nelson Bay context, as opposed to the other options that are more generic and conceptual.

Answers to this question are shown in Figure 5 below.

Figure 5 Usefulness of Potential Parking Solutions



Respondents were also asked to rank their preferred parking solution (1 is most preferred and 6 is least preferred).

The preferred first option is parking permits (37%), followed by the use of parking technology (33%).

Answers to this question are shown in Table 23 below.

Table 23 Ranking of parking solutions in order of preference

Parking Solution	1	2	3	4	5	6
Install parking meters	11%	15%	13%	28%	13%	20%
Parking technology	33%	17%	13%	4%	22%	11%
Extend one way traffic	2%	20%	22%	33%	13%	11%
Redevelop parking stations	13%	15%	24%	22%	13%	13%
Shuttle bus service	4%	17%	20%	9%	26%	24%



Parking Solution	1	2	3	4	5	6
Parking permits	37%	15%	9%	4%	13%	22%

Respondents were given the opportunity to provide alternative solutions for parking in Nelson Bay.

Most suggestions relate to parking meters, with some respondents of the view that they are out of date, and some others suggesting that they should be upgraded, or that they should accept cards and not just coins.

Other suggestions include adding more parking (multi-level parking near the marina), allowing online booking for parking, or creating parking options for one or two hours at the foreshore.

### iii. Interest in a face to face discussion

Respondents were also asked if they were interested in joining a face to face discussion to continue the conversation on parking.

Three persons expressed interest.

# Appendix D – Have Your Say Survey

An online survey was hosted on Council's Have Your Say website from 10 September to 8 October. Council managed this process with no involvement from CLG.

The questions for this survey were adapted from the phone survey with some slight variation to reflect differences in the delivery mode of this survey.

The survey was open to all to participate and the results are not considered representative of the views of the broader community.

Council has provided a brief breakdown of the survey results for inclusion in this report. This additional data helps to inform the general understanding of community experience with parking.

## 1. Demographics

73 people completed the survey<sup>3</sup>, of which:

- 37% (n=27) were male and 59% (n=43) were female, with 3 participants preferring not to answer
- 34% were in the 26-35 age range (n=25)
- 34% were in the 46-65 range (n=25)
- 31% were aged 66+ (n=23)
- 80% were homeowners (n=59)
- 59% were ratepayers of Port Stephens Council (n=43)
- 12% were business owners (n=9).

## 2. Results

### i. Parking Usage and Experience

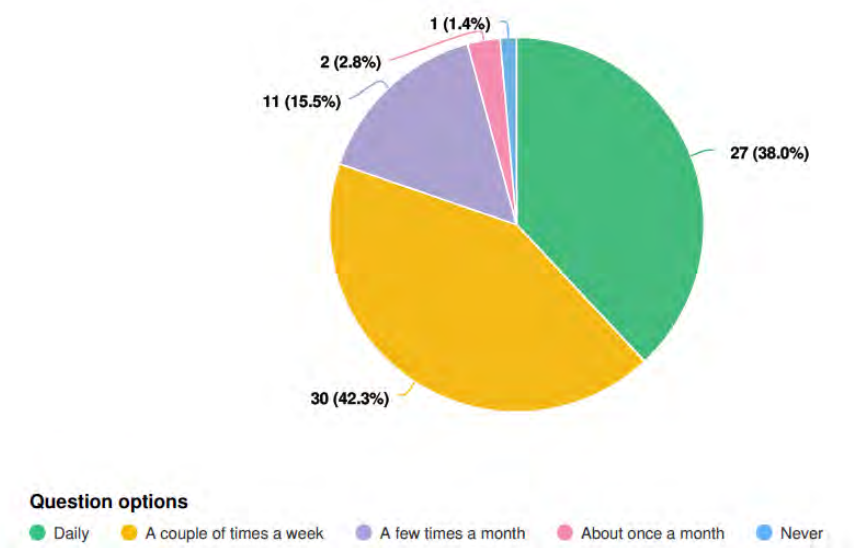
The majority of respondents travel to the town centre a couple of times a week (42.3%), or daily (38%).

Results are shown in Figure 6 below.

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<sup>3</sup> There were options to terminate if the respondent wanted or needed to withdraw from the survey. One respondent terminated the survey.

Figure 6 How often do you travel to the town centre by car and require parking?

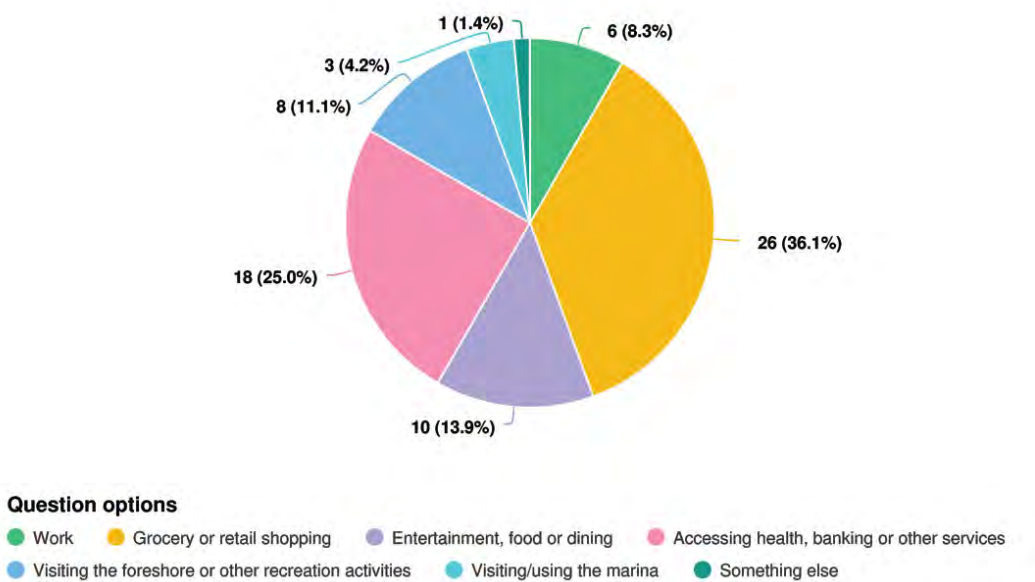


A majority of people visit the town centre to go grocery or retail shopping (36.1%) and to access health, banking or other services (25%).

Some people go to the town centre for entertainment, food or dining, or to visit the foreshore.

Results are shown in Figure 7 below.

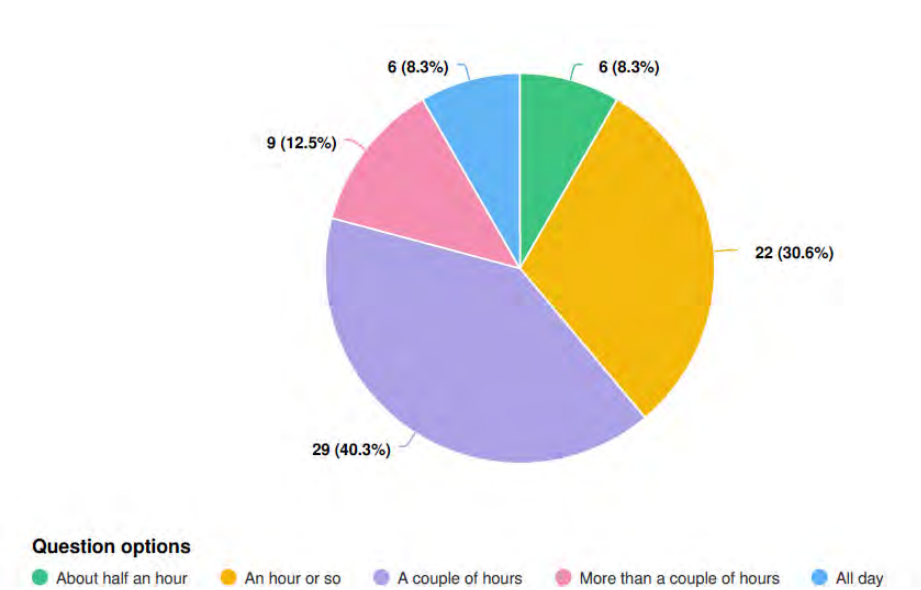
Figure 7 Main purpose of trip



A majority of people need car parking for a couple of hours or less (79%).

Results are shown in Figure 8 below.

Figure 8 When you visit the town centre, how long do you normally require car parking for?



When asked how well parking in Nelson Bay meets the needs of different users, most respondents indicated that parking does not meet the needs of any user group, e.g. of cars with boats, trailers, caravans (89%), local residents (84%), people with mobility issues (83%), people who work in local business (82%), visitors (78%), local businesses (76%), parents with prams (75%), trucks and delivery vehicles (65%), and buses and coaches (63%).

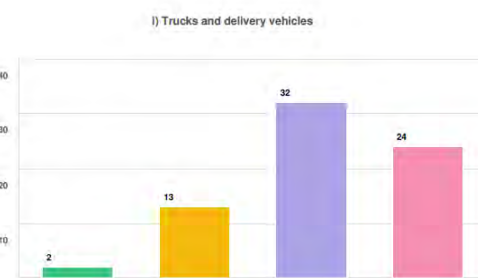
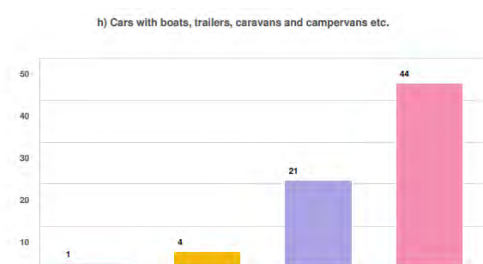
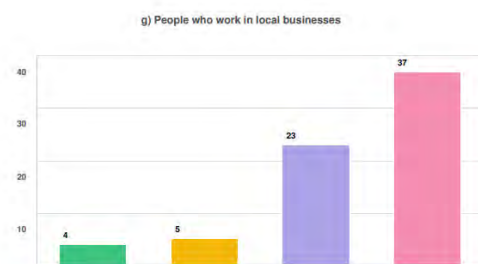
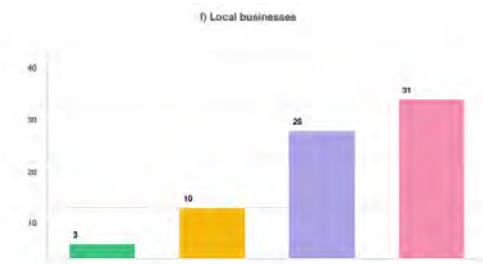
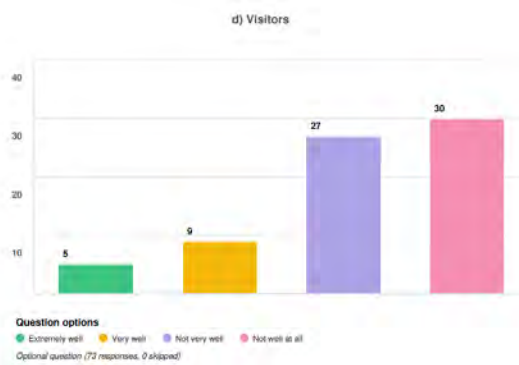
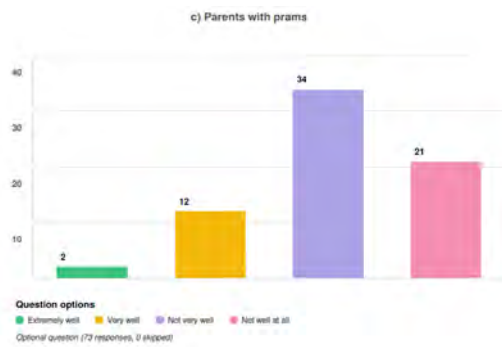
Overall, respondents are more likely to indicate that parking meets the needs of buses and coaches when compared to other user groups.

Answers to this question are shown in Figure 9 below.

Figure 9 How well would you say car parking in Nelson Bay meets the needs of?







Most people indicated they are concerned about finding a park in the town centre (90%) and when they go shopping in the town centre (90%), when accessing businesses or community services (86%), at the marina (78%), or the foreshore (68%).

Respondents are not as concerned about parking at work (43%) and outside own houses or when visiting friends and family (54%).

Answers to this question are shown in Figure 10 below.

**Figure 10 Please indicate your level of concern about the following?**



Respondents who answered 'very and/or extremely concerned' at Q3 were also asked when they experienced difficulties parking in each of these places.

The majority of difficulties are experienced during holiday periods.

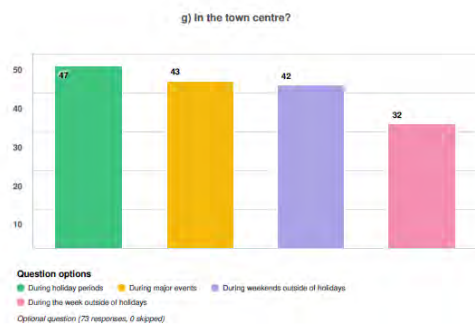
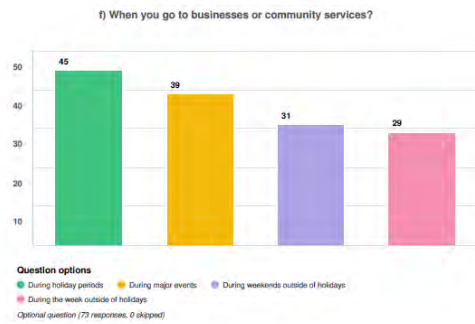
Difficulties are slightly higher during major events than during weekends outside of holidays.

Difficulties experienced during the week outside of holidays are primarily in the town centre (44%), when going to businesses or community services (39%), and when going shopping (35%).

Answers to this question are shown in Figure 11 below.

**Figure 11 When do you tend to experience difficulties finding a park in each of these places?**



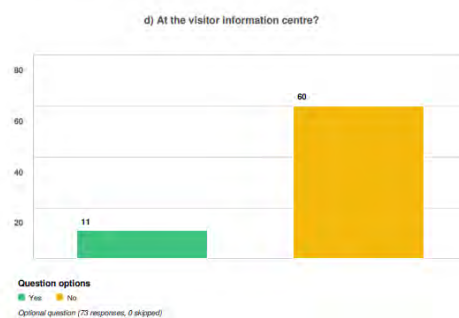
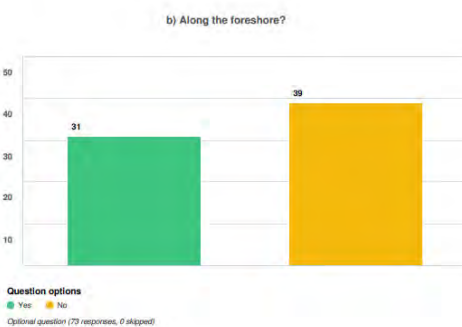
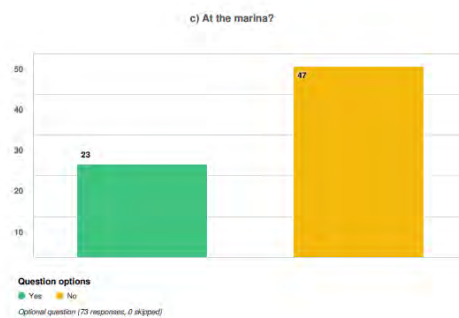
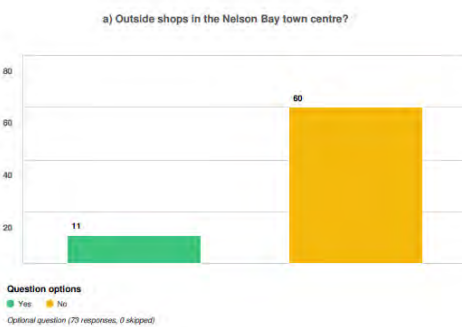


When asked if there is enough parking in certain locations, a majority of respondents think that there is not enough parking outside shops in Nelson Bay town centre and at the visitor information centre (82% each), at the marina (64%), and along the foreshore (53%).

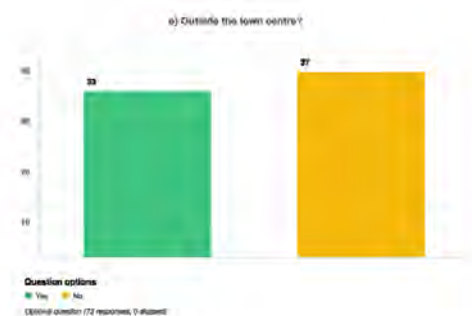
Half of the respondents think there is enough parking outside the town centre.

Answers to this question are shown in Figure 12 below.

**Figure 12 Is there enough parking?**







## ii. Potential Options for Solutions

Respondents were asked to rate the perceived usefulness of six different parking solutions, and/or raise their own solution.

Most people (73%) indicated that redeveloping parking stations at Donald Street was useful, as well as issuing parking permits for local residents, ratepayers and businesses (63%).

Most people (78%) indicated that installing parking meters in the town centre and removing them at the foreshore was not useful.

There are mixed views about using parking technology and the extension of one way traffic flows.

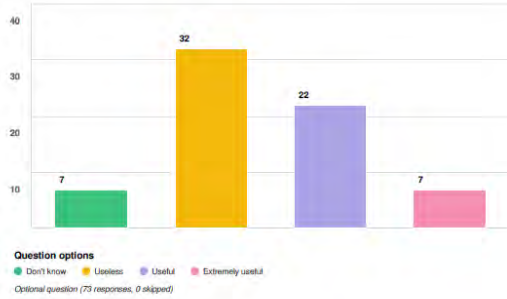
People tend to think that a shuttle bus service would be useful (55%).

Answers to this question are shown in Figure 13 below.

**Figure 13 Usefulness of solutions**



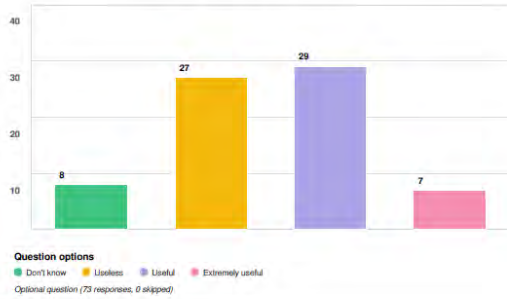
b) Use of parking technology: in-road sensors to direct drivers to available spaces and overstay alerts, introduction of a ...



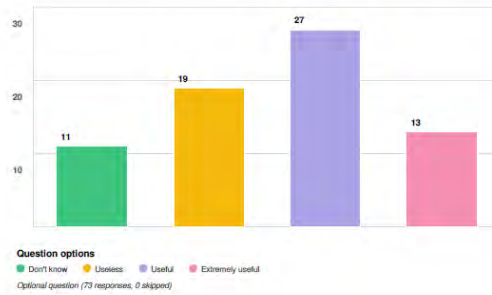
d) Re-development of the parking stations at Donald Street east and west carpark



c) Extension of one-way traffic flow: Extension of one way traffic in Stockton Street and part of Yacarbe Street to allow a...

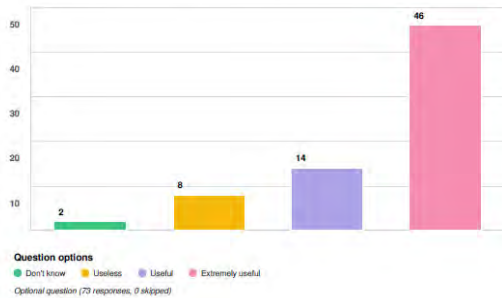


e) Shuttle bus service / park and ride: For major events and/or town centre workers. Potential locations include Tomaree sp...



Page 21 of 27

f) Parking permits for local residents, ratepayers and businesses



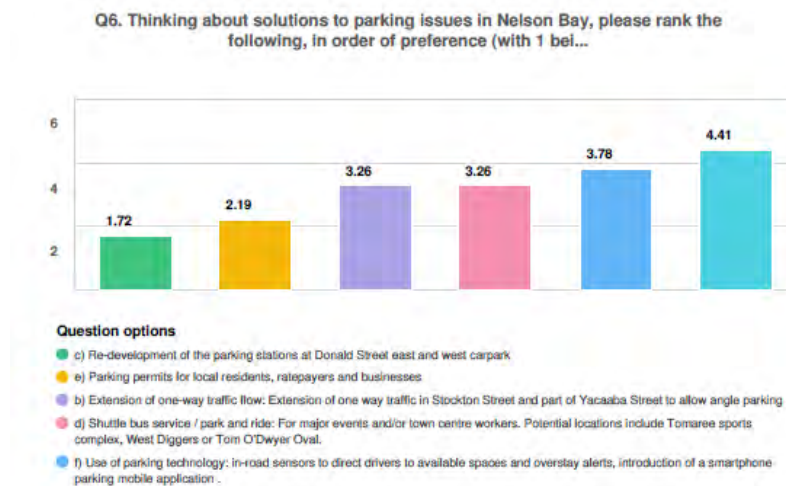
Respondents were also asked to rank each potential solution in order of preference. A majority of respondents chose the redevelopment of parking stations (50%), a majority of which chose issuing parking permits as their second preferred option.

