

Social Infrastructure Assessment Anson St, St Georges Basin: Staged Mixed Use Development

Prepared for
David DeBattista

December 2017



Contact Information

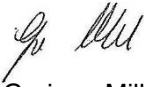
**Cardno South Coast
Trading as Cardno (NSW/ACT) Pty
Ltd**


ABN 95 001 145 035

Level 1, 47 Burelli Street
PO Box 1285
Wollongong NSW 2500

Telephone: 02 4228 4133
Facsimile: 02 4228 6811

southcoast@cardno.com.au
www.cardno.com.au

Author(s): 
Grainne Miller
Planner

Approved By: 
Michael Park
Senior Planner

Document Information

Prepared for David DeBattista
Project Name St Georges Basin Social
Infrastructure Assessment
Job Reference 82018082-01
Date November 2017

Version Number Ver 2

Effective Date 13 December 2017

Date Approved: 13 December 2017

Document History

Version	Effective Date	Description of Revision	Prepared by:	Reviewed by:
0	16/11/2017	Draft	GM	MP
1	22/11/2017	Draft Issued to Client	GM	MP
2	13/12/2017	Revised Draft to Client	GM	MP

© Cardno. Copyright in the whole and every part of this document belongs to Cardno and may not be used, sold, transferred, copied or reproduced in whole or in part in any manner or form or in or on any media to any person other than by agreement with Cardno.

This document is produced by Cardno solely for the benefit and use by the client in accordance with the terms of the engagement. Cardno does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by any third party on the content of this document.

Executive Summary

Mr David DeBattista has commissioned Cardno to conduct an analysis of the social infrastructure in the St Georges Basin area, in relation to a proposed mixed use development located at Anson Street, St Georges Basin. In March 2017, a Development Application (DA) seeking approval for a Concept Master Plan for a mixed use development was lodged with Shoalhaven City Council, and Mr DeBattista has lodged a Class 1 Application with the NSW Land and Environment Court (the Court) to have the matter determined by the Court.

Cardno has undertaken a review of the availability and capacity of community and social infrastructure within the Bay and Basin area, which demonstrates there is a significant oversupply both now and at 2036.

There is significant surplus capacity within existing services and infrastructure in the Bay and Basin area to support the proposed development as outlined in the Concept Master Plan. Further, the Shoalhaven Contributions Plan 2010 levies monetary contributions on development towards new and augmented infrastructure which will directly increase the supply and capacity of community and social infrastructure in the Bay and Basin area.

If the proposed development proceeds in accordance with the Concept Master Plan, there will still be a significant oversupply of community and social infrastructure in the Bay and Basin Area. Further, a spatial analysis of community and social infrastructure was completed, which demonstrated the suitability of the site for medium density development in relation to the proximity and density of community infrastructure and services.

Table of Contents

Executive Summary	3
1 Introduction	6
1.1 Concept Master Plan	6
1.2 The Site	7
1.3 Shoalhaven City Council Planning Area 3	7
2 St Georges Basin Demographics	9
2.1.1 Population and Age Structure	9
2.1.2 Dwelling and Housing Structure	9
2.1.3 Population Forecasts	10
2.1.4 Timing and population of the proposed development	11
3 Social Impact – Housing Needs	13
4 Analysis of Community and Social Infrastructure Planning	14
4.1 Shoalhaven City Council Community Infrastructure Strategic Plan (2017-2036)	14
4.1.1 Shoalhaven Community Infrastructure	15
4.1.2 Planning Area Three Supply and Demand	17
4.2 Shoalhaven Contribution Plan 2010	19
4.3 Community and Social Infrastructure Planning Summary	20
5 Spatial Analysis of Community and Social Infrastructure	21
5.1 Community and Social Infrastructure in the St Georges Basin Area	21
5.2 Community and Social Infrastructure in the Broader Bay and Basin Area	24
6 Analysis of Social Infrastructure	26
6.1 Public Transport	26
6.2 Medical Services	28
6.3 Education Facilities	29
7 Summary and Conclusion	31
8 References	32

Appendices

Appendix A Spatial Analysis of Community and Social Infrastructure

Tables

Table 2-1	St Georges Basin Population Forecast	11
Table 4-1	Summary of Shoalhaven's current open space supply, demand and gap analysis (Shoalhaven Wide) (Source: Ross Planning, 2017)	15
Table 4-2	Summary of Shoalhaven's current community buildings supply, demand and gap analysis (Shoalhaven Wide) (Source: Ross Planning, 2017)	16
Table 4-3	Summary of planning area 3 community infrastructure current supply, demand and gap analysis (Planning Area Three) (Source: Ross Planning, 2017)	18
Table 4-4	Summary of Contributions Projects (Planning Area 3) in Shoalhaven Contributions Plan 2010 (Source: Shoalhaven City Council, 2010)	19

Table 5-1	Community and Social Infrastructure, St Georges Basin Area	23
Table 5-2	Community and Social Infrastructure Bay and Basin (excluding St Georges Basin area)	24
Table 6-1	Nowra Coaches service between St Georges Basin and Bomaderry (Route 732)	26
Table 6-2	Nowra Coaches service between St Georges Basin and Bomaderry (Route 732)	26
Table 6-3	GP Services – Bay and Basin	28
Table 6-4	Primary and Secondary Schools	29

Figures

Figure 1-1	Shoalhaven Planning Areas (Source: Shoalhaven City Council, 2014)	8
Figure 2-1	Age Structure Comparison (%) – St Georges Basin and NSW	9
Figure 2-2	St Georges Basin Household Structure	10
Figure 2-3	St Georges Basin Dwelling Structure (%)	10
Figure 2-4	St Georges Basin changes in age structure	11
Figure 3-1	Number of bedrooms per dwelling (%) – St Georges Basin and NSW	13
Figure 5-1	Access to Community and Social Infrastructure	22
Figure 6-1	Public Transport Networks (Source: Shoalhaven Transport Guide)	27

1 Introduction

Mr David DeBattista (the proponent) has commissioned Cardno to conduct an analysis of the social infrastructure in the St Georges Basin area, in relation to a proposed mixed use development located at Anson Street, St Georges Basin. In March 2017, a Development Application (DA) seeking approval for a Concept Master Plan for a mixed use development was lodged with Shoalhaven City Council (Council), and on 28 June 2017, the proponent lodged a Class 1 Application with the NSW Land and Environment Court (the Court) to have the matter determined by the Court.

In the Statement of Facts and Contentions, the Respondent (Council) identified a number of reasons why the application should be refused (the contentions). Specifically, Contention 5 states that:

The application does not provide any analysis of the social impacts of future development of the site having regard to existing and future social infrastructure within the locality, such as schools, roads and health care services.

Cardno has been engaged to undertake a review of the availability and capacity of community and social infrastructure within the Bay and Basin area; and assess the impacts of the proposed development on both current and future social infrastructure in the locality. This includes a critical review of the Shoalhaven Community Infrastructure Strategic Plan and Shoalhaven Contributions Plan 2010 to establish and analyse the existing and future provision of social and community infrastructure in the Bay and Basin area.

1.1 Concept Master Plan

The proponent has sought approval for a Concept Master Plan for a mixed use development comprising residential flat buildings, commercial premises and shop top housing at Lots 1 and 6 DP 1082382, Anson Street, St Georges Basin. The Concept Master Plan proposes a total of 15 buildings including mixed use and residential flat buildings. The following uses are proposed for the site:

- > 88 x 2 bedroom units
- > 292 x 3 bedroom units
- > 2,233m² of non-specific commercial floor space; and
- > Associated parking and infrastructure

The development application is supported by expert assessments addressing bushfire, ecology, traffic and utility infrastructure. These expert assessments conclude that the proposed Concept Master Plan will not adversely affect the environment; amenity of the locality; or the carrying capacity or safety of the local road system. Further, higher density residential development in close proximity to commercial centres is considered to be a good planning outcome, and can provide broader housing options for the community and plays an important role in responding to the future changing housing needs of the Shoalhaven area.

Future development applications will need to be submitted, and approved, for each of the buildings identified in the Concept Master Plan associated with this application. The future development applications will contain detailed plans for the individual buildings for the relevant subsequent stages of the application.

1.2 The Site

The subject land is made up of two parcels formally known as Lots 1 and 6 DP 1082382, Anson Street, St Georges Basin, within the Shoalhaven Local Government Area. The site is approximately 3.59ha bounded by private property to the north, south, east and west, with a small Public Reserve to the north east. Anson Street bisects the property and there are two local streets connecting the land to the north with the existing road network, one of which is physically constructed. The property to the south is fully cleared and developed; while to the east are developed residential lots. To the west is a mix of developed residential lots and developed and undeveloped commercial lots.