30% of respondents chose issuing parking permits as their most preferred option, a majority of which then chose the redevelopment of parking stations as their second preferred option.

The shuttle bus and parking meters are the least preferred solutions.

Answers to this question are shown in Figure 14 below.

**Figure 14 Preference**



Respondents were also asked to make suggestions for alternative or additional suggestions.

The majority of respondents suggest providing more parking, for example building a multi storey car park on the corner of Stockton Street and Tomaree Street, upgrading the Donald Street car park, upgrading the Rivers car park, using vacant buildings, or building underground car park.

Other suggestions are in relation to:

- Parking meters: mixed views but a majority suggest that they should be removed, at least for residents
- Residents to have permits
- Better policing:
  - Enough parking however workers park in the morning for the whole day
  - Better policing of Woolworths car park
- Making sure that future development address parking issues and /or limit future development, in particular high rise development which creates more traffic.

Some respondents also suggest relocating some user groups or facilities outside of the town centre, for example:

- Moving the information centre out of town, which may keep caravans/tourist vehicles out of the town centre
- Moving coach and bus parking currently available along the foreshore and in the centre to a designated park out of town
- Incentives for local business employees to park outside town centre
- Disincentive for single long stay parking during peak season.

Some respondents suggest that more walking should be encouraged in the centre, as well as using public transport and carpooling, instead of driving.

Some respondents also highlight that parking difficulties are limited to specific times of the year (peak season/summer holidays).

# Appendix E – Evolution of Views

Participants completed surveys at the start of the first day of the Panel Workshop, and at the end of the second day.

The purpose of this exercise was to see the evolution of views from start to finish. A total of 16 participants completed the pre-panel survey and 15 participants completed the post-panel survey.<sup>4</sup> The survey addressed five key areas:

- Q1: The most important things about parking in Nelson Bay
- Q2: How well parking meets needs
- Q3: Level of concern about finding a car park
- Q4: Periods when participants experience difficulties finding a park
- Q5: Parking solutions.

## **Q1: The most important things about parking in Nelson Bay**

Answers to this question enabled CLG to identify what elements of parking became more important throughout the Panel Workshop.

The Top 3 elements that gained more importance for Panel members include:

1. Providing parking for customers and suppliers of local businesses
2. Enforcing parking rules and regulations, making streets safe and appealing for pedestrians, and improving traffic flows
3. Improving the design and character of the public domain.

## **Q2: How well parking meets needs of various groups**

It is noted that in general, responses to this question tended to be mainly negative both pre and post-Workshop, with participants generally saying that parking in Nelson Bay does not meet needs.

Prior to the Panel Workshop, a majority of participants did not think that the needs of any user group were met. This remained the case post panel.

There were less 'very well' or 'extremely well' responses received post Workshop. In particular, no 'very well' or 'extremely well' responses were received for people with mobility issues, parents with prams, buses and coaches, cars with boats, trailers, caravans.

The highest concern pre-Workshop was for cars with boats, trailers and caravans (10 'not well at all' responses), and buses and coaches (7 'not well at all' responses). Concerns for cars with boats, trailers and caravans strengthened post Workshop (14 'not well at all' responses), however concern for buses and coaches reduced (4 'not well at all' responses).

A total of 7 'not well at all' responses were received for people with mobility issues (as opposed to 6 pre Workshop).

## **Q3: Level of concern about finding a car park**

Participants were asked about their level of concern about finding a car park in various locations in Nelson Bay.

Prior to attending the Panel Workshop, the majority of participants (8) were not concerned with finding a park outside their house or when visiting friends. This grew to 11 participants post Workshop.

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<sup>4</sup> 1 participant did not complete questions 3, 4, 5 of the post-panel survey. This was taken in account when calculating responses.



There was a noticeable shift after the Panel Workshop finished towards more positive views, with more than double 'unconcerned' responses (27 post Workshop as compared to 15 pre Workshop) received in all other categories (between 2 and 4). This includes two 'unconcerned' responses for parking in the town centre.

In general, there were less 'extremely concerned' responses received post Workshop (7 responses post Workshop as compared to 16 pre Workshop). Concerns shifted towards more moderate responses ('slightly' and 'somewhat' concerned).

#### **Q4: When do you experience difficulties finding park?**

Participants were asked to select times and locations when they experience difficulties finding a park. The same localities were used as listed in Q3 (when you shopping, along the foreshore, at the marina, when you go to work etc.) The times included: during holiday periods, during major events, during weekends outside of holidays, and during the week outside of holidays.

Before the Workshop started, ten or more participants were experiencing difficulties during holidays. This remained the same post Workshop.

More difficulties were expressed post Workshop, in particular:

- When shopping, along the foreshore or at the marina for all other periods
- Outside your house or when visiting friends during major events
- When going to businesses or services during major events or during weekends.

#### **Q5: Usefulness of solutions to parking issues**

##### **Pre-Panel Workshop**

Participants were asked to provide an opinion on the usefulness of six parking solutions (providing an opinion as to whether this was useless, useful or 'don't know'). There were 15 responses to this question, with, in order of usefulness:

- Redeveloping the parking stations at Donald Street east and west car park was the most popular option, with 14 participants ranking it as useful
- Shuttle bus service / park and ride option and parking permits for local residents ratepayers and businesses which were each considered useful by 13 participants
- Extension of one way traffic flows, considered useful by 11 participants
- Views were mixed on the use of parking technology
- Installing parking metres in the town centre and removing parking metres at the foreshore was considered useless by 13 participants.

##### **Post- Panel Workshop**

After the Workshop, participants were asked to rank their top three most preferred solution (same solutions as pre Workshop), with, in order of preference:

- Extension of one-way traffic was the most popular and preferred solution, and was in the top 3 of 13 participants (ranked number 1 by five participants)
- Redeveloping parking stations was in the top three of 12 participants (ranked number 1 by four participants)
- Use of parking technology was in the top three of 7 participants (ranked number 1 by one participant). While 9 participants thought it was a useful solution pre panel, it is the third most preferred option post panel.
- Parking permits was in the top three of 6 participants (ranked number 1 by two participants).

Installing parking metres and a shuttle bus/park and ride solution did not rank highly.



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## **Appendix 14 – Community and Stakeholder Consultation Report**

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## COMMUNITY AND STAKEHOLDER CONSULTATION REPORT

Draft Progressing the Nelson Bay Town Centre and Foreshore Strategy: A Revised Implementation and Delivery Program

Prepared by Perception Planning Pty Ltd for Port Stephens Council



**5 September 2018**

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Document Versions and Disclaimer				
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Version 2 (Client)	17/08/18	18 08 17_ PublicExhibition SubmissionsReport_Version 2	JB	PSC
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## EXECUTIVE SUMMARY

This Report provides an overview of submissions received during the public exhibition of the 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A Revised Implementation and Delivery Program' (the Delivery Program) and 'Draft Exceptions to Development Standards Policy' (the Policy).

Both documents were exhibited from 21 February 2018 to 4 April 2018. More than 50 people attended a launch of the 'Nelson Bay Next' brand and over 30 people attended a 'Drop-In Session' in Apex Park. Both events took place within the public exhibition period. Councillors and Council Officers also spoke and answered questions at a Tomaree Residents and Ratepayers Meeting at the Nelson Bay Bowling Club.

151 submitters made individual written submissions. There were also 1674 pro-forma submissions and one petition with 813 signatures. Submissions were also received from peak organisations, such as Destination Port Stephens and the Tomaree Business Chamber, and community groups such as EcoNetwork and the Tomaree Residents and Ratepayers Association.

For each submission, it was recorded whether the following matters were mentioned:

1. Design Excellence
2. Building Height
3. Development Incentives
4. Public Domain
5. Transport and Parking
6. Implementation and Delivery
7. Draft Clause 4.6 Policy
8. Building Height along the Foreshore

Without exception, each submission mentioned the matter of building height in the Nelson Bay Town Centre. Other key matters related to transport & parking (14%), public domain (12%) and design excellence (8%). Other matters that received notable attention included the Draft Clause 4.6 Policy, Building Height along the Foreshore and Tertiary Education.

The overall sentiment that was expressed was support for the actions contained in the Delivery Program. There was little support from the community for increasing the height of buildings to ten storeys across the town centre, however where submissions did indicate support for an increase, this was noted to be a moderate increase in building heights.

There was a lack of support for the Clause 4.6 Policy because it was commonly believed that this policy was the mechanism to vary development standards across the Local Government Area, such as height. However, this is not its role. The Policy aims to provide for greater transparency and accountability for the variation of development standards, which is already achievable under the *Port Stephens Local Environmental Plan 2013* (Clause 4.6).

This Report identifies that an increase in building heights to ten storeys does not have support from the majority of submitters, nor does the Clause 4.6 Policy. Apart from that, all the other actions contained within the Delivery Program had the support of the majority of stakeholders, such as the Public Domain Plan, Citizens Parking Panel and encouraging Design Excellence. The submissions summary table is attached at **(ATTACHMENT 1)**.

## TERMS & ABBREVIATIONS

ASF	Active Street Frontages
CP	Contributions Plan
DA	Development Application
Delivery Program	Progressing the Nelson Bay Town Centre and Foreshore Strategy – A Revised Implementation and Delivery Program
DCP	Port Stephens Development Control Plan 2014
FSR	Floor Space Ratio
HoB	Height of Building
LEP	Port Stephens Local Environmental Plan 2013
LGA	Local Government Area
Paper	Progressing the Nelson Bay Town Centre and Foreshore Strategy – A Discussion Paper
PSC	Port Stephens Council
SEPP	State Environmental Planning Policy
Strategy	Nelson Bay Town Centre and Foreshore Strategy
UFM	Urban Feasibility Model
VPA	Voluntary Planning Agreement

## LIST OF FIGURES

FIGURE 1	Submitters by Location
FIGURE 2	Key Themes raised in Submissions

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## 1.0 INTRODUCTION

This Report provides an overview of submissions received during the public exhibition period of the 'Progressing the Nelson Bay Town Centre and Foreshore Strategy: A Revised Implementation and Delivery Program' (the Delivery Program) and 'Draft Exceptions to Development Standards Policy' (the Policy). Both documents were exhibited from 21 February 2018 to 4 April 2018.

### 1.1 BACKGROUND

The Delivery Program and the Policy are not statutory requirements.

The purpose of the Delivery Program is to update and set the implementation program for the existing 'Nelson Bay Town Centre and Foreshore Strategy' (the Strategy). As a result, it will replace the 'Nelson Bay Town Centre & Foreshore Improvement Program' and overrides the Strategy where any inconsistencies may exist (p.10).

The purpose of the Policy is to provide guidance on the application and administration of Clause 4.6 – Exceptions to development standards in the *Port Stephens Local Environmental Plan 2013*. The Policy aims to create opportunities for greater transparency and community participation when decisions are made to vary development standards and to achieve better decision making through robust assessments.

Both documents are the product of feedback received on the 'Discussion Paper – Progress of the Nelson Bay Town Centre and Foreshore Strategy' that was placed on public exhibition in 2017.

### 1.2 PUBLIC EXHIBITION OF THE DRAFT DOCUMENTS

Both the Delivery Program and the Policy were placed on public exhibition for six weeks to provide members of the community and other stakeholders with an opportunity to:

- Review both documents, as well as fact sheets and frequently asked questions;
- Ask questions and participate in the Community Drop-In Session; and
- Make a submission.

Information was available on the Port Stephens Council Website and the subsequent Engagement HQ Platform. A submission could be made via this platform, or could be provided directly via mail, email or in person to the Port Stephens Council Administration Building in Raymond Terrace.

### 1.3 PARTICIPATION

Submissions were received during the public exhibition period from:

- Individuals and community members;
- Peak organisations, such as Destination Port Stephens and the Tomaree Business Chamber;
- Community groups, such as EcoNetwork and the Tomaree Residents and Ratepayers Association (TRRA); and
- NSW Department of Planning and Environment.

The submission received from the NSW Department of Planning and Environment was the one submission received from a Government agency. The Department stated:

*'I encourage and support Council to continue to implement the strategic vision for the revitalisation of Nelson Bay. Nelson Bay is identified as a strategic centre in the Hunter Regional Plan 2036 because of its role as a tourist centre for the region and as a hub for the Tomaree Peninsula. It is recognised that, among other matters, the delivery plan response to the Regional Plan's desire for Council to investigate opportunities for high density development that maintains and enhances the tourist, recreation and residential appeal of the centre' (p.1).*

Peak organisations that made submissions included Tomaree Business Chamber and Nelson Bay NOW. Community groups that made submissions included the TRRA, Shoal Bay Community Association Inc. and EcoNetwork – Port Stephens Inc.

More than 50 people attended a launch of the 'Nelson Bay Next' brand and over 30 people attended a 'Drop-In Session' in Apex Park. Both events took place within the public exhibition period. Councillors and Council Officers also spoke and answered questions at a Tomaree Residents and Ratepayers at the Nelson Bay Bowling Club within this period.

**Photo – Yacaaba Street Extension (Source: Port Stephens Council Website)**



## 2.0 OVERVIEW OF SUBMISSIONS

### 2.1 SUBMISSIONS BY TYPE

151 submitters made individual written submissions. There were an additional 1674 pro forma submissions and also one petition with 813 signatures. Seven submissions were received from peak organisations, community groups and State agencies.

#### Petition

The one petition that was submitted had a total of 813 signatures from the Nelson Bay Bowling and Recreation Club on behalf of Members and Guests, which stated:

- 'We are of the opinion that lifting building height restrictions will be detrimental to the Nelson Bay Area and Nelson Bay Bowling Club'; and
- 'Action petition for ensuring that the current height restrictions remain as they are'.

The Petition does not make reference to the two documents that were placed on public exhibition, but rather, it references the Nelson Bay Town Centre and Foreshore Strategy, which was not the subject of public exhibition and contains different height of building limits.

#### Pro-Forma Submissions

The pro-forma submission was lodged a total of 1,674 times with different names and appropriate contact details. This pro-forma submission could be summarised as follows:

- Strong objection to Council's proposals to allow building of 10 and more storeys in Nelson Bay town centre;
- The priorities for revitalising Nelson Bay are parking, public domain and improvements relating to landscaping, lighting, signage, design and maintenance standards;
- That the modest height increases agreed to in 2012, but never implemented, may be acceptable and help attract development; and
- The natural amphitheatre with a backdrop of wooded hills and ridges must be preserved.

#### All Submissions

The majority of submissions were provided via email. A vast majority of these individual submissions directly reflected the sentiments raised in the pro-forma, except those individual submissions provided further individual detail and were arranged in a different format.

### 2.2 ABOUT SUBMITTERS

It was difficult to gauge any further information about submitters because the significant majority were in an individual email format, pro-forma or petitions. These formats, unlike surveys do not request information about individual characteristics, or demographics such as age.

When submissions included comments about their individuality, this typically related to the number of years in which they had lived in Nelson Bay. Typical comments related to a desire to

not see things change and that no further population was required. The usual reason being that population would only create further traffic problems during the peak holiday periods.

The place of usual residence was more easily determined given that the vast majority of submissions included their postal address. Submissions came from a number of locations across Australia and one international submission from New Zealand.

The majority of submissions came from individuals that live and/or own property in the Nelson Bay Town Centre or the wider Tomaree Peninsula (i.e. Corlette, Shoal Bay and Fingal Bay).

Submitters were categorised as: 1) Within the Study Area; 2) Within the Tomaree Peninsula; and 3) Outside of the Tomaree Peninsula. The results are illustrated by the following **(FIGURE 3)**.

**FIGURE 1 – Submitters by Location**

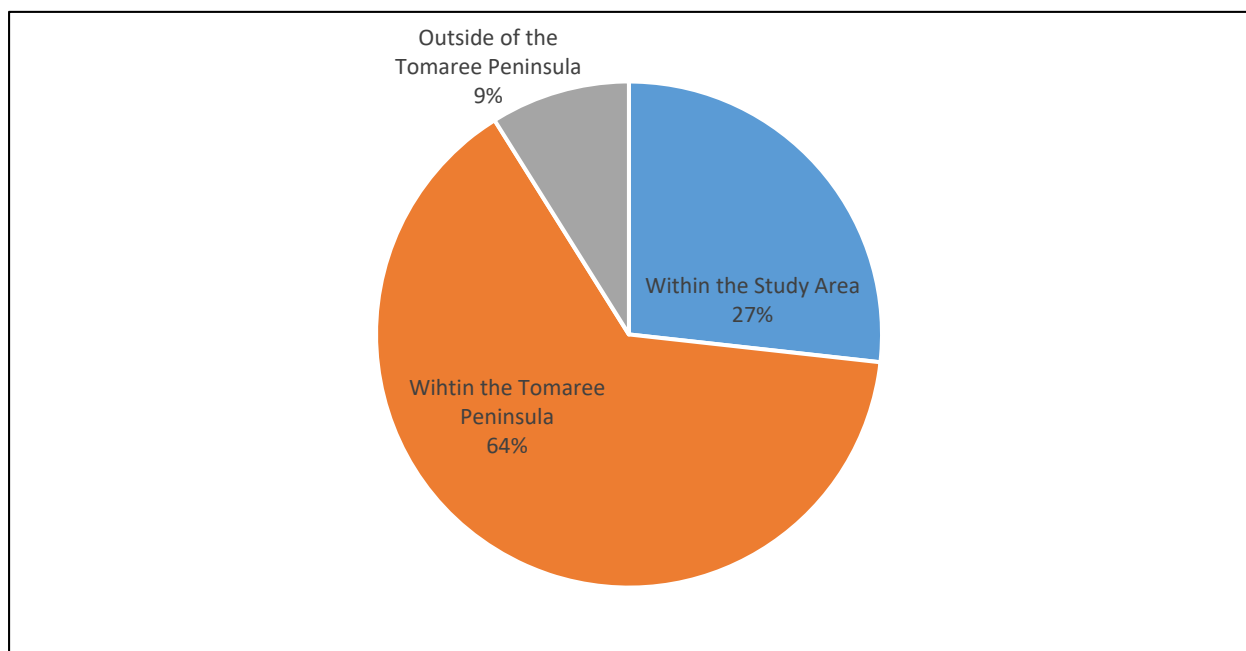


Photo – Launch of 'Nelson Bay Next' Branding (Source: Port Stephens Council Website)





## 3.0 SUMMARY OF FEEDBACK

### 3.1 ANALYSING SUBMISSIONS

All submissions were coded to be consistently recorded and reflect the views expressed in each submission. A summary of each submission and a response is provided (**ATTACHMENT 1**).

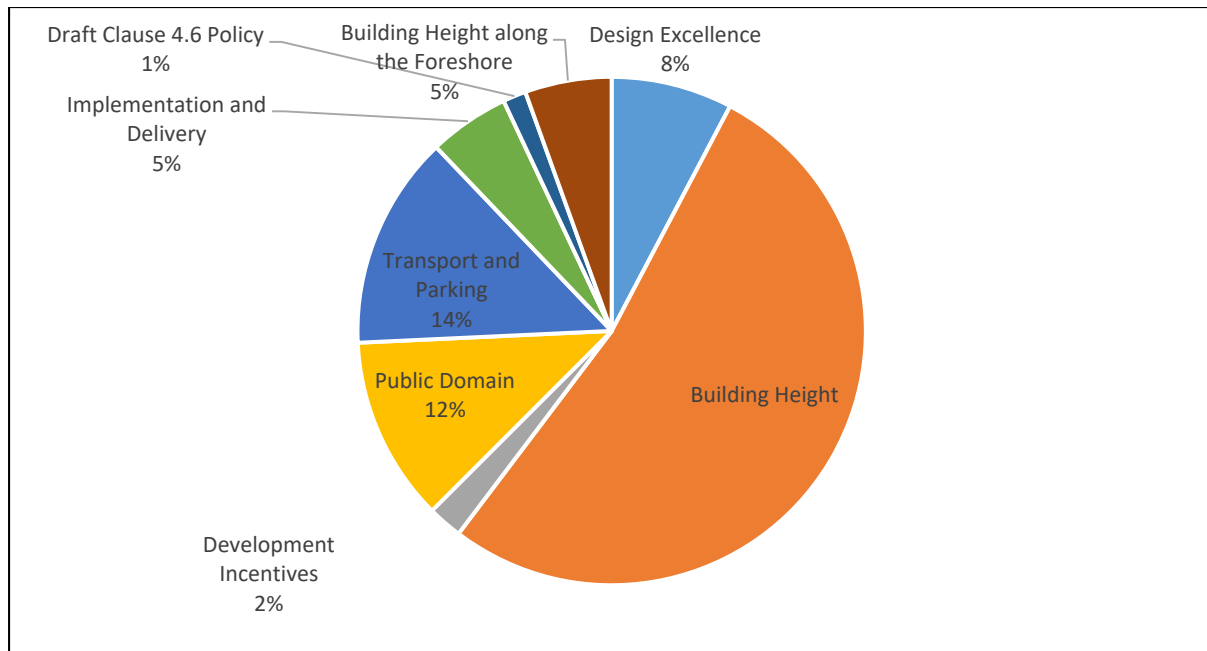
This report makes reference to the key themes raised in submissions and summarises the content of submissions. It also includes responses to key matters including where changes have been made to the Delivery program following exhibition in response to submissions.