The subject site is located at the eastern edge of the St Georges Basin commercial / mixed use centre, and is currently zoned part B4 Mixed Use and part R1 General Residential under Shoalhaven Local Environmental Plan 2014. The zoning provisions reflect the suitability of the land for mixed use and higher density residential development in accordance with the Concept Master Plan.

1.3 Shoalhaven City Council Planning Area 3

The subject site is located at St Georges Basin, within the Shoalhaven Local Government Area. The Shoalhaven Local Government Area has traditionally been split into 5 separate 'Planning Areas' for the purpose of strategic and infrastructure planning as shown in **Figure 1-1**. The site is located within Planning Area 3 which includes the localities of Basin View, Bream Beach, Erowal Bay, Falls Creek, Huskisson, Hyams Beach, Old Erowal Bay, Sanctuary Point, St Georges Basin, Tomerong, Vincentia, Woolamia, Worrowing Heights and Wrights Beach; and is often referred to as 'Jervis Bay' or the 'Bay and Basin' area.

As the site is located within Planning Area 3, this report primarily focuses on these localities to align with Council's infrastructure and strategic planning framework. Further, the designated Planning Area provides a logical catchment for assessing access to community and social infrastructure.

The total population of Planning Area 3 is 21,126, and is the second largest Planning Area in the Shoalhaven. By 2036, the population is expected to grow to 23,191 people with St Georges Basin and Vincentia expected to accommodate approximately 75% of the growth in population (Ross Planning, 2017).

Figure 1-1 Shoalhaven Planning Areas (Source: Shoalhaven City Council, 2014)



2 St Georges Basin Demographics

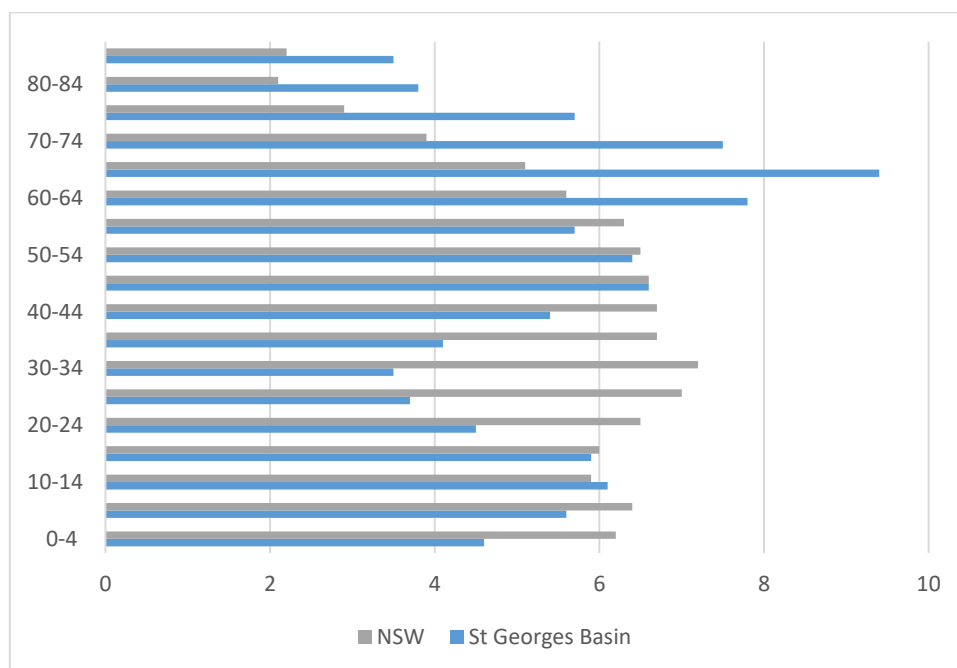
This section provides a demographic analysis of St Georges Basin and surrounds.

The Australian Bureau of Statistics (ABS) 2016 Census Data provides a demographic analysis for St Georges Basin in terms of population and housing. The Shoalhaven id Forecast (2017) provides a forecast of demographic change in the Shoalhaven and St Georges Basin area. The Forecast provides an analysis of future population and housing changes in the St Georges Basin area including Basin View, however, no forecasts are available for St Georges Basin alone. Therefore, this report uses both ABS Census Data and id Forecast data to analyse demographic change in St Georges Basin.

2.1.1 Population and Age Structure

St Georges Basin has an estimated resident population of 2,913 people, with a median age of 50 years old (significantly higher than the state median age of 38). **Figure 2-1** below highlights the higher proportion of older age groups in St Georges Basin compared to the NSW average and a lower proportion of working age groups (20-45). The age structure in St Georges Basin is likely to result in greater demand (existing and future) for health and aged care services.

Figure 2-1 Age Structure Comparison (%) – St Georges Basin and NSW



2.1.2 Dwelling and Housing Structure

Dwelling structure is used to determine urban form and density, as well as analyse social wellbeing. Census data on dwelling structure can be used to monitor changes in housing characteristics to help formulate housing policies and review existing housing stock.

Housing structure is a key indicator of the housing needs of a community. Census data on housing structure can be used to analyse demand for different housing types; and to guide future housing policy to ensure that the housing stock meets the needs of the community.

From a housing policy perspective, the dwelling structure of a locality should be largely influenced by, and reflective of the household structure of the community. However, in many regional areas, there is an insufficient mix of housing types to meet the housing needs of the community.

As shown in **Figure 2-2** below, over 60% of households in St Georges Basin are either single person households or couples without children. However, the smaller household size does not correlate with the dwelling structure in St Georges Basin which is made up nearly 90% of free standing houses (see **Figure 2-3**). A greater mix of housing types would provide a housing stock that better meets the needs of the St Georges Basin community.

Figure 2-2 St Georges Basin Household Structure

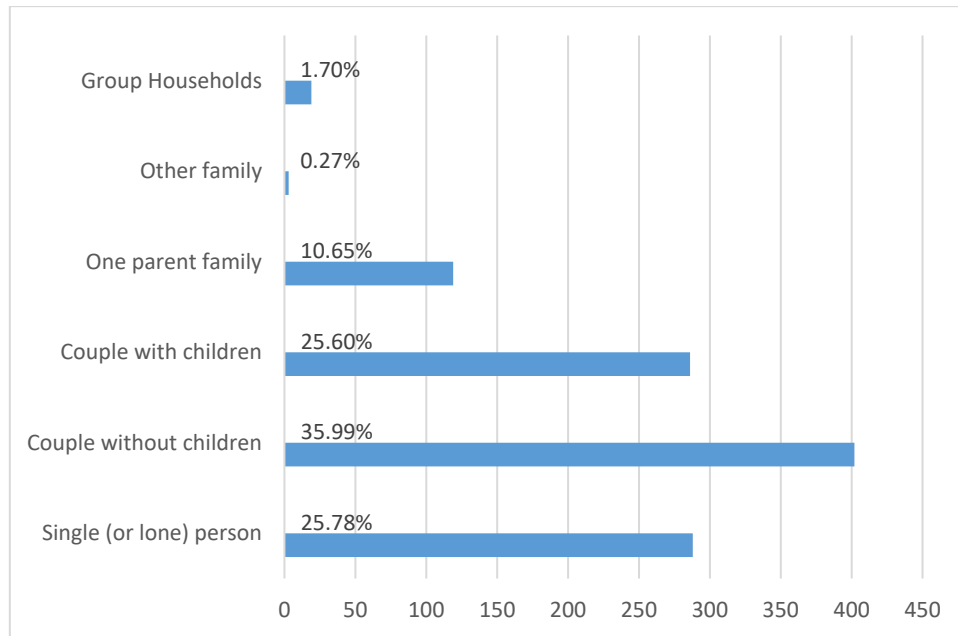
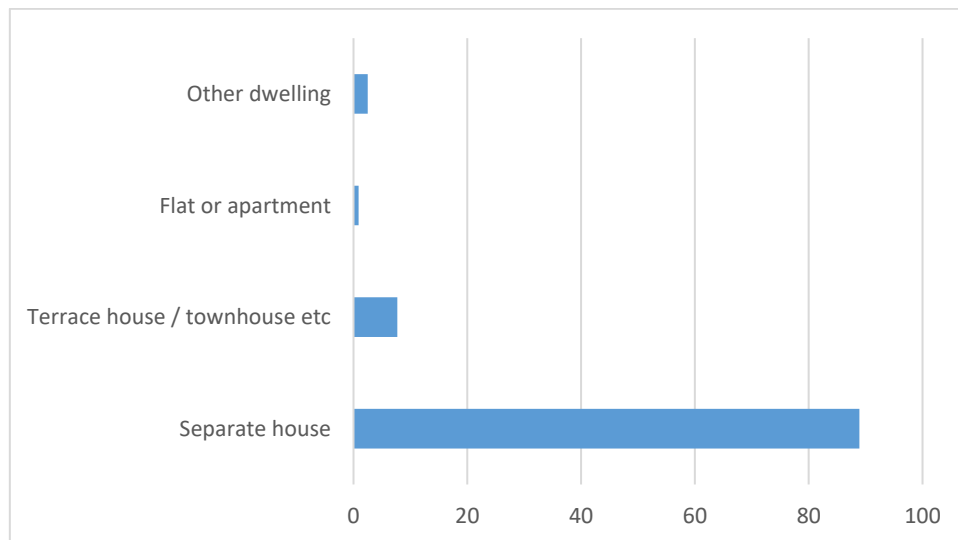