### 3.2 KEY THEMES RAISED IN SUBMISSIONS

The key matters raised in submissions were:

1. Design Excellence
2. Building Height
3. Development Incentives
4. Public Domain
5. Transport and Parking
6. Implementation and Delivery
7. Draft Clause 4.6 Policy
8. Building Height along the Foreshore

**FIGURE 2 – Key Themes Raised in Submissions**



Without exception, each submission mentioned the matter of building height. Other common key matters raised related to transport & parking, public domain and design.

### Building Height

The majority of submissions received addressed building heights. Some were in support for a height increase from the current height limits in the town centre, but the vast majority were against an increase in height. Some of those opposed believed that five storeys were required in order to protect the existing coastal village character. Other submissions supported a moderate increase in height (7 or 8 storeys) and some submissions supported increasing heights and density in the town centre subject to maintaining amenity and view sharing. Some of these issues have also been addressed in the discussion on proposed development controls and development incentives.

Some direct extracts from submissions include:

- '...we submit that the clear sentiment expressed over the first few months of 2018 is overwhelmingly opposed to major height increase' – TRRA (p.6); and
- 'HoBs should be assessed on a project-by-project basis which balances the following considerations: 1) Commercial viability; 2) Design Excellence; 3) Natural amphitheatre; 4) Unique Coastal Village; and 5) Forested Backdrop' - Tomaree Business Chamber (p.3).

The reasons provided for this position were generally as follows:

- The need to protect the wooded ridgeline and headlands that surround Nelson Bay;
- The need to protect the natural amphitheatre;
- The need to protect the existing coastal village character; and
- No changes were required in order to encourage development.

A number of submissions identified that they would support a finer grained approach to the maximum height of building maps, if the above principles were still achieved. The majority of submissions appeared to be unaware of the existing development approvals that exceed eight storeys as cited in the Delivery Program (e.g. Marina Resort and the recent Church St approval). These approvals were granted in consideration of matters relevant to the Development Application through the Clause 4.6 – Exceptions to Development Standards of the *Port Stephens Local Environmental Plan 2013*.

The NSW Department of Planning and Environment expressed support for Council's strategic vision for the revitalisation of Nelson Bay in their submission and noted that:

Nelson Bay is identified as a strategic centre in the Hunter Regional Plan 2036 because of its role as a tourist centre for the region and as a hub for the Tomaree Peninsula. It is recognised that, among other matters, the delivery plan responds to the Regional Plan's desire for Council to investigate opportunities for high density development that maintains and enhances the tourist, recreation and residential appeal of the centre.

### Transport & Parking

The vast majority of submissions identified that the town centre experienced significant traffic and parking problems, especially during the peak periods.

Some of the submissions referenced the Traffic and Transport Study that was completed in 2012 and again updated in 2017. This parking study identified that traffic and parking reached peak capacity during the busier holiday periods (Easter and Christmas), but that there was significant

capacity outside of these peak periods. These submissions question the accuracy of these results and identified that further studies or anecdotal evidence should be relied upon.

Most submissions identified the current closure of Donald Street Car Park as an eyesore and were concerned about a feasible long-term solution given that two of the existing car parks in the town centre were only temporary solutions. A number of submissions identified that the Town Centre needed car parking in order to compete with the nearby Salamander Shopping Centre.

### Public Domain

A number of submissions identified the importance of an attractive and well-maintained public domain (i.e. seating, lighting, landscaping, paving, etc.). These submissions often gave positive feedback about the Yacaaba Street Extension.

A significant matter discussed within the Delivery Program was funding to improve the public domain, which rarely received a mention in submissions. Those that did make mention of funding expressed some support for a special rate variation, while others mentioned the use of development contributions. It would be desirable if further community education took place on the funding available and how this translated into public domain projects.

Some direct extracts from submissions made by residents include:

- 'There are many opportunities for partnerships between the Council and business owners to improve the public domain. Our neighbouring town of Taree has greatly enhanced its mains street through such a partnership resulting in significant increase in business activity. The recently established Nelson Bay Civic Pride Group is an important initiative in this context and this needs to be acknowledged and supported by Council'. (p.17).
- 'Public Domain and Town Presentation. This is the 'Main Game'. If we make the Town far more attractive this will lead to Business Investment' (p.8).

A number of submissions identified the support and appreciation of Council seeking and being awarded the \$140,000 grant to prepare a public domain plan and for borrowing the funds to construct and complete the Yacaaba Street Extension.

The need to implement the Apex Park Masterplan also received a number of mentions, including a strong desire for the relocation of the Visitor Information Centre.

### Design Excellence

Some submissions discussed their support for the concept of design excellence and what this meant. Some referenced the *State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development* (SEPP 65), while others simply referenced a design to keep the 'coastal village character' and a desire to 'protect the wooded ridgelines'.

Some direct extracts from submissions include:

- 'The Nelson Bay Town Centre and Foreshore need significant investment to improve the visual economy, as well as, to drive visitor dispersal throughout the Port Stephens Local Government Area' – Destination Port Stephens (p.1).



- 'Public domain and town presentation is the main game. If we make the Town far more attractive, this will lead to Business Investment' – Nelson Bay Now (p.7).

A significant point raised in the Delivery Program, is that not one development that has been constructed in the Town Centre since SEPP 65 was introduced. This means that the standard for design excellence has been raised, but this is yet to be seen in the town centre. The Delivery Program also reinforces that development is not occurring under current development controls, so placing increased requirements on developers for excellence is unlikely to assist in attracting investment to the town centre.

The Delivery Program includes actions to review the Development Control Plan to provide guidance to the Apartment Design Guideline (SEPP 65), which was supported by submissions.

### Other Matters

Other matters that received a significant amount of mentions include:

#### 1. Draft Clause 4.6 Policy

There was a lack of support for the Clause 4.6 Policy because it was commonly believed that this policy was the mechanism to vary development standards across the Local Government Area, such as height. Clause 4.6 is a standard provision in all Local Environmental Plans, including the *Port Stephens Local Environmental Plan 2013*.

However, this is not the role of the Policy. The Policy aims to provide for greater transparency and accountability for the variation of development standards that is already achievable under the *Port Stephens Local Environmental Plan 2013* (Clause 4.6).

Council has developed a frequently asked questions document to provide more information about Clause 4.6 and this Policy to assist the community. The Clause 4.6 Policy has been strengthened following exhibition to respond to submissions so that all variation of 10% or more will now be determined by the full Council.

#### 2. Building Height along the Foreshore

There was an understanding that the Delivery Program was seeking to raise building heights along the Foreshore. This was not the case.

The Delivery Program simply illustrated the existing height of building limits under the *Port Stephens Local Environmental Plan 2013*. Any development would need to be in accordance with the existing Plan of Management.

#### 3. Tertiary Education

A number of submitters identified the importance of creating local jobs and retaining their young persons. That is, it was cited that young people often leave the Tomaree Peninsula in search of further education and employment.

A potential identified solution was for Council to work with tertiary education providers to attract a campus or training facilities in the Tomaree and buck that trend.

### **3.3 OVERALL SENTIMENT**

The overall sentiment that was expressed was support for the actions contained in the Delivery Program. However, there was little support from the community for increasing the height of buildings to ten storeys across the town centre, however where submissions did indicate support for an increase this was noted to be a moderate increase in building heights.

Some submitters were unconvinced that raising heights would have an impact on revitalising the town centre by drawing economic investment to Nelson Bay. Other submitters felt the impact of raising heights on the coastal village character of Nelson Bay would not be satisfactorily offset by any of the positive benefits identified in the Delivery Program.

There was also a lack of support for the Clause 4.6 Policy because submitters thought that it encouraged and enabled exceeding development standards, such as height.

Three actions contained within the Delivery Program relate to the formation of an Implementation Panel and Citizens Panel for Parking, which will create a direct and frequent line of communication of key actions of Council to stakeholders. This will assist in maintaining stakeholder and community engagement and allow the community to provide immediate feedback. Continual communication has occurred since the Delivery Program was placed on public exhibition through the preparation of the Public Domain Plan, occurring during 2018.

**Photo –Temporary Parking Station (Source: Port Stephens Council Website)**



## 5.0 CONCLUSION

Without exception, each submission mentioned the matter of building height in the Nelson Bay Town Centre. Other key matters related to transport & parking, public domain and design excellence. Other matters that received notable attention included the Draft Clause 4.6 Policy, Building Height along the Foreshore and Tertiary Education.

The overall sentiment that was expressed was support for the actions contained in the Delivery Program. However, there was little support from the community for increasing the height of buildings to ten storeys across the town centre, however where submissions did indicate support for an increase this was noted to be a moderate increase in building heights.

There was also a lack of support for the Clause 4.6 Policy because it was commonly believed that this policy was the mechanism to vary development standards across the Local Government Area, such as height. However, this is not its role. The Policy aims to provide for greater transparency and accountability for the variation of development standards that is already achievable under the *Port Stephens Local Environmental Plan 2013* (Clause 4.6).

## REFERENCE LIST

- Department of Lands, 2008, 'Foreshore Plan of Management'
- GHD, 23 May 2013, 'Nelson Bay Town Centre Transport and Parking Study'
- GHD, September 2017, 'Nelson Bay Traffic and Parking Study Update'
- HVRF, 2012, 'Survey of Stakeholders in the Nelson Bay Draft Strategy for Port Stephens Council'
- Port Stephens Council, February 2008, 'Nelson Bay Foreshore - Plan of Management'
- Port Stephens Council, 2012, 'Nelson Bay Town Centre & Foreshore Strategy'
- Port Stephens Council, 2012, 'Nelson Bay Town Centre & Foreshore - Improvement Plan'
- Port Stephens Council, 2011, 'Port Stephens Planning Strategy'
- Port Stephens Council, 1984, 'Tall Building Study'
- Port Stephens Council, 2011, 'Port Stephens Planning Strategy'
- Port Stephens Council, 2017, 'Draft Nelson Bay Town Centre & Foreshore Improvement Program'
- Port Stephens Council, 2017, 'Draft Exceptions to Development Standards Policy'
- RemPlan, 2016, 'Population, Demographic and Housing Report: Port Stephens LGA'
- NSW Government, 2011, 'Varying Development Standards: A Guide'





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## ATTACHMENT 1

### SUBMISSIONS SUMMARY TABLE

Nelson Bay Town Centre & Foreshore Implementation & Delivery Program

Author of submission	Comment	Council response
Eco Network – Port Stephens Inc.	States that the exhibition documents reveal a prevailing mindset of Council that economic necessity must override all other considerations.	The Delivery Program sought to quantify why no private investment had taken place over the past ten years and proposed changes to encourage investment.
	Supports the idea of an Implementation Panel, Citizens Jury, Design Excellence Proposals and Independent Urban Design Panel.	Noted. Terms of Reference for the Implementation Panel were placed on public exhibition during the exhibition of the Delivery Program.
	A radical new remedial and innovative town and foreshore plan is needed to remediate the sins of the past and eventually over time to gradually reshape the town as an appealing and sustainable bay-side destination.	The existing Strategy and the revised Implementation and Delivery Program seek to encourage development in a town centre in order to reduce development pressures on the fringes of the Tomaree Peninsula. This is a sound environmental strategy.
Nelson Bay Now	<p>Supports all the stated actions, except for:</p> <ol style="list-style-type: none"> <li>1. Building height and variation clauses</li> <li>2. Concerned that the data collected in the Parking Strategy does not reflect the true position.</li> <li>3. Satellite parking arrangements.</li> </ol>	<p>In response to those matters that are not supported:</p> <ol style="list-style-type: none"> <li>1. Council will have the option of retaining the five storey limit in the core of the town centre in the report that is provided to Council. Clause 4.6 applies to the whole of the local government area and is a mandatory clause that the State requires all councils to include.</li> <li>2. More than two traffic and parking studies have been conducted, which represent data during peak and non-peak events. This data indicates that parking is at capacity during peak</li> </ol>

Author of submission	Comment	Council response
		<p>events, which is only for several weeks of the year.</p> <p>3. Satellite parking, along with a number of other parking options will be considered by a Citizens Parking Panel.</p>
	States that there is a very strong need for Tertiary Education on the Tomaree.	Council will continue to work with other stakeholders
	Investigate an effective 'smart' parking mix of free, moderate cost, premium cost with timing restrictions to limit take up of CBD.	A new action has been included in the Implementation Plan related to utilising Smart City Initiatives, such as a Smart Parking Application, Digital Signage and other tools to improve traffic and parking. These will be some of the options the Citizen's Parking Panel will be able to consider.
Tomaree Business Chamber	<p>Supports all the stated actions, except for:</p> <ol style="list-style-type: none"> <li>1. Does not support the height limits as proposed. Suggests that a finer grained approach is required for maximum height of building.</li> <li>2. Does not support the Clause 4.6 Policy as proposed, unless it is amended to not apply to HoBs and FSRs in the Strategy Area.</li> <li>3. Identifies that further traffic and parking studies are required.</li> </ol>	<p>In response to those matters that are not supported:</p> <ol style="list-style-type: none"> <li>1. Council will have the option to consider retaining the five storey limit in the core of the town centre in the report that is provided to Council.</li> <li>2. Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council. Clause 4.6 applies to the whole of the local government area and is a standard clause that the State requires all councils to include in their local environmental plans. Amendments to this clause are not permitted by the State.</li> </ol>

Author of submission	Comment	Council response
		<p>3. More than two traffic and parking studies have been conducted, which represent data during peak and non-peak events. This data indicates that parking is at capacity during peak events, which is only for several weeks of the year. Satellite parking, along with a number of other parking options will be considered by a Citizens Parking Panel.</p>
NSW Department of Planning and Environment	<p>Expressed support for Council's strategic vision for the revitalisation of Nelson Bay and states:</p> <p>Nelson Bay is identified as a strategic centre in the Hunter Regional Plan 2036 because of its role as a tourist centre for the region and as a hub for the Tomaree Peninsula. It is recognised that, among other matters, the delivery plan responds to the Regional Plan's desire for Council to investigate opportunities for high density development that maintains and enhances the tourist, recreation and residential appeal of the centre.</p> <p>This submission identifies the justification that would be required if changes to the <i>Port Stephens Local Environment Plan 2013</i> was provided, such as development feasibility.</p>	<p>The Revised Implementation and Delivery Plan has been based on supporting studies that provide that justification for a planning proposal. The planning proposal will require assessment and endorsement by the Department of Planning and Environment.</p>
Shoal Bay Community	<p>States that they are strongly opposed to the blanket increase of building height</p>	<p>Council will have the opportunity to consider the option of retaining a five storey</p>



Author of submission	Comment	Council response
Association Inc.	limits in the town centre of Nelson Bay. Building heights should be governed by storeys.	height limit in the core of the town centre when it considers the Delivery Program. The Standard Instrument local environmental plan requires heights to be measured in metres.
	States that they strongly object to the land, on the water side of Victoria Parade being classified as 2 Storey.	There is no change proposed to the current controls that apply to this land. The current height limits for this land under the PSLEP will remain unchanged if the Delivery Program is adopted.
	The Visitors Centre should be moved out of Nelson Bay Centre to the junction at Nelson Bay and Port Stephens Drive.	There are no current plans to move the Visitor Information Centre.
Tomaree Residents & Ratepayers Association	<p>Supports all the stated actions, except for:</p> <ol style="list-style-type: none"> <li>1. Does not support the proposed heights and states the heights in the 2012 Strategy should be reinstated.</li> <li>2. Does not support Clause 4.6 Policy as they consider it to be far too weak.</li> <li>3. Conditional support for expanding strategy boundary along the ridgelines.</li> <li>4. Opposes development incentives as discussed and states that they should be considered as they were in the 2012 Strategy.</li> <li>5. Wants the removal of the Stockton Street Stage deferred.</li> <li>6. Wants the capacity analysis of Victoria Street Pedestrian Bridge deferred.</li> </ol>	<p>In response to those matters that are not supported:</p> <ol style="list-style-type: none"> <li>1. Council will have the option of retaining the five storey limit in the report that is provided to Council.</li> <li>2. Clause 4.6 is a part of the Standard Instrument Local Environmental Plan template. The Policy seeks to provide greater transparency to how this Clause is applied. Following exhibition, the Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.</li> <li>3. The Strategy boundaries have been expanded.</li> <li>4. The Delivery Paper reinforced that development incentives in relation to design excellence are difficult to</li> </ol>

Author of submission	Comment	Council response
		<p>apply. Design is subjective and the analysis states that non-excellent development will still take place under the current Strategy and current controls, and the Strategy does not guarantee design excellence.</p> <p>5. Noted. The details will form part of the Public Domain Plan.</p> <p>6. Noted. The details will form part of the Public Domain Plan.</p>
Petition – 813 signatures	The Petition is being lodged by Nelson Bay Bowling & Recreation Club on behalf of Members and Guests, who are of the opinion that lifting building height restrictions will be detrimental to the Nelson Bay Area and the Nelson Bay Bowling Club.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Pro-Forma 1	1,674 pro-forma submissions objected to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Destination Port Stephens	Supports the intent of the recommendation to adopt the LEP Clause 4.6 Policy.	Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.
	The Strategy should address the improvement of existing properties and actions to improve the public domain.	Expedited preparation of the Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan. Consultants have been engaged to prepare these documents so that they will be

Author of submission	Comment	Council response
		ready for public exhibition in conjunction with the planning proposal that will be prepared should Council adopt the Delivery Program.
	Ensure that Nelson Bay maintains its seaside village atmosphere, while increasing amenities on offer.	A Public Domain Plan has been expedited to provide additional amenity in the town centre.
Resident	Supportive of improvements to the public domain and protection of parkland from building development.	Noted.
	Not supportive of building height increases and states that 5-7 stories should be retained with any exceptions only for the most outstanding proposals.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Supportive of Council and has been impressed with the work Council has done along the Foreshore in recent years.	Noted.
	Supportive of development each side – along Church Street and to the east of Yacaaba Street and the high parts of Magnus Street are appropriate.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	Parking is a real issue in the peak periods as was clearly evident for the tourist visitors over Easter. This is costly and I don't see any easy fixes.	Council has expedited the establishment of the Citizen's Panel and has engaged the University of Technology's Centre for Local Government to establish this independently.
Resident	Strongly opposes Council's current proposal to allow buildings of ten or more storeys in Nelson Bay and the Tomaree Peninsula.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Objects to the proposal for increased building height because it will change the character of Nelson Bay.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.

Author of submission	Comment	Council response
	Supports a fine-grained approach to zoning, height and density limits to provide view corridors with a stepped approach to heights.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	Parking, traffic management and public domain improvements are the two main reasons to revitalising the town.	Council has expedited the establishment of the Citizen's Panel and has engaged the University of Technology's Centre for Local Government to establish this independently.
Resident	Supports the directions identified in the document except the proposal to increased building heights in Nelson Bay beyond the currently agreed 5 + 2 storey limit.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Supports recommendations of the Delivery Program with the exception of the proposal to raise the building heights above 5 storeys, let alone the proposed 10 storeys or more in the Nelson Bay town centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Concerned about the recent proposal to increase the building height to 10+ and the impact it will have on tourism and the Nelson Bay community.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strong objection to Council's proposals to allow buildings of ten and more storeys in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly object to the elements of the draft strategy relating to building heights as they would detrimentally change the character of Nelson Bay. A fine grained approach to zoning is required.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.