Figure 2-3 St Georges Basin Dwelling Structure (%)



2.1.3 Population Forecasts

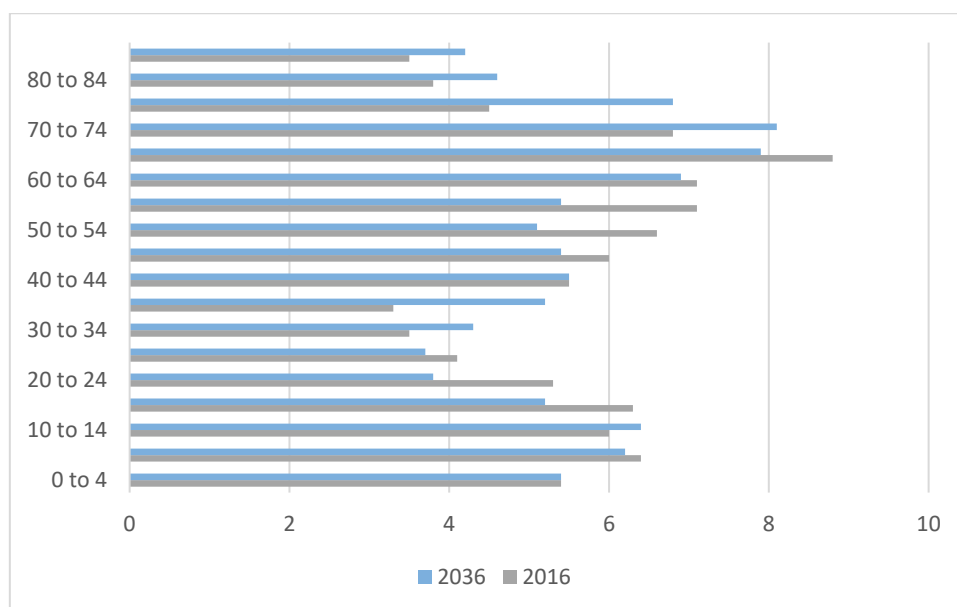
The forecast change in population and dwellings for St Georges Basin (including Basin View) is shown in **Table 2-1** below. It is anticipated that the St Georges Basin population will increase by over 23% between 2016 and 2036. Over the same period, the average household size is forecast to decrease from 2.44 persons per household to 2.36; and the dwelling vacancy rate is expected to remain steady at 20%.

Table 2-1 St Georges Basin Population Forecast

Forecast population, households and dwellings					
St Georges Basin - Basin View	Forecast year				
Summary	2016	2021	2026	2031	2036
Population	4,537	4,716	5,059	5,381	5,592
Households	1,808	1,922	2,079	2,220	2,319
Average household size	2.44	2.39	2.37	2.37	2.36
Population in non private dwellings	128	128	128	128	128
Dwellings	2,241	2,388	2,582	2,758	2,880
Dwelling occupancy rate	80.68	80.49	80.52	80.49	80.52

The age structure for St Georges Basin is anticipated to remain largely the same over the next 20 years, with an increase in the 65 and over age brackets and a decrease in the proportion of people aged 40-64. **Figure X** shows the comparison between the 2016 and 2036 age structure for St Georges Basin.

Figure 2-4 St Georges Basin changes in age structure



2.1.4 Timing and population of the proposed development

The proposed Concept Masterplan will facilitate a total of 380 new dwellings over an extended period of time. The proposal includes a mix of dwelling sizes and is made up of:

- > 88 x 2 bedroom units
- > 292 x 3 bedroom units

Based on the predicted household size of 2.36 persons per household and an occupancy rate of 80.52%, the proposed development would have a total resident population of 722 people. However, this number does not consider the likely reduced household size associated with medium density development.

When Shoalhaven City Council plans for infrastructure provision and funding, it assumes that a 3 bedroom unit is equivalent to 0.8 standard dwellings and a 2 bedroom unit is the equivalent of 0.6 standard dwellings in terms of population and demand for infrastructure (see Shoalhaven Contributions Plan 2010 and Shoalhaven Development Servicing Plan). On this basis of a reduced

household size for medium density development, the total resident population for the proposed development would be 544 people.

As outlined above, the entire St Georges Basin and Basin View area is anticipated to grow by only 1,055 people over the next 20 years. This growth rate is based primarily on demand associated with the drivers of population change including births, deaths and migration. The growth in population is in no way limited by supply of residential land, and therefore, the proposed development is unlikely to have a significant influence over the future population in St Georges Basin.

The population projections do however highlight that the proposed development is likely to be developed over an extended period of time. Based on the current population forecasts, if 50% of all new residents moved into the proposed development it would take over 20 years to fill all of the units. However, it is considered highly unlikely that 50% of the population growth would be accommodated within the proposed development, and therefore, the development is likely to extend for significantly longer than 20 years.

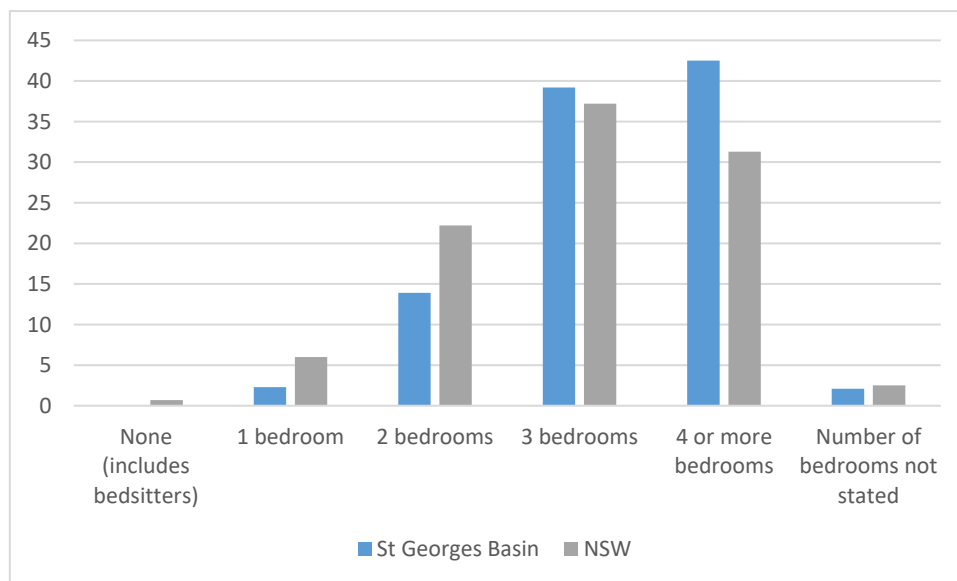
The extended timing of the development highlights the difficulty in assessing the supply and demand for community and social infrastructure. The provision of infrastructure and services (supply) will change over time and is often demand driven (i.e. as new development occurs and the population grows, the supply of infrastructure / services is likely to increase to meet the demand). By the time the impacts of this development are realised (future demand), the supply of services may have significantly increase or decreased in that time based on a whole range of factors outside of the influence of this development (i.e Government policy, funding, legislation etc).

3 Social Impact – Housing Needs

As outlined in Section 2 above, there is a clear disconnect between the household structure and existing housing stock in St Georges Basin. Over 60% of households within St Georges Basin are either lone person or couples without children, yet nearly 90% of all dwellings are separate, free standing houses. As shown in **Figure 3-1** below, over 81% of all dwellings are 3 or more bedroom houses, which is significantly higher than the NSW average (68%).

As the population continues to age in St Georges Basin, the demand for smaller, low-maintenance dwellings will continue to increase. However, the current housing stock is unable to meet the changing needs of the community and there is a clear need to encourage a greater housing mix in St Georges Basin to ensure the housing stock reflects the needs of the community.