Author of submission	Comment	Council response
	Discusses five aspects of design excellence, pedestrian areas, parking, creating a niche and resourcing.	Expedited preparation of the Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan. Consultants have been engaged to prepare these documents so that they will be ready for public exhibition in conjunction with the planning proposal that will be prepared following Council adoption of the Delivery Program.
Resident	The whole ground floor of future development sites must be dedicated to retail/commercial development.	The Delivery Program has been amended to extend the area where new buildings will be required to provide an activated street frontage. This means all premises on the ground floor of a new building facing the street are to be used for the purposes of business premises or retail premises. This will create a lively centre with an amenable and pedestrian-focused public domain, activated by building uses that engage with the street.
	There are no other options for creating suitable car parking sites inside and outside the town centre sphere due to the restricted size of the CBD and the inconvenience of the hilly terrain.	Council has expedited the establishment of the Citizen's Panel and has engaged the University of Technology's Centre for Local Government to establish this independently.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay town centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Objects to Council's proposal to allow buildings of 10 or more storeys in the Nelson Bay town centre. Such a proposal would put a real strain on existing infrastructure particularly with regard to roads and parking.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.

Author of submission	Comment	Council response
Resident	Objects to any increase over the 7 storey height limits for Nelson Bay CBD. The 7 storeys precedent was set when the Landmark building was approved between 1995-1999.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly object to the proposal to radically increase building height limits in Nelson Bay and to allow easy approval to similar height buildings elsewhere in Port Stephens.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.  The Delivery Program will not apply to the assessment of development applications in other parts of the Local Government Area.
	In my opinion, Nelson Bay has suffered because of the Salamander Bay Shopping Centre. This is a common issue in many places.	Salamander Bay has grown because it offers larger floor plates for contemporary businesses. The Nelson Bay Town Centre cannot compete with this due to historical subdivision, however it can attract tourists and residents to the Centre through offering a different experience and elements such as a quality public domain.
Resident	Believes that Council have not undertaken the appropriate level of Urban Design and Architectural study for such a town centre plan.	Council has town planners with urban design expertise and also engaged consultants in the preparation of the Delivery Program with urban design expertise.  The proposed development standards for the Town Centre set the broad framework for future development which will then be subject to actions in the Delivery Program related to improving design excellence including an independent urban design panel, and development controls for upper storey

Author of submission	Comment	Council response
		setbacks and floor plates to enhance the public domain and pedestrian experience by preserving daylight access to the street level and creating a comfortable street environment.
Resident	Support a number of things suggested by the Delivery Program, but do not support the increase in height that is proposed.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	As a new resident to Nelson Bay, they were horrified to learn of a proposal to allow 10 storey high buildings in the area.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Express concern about allowing developers to fill the Nelson Bay amphitheatre with 10 and 12 storey buildings.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Objects to the increase in the building height as the wording used in the <i>Port Stephens Local Environmental Plan 2013</i> seeks to ensure height is appropriate for the context and character of the area.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly object to Council's proposals to allow buildings of 10 or more storeys in the Nelson Bay town centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	Believes the priorities for Nelson Bay are improving the appearance of the town, improving parking and walking tracks.	Expedited preparation of the Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan. Consultants have been engaged to prepare these documents so that they will be ready for public exhibition in conjunction with the planning proposal that will be prepared

Author of submission	Comment	Council response
		<p>following Council adoption of the Delivery Program.</p> <p>In relation to parking, Council has also expedited the establishment of the Citizen's Panel and has engaged the University of Technology's Centre for Local Government to establish this independently.</p>
Resident	Strongly object to Council's proposals to allow buildings of 10 or more storeys in the Nelson Bay town centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	Believes the priorities for Nelson Bay are improving the appearance of the town, improving parking and walking tracks.	<p>Expedited preparation of the Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan. Consultants have been engaged to prepare these documents so that they will be ready for public exhibition in conjunction with the planning proposal that will be prepared following Council adoption of the Delivery Program.</p> <p>In relation to parking, Council has also expedited the establishment of the Citizen's Panel and has engaged the University of Technology's Centre for Local Government to establish this independently.</p>
Resident	Supports Council's plans to modernise, update and beautify Nelson Bay Town Centre and surrounds.	Noted.
	Strongly opposed to the proposal to construct multiple high-rise developments throughout the town.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	The doubling of the current height limits is totally	Council will have the opportunity to consider the



Author of submission	Comment	Council response
	unjustified and unwanted – and is strongly opposed.	option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Fully support the concept that public domains matter.	Noted.
	Do not agree with the proposed new building height suggestions.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	Parking is an issue within the precinct and the availability is highlighted during peak tourism periods. I concur that additional opportunities should be investigated.	Council has expedited the establishment of the Citizen's Panel and has engaged the University of Technology's Centre for Local Government to establish this independently.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more story in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more story in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Opposed to changing the current plan for high rise in Nelson Bay. Does not want 10 + Storeys in Nelson Bay.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Visitor	There is no justification to have these high-rise buildings.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.

Author of submission	Comment	Council response
Resident	Objection to draft policy on Exceptions to Development Standards. Council must signal a strict approach to applications for variations from planning standards.	Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.
Resident	Strongly opposes Council's current proposal to allow buildings of ten or more storeys in Nelson Bay.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Visitor	Strongly objects to Council's proposals to allow buildings of 10 and more story in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Visitor	Questions the Feasibility Modelling and the assumptions made.	The feasibility modelling has been reported to Council and the detailed assumptions and peer review is available through previous Council Reports.
	Identifies a number of strategies to improve Nelson Bay, such as public transport, permanent residential occupation, innovative approaches to housing affordability, etc.	All of these strategies present positive solutions, but are not specific, measurable, accurate, realistic or time-based. These are objectives or goals, rather than actions that Council can implement in Nelson Bay to deliver the identified economic revitalisation.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more story in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly opposed to making lovely Port Stephens into a Gold Coast town with high rise buildings.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the

Author of submission	Comment	Council response
		town centre when it considers the Delivery Program.
Resident	Height limits must meet the Strategy objective that 'It is critical that the wooded ridge and headlands that surround the Bay be visible and not eclipsed by buildings.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	Parking and traffic management, and public domain improvements are the two main keys to revitalising the town.	Please refer to the previous responses in regards to the Public Domain Plan and Citizens Panel for Parking.
Resident	Objects to the proposed height and believes that the way to attract permanent residents is to implement all the recommendations in the existing 2012 Strategy to make the place attractive to the current and prospective permanent residents.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program. Furthermore, the Implementation Plan builds on the 2012 Strategy and has a strong focus on Implementation with actions that are specific, measurable, accurate, realistic and time-based.
Resident	Strong opposition to the proposed change in building height limits which will allow ten or more storeys to be built in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly object to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly object to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.

Author of submission	Comment	Council response
Resident	Strongly objects to Council's proposals to increase the building height limits in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Identifies that funding is a major hurdle and suggests that a balance is required.	The Delivery Program sets out a range of funding options. The actions in the Implementation Plan include clear requirements for Council's Strategic Asset Management Plan and Developer Contributions Plans to be updated to include infrastructure requirements.
	Identifies that public domain is definitely lacking and that urban design excellence is to be encouraged. States that the Nelson Bay Report is extremely well prepared and much easier to follow than Council Policy Documents.	Noted.
Resident	Applauds Council for plans to try and rejuvenate this beautiful area of Port Stephens after years of neglect.	Noted.
	Witnessed petitions being circulated through two retiree organisations with elderly residents being encouraged to sign. Most of them admitted afterwards they had no idea of what Council's vision and plans for the future were, but they signed it because a friend asked them.	Noted.
Resident	Objection to Clause 4.6 Policy.	Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.



Author of submission	Comment	Council response
Resident	The town centre needs more car parking to compete with nearby shopping malls.	Multiple traffic and transport studies have identified that parking is at capacity during busy holiday periods. Outside of these periods, capacity exists. This is a common situation for holiday destinations. Council has expedited the establishment of the Citizen's Panel on parking and has engaged the University of Technology's Centre for Local Government to establish this independently.
	The town centre has traffic problems.	
	Does not support an increase in building heights.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Objection to Increase in Building Heights.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	The traffic movement in and around the NB CBD should be modernised to: <ul style="list-style-type: none"> <li>- Stockton St from Victoria Parade to the Nelson Bay Bowling Club should flow North to South</li> <li>- Donald Street traffic should flow from Church Street to Yacaaba Street, that is, West to East.</li> </ul>	A comprehensive Traffic and Parking Study was completed in 2012 and updated in 2017. This Study will inform the future traffic arrangements for the town centre.
	Why not limit the height of building to a Reduced Level.	Height of Building Limits are in accordance with the Relative Level under the Standard Instrument Local Environmental Plan. This is a standardised approach applied by the State Government across the State.
Resident	Strongly object to Council's proposals to allow buildings of	Council will have the opportunity to consider the

Author of submission	Comment	Council response
	10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Agrees with all the proposals and alterations to the above strategy that have been proposed by TRRA.	Noted.
Resident	Asks to look at Forster which allowed 8 to 10 plus stories many years ago and has one vacant shop in the Main Street. Believes that Nelson Bay had 6 or so vacant shops in the CBD at last count. Strongly recommends that Nelson Bay and Soldiers Point be allowed more high rise where appropriate.	Noted.
Resident	If there is to be any change made to building heights, then consider reducing them.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Visitor	Saddens this visitor to learn of the proposed changes to the building regulations which include allowing the development of new property at a greatly increased height.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's latest proposals to allow buildings of 10 or even more storeys in the main central area of Nelson Bay.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	More units, especially high rise ones are not needed or wanted in Nelson Bay.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Objection to the Clause 4.6 Policy as it provides for excessive development in the NSW Coastal Zones and most	The Clause 4.6 Policy seeks to provide greater transparency to development decisions that are already permissible under the land use tables and Clause 4.6

Author of submission	Comment	Council response
	especially in the Nelson Bay coastal township.	of the <i>Port Stephens Local Environmental Plan 2013</i> . Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.
Resident	Writes to express objection to allowing buildings of ten or more storeys to be built in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay town centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's latest proposals to allow buildings of 10 or even more storeys in the main central area of Nelson Bay.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Nelson Bay has no soul or atmosphere. No decorations are provided over Christmas and Port Stephens has no cultural arts centre.	The preparation of the Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan will seek to improve the Public Domain of the Nelson Bay Town Centre.
Resident	Sees no reason to alter the existing building code.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly oppose the increase in building heights beyond 5 storeys for the Bay area, as there are a number of issues that have been overlooked or ignored.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.

Author of submission	Comment	Council response
Resident	The priorities for revitalising Nelson Bay are parking, public domain improvements, such as landscaping, lighting and design and design and maintenance standards.	The preparation of the Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan will seek to improve the Public Domain of the Nelson Bay Town Centre.
Resident	In general, I agree with the directions identified in the document, except the proposal to increase the building heights in Nelson Bay beyond the currently agreed 5 + 2 storey limit.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Believes that changing the building height now is putting the cart before the horse. The Council could call for visual submissions.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Wishes to express opposition to any increase in building heights in Nelson Bay and also recognises the need for the revitalisation of the Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	States that there are many good aspects of the revised Delivery Program.	Noted.
	Parking, especially the East of Donald Street Car Park remains a serious problem, which requires an innovative approach.	An updated traffic and parking study informed the Delivery Program. A Citizen's Parking Panel will be coordinated by UTS.
	The 10 storey height limit will exacerbate problems and the two storey limit along the Foreshore should be removed.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay town centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of	Council will have the opportunity to consider the



Author of submission	Comment	Council response
	10 and more storeys in the Nelson Bay town centre, more than doubling the current height limits.	option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay town centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Recommends that the implementation program not be approved in its current form and encourage Council to incorporate into the document the 2012 Strategy on building heights in the Nelson Bay CBD.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to increase the building height limits in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	The main reason for empty shops is greedy landlords charging exorbitant rents.	Noted.
	There is a major parking problem and increasing the density of Nelson Bay with high rise will only make things worse.	An updated traffic and parking study informed the Delivery Program. A Citizen's Panel will be coordinated by UTS.
Resident	States that you don't need 10 stories for developers to survive.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to permit buildings of 10 or more storeys in the Nelson Bay Area.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre,	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the

Author of submission	Comment	Council response
	more than doubling the current height limits.	town centre when it considers the Delivery Program.
Resident	I strongly object to Council's proposals to increase the building height limits in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to the doubling of the current height limit across the entire town centre, allowing for 10 storey buildings at very high density.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Identifies a number of public domain improvements, such as beautifying the main roundabouts and ideas to encourage shops/restaurants to stay open longer.	Expedited preparation of the Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan. Consultants have been engaged to prepare these documents so that they will be ready for public exhibition in conjunction with the planning proposal that will be prepared following Council adoption of the Delivery Program.
Resident	Strongly objects to Council's proposal to allow buildings of 10 and more storeys in the Nelson Bay Town centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Buildings should be kept below the wooden backdrop when viewed by the Bay. Any change in height restrictions would have a devastating and irreversible consequences.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposal to allow buildings of 10 and more storeys in the Nelson Bay Town centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposal to allow buildings of 10 and more storeys in the Nelson Bay Town centre,	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the

Author of submission	Comment	Council response
	more than doubling the current height limits.	town centre when it considers the Delivery Program.
Resident	Objects to Council's proposals to allow home unit development of ten stories and higher in the centre of Nelson Bay as outlined in the plan tabled in the meeting at Nelson Bay Bowling Club.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Urges Council to reconsider the push for large scale high rise.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	The Draft Clause 4.6 Policy is definitely opposed.	Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Visitor	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.

Author of submission	Comment	Council response
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Objects to lifting the heights as it would spoil the natural amphitheatre look of the place.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	States that Council should keep the existing height limits – no increase. There is no need to attract permanent residents, there are plenty moving here all the time.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Visitor	Building heights should not be increased because: <ol style="list-style-type: none"> <li>1. They have never experienced a lack of accommodation.</li> <li>2. Building more high rise would spoil the relaxed holiday resort atmosphere.</li> </ol>	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Suggests by raising the height restriction Council is adding to the property values and	Council will have the opportunity to consider the option of retaining a five storey



Author of submission	Comment	Council response
	restricting development to only large companies and this inevitably leaves holes in the ground.	height limit in the core of the town centre when it considers the Delivery Program.
Resident	Opposes the Clause 4.6 Policy because it is giving Council more room to make inappropriate decisions.	<p>Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.</p> <p>Clause 4.6 is a part of the Standard Instrument Local Environmental Plan template. The Policy seeks to provide greater transparency to how this Clause is applied.</p>
	States that current height limits should be retained and that buildings along the foreshore should be kept to one storey.	The height limits that currently apply to Nelson Bay Foreshore Reserve are not proposed to be amended, and were shown in the exhibited draft Delivery Program as they currently exist in the <i>Port Stephens Local Environmental Plan 2013</i> .
Resident	Suggests by raising the height restriction Council is adding to the property values and restricting development to only large companies and this inevitably leaves holes in the ground.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Believes that Council has gone to a lot of expense over the years doing studies and would like to think that something might come of this one.	The actions relating to Implementation and Delivery seek to ensure that the actions of the Strategy are delivered.
	Suggests that the paid parking could be seasonal and it could	Note Council resolved to implement this initiative to

Author of submission	Comment	Council response
	be tuned off after East until the end of September.	<p>provide free and untimed parking along Victoria Parade, Nelson Bay outside of peak periods and weekends on 26 June 2018.</p> <p>Paid parking, along with a number of other parking options will be considered by a Citizens Parking Panel.</p>
Resident	Suggests that if development cannot be expanded laterally then so be it – expanding vertically in the alternative is not necessarily the best alternative and strongly urge Council to rethink building height limitations.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	States that the Federal Government should pass laws that no buildings should block the views of other buildings.	The Federal Government does not have a role in planning and building. It is the role of the State Government and Local Government. The Land and Environment Court has established planning principles about view sharing and over-shadowing.
Resident	Disappointed with Council's vision and believes that the existing five storey height limit should be retained.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Disappointed that Council continues to shift the goal posts in terms of building height.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	Congratulates Council on bringing forward its plans to improve the amenity of central Nelson Bay.	The Delivery and Implementation Program identifies a list of actions that seek to encourage this private investment, such as the development of Nelson Bay Town Centre Public Domain

Author of submission	Comment	Council response
		<p>Plan, Wayfinding Strategy and Street Tree Masterplan.</p> <p>Consultants have been engaged to prepare these documents so that they will be ready for public exhibition in conjunction with the planning proposal that will be prepared following Council adoption of the Delivery Program.</p>
Resident	Objects to the increases in height limited buildings in Nelson Bay and surrounding areas.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Objects to the increases in height limited buildings in Nelson Bay and surrounding areas.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Objects to Clause 4.6 Policy and any change in building heights.	<p>Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.</p> <p>Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.</p>
Resident	Strongly opposed to the development of high-rise in the central district.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program
Resident	Suggests extending the study area, building and increasing heights along Thurlow Avenue, Government Road and Morgan Street.	One of the key goals of the strategy is to encourage redevelopment in the existing centre as nothing has been completed in over ten years.

Author of submission	Comment	Council response
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	States that parking should be a priority, the public domain needs to be improved and the existing height limits provide enough incentive for developments.	<p>Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.</p> <p>The development of a Public Domain Plan and associated documents has commenced and a Citizens Panel for Parking.</p>
Resident	Disappointed that Council's proposal would allow new buildings in Nelson Bay to increase their heights to ten storeys.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre, more than doubling the current height limits. States that they do not want to live alongside high rise buildings.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Supports Council's plans to modernise, update and beautify the Town Centre, but	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the



Author of submission	Comment	Council response
	does not want the heights doubled.	town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to increase the building height limits in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Wishes to register a strong objection to changes to the building regulations.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to the raising of the building heights in Port Stephens – particularly in regard to Nelson Bay CBD.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	States that there are poor parking opportunities and a limitation on roads into and out of the Bay.	Parking opportunities along with a number of other parking options will be considered by a Citizens Parking Panel.

Author of submission	Comment	Council response
Resident	States that Council has not provided parking, nor undertaken landscaping, lighting signage, nor implemented any design standards.	The Delivery and Implementation Program identifies a list of actions that seek to encourage this private investment, such as the development of Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan.
Resident	States that parking which has been provided has only been done on a temporary basis.	The discussion of opportunities along with a number of other parking options will be considered by a Citizens Parking Panel.
	States that they are concerned about the proposed changes to Nelson Bay's building height limit.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	States that increasing parking slots in the area could help.	The discussion of increasing parking slots along with a number of other parking options will be considered by an independent Citizens Parking Panel.
Resident	Strongly objects to Council's proposals to allow buildings of 10 and more storeys in the Nelson Bay Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly voices their objection to the proposed changes for building heights in Nelson Bay. States that other towns have had no difficulty in saying that their towns have reached an optimum size.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	States that their view is that the priorities are parking and traffic flow and looking at having very restricted high rise to no more than seven stories.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
		The discussion of increasing parking slots along with a

Author of submission	Comment	Council response
		number of other parking options will be considered by a Citizens Parking Panel.
Resident	States that the Strategy is fine, except for the increase in building heights.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Strongly objects to the proposals to allow for a 10 storey buildings at a very high density across the Town Centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	States that Council's exceptions policy must send a clear message that only marginal variation to height and density controls will be considered.	Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.
Resident	Identifies the importance of FSR and height standards working together building density and public amenity.	The proposed building height controls were considered alongside the proposed FSR controls. They were varied a few times to achieve the right balance in consultation with architects and the feasibility modelling that was undertaken.
Resident	Identifies that maintaining the green amphitheatre and improving beautification of the Nelson Bay amenity are critical for progress.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	Identifies that height limits and density must be strictly managed and stepped or zoned to provide assured view lines, which give developer confidence.	
	States the need to revitalise the town through public domain improvements and parking/traffic management.	The Delivery and Implementation Program identifies a list of actions that seek to encourage this private investment, such as the

Author of submission	Comment	Council response
		development of Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan.
	States that the foreshore is critical amenity and is the heart of Nelson Bay's attraction.	The Strategy makes no proposal or suggestion that the Foreshore will be developed. Any changes on the Foreshore would need to be in accordance with the existing Crown Plan of Management for this Foreshore land.
Resident	States that they strongly disagree with the proposal put forward by the Council to increase heights of developments in Nelson Bay and surrounding areas.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	States that they are strongly opposed to the blanket increase of building height limits in the town centre.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	States that the Exceptions to Development Standards Policy will give Council unilateral control over variations to building standards.	Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.  Clause 4.6 is a part of the Standard Instrument Local Environmental Plan template. The Policy seeks to provide greater transparency to how this Clause is applied.
Resident	States that they strongly object to Council's proposals to allow buildings of 10 and more storeys.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	States that they strongly object to Council's proposals	Council will have the opportunity to consider the



Author of submission	Comment	Council response
	to allow buildings of 10 and more storeys.	option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	States that they are concerned with Council's proposal/intention to demolish the building heights restriction and allow 10 storey developments in Nelson Bay.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	States that they attended the recent TRRA meeting and are absolutely opposed as everyone else to permitting the building height to increase to 10 + storeys.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	States that a new parking building will guarantee people spending more time and money in the area.	A Citizens Panel will be developed to discuss traffic and parking and the options.
Resident	Strongly objects to Council's proposals to allow buildings of 10 storeys and more in the Nelson Bay Town Centre, more than doubling current height limits.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Disappointed with the proposal to increase heights and the associated Clause 4.6 Policy.	<p>Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.</p> <p>Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.</p>
Resident	Disappointed with the proposal to increase heights and the associated Clause 4.6 Policy.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.