Figure 3-1 Number of bedrooms per dwelling (%) – St Georges Basin and NSW



The proposed development provides an opportunity to introduce a greater housing mix in St Georges Basin, by providing a medium density development immediately adjoining the mixed use / commercial centre. There is a clear social benefit in ensuring that the housing stock meets the needs of the community. The proposed development will allow residents to downsize into a low maintenance dwelling without having to relocate and leave their community / support networks behind.

The need to encourage a greater mix of housing types in close proximity to the St Georges Basin centre has been re-enforced in Council's recently exhibited Affordable Housing Strategy prepared by Judith Stubbs and Associates (2017). The strategy encourages Council to ensure that appropriately zoned land is available to encourage residential flat buildings and multi dwelling housing within 600 Nowra-Bomaderry, Jervis Bay-St Georges Basin and Milton Ulladulla town centres.

4 Analysis of Community and Social Infrastructure Planning

Shoalhaven City Council are responsible for the planning, provision and management of key community infrastructure (local) in the Bay and Basin area such as roads and public open space (passive and active recreation areas); as well as key social infrastructure such as libraries and community facilities.

Council have developed a strategic planning framework to guide the planning and funding of community and social infrastructure to meet the needs of the current and future population of the Bay and Basin and broader Shoalhaven. The strategic planning framework includes the *Shoalhaven Community Infrastructure Strategic Plan 2017-2036* (CISP) which identifies the community and social infrastructure requirements for the Shoalhaven over the next 20 years; and the *Shoalhaven Contributions Plan 2010* which levies monetary contributions on new development towards the provision of new or augmented community infrastructure.

A review of Council's strategic planning framework has been undertaken in the subsections below to analyse the supply, demand and accessibility of community infrastructure in relation to the subject site.

4.1 Shoalhaven City Council Community Infrastructure Strategic Plan (2017-2036)

The CISP was prepared by Ross Planning for Shoalhaven City Council. The plan assesses the current and future supply and demand for community and social infrastructure and makes recommendations for the future provisions at local, district and regional levels.

It is important to note that the CISP assesses the future demand for community infrastructure based on Council's adopted population and housing forecasts. These population and housing forecasts were developed on the basis of existing land use zones and Local Environmental Plan (LEP) provisions; and consideration of the development capacity of these provisions. Therefore, any development within the existing LEP provisions has been considered in the supply and demand analysis in the CISP.

The CISP defines Community infrastructure as:

"Community infrastructure is public land and buildings e.g. cultural buildings, recreation buildings, passive and active open space, which accommodate community support services, programs and activities e.g. preschool service, child care, youth services, aged services, community meetings, sporting competition, informal recreation, cultural activities, education activities, community support etc"

Community infrastructure has been further classified into two groups for the purposes of analysis as follows:

"Open space and recreation - Council-managed land that are broadly available for public leisure and recreation, pedestrian and cycle movement, sport or for nature conservation purposes"

"Community buildings - Council-managed buildings that are able to be used by groups and organisations for recreational, social, community service, educational or health promoting activities, and as community meeting places or be hired by the public on a casual basis."

4.1.1 Shoalhaven Community Infrastructure

The CISP has identified that “Overall, Shoalhaven has an abundance of community infrastructure”. There is approximately 620ha of recreational land and sports parks, and 90 community buildings available to service the community. “A significant surplus of community infrastructure” was also identified, both currently, and for future needs, up to 2036.

Table 4-1 below, recreated from the CISP, analyses the current open space and recreation infrastructure available to the community. It highlights a significant oversupply of infrastructure throughout the region in the majority of categories, based on current and projected demand to 2036. There is a small undersupply in sports parks projected on a regional level by 2036 (9.46 ha), but this undersupply is more than catered for at a district level (41.59 ha surplus).

There is a predicted future demand for Indoor Sports Centres, with a future gap of one centre predicted. A new Shoalhaven Indoor Sports Centre has been proposed, effectively creating a sporting hub at Bomaderry. The construction of this centre would bring the total centres, to two, leaving no further gap in the predicted demand for Indoor Sports Centres.

Table 4-1 Summary of Shoalhaven’s current open space supply, demand and gap analysis (Shoalhaven Wide) (Source: Ross Planning, 2017)

Open space type	Current land supply (ha) (sum of current network)	Current land demand (ha) (DSS x population / 1,000)	Current land gap (ha) (current supply - current demand)	Future land demand 2036 (ha) (DSS x population / 1,000)	Future land gap 2036 (ha) (current supply - future demand)
Recreation parks					
Total	257.52	127.38	+52.58	155.3	+24.66
Local	130.16	48.99	+81.17	59.73	+70.43
District	119.83	58.79	+61.04	71.68	+48.15
Regional	7.53	19.60	+10.37	23.89	+6.08
Sports park					
Total	259.11	186.16	+72.95	226.98	+32.13
District	196.89	127.37	+68.52	155.30	+41.59
Regional	62.22	58.79	+3.43	71.68	-9.46
Aquatic Centres *					
Local	7 centres	3 centres (5 if planning areas 2 and 4 are considered 'rural')	+4 centres (+2 if planning areas 2 and 4 are considered 'rural')	4 centres (6 if planning areas 2 and 4 are considered 'rural')	+3 centres (+1 if planning areas 2 and 4 are considered 'rural')
District	5 centres	2 centres	+3 centres	3 centres	+2 centres
Indoor Sports Centres *					
District	1 centre	1 centre	Meeting demand	2 centres	-1 centre
* demand standards for aquatic and indoor sports centres are based on facility per population					

Table 4-2 below, recreated from the CISP, analyses the current community facilities available for use by the community. The needs of the community are more than catered for, based on current and future demand, with a significant surplus of community centres both now and at 2036:

“The Shoalhaven community is very well serviced with community buildings, with community demand being met under all sub-classifications.”

Table 4-2 Summary of Shoalhaven’s current community buildings supply, demand and gap analysis (Shoalhaven Wide) (Source: Ross Planning, 2017)

	Current number of buildings	Current demand for buildings	Current gap (current supply - demand)	Future demand for buildings	Future gap (current supply - demand)
Community Centres					
Total	52	11	+41	14	+38
Local (1/10,000 people)	44	9	+35	12	+32
District (1/50,000 people)	8	2	+6	2	+6
Cultural Buildings					
Convention Centres/ performing spaces					
Total	4	2	+2	4	Meet demand
District (1/50,000 people)	2	1	+1	2	Meet demand
Citywide (1/100,000 people)	2	1	+1	2	Meet demand
Museums (needs based)					
Total	2 ^	No current demand, however, investigations will be required if a future need is identified by the community.			
Local (opportunistic)	2 ^				
District (1/100,000 people)	2				
Art galleries (needs based)					
Citywide (1/100,000 people)	1	No current demand, however, investigations will be required if a future need is identified by the community.			
Libraries					
Local	1				

(no standard, demand based)					
District (Refer to People Places Guide for library building planning tools)	3	2	+1	3	+1 When Vincentia library is built and operational
Specialised community centres					
<i>There are no standards for the number of facilities per population for these types of buildings. Instead, they are built or retrofitted to meet the demands of the local community</i>					
Arts and craft buildings					Total = 7
Surf lifesaving clubs					Total = 4
Visitor information centre					Total = 2
Mens sheds (<i>a large number of mens sheds are not on Council land</i>)					Total = 6

4.1.2 Planning Area Three Supply and Demand

The subject land is located within Planning Area 3 and the CISP assess the current and future access, supply and demand for community and social infrastructure across the Shoalhaven and within each individual Planning Area. As noted above, the CISP assesses the future demand for community infrastructure based on Council's adopted population and housing forecasts. These population and housing forecasts were developed on the basis of existing land use zones and Local Environmental Plan (LEP) provisions; and consideration of the development capacity of these provisions. Therefore, as the Concept Master Plan is consistent with the existing LEP provisions, population growth associated with the development has been considered in the supply and demand analysis in the CISP.

The CISP highlights the population for Planning Area 3 is expected to reach 23,191 people by 2036. This is an increase of 9.77% based on the 2016 ABS population of 21,126. St Georges Basin and Vincentia are expected to accommodate 75% of this growth (1,549 extra people).

Planning Area Three is well catered for Community Infrastructure with supply either meeting or exceeding demand out to 2036:

"There is a current surplus of land for recreation and sports parks in planning area three."

There is a current surplus of 4.87ha of sports parks, with an anticipated deficit of 0.96ha in 2036. There is a significant surplus of recreation parks that are well dispersed around the area offering significant amenity to the community. Over two thirds of CISP survey respondents were happy with the quality of the recreation parks in the area, with possible upgrades recommended for some parks. There are six community centres in the area, giving Planning Area 3 a surplus of four centres.

Table 4-3 below, recreated from the CISP, gives further detail on the available community facilities, and the general surplus of these facilities to meet community demand both now and at 2036.

While there is an apparent surplus of public open space based on standard rates of provision, the community satisfaction is relatively low. The community consultation associated with the CISP indicated that the community were unsatisfied with the diversity and level of amenity within public open spaces.

In the St Georges Basin area there is a substantial quantum of open space, however, the quality of open space varies significantly between parks / reserves. There are a number of high amenity parks / reserves including the recently completed St Georges Basin Village Green. However, it is noted that there is an opportunity / need to improve existing open space areas to benefit the broader St Georges Basin community. Importantly though, land is available and in public ownership, and can be upgraded to better service the community when funding is available.

Table 4-3 Summary of planning area 3 community infrastructure current supply, demand and gap analysis (Planning Area Three) (Source: Ross Planning, 2017)

Community infrastructure type	Provision standard per population	Current supply		Quantity Analysis		Community satisfaction (community survey)	
		Number	Area (ha)	Current gap (2015)	Future gap (2036)	Quantity *	Quality*
Open Space							
Sports Parks	1.9ha/1,000	8	43.1	4.87 ha	-0.96ha	47.2%	63.9%
District	1.3ha/1,000	8	43.1	16.94 ha	12.95 ha	-	-
Regional	0.6ha/1,000	-	-	-12.07 ha	-13.91 ha	-	-
Recreation parks	1.3ha/1,000	24	36.21	10.05 ha	6.06 ha	50%	66.7%
Local	0.5ha/1,000	12	13.33	+3.27 ha	+1.73 ha	-	-
District	0.6ha/1,000	11	19.39	+7.32 ha	+5.48 ha	-	-
Aquatic Centre							
District	1/20,000-50000	1 local centre + 1 sea pool		Meeting demand	Meeting demand	-	-
Regional	1/LGA	1 centre		over supply, supposed to service LGA (3 in LGA)			
Community Buildings							
Community Centres							
Local	1/10,000	6 buildings		+4 buildings	+4 buildings	-	-
Cultural buildings							
Museum							
District	1/100,000	1 building		+1 building	+1 building		
Library							
Local	No standard	1 building		there is community demand for a district library to replace Sanctuary Point Library. This will be met when the Vincentia branch is built and operational			
<i>*findings from the community survey, percentage of respondents that were happy with the supply and rated the quality of buildings as good and very good.</i>							

4.2 Shoalhaven Contribution Plan 2010

The Shoalhaven Contribution Plan 2010 allows the Shoalhaven LGA to levy monetary contributions on new development towards the provision of new or augmented community and social infrastructure. The Contributions Plan ensures that new development directly contributes towards new infrastructure to meet the future needs of a growing population.

The CISP ultimately determined that there was a significant surplus of key community and social infrastructure in Planning Area 3 in most instances both now and at 2036. Despite this, the Shoalhaven Contribution Plan levies contributions on new development towards community and social infrastructure that will directly contribute to the overall supply of community infrastructure in Planning Area 3.

Table 4-4 describes the infrastructure upgrades identified in Shoalhaven Contributions Plan 2010 to support the growth in population in Planning Area 3:

Table 4-4 Summary of Contributions Projects (Planning Area 3) in Shoalhaven Contributions Plan 2010 (Source: Shoalhaven City Council, 2010)

Infrastructure Type	Proposed Upgrades
Active Recreation (Sports Fields)*	<ul style="list-style-type: none"> • Frances Ryan Reserve Expansion and Flood Lighting • Huskisson Sportsground Amenities Upgrade • Four additional Senior Sports Fields at Worrowing Heights • St Georges Basin Sports Fields – Two Additional Senior Sports Fields • Bay and Basin Skate Park
Car Parking	<ul style="list-style-type: none"> • St Georges Basin Village Centre Car Parking • Huskisson Car Parking • Sanctuary Point Car Parking
Community Facilities*	<ul style="list-style-type: none"> • Bay & Basin Community Centre and Branch Library
Passive Open Space	<ul style="list-style-type: none"> • St Georges Basin Village Green (Land Acquisition)* • Pine Forest Road Passive Open Space (Land Acquisition) • Vincentia Expansion Area Passive Open Space (Land Acquisition)
Roads and Traffic Upgrades*	<ul style="list-style-type: none"> • Various Roads and Traffic Upgrades to meet the demand associated with new development

* Indicates projects that will be directly contributed to by the proposed development

4.3 **Community and Social Infrastructure Planning Summary**

The CISP highlights the significant oversupply of community and social infrastructure across the Shoalhaven and the Bay and Basin area both now and at 2036. Further, the Shoalhaven Contributions Plan 2010 levies monetary contributions on development towards new and augmented infrastructure which will directly increase supply of community and social infrastructure in the Bay and Basin area.

The Concept Master Plan proposes a development scheme that is within the existing zoning and LEP provisions; and the population growth associated with the existing LEP provisions has been considered in the demand for community and social infrastructure in the CISP Contributions Plan.

If the proposed development proceeds in accordance with the Concept Master Plan, there will still be a significant oversupply of community and social infrastructure in the Bay and Basin Area.

5 Spatial Analysis of Community and Social Infrastructure

Section 2 of this report analyses the community and social infrastructure that is planned, provided and managed by Shoalhaven City Council. However, it is noted that the social infrastructure required to support new and growing communities extends beyond the responsibilities of Local Government. Schools, doctors, public transport, commercial centres, clubs, public recreation and natural environments are all required to support growing populations. This section of the report provides a spatial analysis of all community and social infrastructure within St Georges Basin and the broader Bay and Basin area.

5.1 Community and Social Infrastructure in the St Georges Basin Area

The St Georges Basin area, consisting of St Georges Basin, Sanctuary Point and Basin View has an estimated resident population of 11,873 people (id. 2017). As outlined in the CISP, the St Georges Basin area is generally oversupplied in community and social infrastructure based on standard rates of provision where they exist.

Table 5-1 describes the existing social infrastructure and community facilities within the St Georges Basin Area. The St Georges Basin area is well serviced with community infrastructure including 3 community facilities, 2 primary schools, 3 medical centres, a library, a supermarket and substantial amounts of foreshore open space.

The subject site is within easy walking distance of the St Georges Basin mixed use / commercial centre providing easy access to key social infrastructure including a medical centre, public transport, public open space and a supermarket. **Figure 3-1** highlights the density of community and social infrastructure within a 5-10 minute walking distance (400-800m) of the subject site including the commercial centre (including a medical centre, supermarket and post office), public transport, 2 community facilities, and a number of parks and foreshore public open spaces. The density and proximity of community and social infrastructure in relation to the subject site highlights its suitability for medium density housing in accordance with the Concept Master Plan.

Infrastructure Analysis

ST GEORGES BASIN

Legend



















-  Site Boundary
-  Bus Stop
-  Beach / Lake / Bay / Island / Reef
-  Boat Ramp
-  Community Facility
-  Medical Centre
-  Park
-  Place Of Worship
-  Post Office
-  Rural Fire Service
-  Shopping Centre
-  Sports Centre / Field / Track / Target Range
-  Wharf
-  Walking Distance
-  Watercourse (LPI)
-  Cadastre (DFS1-SS, 2017)
-  St Georges Basin Mixed Use/ Commercial Centre
-  Public Open Space