Author of submission	Comment	Council response
		<p>Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.</p>
Resident	<p>Strongly objects to the blanket 10 + storeys zoning across the whole town area.</p>	<p>Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.</p>
Resident	<p>States that everyone agrees that building heights in Nelson Bay should not be increased.</p>	<p>Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.</p>
Resident	<p>This discusses the need to develop a streetscape plan, an access plan, a transport plan and Nelson Bay village design criteria that is fully embraced by all stakeholders.</p>	<p>The Nelson Bay Strategy was adopted in 2012. A review identified that although a number of government actions had been completed, no private investment had taken place.</p> <p>The Delivery and Implementation Program identifies a list of actions that seek to encourage this private investment, such as the development of Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan.</p> <p>Consultants have been engaged to prepare these documents so that they will be ready for public exhibition in conjunction with the planning proposal that will be prepared following Council adoption of the Delivery Program.</p>

Author of submission	Comment	Council response
Resident	<p>The Nelson Bay CBD should be developed with low rise (2 or 3 storeys, probably residential over commercial retail) in the centre of town, with taller buildings (say 5 to 7 storeys) rising up towards the surrounding ridge lines.</p>	<p>The existing height of building limits had led to no new development. A change in these height of building limits is a mechanism to encourage development, which then means contributions can be collected and the public domain improved.</p> <p>Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.</p>
	<p>The exceptions policy is unacceptable. There should be set height guidelines so that a developer knows what the height limits are.</p>	<p>Following exhibition, the Clause 4.6 Policy has been strengthened to require all applications that include variations to development standards of more than 10% to be determined by the full Council.</p> <p>Clause 4.6 is a part of the Standard Instrument Local Environmental Plan template. The Policy seeks to provide greater transparency to how this Clause is applied.</p>
	<p>As a property developer, I comment that the most valuable property is that with a water view – the better the water view, the higher the value.</p>	<p>The Delivery and Implementation Plan directly responds by providing data illustrating that developers are losing money on the first five floors because they do not have water views. This is one of the reasons why no redevelopment has taken place over the past ten years.</p>
Resident	<p>Does not agree with Council's proposal to allow buildings of 10 plus storeys in the Nelson Bay Area.</p>	<p>Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.</p>

Author of submission	Comment	Council response
Resident	The key problem in Nelson Bay is parking, not population.	Noted.
	Council should listen to the public and not developers. If the silent majority are supposedly all for high rise, then let's hear from them.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Agrees with all the proposals and alterations to the above strategy that have been proposed by TRRA.	Noted.
Wipeout Graffiti	The issue that is of concern of the Team as a whole is the Donald Street East Car Park, which is the centre for antisocial behaviour in the town.	The Delivery Program identifies that re-development is unlikely to occur under current development controls and in turn changes are required to encourage redevelopment and subsequently boost activity in the town centre.
Resident	Writes to voice opposition to the proposed changes to height limits in Nelson Bay.	The preparation of the Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan will seek to improve the Public Domain of the Nelson Bay Town Centre.
Resident	The proposal to allow buildings of 10 or more storeys in the Nelson Bay CBD would destroy the ambience of the small coastal town.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Objection to high rise building heights being relaxed in Nelson Bay, particularly with regard to the vicinity of the township and marina.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
Resident	Totally rejects the push from Council to continually try and encourage extra height within the area by 'Lifting the Lid' on height restrictions.	Council will have the opportunity to consider the option of retaining a five storey height limit in the core of the town centre when it considers the Delivery Program.
	The proposed values of FSR are far too high for a coastal village and should be	The FSR values are commensurate with the town centre controls in similar coastal



Author of submission	Comment	Council response
	restricted to values of no more than 2.5:1	locations in NSW that are also strategic centres and tourism hubs, such as Forster.
	States that the two public car parks need to be renewed and that existing traffic studies need to be updated.	A comprehensive Traffic and Parking Study was completed in 2012, which was updated with revised traffic and parking data in 2017. This Study will inform the future traffic arrangements for the town centre.
	States that the public domain is the most important component.	The preparation of the Nelson Bay Town Centre Public Domain Plan, Wayfinding Strategy and Street Tree Masterplan will seek to improve the Public Domain of the Nelson Bay Town Centre.

**Appendix 15 – Frequently Asked Questions (FAQs) to Progressing the Nelson  
Bay Town Centre and Foreshore Strategy: A Revised Implementation and  
Delivery Program**

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# FAQs

Nelson Bay frequently asked questions



This fact sheet responds to key issues raised during the exhibition of the Nelson Bay Revised Implementation and Delivery Program, and outlines the next steps towards initiating change in the Town Centre.

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**next**



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# Building heights

## Current NB Strategy 2011

## Adopted Nelson Bay Revised Implementation and Delivery Program

LEP Height Limit	5 storeys	LEP Height Limit	8 storeys and 5 storeys
With bonus incentives under the Strategy	Clause 4.6 (as per Standard Instrument) may be used to gain an additional 2 storeys for outstanding design excellence	No bonus incentives  ratio controls Establish design excellence panel Clause 4.6 (as per Standard Instrument) may be used to exceed limit	If Clause 4.6 is relied on for more than 10% increase, the full Council determines the application

### 1 Why increase heights in Nelson Bay town centre?

Limited private investment and economic development over the past decade has hampered the progress of Nelson Bay. This has impacted both businesses and the community, who are struggling with the lack of services available.

Despite the current housing boom, the residential unit market in Nelson Bay has declined since 2006 due to a number of defaults and stalled development activity. An independent feasibility appraisal and third party peer review by local economists indicates current height limits are unfeasible for re-development.

Nelson Bay as a 'strategic centre' in the Hunter Regional Plan 2036, suitable for increased densities that will enhance the tourist, recreation and residential appeal of the town centre.

Increasing heights is the most sustainable way to accommodate the growth and density needed to rejuvenate Nelson Bay's town centre, rather than allowing urban sprawl to creep into the precious surrounding bushland.

### 2 Why will increasing building heights benefit the town and the community?

In order to thrive, Nelson Bay needs a larger permanent population and the best way to achieve this is by creating a walkable, liveable town centre. Increasing heights will make new developments and investments in the town centre feasible, which will fund public domain improvements and other community facilities.

access to services. The community has asked for investment in health care facilities, educational services and improved transport infrastructure. Only a higher population density will attract this level of investment in urban infrastructure and services in Nelson Bay.



Increase in density, service provision and building height



## Hamlet

A cluster of small scale residential development of low to very low density in a rural or coastal setting, with very limited services or facilities.



## Village

Lower density areas typically have smaller scale development within a more natural setting with a limited mix of retail, commercial and service needs principally servicing the village.



## Town

Towns, like Nelson Bay, include a diverse mix of low to mid-rise building types

retail and service needs which often extend beyond the township boundary.



## City

Higher density areas include a diversity of building types including high rise development, and wide range of retail and commercial uses and services.

3

Did Council look at similar seaside towns to inform the Nelson Bay Delivery Plan?

Council planners considered a range of similar seaside towns, their local economies and their planning controls. Most recently, Mid Coast Council has prepared amendments to allow an 11 storey precinct in the Forster civic centre, citing a need for increased services and a greater diversity of accommodation types in the centre. The proposal will stimulate further interest and investment in Forster Tuncurry, activate retail, commercial and community uses in the centre and responds to the land development economics that make development in that location feasible.

4

How can Nelson Bay maintain its character and amenity with 8-storey apartment blocks?

Nelson Bay town centre already contains several apartment buildings of similar size and scale. Design excellence for new buildings in Nelson Bay and improved amenity in the town centre will be achieved by activated street frontages and the appointment of an independent urban design panel who will provide expert advice to Council.

In addition to overall building height, and

appearance of a building and the perception of its overall bulk, scale and mass.



Source: Final Planning Proposal – Civic Precinct Lake and West Forster, Mid Coast Council 2017





## Design elements influencing visual appearance



Source: Apartment Design Guide – Planning & Environment, NSW Government 2015

## Strengthening design excellence

Design excellence will be strengthened by new LEP clauses for activated street frontages and appropriate vertical to horizontal proportions. Multi storey buildings in Nelson Bay will be referred to an independent Urban Design Panel which will consider design elements such as:

**Facade Layering:** Articulated and varied use of materials provides depth and layering to this mixed use development.

**Structure:** Rectilinear form is broken down by deeper upper level deck areas articulated with screens with the top storey set back from the elevation.

**Diversity:** Townhouses with a strong individual vertical articulation creates a sense of diversity and material richness

**Scale:** The scale of this larger mixed use building is broken down with a distinctive ground, mid and upper level articulated with blade walls, projecting decks, material and colour.

**Form:** Fluid form, expressed volumes and level articulates this contemporary residential

5

Existing high rise apartment blocks in Nelson Bay already have high vacancy rates and absentee owners who use their flats only for weekends and holiday rentals.

A more balanced mix of both residential and visitor accommodation stock will enhance the vibrancy and appeal of the town centre and surrounds. Quality residential units are

Increasing building heights will enable a mix of residential accommodation, such as townhouses and 1,2,3+ bedroom apartments, that can support mixed use activated street frontages for cafes, restaurants and ground level amenities.

New buildings could be marketed at seniors looking to downsize to live near vital services, young people looking to live and work at the

close to services and the Bay lifestyle.





## Steps to change heights

### 1 Identify strategic justification and merit to varying building height

Building heights are reviewed as part of Council's strategic planning.

Higher buildings have been explored as a way of making

of available serviced land. They provide for housing mix and housing diversity and allow greater density opportunities within a walkable catchment of services, open space and recreation opportunities.

strategic planning outcomes through adoption of the Nelson Bay Revised Implementation and Delivery Program.

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### 2 Initiate a planning proposal to change the *Port Stephens Local Environmental Plan 2013*

Council will be asked to resolve to prepare a planning proposal to facilitate the strategic planning outcomes.

### 3 Gateway determination from the Department of Planning and Environment

After reviewing the planning proposal

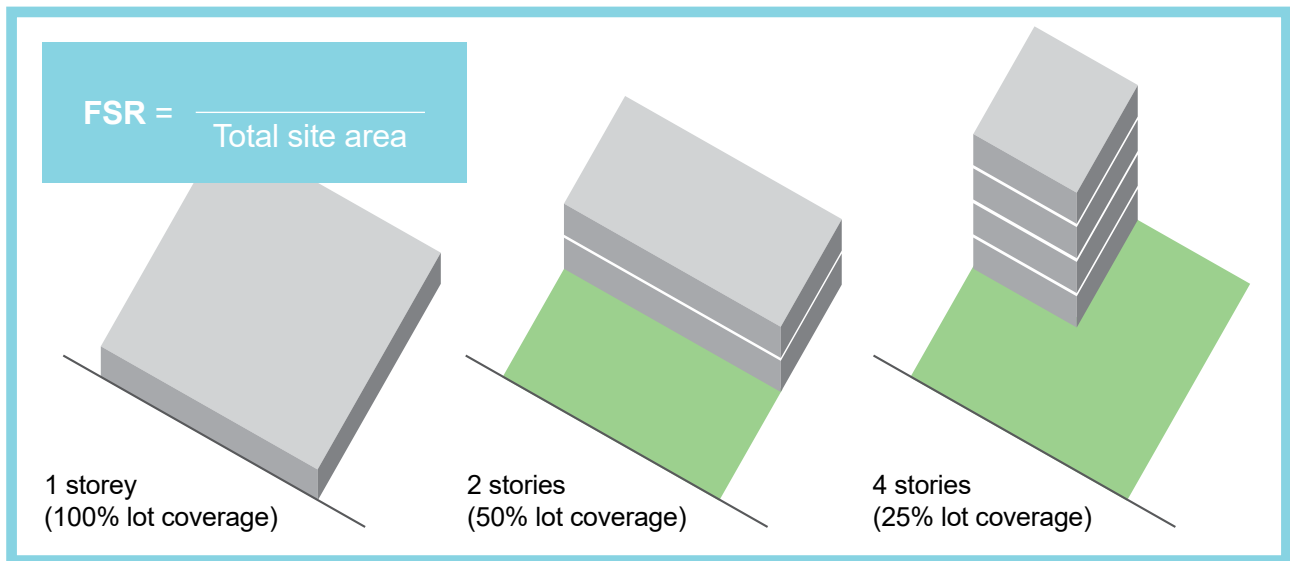
the Minister determines whether it should proceed. They then set requirements for further studies, public consultation, State agency consultation and project time frames.

### 4 Public exhibition of the draft amendment to the *Port Stephens Local Environmental Plan 2013*

### 5 Council review and determination

Public submissions are reviewed and Council determines whether to proceed, amend the planning proposal or terminate the planning proposal. If approved, the amendment is made to the *Port Stephens Local Environmental Plan 2013* and becomes law.

# Floor space ratio



## 1 What is floor space ratio?

Floor space ratios (FSR) are used to control the size of a building and the amount of land it occupies.

If the FSR is set at 1:1, a new building could cover a site as a single storey, 50% of the site as a 2 storey building or 25% of the site as a 4 storey building.

Statutory FSR controls are being proposed

bulk and scale of new buildings.

It is proposed to amend the *Port Stephens Local Environmental Plan 2013* to introduce an FSR of 3:1 in Nelson Bay town centre. This is on par with the FSR proposed in Forster town centre.

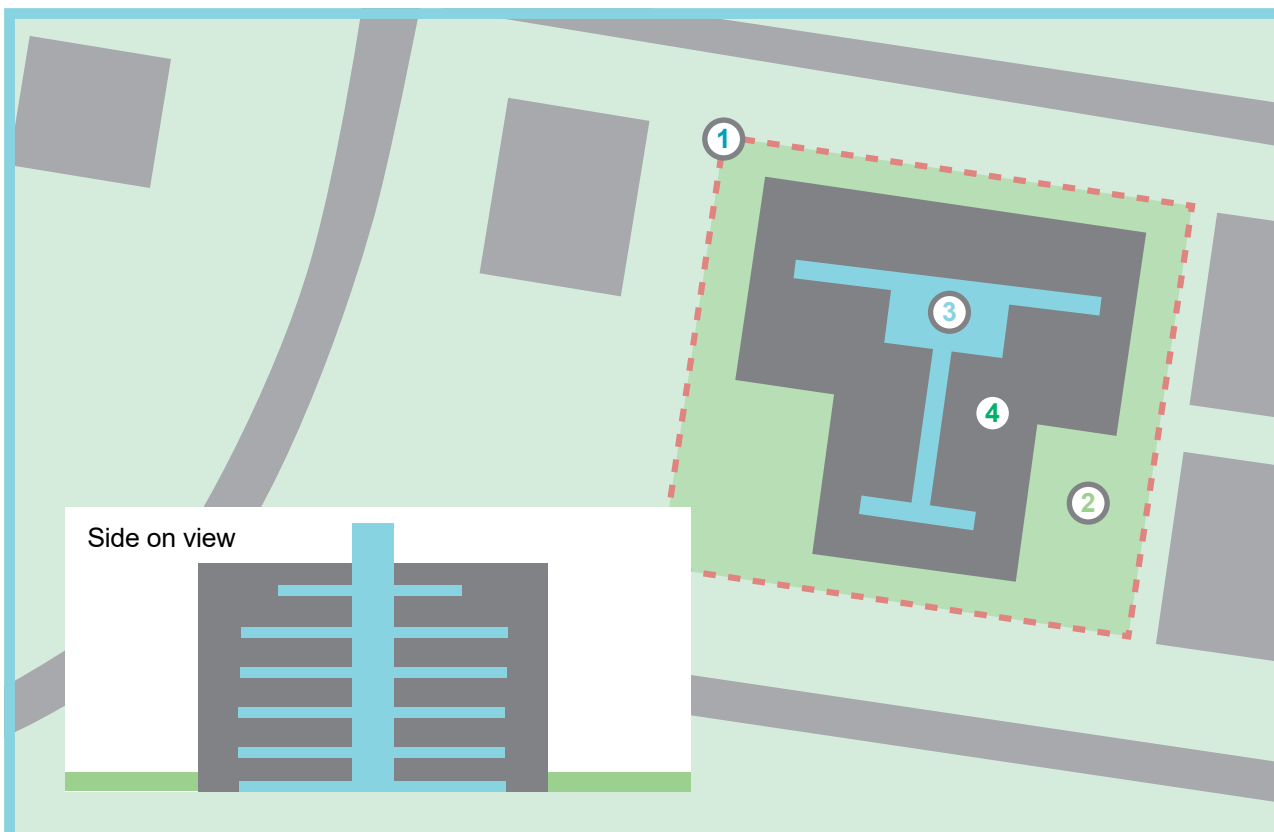
## 2 How does FSR control the scale of development?

By setting a maximum FSR, the overall building size is limited, as demonstrated above. Height controls can also be used in conjunction with FSR. For example, if height controls only permitted 2 storey development, it would not be possible to build the 4 storey building above even

In Nelson Bay some sites simply won't be able to be developed to the maximum height limit because of the FSR controls.

Other controls that limit the scale of development include front and side setbacks, which set the minimum distance a building must be from the boundary, as well as open space and landscaping requirements.

These controls are established in Council's Development Control Plan and other policies.



### 3 How can FSR control the scale of development in Nelson Bay town centre?

Let's examine FSR using a hypothetical site. For this site, FSR, setbacks and landscaping requirements would limit the maximum height of a building to 6 storeys.

$$\text{FSR} = \frac{\text{GFA}}{\text{Total site area}}$$

FSR controls in Nelson Bay town centre are 3:1.

**Site area** - 2,396sqm

- 1 Development controls stipulate that
- 2 **30% of a site** cannot be built on to meet requirements for setbacks, private open space, landscaped area, etc. This leaves a maximum building footprint of 1,678 sqm (2,396 sqm – 30%).

Of the 1,678 sqm, stairs, voids, storage

areas, parking, driveways and outdoor terraces do not count towards gross

This takes up about **30% of a building**, leaving **1,175 sqm of gross** per storey (1,678 sqm - 30%).

$$\text{FSR} = \frac{\text{GFA}}{\text{Total site area}}$$

$$\text{FSR} = \frac{1,175 \times 6 \text{ storeys}}{2396}$$

$$\text{FSR} = \frac{7050}{2396}$$

$$\text{FSR} = 2.9:1$$

A 7 storey building would exceed the maximum FSR at 3.4:1.

For this site FSR controls limit the height of new development to 6 storeys.



# Variations to development standards

Using clause 4.6 of the Port Stephens Local Environmental Plan 2013

1 Why does Council allow people to vary height limits? Council should set a limit and never let anyone build above that limit.

Every council in NSW is required to include a standard clause in their Local Environmental Plan (LEP) that allows an applicant to request a variation to standards like height or subdivision lot size.

The State Government requires councils to include this clause because it recognises that while some developments might not meet strict numerical standards, they still meet the planning objectives for an area. Clause 4.6 applies to the whole Port Stephens Local Government Area, and not just in Nelson Bay.

2 Versions of Clause 4.6 and supporting policies adopted by other councils in NSW are much stricter.

Every Local Environmental Plan in NSW includes the same version of Clause 4.6. The State Government does not allow councils to amend Clause 4.6 or change its operation.

If adopted, Port Stephens Council will be

an adopted policy to guide the assessment of these applications, which will provide opportunities for greater transparency and community participation.



3

There is no clear criteria for Council to assess variation requests under Clause 4.6.

Clause 4.6 requires an applicant to demonstrate that:

- compliance with the development standard is unreasonable or unnecessary in the circumstances of the case; and
- grounds to justify contravening the development standard; and
- the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out.

The Court also requires councils to take

decision to exceed development standards.

4

How will Council's new Clause 4.6 Policy improve decision making?