Figure 5-1

1:7,500 Scale at A3

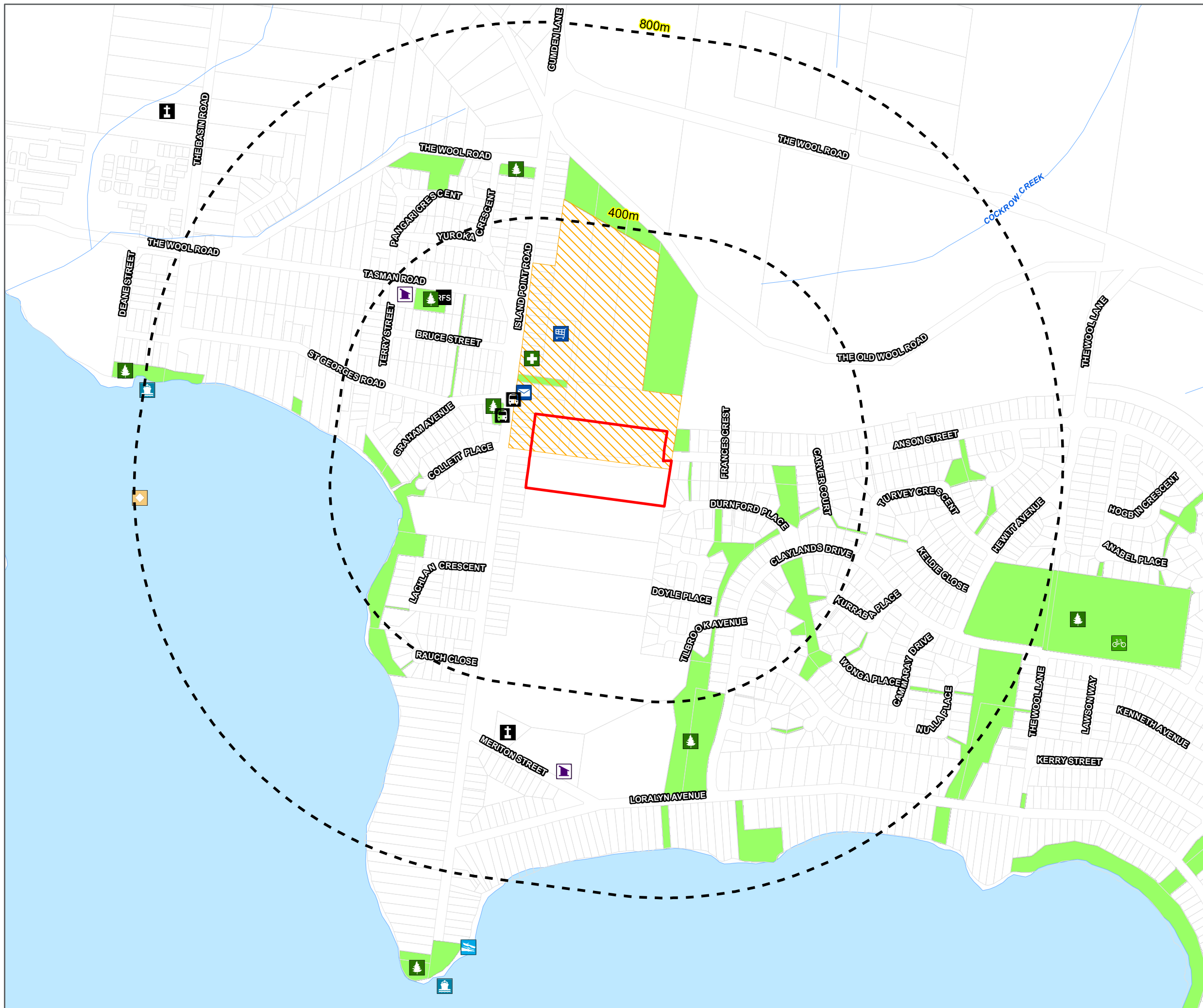


Table 5-1 Community and Social Infrastructure, St Georges Basin Area

Community and Social Infrastructure within the immediate locality		
Community and Social Infrastructure	Location	Count
Community Facility	St Georges Basin / Sanctuary Point / Basin View	3
Commercial Centre	St Georges Basin / Sanctuary Point / Basin View	1
Primary School	St Georges Basin / Sanctuary Point / Basin View	2
Library	St Georges Basin / Sanctuary Point / Basin View	1
Place Of Worship	St Georges Basin / Sanctuary Point / Basin View	4
Rural Fire station	St Georges Basin / Sanctuary Point / Basin View	3
Beach	St Georges Basin / Sanctuary Point / Basin View	2
Bay / Inlet / Basin	St Georges Basin / Sanctuary Point / Basin View	5
Park / Picnic Area	St Georges Basin / Sanctuary Point / Basin View	12
Sports Field	St Georges Basin / Sanctuary Point / Basin View	6
Boat Ramp	St Georges Basin / Sanctuary Point / Basin View	7
Wharf	St Georges Basin / Sanctuary Point / Basin View	2
Post Office	St Georges Basin / Sanctuary Point / Basin View	2
Medical Centre / Doctors	St Georges Basin / Sanctuary Point / Basin View	3
Supermarket / Shopping Centre	St Georges Basin / Sanctuary Point / Basin View	1
Bus Stop	St Georges Basin / Sanctuary Point / Basin View	7
Club	St Georges Basin / Sanctuary Point / Basin View	1
Golf Course	St Georges Basin / Sanctuary Point / Basin View	1

5.2 Community and Social Infrastructure in the Broader Bay and Basin Area

Residents within the Shoalhaven are generally willing to travel outside of their immediate locality to access community and social infrastructure (Ross Planning, 2017). It is noted that higher level services such as hospitals and a university campus are located approximately 25km north of the site in Nowra, the major regional centre. However, this section of the report focuses on community and social infrastructure within the local Bay and Basin catchment (outside of the St Georges Basin Area).

Table 3-2 describes the existing social infrastructure and community facilities within the remaining Bay and Basin Area including the localities of Huskisson, Vincentia, Hyams Beach, Erowal Bay, Bewong, Worrowing Heights and Tomerong. The remaining Bay and Basin area has an estimated resident population of 9,253 people.

As outlined in the CISP the area is generally oversupplied with community and social infrastructure. In addition to the infrastructure identified in the CISP, the area also includes 3 commercial centres, 2 medical centres, 2 shopping centres, a police station, 3 primary schools and a high school, and substantial amounts of foreshore open space. This level of community and social infrastructure is considered more than adequate to support the community of 9,253 people.

The community and social infrastructure identified in **Table 5-1** and **Table 5-2** is mapped in **Appendix A** to this report. The spatial analysis demonstrates the significant density of services and infrastructure around the Huskisson and St Georges Basin commercial centres, highlighting the suitability of the subject site for increased residential densities in accordance with the Concept Master Plan.

Table 5-2 Community and Social Infrastructure Bay and Basin (excluding St Georges Basin area)

Community and Social Infrastructure within the broader Bay and Basin area		
Community and Social Infrastructure	Location	Count
Beach	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	5
Boat Ramp	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	5
Bus Stop	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	33
Club	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	4
Commercial Centre	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	3
Community Facility	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	4
Golf Course	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	1

Leisure Centre	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	1
Medical Centre / Doctors	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	6
Museum	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	1
Park / Picnic Area	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	17
Place Of Worship	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	6
Police Station	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	1
Post Office	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	3
Primary School	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	3
High School	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	1
Rural Fire station	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	4
SES Facility	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	1
Shopping Centre	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	2
Showground	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	1
Sports Field / Court	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	6
Swimming Pool	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	2
Wharf	Broader Bay and Basin (excluding St Georges Basin / Sanctuary Point / Basin View)	2

6 Analysis of Social Infrastructure

6.1 Public Transport

The Shoalhaven is relatively underserved with public transport options compared to neighbouring Local Government Areas to the north. The train line terminates at Bomaderry, with no passenger train services available south of this point. Therefore, the Shoalhaven is potentially more reliant on alternate means of transport including bus and taxi services, active transport and private vehicle usage.

The subject site is located within easy walking distance of a designated bus stop as shown in **Figure 6-1** (approximately 120m along an established footpath with relatively moderate grades); and is serviced by two separate bus networks and a local taxi service. Nowra Coaches provides a passenger bus service (Route 732) that provides an important connection between the subject site, the Bomaderry train station and higher level services located in the Nowra CBD. Passenger services are available from St Georges Basin to the Nowra CBD and Bomaderry train station four times a day as shown in **Table 6-1** below.

Table 6-1 Nowra Coaches service between St Georges Basin and Bomaderry (Route 732)

Bus Stop / Location*	Service Times			
St Georges Basin	6:15am	8:55am	12:50pm	1:50pm
Nowra CBD (bus interchange)	7:35am	10:27am	2:11pm	3:18pm
Bomaderry Train Station	7:45am	10:35am	2:25pm	3:31pm

* Table only displays selected bus stops / locations

Passenger services are available from Bomaderry train station, Nowra CBD and St Georges Basin four times a day as shown in **Table 6-2** below. It is noted that additional services are available between Nowra, Bomaderry and the Bay and Basin area, stopping at Tomerong approximately 5km from the subject site.

Table 6-2 Nowra Coaches service between St Georges Basin and Bomaderry (Route 732)

Bus Stop / Location*	Service Times			
Bomaderry Train Station	9:20am	10:38am	2:56pm	5:21pm
Nowra CBD (bus interchange)	10:20am	10:52am	3:03pm	5:31pm
St Georges Basin	11:40am	12:15pm	4:25pm	6:52pm

* Table only displays selected bus stops / locations

Premier Bus Services also provides a bus service between Nowra CBD and St Georges Basin. The two bus routes and taxi service areas for St Georges Basin are shown in **Figure x** below. Further, Shoalhaven City Council run a Bay and Basin Summer Shuttle Bus that provides a regular loop around the Bay and Basin area over the peak period of summer.