Council's new Clause 4.6 Policy creates certainty and transparency in decision-making by setting out the processes that apply and further criteria for a more robust assessment.

The Policy requires:

- Applications increasing heights by 10% or more to be determined by the full council;
- Applications to vary a standard to be accompanied by a 'Clause 4.6 form' which lists the criteria that must be addressed;
- Council to exhibit the Clause 4.6 form when an application is advertised; and
- Council to maintain a register of applications that have varied development standards on Council's website.

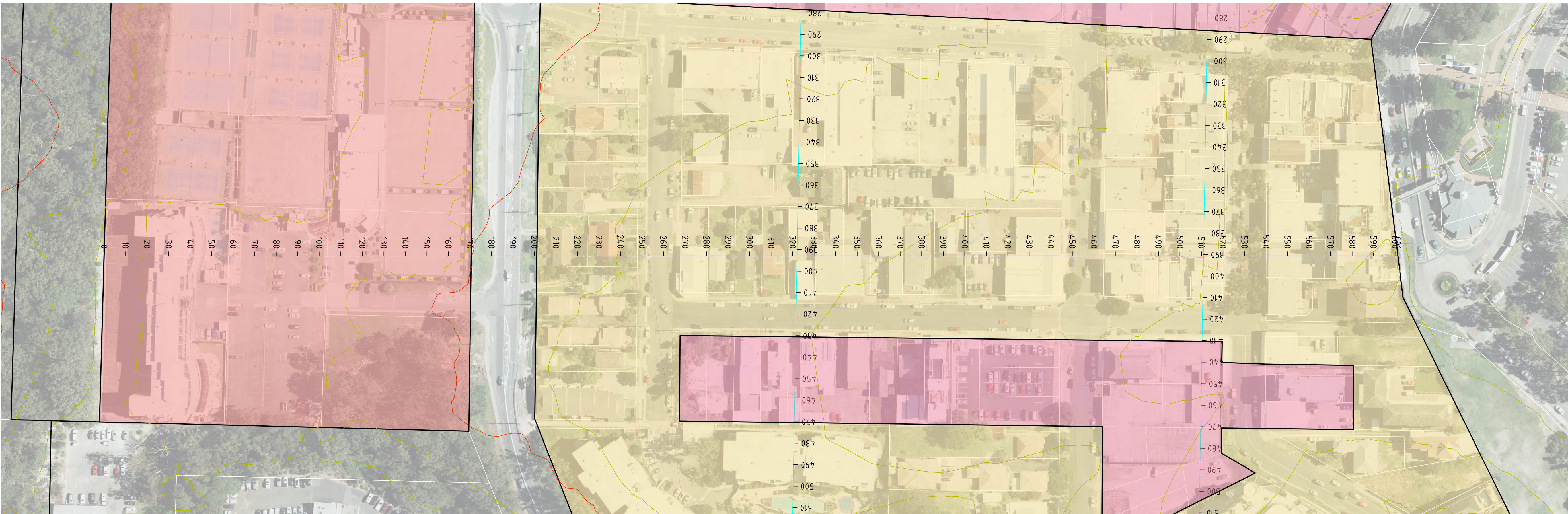




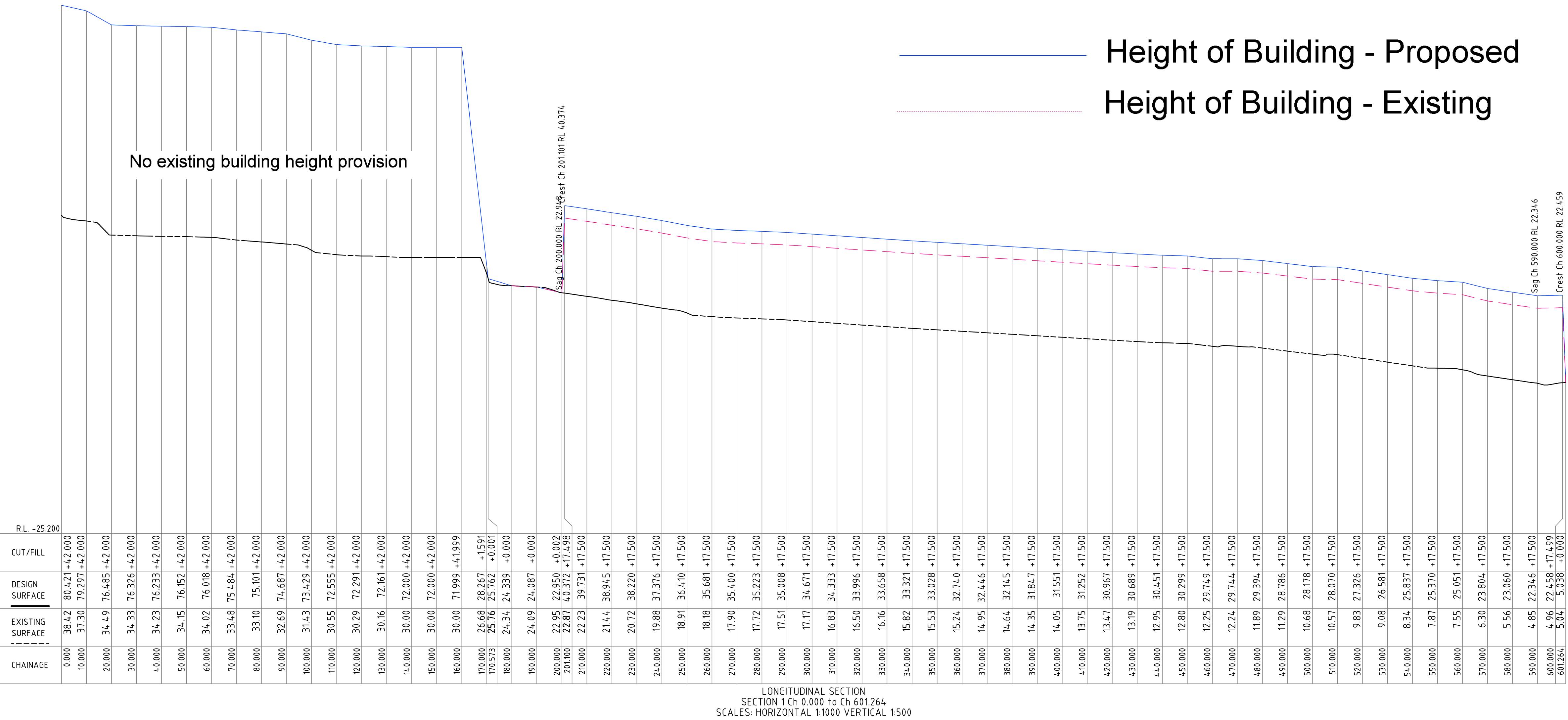
## **Appendix 16 – Cross Sections**

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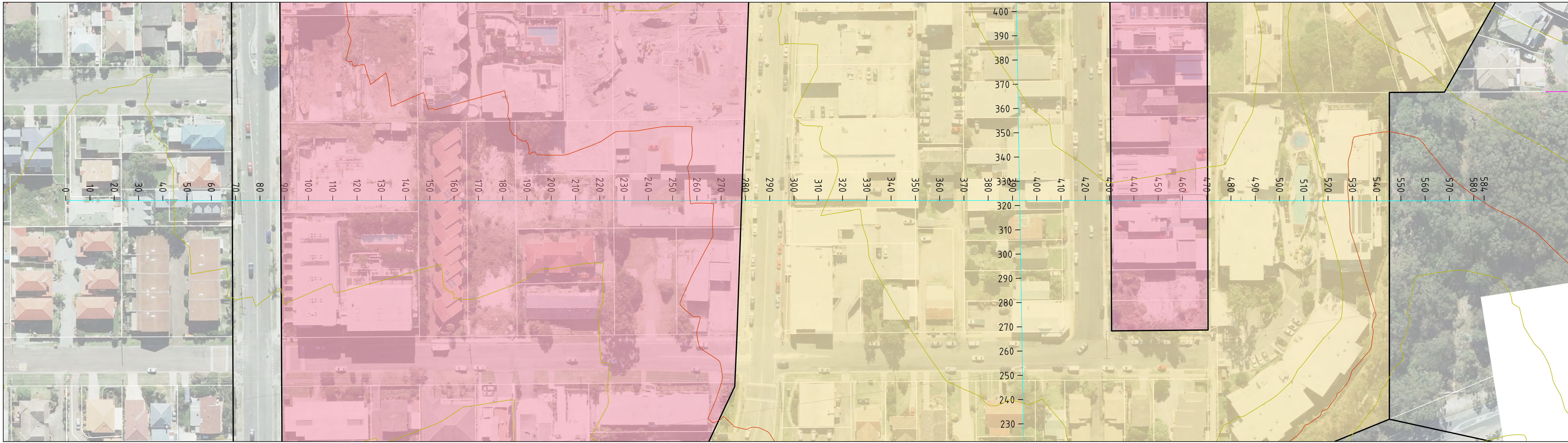




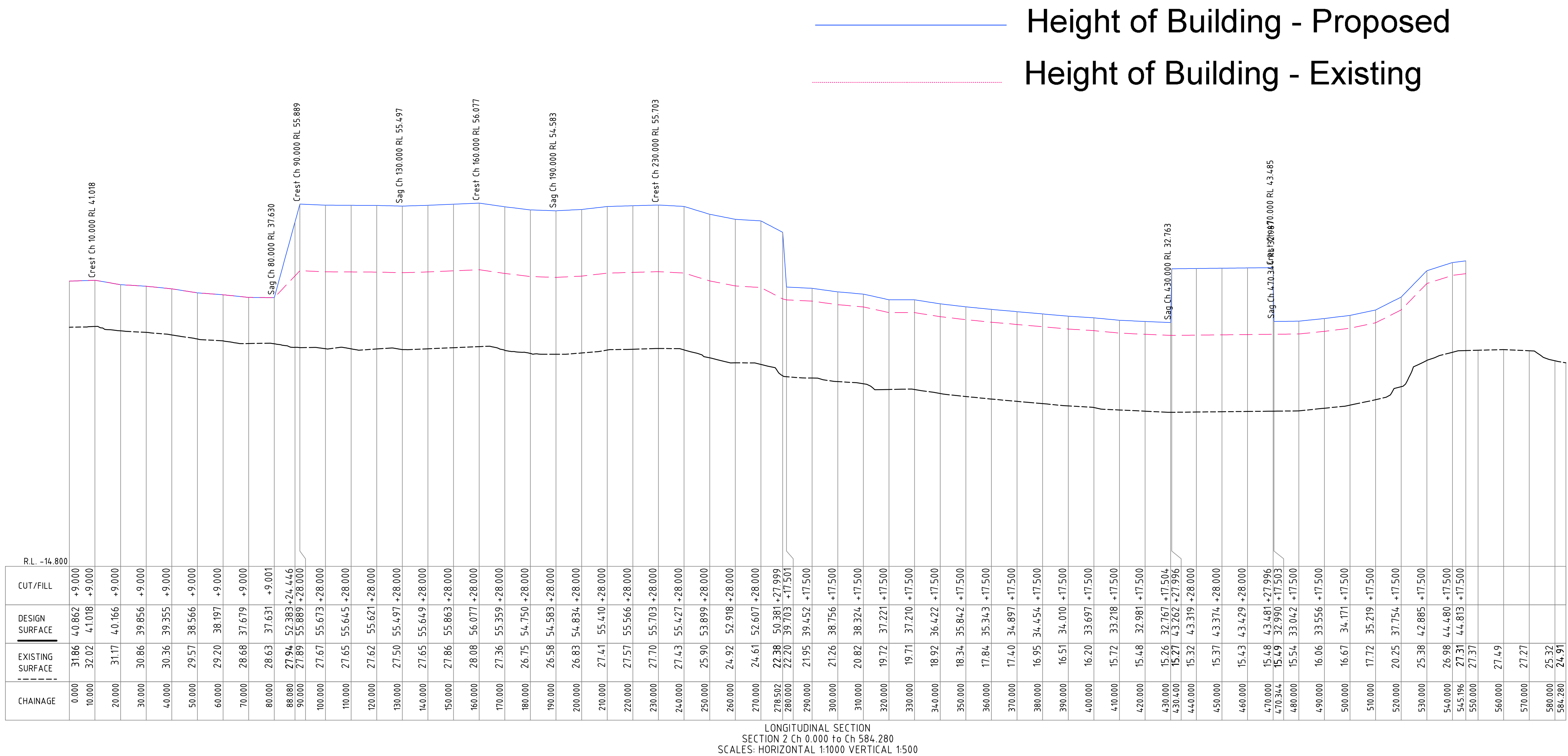
# North-south cross-section



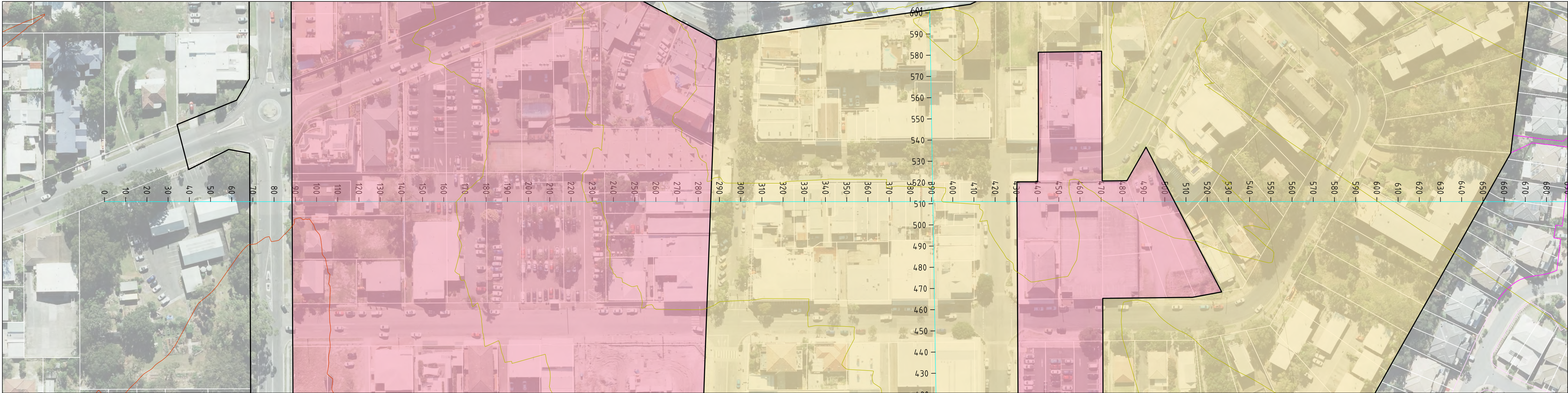




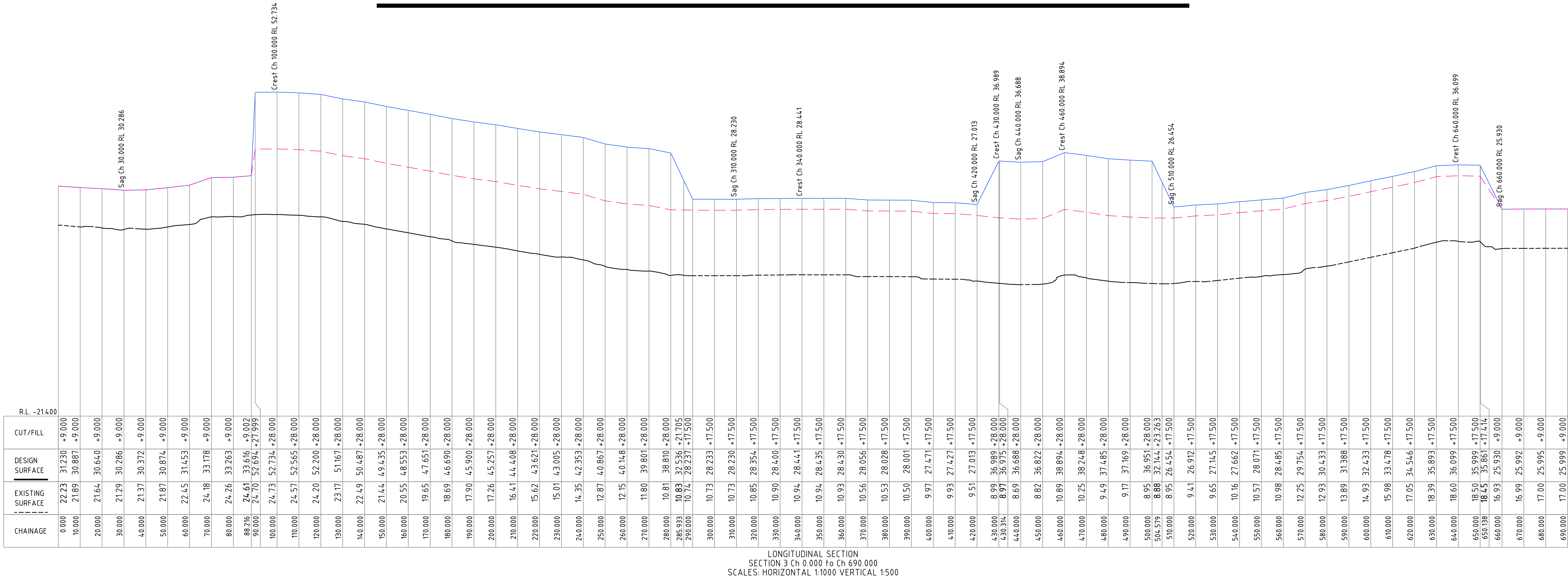
# Southern east-west cross-section







# Northern east-west cross-section



Height of Building - Proposed

Height of Building - Existing



## **Appendix 17 – Urban Design Analysis**

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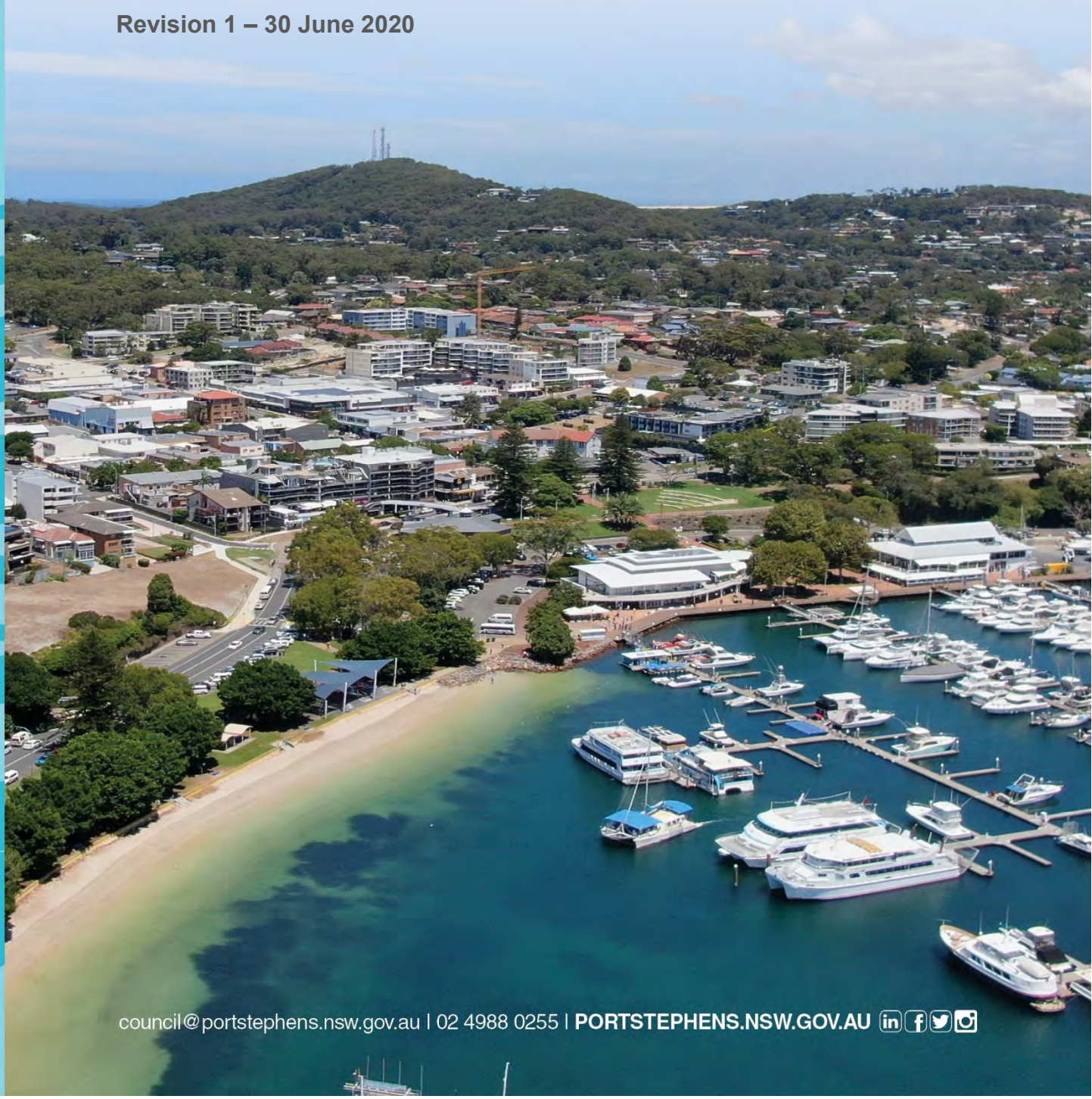


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# Nelson Bay

## Urban Design Analysis

Revision 1 – 30 June 2020





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## Abbreviations used in this Urban Design Analysis

The Nelson Bay Town Centre and Foreshore Strategy	The Strategy
Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program	The Delivery Program
Port Stephens Local Environmental Plan 2013	PSLEP
Port Stephens Development Control Plan 2014	PSDCP
Floor Space Ratio	FSR

# Introduction

Nelson Bay is surrounded by beautiful beaches and a pristine natural environment. It is a popular destination for international and domestic tourists, and people looking for a great place to live. People come to the town centre to live, shop, work, gather and be entertained.