Figure 6-1 Public Transport Networks (Source: Shoalhaven Transport Guide)



As outlined above, there are a minimum of four return bus trips between St Georges Basin and Nowra / Bomaderry per day, providing access to employment, higher level services and regional public transport networks. Given the close proximity of the site to public transport stops, and the relative frequency of services, it is anticipated that future residents of the site could comfortably use public transport to access employment and higher level services in the Nowra CBD.

6.2 Medical Services

The St Georges Basin Medical Centre is located within the St Georges Basin town centre approximately 250m from the subject site and the St Georges Basin Community Health Centre is located on Meriton Street approximately 600m from the site.

The St Georges Basin Medical centre has 3 general practitioners (GP) which equates to 1 GP for every 971 persons in the St Georges Basin area. The ratio of GPs to population across NSW is significantly lower, with an average of 1 GP for every 719 persons. Given the higher median age of the community, it is likely that demand for medical services would be higher than the average across NSW.

Based on the above, the St Georges Basin area could be considered to be undersupplied with general practitioners based on GP to patient ratios. Nevertheless, the medical centre is still accepting new patients, indicating that there is some existing capacity despite the lower GP to patient ratios.

The increase in population associated with the development (anticipated to be 544 people as outlined in **Section 2.1.4**) will further increase the demand for GPs in the area. It is noted however, that the Concept Master Plan is seeking approval for over 2,000m² of unspecified commercial floor space. Subject to future demand, this commercial floor space could be utilised for a medical centre to directly contribute to the supply of GP services in St Georges Basin.

The St Georges Basin Community Health Centre provides a range of other medical services to support the local community including:

- > Child and Family health services
- > Child Protection Counselling
- > Diabetes Educator
- > Diabetes Dietician
- > Primary Health Nursing
- > Physiotherapy
- > Speech
- > Violence Abuse and Neglect (VAN) Service
- > Women's Health

While the Community Health Centre does not provide GP services, it does provide important medical services for the local community. Consultation with the Community Health Centre indicated that many residents of St Georges Basin travel to the Vincentia Medical centre (approximately 7km from the subject site) to access GP services. Travelling 7kms to access a GP is considered appropriate in the Shoalhaven context, with many identified urban release areas throughout the Shoalhaven located greater than 7km from the nearest medical centre or GP.

Table 6-3 below describes the total distribution of GPs across the broader Bay and Basin area. A total of 33 GPs currently provide services to the local community at a GP to patient ratio of 1 GP for every 640 persons. This ratio is lower than the state average of 1 GP for every 719 persons indicating that there is existing capacity within existing medical services to support the modest growth in population across the Bay and Basin area.

Table 6-3 GP Services – Bay and Basin

Medical Practice	Area	no. of GPs
Sanctuary Point	Sanctuary Point	5
Tom Jones	Sanctuary Point	1
Basin View	Basin View	3
St Georges Basin Medical	St Georges Basin	3

Vincentia Medical	Vincentia	11
Vincentia Bay Medical Centre	Vincentia	4
Underwood Daniel	Vincentia	1
Diana Faras Dr	Vincentia	1
Collingwood Beach Medical Centre	Vincentia	2
Banksia St Surgery	Vincentia	2
Total		33

Two hospitals (one public one private) are located in the Nowra CBD approximately 25 minutes drive from the subject site. As outlined in Section 6.1, four daily bus services link St Georges Basin with the Nowra CBD providing an important connection to higher level medical services for the residents of St Georges Basin.

As outlined above, there is a current undersupply of GPs in the immediate St Georges Basin area based on GP to patient ratios. Nevertheless, the St Georges Basin medical centre is still welcoming new patients indicating that there is some additional capacity. Further, the GP to patient ratios across the broader Bay and Basin area indicate that there is sufficient supply to service the modest forecast growth for the area. All of the local GPs contacted indicated that they were welcoming new patients (St Georges Basin, Sanctuary Point, Basin View and Vincentia Medical Centres) which demonstrates that there is sufficient supply to support the existing population.

Despite the apparent capacity within the existing GP services, the proposed development includes over 2,000m² of unidentified commercial floor space. Subject to future demand, this commercial floor space could be utilised for a medical centre to directly contribute to the supply of GP services in St Georges Basin.

6.3 Education Facilities

Both the St Georges Basin and Sanctuary Point Public Schools (primary) are located within close proximity to the subject site. Both schools are currently operating at or near capacity with demountable classrooms used to support the growing student numbers.

Similarly, the Vincentia High School relies on demountable classrooms to accommodate the existing students indicating that there is limited capacity within the existing primary and secondary school systems in the Bay and Basin area.

All 3 schools were contacted in preparing this report, and each school is still welcoming new enrolments despite the limited capacity available. **Table 6-4** below shows the schools that were contacted during the preparation of this report.

Table 6-4 Primary and Secondary Schools

Schools	Area	Demountable Classrooms	Accepting New Enrolments
St Georges Basin Public School	Basin View	Yes	Yes
Sanctuary Point Public School	Sanctuary Point	Yes	Yes
Vincentia High School	Vincentia	Yes	Yes

Based on the future age structure of St Georges Basin and the estimated resident population of the proposed development, it is anticipated that less than 100 school aged students will reside within the development following its completion (anticipated to be developed over a 20-year period). A proportion of the school aged students would likely attend non-Government schools in Nowra-Bomaderry which would further reduce the demand on local schools from the proposed development.

Further, an Anglican school has been proposed on the corner of Naval College Road in Vincentia which would likely reduce the demand for public schools in the area and increase capacity within local education facilities. Higher level education facilities including a University campus and TAFE are

located in Nowra-Bomaderry, with public transport available between the subject site and these higher level services.

It is anticipated that there will be sufficient capacity within education services to support the proposed development given the relatively low demand generated; and the existing and proposed education facilities with the local area.

7 Summary and Conclusion

In March 2017, a Development Application (DA) seeking approval for a Concept Master Plan for a mixed use development was lodged with Shoalhaven City Council, and the proponent has lodged a Class 1 Application with the NSW Land and Environment Court (the Court) to have the matter determined by the Court.

Contention 5 in the Statement of Facts and Contentions states that:

The application does not provide any analysis of the social impacts of future development of the site having regard to existing and future social infrastructure within the locality, such as schools, roads and health care services.

Cardno has undertaken a review of the availability and capacity of community and social infrastructure within the Bay and Basin area. The analysis centred around a critical review of the current planning framework for community and social infrastructure in the Shoalhaven including the Shoalhaven Community Infrastructure Strategic Plan and Shoalhaven Contributions Plan.

The CISP highlights the significant oversupply of community and social infrastructure across the Shoalhaven and the Bay and Basin area both now and at 2036. There is significant surplus capacity within existing services and infrastructure in the Bay and Basin area to support the proposed development. Further, the Shoalhaven Contributions Plan 2010 levies monetary contributions on development towards new and augmented infrastructure which will directly increase supply of community and social infrastructure in the Bay and Basin area.

The Concept Master Plan proposes a development scheme that is within the existing zoning and LEP provisions; and the population growth associated with the existing LEP provisions has been considered in the demand for community and social infrastructure in the CISP Contributions Plan.

If the proposed development proceeds in accordance with the Concept Master Plan, there will still be a significant oversupply of community and social infrastructure in the Bay and Basin Area. Further, a spatial analysis of community and social infrastructure was completed, which demonstrated the suitability of the site for medium density development in relation to the proximity and density of community infrastructure and services.

8 References

Id. the population experts 2017, Shoalhaven population and dwelling forecast. Id. the population experts, Collingwood, Victoria < <http://forecast.id.com.au/shoalhaven>>.

Judith Stubbs and Associates 2017, draft Shoalhaven Affordable Housing Strategy, Bulli.

Ross Planning 2017, Shoalhaven Community Infrastructure Strategic Plan, Wynnum.