With limited private investment in the town centre however, Nelson Bay is at risk of become a dated destination that fails to meet the expectations of residents and visitors.

## COMMUNITY VISION

Significant consultation has been carried out to develop the community vision for Nelson Bay – a vibrant town centre focused on lifestyle that respects important elements of local character.

The Nelson Bay Town Centre and Foreshore Strategy (the Strategy) outlines objectives for the town centre to achieve the community vision, which are supported by actions in Progressing the Nelson Bay Town Centre and Foreshore Strategy: A revised implementation and delivery program (the Delivery Program).

The Delivery Program actions will deliver some really exciting changes and make Nelson Bay an even more inviting and beautiful place than it already is. The changes will sustain the Bay as a major contributor to the Hunter regional economy and revitalise the centre for both residents and visitors.

The Delivery Program includes a number of actions to amend the Port Stephens Local Environmental Plan 2013 (PSLEP) to both encourage new development and reinforce the key components of character identified in the community vision:

- Solar access at street level
- Views to the bay and ridgelines along key view corridors
- A village feel to the town centre

This urban design analysis demonstrates how proposed changes to PSLEP will deliver the community vision and enhance the character of Nelson Bay.



# Determining Proposed Provisions

The Delivery Program included a range of actions to deliver the community vision, and specifically sets out the rationale for the proposed amendments to PSLEP. The proposed changes, including details of how the provisions were determined, are set out below.

## Building Heights

Action 7 of the Delivery Program proposes changes to the Height of Building Map. Figures 12 and 13 of the Delivery Program have been reproduced below. The provisions in the Planning Proposal have been prepared in accordance with these figures.

FIGURE 12– Proposed HoB and FSR						
No.	Existing HoB	Strategy HoB	Proposed HoB	Strategy FSR	Existing FSR	Proposed FSR
A	2 Storey (8m)	Not in Strategy	2 Storey (8m) (No change)	Not in Strategy	No FSR	No FSR (No change)
B	2 Storey (8m)	3 Storey (10.5m)	3 Storey (10.5m)	2.5:1	No FSR	2.0:1
C	2 Storey (8m)	4 Storey (14m)	4 Storey (14m)	2.5:1	No FSR	2.0:1
D	5 Storey (15m)	7 Storey (24.5m)	8 Storey (28m)	2.5:1	No FSR	3.0:1
E	5 Storey (15m)	7 Storey (24.5m)	5 Storey (17.5m)	2.5:1	No FSR	2.5:1
F	No HOB	9 Storey (31.5m)	12 Storey (42m)	2.5:1	No FSR	3.0:1
G	5 Storey (15m)	Not in Strategy	5 Storey (17.5m)	Not in Strategy	No FSR	2.5:1

Note: The Strategy (and this Delivery Program) makes allowance for a minimum 3.5 metres per storey.

**Figure 1 - Proposed Height of Building Provisions in the Delivery Program**



FIGURE 13– Illustration of proposed HoB and FSR



Figure 2 - Proposed Height of Building Map in the Delivery Program

The Delivery Program sets out the justification for these proposed heights as follows:

- The Hunter Regional Plan 2036 identifies the need to ‘investigate high density development that maintains and enhances the tourist, recreational and residential appeal of the centre’ for Nelson Bay (p. 64). This approach is further supported by the Port Stephens Planning Strategy 2011, which identifies that the intensification of existing development is more suited than zoning further lands (p.20).
- The Tomaree Peninsula is surrounded by national parks, which contain federally listed endangered species, such as the koala. As a result, outwards expansion is constrained. A town centre is the most appropriate location for density to cater for population growth. Without this, Council will continue to see rezoning proposals on the periphery.
- Consultation has identified that the Resident Owners, Resident Renters, Absentee Landlords and Businesses do not reach mean agreement about the numerical maximum height of building limit. However, they did reach mean agreement that building heights should follow the natural slope of the land (p. vii).
- The Paper identified that the town centre and foreshore has not seen any significant residential development since 2006, despite a number of development consents being issued. An extensive feasibility analysis, which was then peer reviewed and identified that a minimum of eight storeys was required to provide confidence for investment.

- The development application for an eight storey apartment building at 11-13 Church Street was considered by Council on 11 April 2017, and received 75 submissions and a petition containing 145 signatures in support of this development. Only two submissions objected to the development application. This is an indication of support for increased heights where good design outcomes can be achieved.
- A number of existing buildings and approved development consents already exceed the existing five storey maximum height of building limit, being:
  - 71 Victoria Parade, Nelson Bay (Commercial & Residential) – 6 Storey/21m
  - 5B Talleen Road, Nelson Bay (The Landmark) – 8 Storey/28m
  - 14 Magnus Street, Nelson Bay (Residential) – 6 Storey/21m
  - 11-13 Church Street, Nelson Bay (Residential) – 8 Storey/32m
  - 29-45 Magnus Street, Nelson Bay (Marina Resort) – 6 Storey/22m
- Retaining lower heights (17.5m / 5 storeys) in the central core of the study area will assist in retaining a 'village atmosphere' in this precinct and better facilitate view sharing. This proposal is in response to submissions received that expressed concerns about the quality of the public domain and pedestrian experiences in this area as well as submissions that valued view sharing. In addition, parts of the core of the town centre are highly fragmented and, without consolidation of multiple lots, are unlikely to be able to be developed to 8 storeys given the proposed FSR controls. Therefore, raising height limits in this part of the town centre may not have an impact on the feasibility of development to the same extent as in other parts of the centre and may not have the same impact on driving economic investment in Nelson Bay.

The above justification has been informed by a significant volume of previous urban design analysis that identifies how new development can frame the town centre and key view corridors, reinforcing the key characteristics of Nelson Bay. Increased building heights around the town centre will enable new development that provides an increase resident population. These taller buildings will also be able to take advantage of the natural topography to afford high quality views to a larger number of residents, whilst maintaining views towards the water and surrounding ridgeline along key public view corridors. Lower building heights in the town centre will reinforce the village feel in the central town centre precinct.

## **Floor Space Ratios**

The Delivery Program recognises the importance of maintaining appropriate bulk and scale, and that the overall bulk and scale of development will not just be determined by height.

A key matter in this regard is floor space ratio (FSR). Feasibility testing of development bulk and scale has shown that FSR provisions resulting in site cover average of 38% provides an acceptable level of feasibility for new development, whilst also providing ability to meet the design requirements outlined in the SEPP 65 Apartment Design Guidelines (Nelson Bay Town Centre: Feasibility Testing of Residential Development Sites, Hill PDA Consulting, 2017).

This means that developers have the confidence to invest, whilst ensuring appropriate solar access and view sharing. This accords with the community vision and respects local character, and has resulted in the provisions outlined in the Planning Proposal.

## **Active Street Frontages**

The Delivery Program recommends provisions in the PSLEP to require active street frontages in the Nelson Bay town centre, using the following justification.

This clause will seek to provide activation to those identified streets in order to achieve good design outcomes. The supermarket site on the corner of Daonal and Stock Streets (Nelson Bay Woolworths) is an example of a building that provides an activated street frontage.

Good urban design features for the supermarket site are identified as follows:

- Central location in the town centre supports existing specialty shops.
- Clear identifiable entry point on the street corner encourages pedestrian activity.
- Pedestrian crossing provides direct access from different sides of the street.
- Lack of internal shops means specialty stores are not taken away from the streetscape.
- Underground parking means floor level space is not given to parking.
- Underground services clean up aesthetics and provides spaces for landscaping.
- Continual awning coverage provides protection from elements, such as rain and sun.
- Rear separate loading bays reduce potential conflict with pedestrians and cars.

An activated street frontage requirement will mean all new developments will have to ensure the ground floor premises facing the street are to be used for the purposes of business premises or retail premises. This could include amusement centres, community facilities, educational establishments, entertainment facilities, function centres, information and education facilities, medical centres, public administration buildings, or indoor recreation facilities. This will create a lively centre with an amenable and pedestrian-focused public domain, activated by building uses that engage with the street.



The role of active street frontages provisions in achieving the community vision for a vibrant town centre has been identified in a number of previous studies and documents relating to urban design outcomes for Nelson Bay. In addition, the NSW Government Architect document Better Placed identifies the role of active street frontages in creating functional and engaging places where people want to spend time. This aligns with the community vision for a more vibrant town centre.

## Minimum Street Frontage

The character of Nelson Bay includes buildings of human scale, which do not dominate the streetscape. To achieve human scale, the front façade of buildings should give consideration to building width to height ratios. Character analysis carried out for Nelson Bay has determined that ratios of between 1:0.5 and 1:1 at the front building line are appropriate in Nelson Bay (Draft Nelson Bay 2030 Strategy, Rohan Dickson et al, 2008).

The Nelson Bay town centre includes many lots with narrow road frontages however, and so new development may not be able to achieve this human scale. To ensure appropriate development outcomes, the Delivery Program recommends provisions for appropriate vertical to horizontal proportions be included in the PSLEP.

This clause will apply to land within the town centre with a width less than 15m and will seek to ensure the consolidation of narrow sites. This avoids tall and narrow developments that have been considered undesirable, but are currently encouraged by the controls contained in the PSLEP.





## Testing the controls

Testing of the proposed provisions on development outcomes has been carried out for hypothetical sites located in the town centre, to demonstrate that future development will deliver the vision for a revitalised Nelson Bay.

**SITE 1**  
17.5m Height  
2.5:1 FSR

This site is typical of sites located in the main commercial streets, where narrow lot configurations have reduced the opportunity for redevelopment. To meet the new provision for minimum street frontage, the land owner has acquired adjoining lots to ensure a minimum 15m width. The site is 28m long and has a site area of 420m<sup>2</sup>.

As a result of changes proposed to PSLEP, the land is subject to a 17.5m building height limit and a floor space ratio of 2.5:1. The site is also subject to active street frontage requirements.

A resulting building on this land can have a maximum 5 storeys, and a maximum floor space of 1,050m<sup>2</sup>.

This results in a built form with the following floor space configuration:

Ground floor – 110m<sup>2</sup> (the remainder being used for car parking purposes)

1<sup>st</sup> Floor – 420m<sup>2</sup>

2<sup>nd</sup> Floor – 198m<sup>2</sup>

3<sup>rd</sup> Floor – 198m<sup>2</sup>

4<sup>th</sup> Floor – 198m<sup>2</sup>

In the above example, 2<sup>nd</sup> to 4<sup>th</sup> floors are setback 3m from the front, side and rear boundaries. This provides potential building separation of 6m between similarly designed buildings. Upper floors will represent a maximum 60% of the lot width. These upper floor setbacks will provide a two storey façade to the street, reinforcing the village feel of the town centre.

This will be further reinforced through PSDCP controls for design excellence, requiring design solutions such as the use of appropriate colours and materials to reduce the apparent bulk of upper storeys.

New provisions for active street frontages will ensure that ground level retail and business uses provide an engaging pedestrian experience and contribute to Nelson Bay as a location where people want to be.

SITE 2  
28m Height  
3:1 FSR

This site is typical of land located towards the southern part of the town centre. New provisions for minimum street frontages will require acquisition of adjoining lots in some circumstances. In this example, the land is 24m wide, 40m long and has a site area of 960m<sup>2</sup>.

As a result of changes proposed to PSLEP, the land is subject to a 28m building height limit and a floor space ratio of 3:1. The site is also subject to active street frontage requirements.

A resulting building on this land can have a maximum 8 storeys, and a maximum floor space of 2,880m<sup>2</sup>.

This results in a built form with the following floor space configuration:

Ground floor – 180m<sup>2</sup> (the remainder being used for car parking purposes)

1<sup>st</sup> Floor – 960m<sup>2</sup>

2<sup>nd</sup> Floor – 288m<sup>2</sup>

3<sup>rd</sup> Floor – 288m<sup>2</sup>

4<sup>th</sup> Floor – 288m<sup>2</sup>

5<sup>th</sup> Floor – 288m<sup>2</sup>

6<sup>th</sup> Floor – 288m<sup>2</sup>

7<sup>th</sup> Floor – 288m<sup>2</sup>

8<sup>th</sup> Floor – 288m<sup>2</sup>

In the above example, 2<sup>nd</sup> to 8<sup>th</sup> floors are setback 3m from the front boundary, 6m from side boundaries, and 13m from the rear boundary. This provides potential building separation of 12m between similarly designed buildings.

Upper floors will represent a maximum 50% of the lot width. These upper storey setbacks will allow views to the sky as well as significant solar access to adjoining development and streets.

New provisions for active street frontages will ensure that ground level retail and business uses provide an engaging pedestrian experience and contribute to Nelson Bay as a location where people want to be.

# Nelson Bay Development Controls

## DELIVERY PROGRAM ACTION

Action 11 of the Delivery Program sets out amendments to the Port Stephens Development Control Plan (PSDCP) to incorporate controls that encourage design excellence.

Existing chapter D5 Nelson Bay Centre includes site specific provisions which inform how development is carried out in the Town Centre. The controls have been informed by previous urban design analyses and relate to specific precincts identified in Strategy Principles prepared in 2010, to inform the Nelson Bay Strategy (Nelson Bay Policy for Future Development of the Town Centre and Foreshore: Strategic Planning Principles, 2010).

Precincts with differing characters and functions have been identified in Nelson Bay since 1989, when the Commercial Area Urban Design Study described separate tourism, pedestrian prioritised commercial, vehicle prioritised commercial, residential, open space and waterfront precincts (Nelson Bay Commercial Area: Urban Design Study, Tony Corkill, 1989).

The existing PSDCP controls relate specifically to character of the identified precincts and require new development to incorporate design elements that respect this surrounding context.

An amendment to the PSDCP has been drafted which includes strengthened design excellence controls that complement the proposed provisions, which will be exhibited concurrently with the Planning Proposal. This will see character and context related objectives contained within the NSW Government Architects document Better Placed, adopted as relevant objectives for development in Nelson Bay.

In addition, new controls refer to the consideration of character and urban design by the newly formed Urban Design Panel. A number of urban design analyses documents have recommended constituting an Urban Design Panel as a means to achieving a higher level of design quality in Nelson Bay.

Other development controls recommended in a variety of urban design documents for Nelson Bay are included in other chapters of existing PSDCP. This includes controls such as upper storey setbacks to reduce the bulk and scale of buildings as viewed at street level, and floor to ceiling heights to allow for adaptable use of buildings.

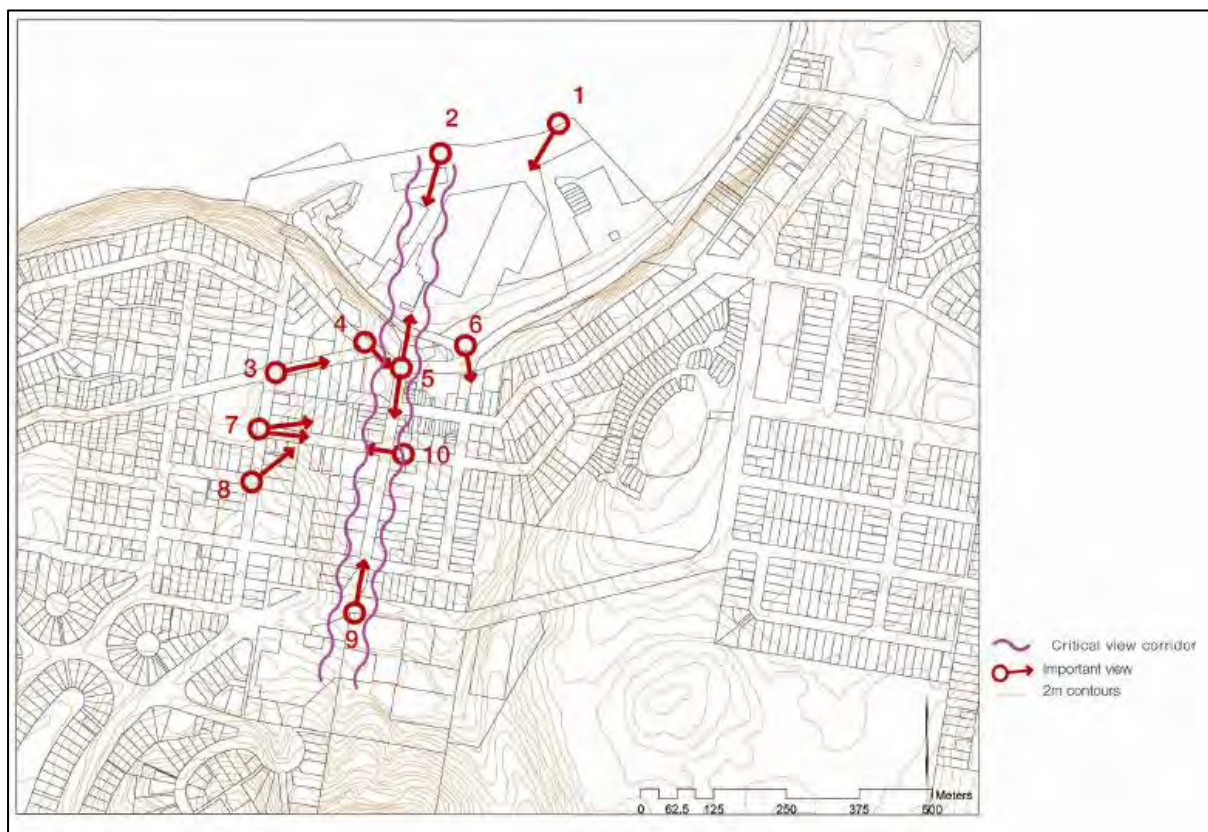
# Visual Impact Analysis

Character statements for Nelson Bay, developed through a range of urban design analyses undertaken over the past 30 years (see references at the end of this document), provide a concise set of criteria in PSDCP to inform a built form outcome that reinforces the desired future character of Nelson Bay. The PSDCP controls and complementary PSLEP provisions have been explored in the preceding sections of this document.

As set out earlier in this document, new development will be required to demonstrate design excellence and provide high quality urban form outcomes.

Significant work has also been undertaken in developing the proposed provisions, to ensure key views and vistas are maintained towards the water and surrounding verdant ridgelines. These views and vistas have been identified in strategic documents prepared over the last 30 years, as key characteristics of Nelson Bay to be preserved.

A view corridor extending from the water, along Stockton Street and south towards Kurrara Hill has consistently been identified as an important view corridor, as can be seen in the figure below from the draft Nelson Bay 2030 Strategy (2008). Other important views generally occur along other street lines, where an ultimate view of the ridgelines or water has been identified as important.



**Figure 3 - Important Views identified in the Draft Nelson Bay 2030 Strategy (2008)**



A visual impact analysis was undertaken for the draft Nelson Bay 2030 Strategy (2011), which noted that increased height and density of buildings is unlikely to impinge on these views. In fact, the analysis identified opportunities for taller builders to assist in framing key vistas and views.

This visual impact analysis was been informed by community consultation. In particular, the consultation undertaken in the preparation of the draft Nelson Bay Town Centre Development Control Plan (2009), where community workshops supported tall buildings towards the edge of the town centre, where they would not block important views.

The below summary from the draft Nelson Bay 2030 Strategy (2011) discusses key views and the impact of taller buildings. It is noted that this analysis included consideration of buildings up to 36m in height – higher than those proposed in the Planning Proposal. These summaries have informed the proposed heights in the Delivery Program and the Planning Proposal.

### **View 1**

Figure 4 shows how building heights have not impacted on views of Gan Gan Hill. This image suggests how higher density development could be established at corresponding points to frame the hillside and town centre development.



Figure 16: Image of the existing view of the town centre from the eastern end of the Western Groyne

**Figure 4 - Figure 16 from Nelson Bay 2030 Strategy (2011)**

## View 2

The view looking South from the Western Groyne (Figure 5) shows the amphitheatre created by the ridgelines that surround Nelson Bay Town Centre. This amphitheatre shape allows for views from the North of the town to maintain strong landscape character and setting.

The topography of Nelson Bay along with vegetation, frames the core town centre. Taller buildings usually exist in the town centre. In order to maintain the natural setting, implementation of large bulky forms is discouraged. However the impact of tall buildings would reinforce the amphitheatre and the town centre if placed towards the outside of the town centre.

The view lines between Kurrara Hill and the marina form an axis for the main street of the town centre, which should be maintained.

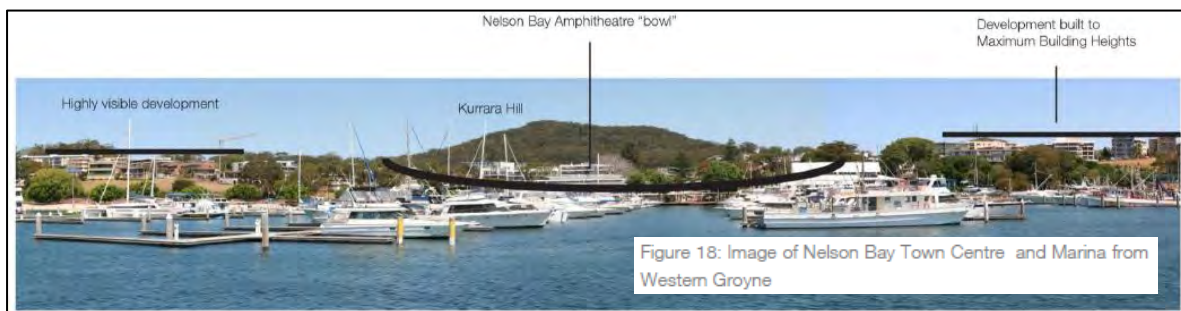


Figure 5 - Figure 18 from draft Nelson Bay 2030 Strategy (2011)

## View 5

The street trees along Stockton Street frame the vista to Kurrara Hill from the intersection of Victoria Parade, not the built form. However existing building envelopes and future buildings will also reinforce this. Tall structures within the built form would not detract from the vista if upper floors are stepped back.

The pavilion structure at the intersection of Magnus and Stockton Streets limit the views both north and south along Stockton Street and appear to have limited uses.



Figure 6 - Figure 24 from draft Nelson Bay 2030 Strategy (2011)

## View 6

The view shown in Figure 7 indicates the sloped open space in this section of the Foreshore Crown Land area. It also demonstrates the lack of views to Tomaree Park from this section of the Foreshore. Views have been significantly improved towards Kurrara Hill with the recent extension of Yacaaba Street to Victoria Street. Similar to the view along Stockton Street, taller buildings will help to frame this important view.

The extension of Yacaaba Street has also provided for a new important view along Yacaaba Street, northward to the water. This street already contains a number of buildings built to the height limit, which concentrate views towards the water. Additional tall buildings will continue to reinforce this new view corridor.

Figure 28: Image of the roundabout at the intersection of Victoria Parade and Teramby Street.



Figure 7 - Figure 28 from the draft Nelson Bay 2030 Strategy (2011)

## View 7

Figure 8 depicts how more intense development along Donald Street could frame views of the Tomaree National Park. Street frontages could be set to a maximum of two storeys, and taller levels set back to increase pedestrian amenity and to enhance this important view corridor. Upper storey setbacks are outlined in PSDCP to achieve this outcome.

Figure 30: Image looking east along Donald Street from Church Street.



Figure 8 - Figure 30 from the draft Nelson Bay 2030 Strategy (2011)



## View 9

Views from the south, (Figure 9) depict the amphitheatre and the land water interface views on Port Stephens towards Tea Gardens. The input of increased height in the edges of the bowl reinforces the amphitheatre.

Existing building forms and the spaces between them indicate how development within the existing town centre fabric could be intensified. There is opportunity to increase heights at key points and frame town centre development with Tomaree National Park hillside as the backdrop or “amphitheatre.”

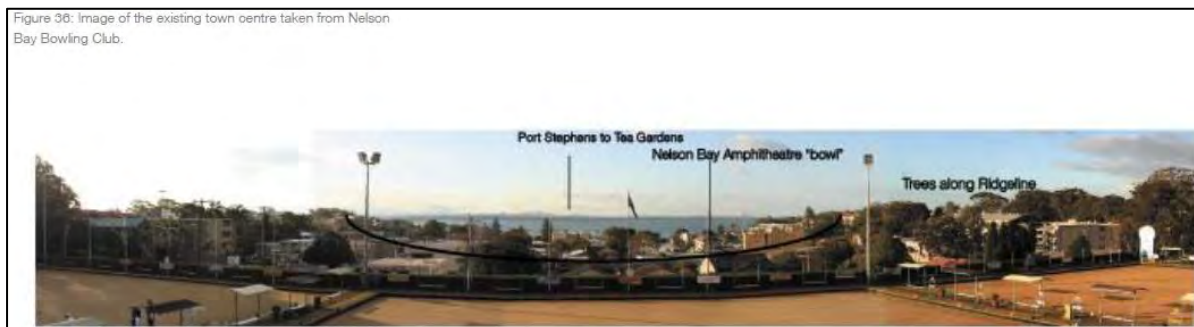


Figure 9 - Figure 36 from the draft Nelson Bay 2030 Strategy (2011)

## View 10

The view west along Donald Street (Figure 10) is terminated by a stand of trees located on the community college site. The street is wide and allows for the amphitheatre topography to be expressed without enclosing the space.

Forms that have upper level setbacks are more desirable than tall street walls, as predominantly two storey street walls encourage a more pedestrian-scaled environment. Upper storey setbacks are outlined in PSDCP to achieve this outcome.



Figure 10 - Figure 38 from the draft Nelson Bay 2030 Strategy (2011)



# Building Height Transitions

The Planning Proposal includes a variety of building heights that respond to local topography and deliver built outcomes to support the community vision for Nelson Bay. The proposal includes a lower height in the town centre, to support the village feel of this precinct. Lower buildings in this part of the Nelson Bay 'bowl' also ensure that taller buildings around the edges of the town centre can share high quality views to an increased number of people. New buildings in the town centre are anticipated to be constructed over a protracted period of time, evolving the town centre into the future vision.

The local topography will allow for appropriate transitions between the town centre and surrounding land, with taller buildings on higher land accentuating the natural setting of the town centre and defining important views and vistas.

For sites with immediate height transitions, development controls, particularly existing controls in PSDCP relating to consistency with local character and setbacks, will ensure that new development responds to change in permissible building height, and provide for appropriate transitions to surrounding built form.

In addition, there is an inherent requirement to consider the impact of any new development on the built environment (section 4.15(1)(b) *Environmental Planning and Assessment Act, 1979*), where relevant standards such as the principles of the NSW Government Architect's document Better Placed can be considered. This document places emphasis on appropriate building design with consideration to surrounding context and urban form.

To further enhance consideration of building height transitions, a proposed amendment to the PSDCP will adopt relevant principles of Better Placed as objectives for new development in Nelson Bay. This amendment will also make reference to the role of the Urban Design Panel in providing expert advice on design excellence during the development assessment process.

An assessment of any development application necessarily considers whether building height transitions are appropriate, on the individual merits of each proposal.

# Solar Access

Appropriate solar access at street level has been consistently identified as an important characteristic of Nelson Bay that informs the future vision for the town centre.

The characteristics of 'appropriate solar access' have been discussed in a number of urban design documents for Nelson Bay. These documents consistently recommend that street trees and awnings should be provided to afford shade to the pedestrian environment, and that a shaded pedestrian environment is preferable to areas of direct sunlight.

This aligns with community feedback which outlined the need for weatherproof pedestrian traffic areas and undercover footway dining options, and positive feedback on the experience of visiting areas with well establish street trees such as the Magnus Street shared zone (see Figure 11 below).



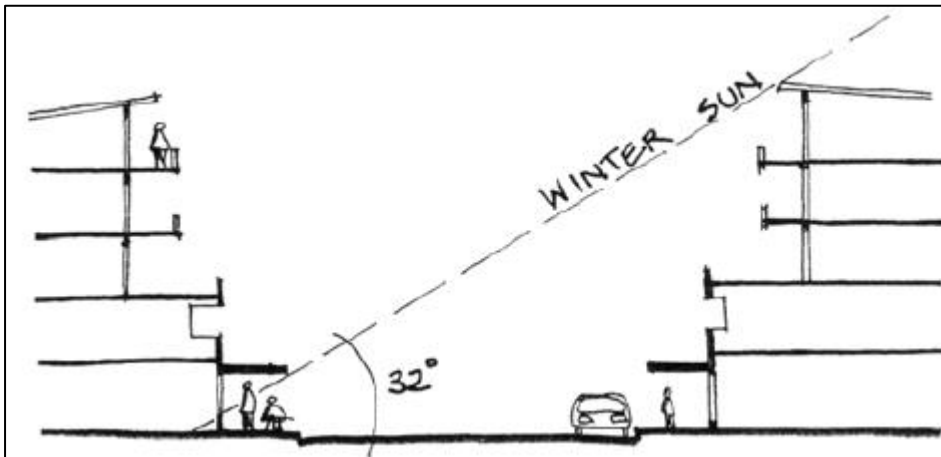
**Figure 11 - Street trees and shading in Magnus Street pedestrian shared zone**

Appropriate solar access does not necessarily include uninterrupted direct solar access, and in fact, community feedback suggests that this does not meet community expectations. Rather indirect light with a suitable overall level of brightness achieves appropriate solar access.

This is supported by previously proposed development controls aimed at maintaining appropriate solar access, which recommend the stepping back of upper storeys to increase light penetrating into street corridors (Background to Design Codes & Draft Development Control Plan: Nelson Bay Town Centre, Patrick Partners & Design

Urban, 2009). This was incorporated into the existing and preceding development control plans.

In particular, these controls were noted as relevant for east-west oriented streets where tall buildings on the northern side of the road have the potential to overshadow the road corridor. In these locations, controls were proposed for upper storey setbacks, to allow a greater amount of light to penetrate the road corridor, without necessarily directly illuminating the ground surface. This is highlighted in Figure 12 below. It is noted that in the below diagram, taller buildings on the south side of these streets may have the effect of reflecting light back into the road corridor and increasing overall brightness.



**Figure 12 - Appropriate solar access outcome in Port Stephens Development Control Plan 2007: Chapter C4 – Nelson Bay Town Centre**

Floor space ratio provisions proposed in the Planning Proposal will further improve solar access into the public realm. The proposed provisions will, for the first time, provide bulk and scale controls in the PSLEP that result in separation between the upper floors of adjacent buildings. This will also allow greater light incursion into road corridors.

The partial shadow diagrams (Figure 13 and Figure 14) show the impact of shadowing on the road corridor at 12pm on 21<sup>st</sup> June, both with, and without, floor space ratio provisions. The diagrams clearly show that the introduction of this provision will increase the opportunity for solar access into road corridors. Note that the below figures illustrate maximum built form under both the current and proposed provisions, and do not take into account the PSDCP controls such as setbacks or design excellence controls.

These figures show that taller buildings with the proposed FSR provisions, result in greater solar access at street level, and an improved pedestrian experience.





Figure 13 - Current - no Floor Space Ratio provisions



Figure 14 - Proposed - including Floor Space Ratio provisions



## Desired Future Character

Changes to enhance local character draw on the character of the existing built and natural environment and surrounding land use to enhance the experience of an area. Change is often necessary to retain the vitality, viability and significance of a place.

Enhancing character may involve intensifying, improving or increasing the quality and experience of an area. Changes that enhance a place are likely to be incremental, with some existing elements remaining as new sites are developed over time, consistent with the valued elements of a place.

Council has carried out a range of urban design analysis and studies for Nelson Bay, to determine the actions that need to be taken to enhance the character of the town centre and achieve the community vision. This includes urban design studies, development capacity modelling, traffic and parking studies, and built form analysis (see references at the end of this document).

### Sunny and Inviting Public Spaces

Planning for appropriate solar access to the streets enhances the character of Nelson Bay by reinforcing the village feel of the town centre. Streets that are warm and bright provide activated public spaces, particularly in the winter months, making places where people want to spend time, for example spaces for outdoor dining in the centre.

The bulk and scale of a building defines the impact of that development on solar access, in addition to the arrangement of land in relation to streets and public space.

Proposed FSR provisions will reduce the bulk and scale of development, and increase the opportunity for appropriate solar access (see Figures 13 and 14 above).

Other actions being delivered from the Delivery Program, such as the Nelson Bay Public Domain Plan set the vision for street furniture, trees, pavements and other elements that deliver interactive public spaces. Works carried out to implement the public domain plan will complement the proposed PSLEP provisions.

### Views of the Blue Sky and Vistas to the Bay

Retaining important views and vistas will enhance the character of the town centre by providing a visual connection to the surrounding waterway and verdant ridgelines. Nelson Bay is surrounded by pristine natural environment and beautiful waterways and retaining visual connections to these features is an important element of the local character.

The design of new buildings can incorporate view sharing principles to maximise view opportunities and enhance public spaces. New development can also play a role in

framing key vistas to the natural environment and drawing the eye along important view corridors.

Proposed building height provisions will take advantage of the natural topography to provide access to views to an increased number of people, whilst respecting important views to surrounding ridgelines.

## **A Friendly Village Feel**

Enhancing the village feel of the commercial town centre will contribute to a more intimate sense of place, and entice people to use public spaces and surrounding businesses both more frequently, and for longer periods of time.

The feel of central Nelson Bay has been defined in the community vision through the eyes of the pedestrian. In the central commercial precinct, buildings predominantly have two storey front facades with relatively narrow shops that encourage shoppers to continue moving along the street towards new shopping experiences. There are numerous examples of buildings that exceed two storeys in height, however upper floor setbacks reduce the visual bulk of a building when viewed at street level, promoting a village feel.

Proposed height of building provisions retain a maximum five storey outcome throughout main commercial areas to retain this village feel, while new development towards the edge of the town centre will provide an increase local population to support local businesses. More economically viable businesses are better placed to further contribute to the village feel of the town centre.

## **Planning Changes to Enhance the Character of Nelson Bay**

The changes proposed to PSLEP, complemented by the proposed changes to PSDCP, will set the controls and expectations for how new development is carried out in the town centre. This includes controls relating to what new buildings look like and how they fit into Nelson Bay.

The proposed amendments to PSLEP will improve solar access by controlling bulk and scale in the town centre, and help to frame important views to the water and surrounding ridgelines. Active street frontage provisions will also ensure that development provides an interactive experience between the public and private realm throughout the town centre, making Nelson Bay a place people want to be.

# Consistency with Better Placed

The NSW Government Architect has produced a suite of documents under the collective name Better Placed, aimed at the improvement of places. The documents outline the components of places that can be controlled to produce a high quality environment for people to live and work in. These have been summarised in 7 objectives that outline, amongst other matters, the role that planning processes have in achieving high quality places where people want to be.

The Nelson Bay Strategy sets a future vision for a more vibrant town centre, which includes an increase in the use of the local businesses and public spaces. This is consistent with the recently adopted Nelson Bay Public Domain Plan which outlines three big moves – Streets for People, Places for People and an Improved Blue-Green Network. The public domain plan is the vision for public spaces in Nelson Bay and outlines how these spaces can contribute to the overarching future vision for the area.

The Nelson Bay Planning Proposal will also deliver the future vision for Nelson Bay, with provisions for new development that will result in a high quality built form. These provisions will provide the necessary tools to ensure new development contributes to the quality of place.

Better Placed includes a framework for evaluating the design objectives, which has been considered below.

## Objective 1: Better Fit

This objective relates to the need to ensure new developments give consideration to the surrounding built environment, and ensure important elements of local character are respected and reinforced.

The proposed provisions have been developed with specific consideration to these important elements of local character. In particular, requirements for active street frontages will require greater consideration of how buildings present to the street, and will reinforce a fine grain at the front façade. Floor space ratio provisions will also ensure appropriate bulk and scale of development, and will improve solar access outcomes at street level. Bulk and scale outcomes will also benefit from the proposed provisions for minimum land width requirement.

PSDCP also includes specific character statements for the various precincts in Nelson Bay, to inform new development outcomes. These complement the proposed provisions to ensure that development fits within the local context.

## **Objective 2: Better Performance**

Objective 2 relates to the use of sustainable materials and design, to promote longevity of buildings in terms of both structural adequacy and on-going relevance to the changing needs of the community. This objective aligns strongly with the rationale for the proposed provisions, which has been motivated by a need to enable the future vision for Nelson Bay.

To enable this future vision, new development is needed to increase the resident population that will support a more vibrant town centre. Highly valued surrounding vegetation means that greenfield development is not an appropriate option, however infill development has not eventuated within the existing urban footprint. A feasibility assessment carried out on a number of sites within the town centre has shown that existing building height provisions in PSLEP create a barrier to the development required to deliver the future vision for Nelson Bay (Nelson Bay Town Centre: Feasibility Testing of Residential Development Sites, Hill PDA Consulting, 2017).

The proposed provisions have been derived from this feasibility assessment, to enable development that will serve the future needs of the Nelson Bay community.

## **Objective 3: Better for Community**

The need for development to be inclusive, connected and diverse forms the basis for this objective.

Whilst this objective relates primarily to building design elements that are not controlled by PSLEP, the proposed provisions do contribute to a positive streetscape by increasing solar access at street level. Floor space ratio provisions will control volumetric mass resulting in setbacks that promote solar access into public space. Appropriate solar access contributes to a positive pedestrian experience for all users, consistent with this objective.

## **Objective 4: Better for People**

People oriented characteristics of safety, comfort and liveability result in development that is better for people.

These characteristics relate to users of development and form objectives primarily addressed to internal building design. PSLEP does not include provisions relating to the internal design of buildings, however proposed active street frontage provisions will require more interactive interfaces between the internal parts of buildings and the public realm. This will help to improve activity in adjoining public spaces and increase safety and liveability.



## **Objective 5: Better Working**

This objective requires development to be functional, efficient and fit for purpose.

The proposal includes revised building heights in the town centre to allow for practical floor to ceiling heights that are suitable for a diverse range of uses, aligning with this objective. The proposal will also increase the opportunity for new development in the town centre that will provide higher density housing close to local shops and services.

## **Objective 6: Better Value**

Development has the opportunity to generate ongoing value for people and communities and minimises costs over time.

The planning proposal includes new provisions relating to active street frontages which will improve the interface between development and the public realm. The resulting higher streetscape experience results in increases to the shared value of Nelson Bay as a place.

Endorsement of appropriate floor to ceiling heights for new development also ensures that new development is suitable for a variety of potential uses, providing a more valuable investment environment for developers constructing new buildings.

## **Objective 7: Better Look and Feel**

This objective involves making a place engaging, inviting and attractive.

The proposal includes new provisions for active street frontages to improve the interface of development with the public realm, adding interest to the streetscape experience. In addition, new floor space ratio provisions will increase the opportunity for appropriate solar access to public spaces, and will control bulk and scale of development.

Supporting controls in PSDCP and the Nelson Bay Public Domain Plan will further strengthen important elements of local character to provide an enjoyable and pleasing look and feel to the town centre.

# Conclusion

Significant work has been undertaken to understand and define the community vision for the future of Nelson Bay, and the important elements of local character that will achieve a revitalised town centre.

The community vision has informed the objectives outlined in the Nelson Bay Town Centre and Foreshore Strategy and the actions in the Delivery Program, which will improve and enhance Nelson Bay. These work together holistically to achieve the community vision.

The proposed amendments to PSLEP are one element of the planning package that will deliver the community vision. Urban design analysis carried out over an extended period of time, which considers the local context and character of Nelson Bay, has informed the Planning Proposal. The resulting provisions will enable new development in Nelson Bay to deliver the community vision, while ensuring important elements of local character are retained and reinforced.



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