Shoalhaven City Council 2010, Shoalhaven Contributions Plan 2010. Shoalhaven City Council, Nowra, NSW < <http://s94.shoalhaven.nsw.gov.au/>>

St Georges Basin
Social Infrastructure
Assessment

APPENDIX

A

SPATIAL ANALYSIS OF
COMMUNITY AND SOCIAL
INFRASTRUCTURE



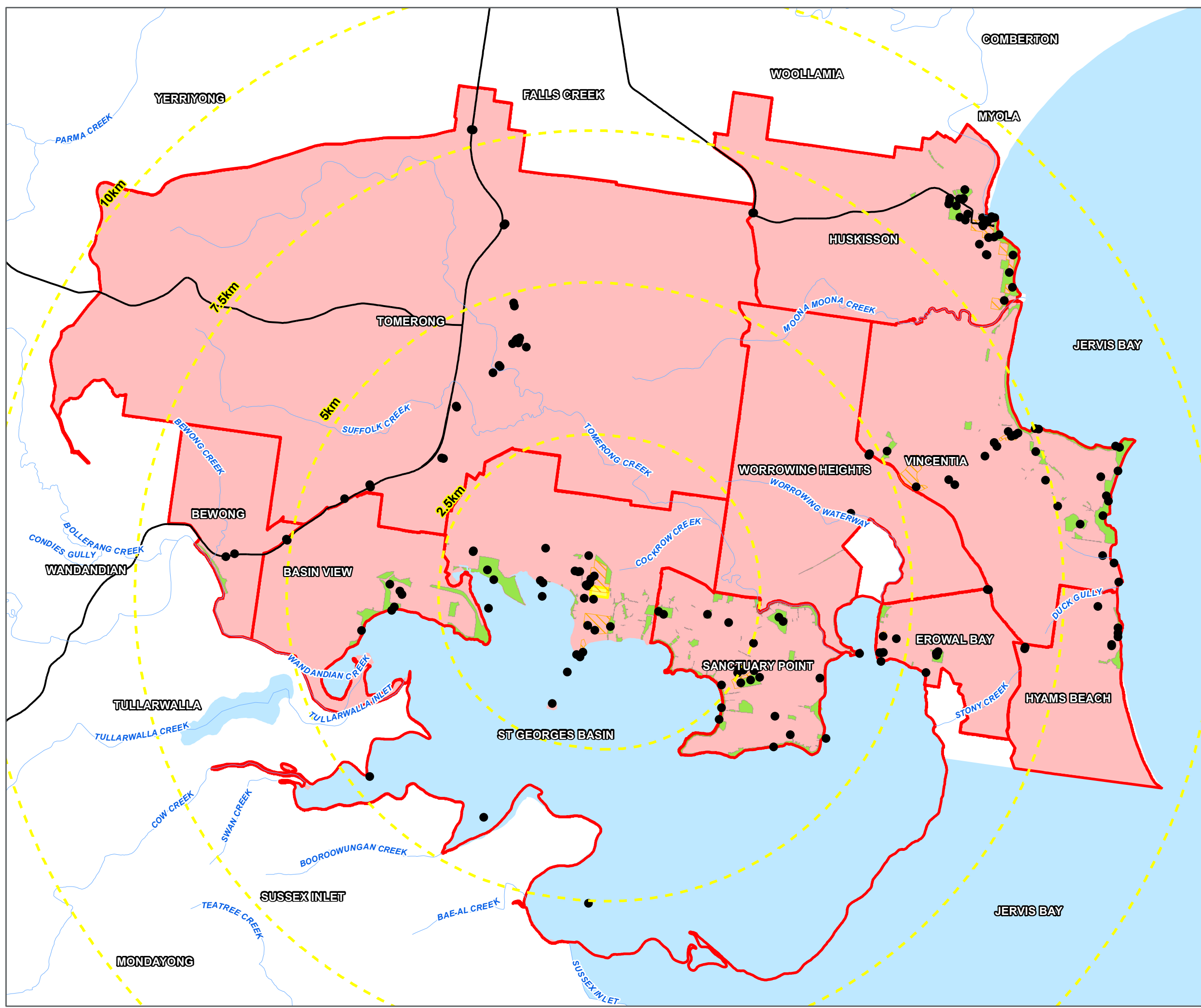
Infrastructure Analysis - Overview

BAY AND BASIN AREA

Legend

- Site Boundary
- Community and Social Infrastructure
- Distance Buffer
- Major Roads (LPI)
- Major Watercourse (LPI)
- Analysed Suburbs
- Commercial Centre
- Public Open Space

1:60,000 Scale at A3



Infrastructure Legend

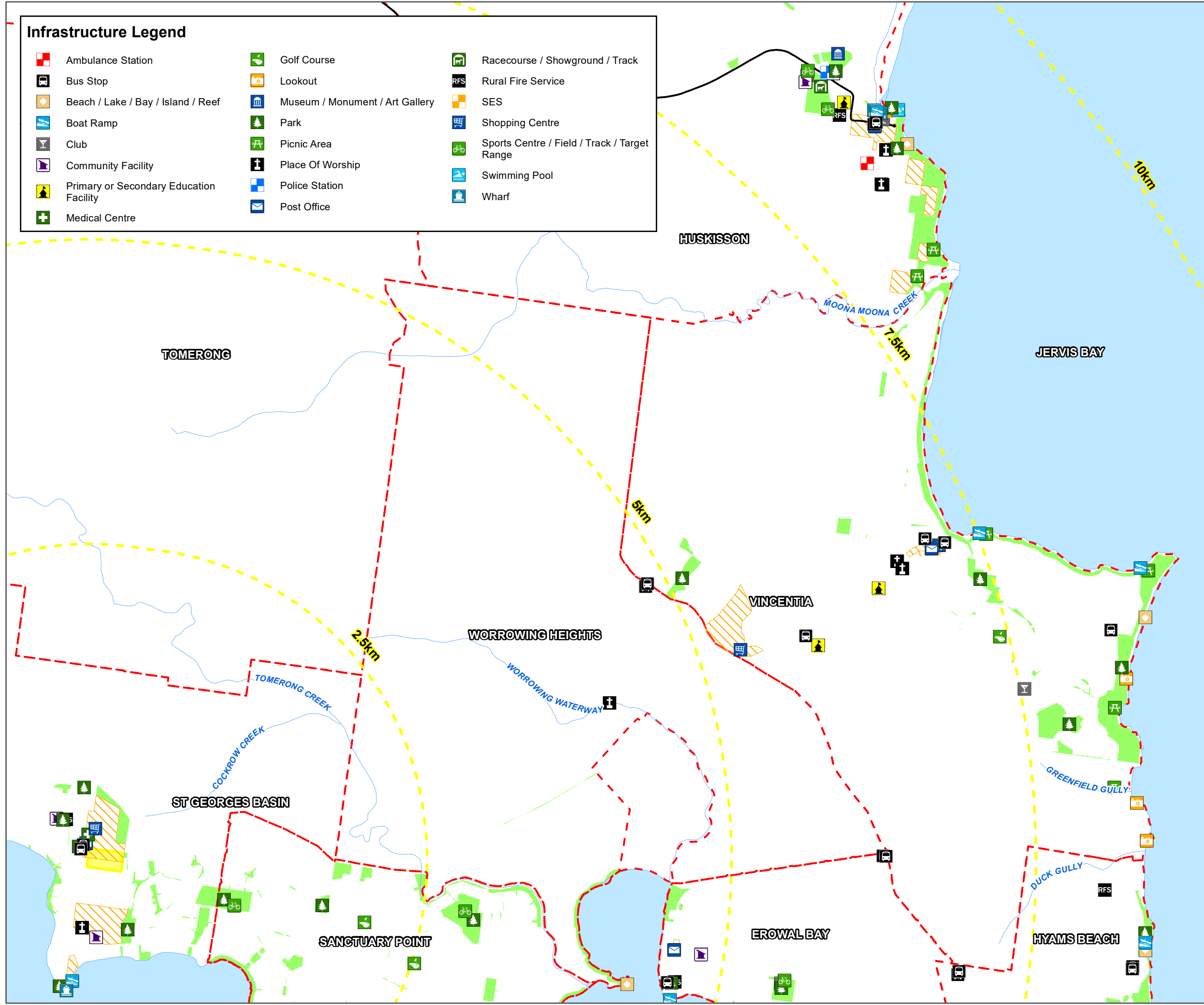
	Ambulance Station		Golf Course		Racecourse / Showground / Track
	Bus Stop		Lookout		Rural Fire Service
	Beach / Lake / Bay / Island / Reef		Museum / Monument / Art Gallery		SES
	Boat Ramp		Park		Shopping Centre
	Club		Picnic Area		Sports Centre / Field / Track / Target Range
	Community Facility		Place Of Worship		Swimming Pool
	Primary or Secondary Education Facility		Police Station		Wharf
	Medical Centre		Post Office		

Infrastructure Analysis

BAY AND BASIN AREA

Legend

	Site Boundary
	Distance Buffer
	Major Roads (LPI)
	Major Watercourse (LPI)
	Analysed Suburbs
	Commercial Centre
	Public Open Space



1:30,000 Scale at A3



Map Produced by Cardno NSW/ACT Pty Ltd (WOL)
 Date: 2017-11-21 | Project: 8201808201
 Coordinate System: GDA 1994 MGA Zone 56
 Map: 8201808201-GS-004-InfrastructureReview_BayBasin2.mxd 01

Infrastructure Legend

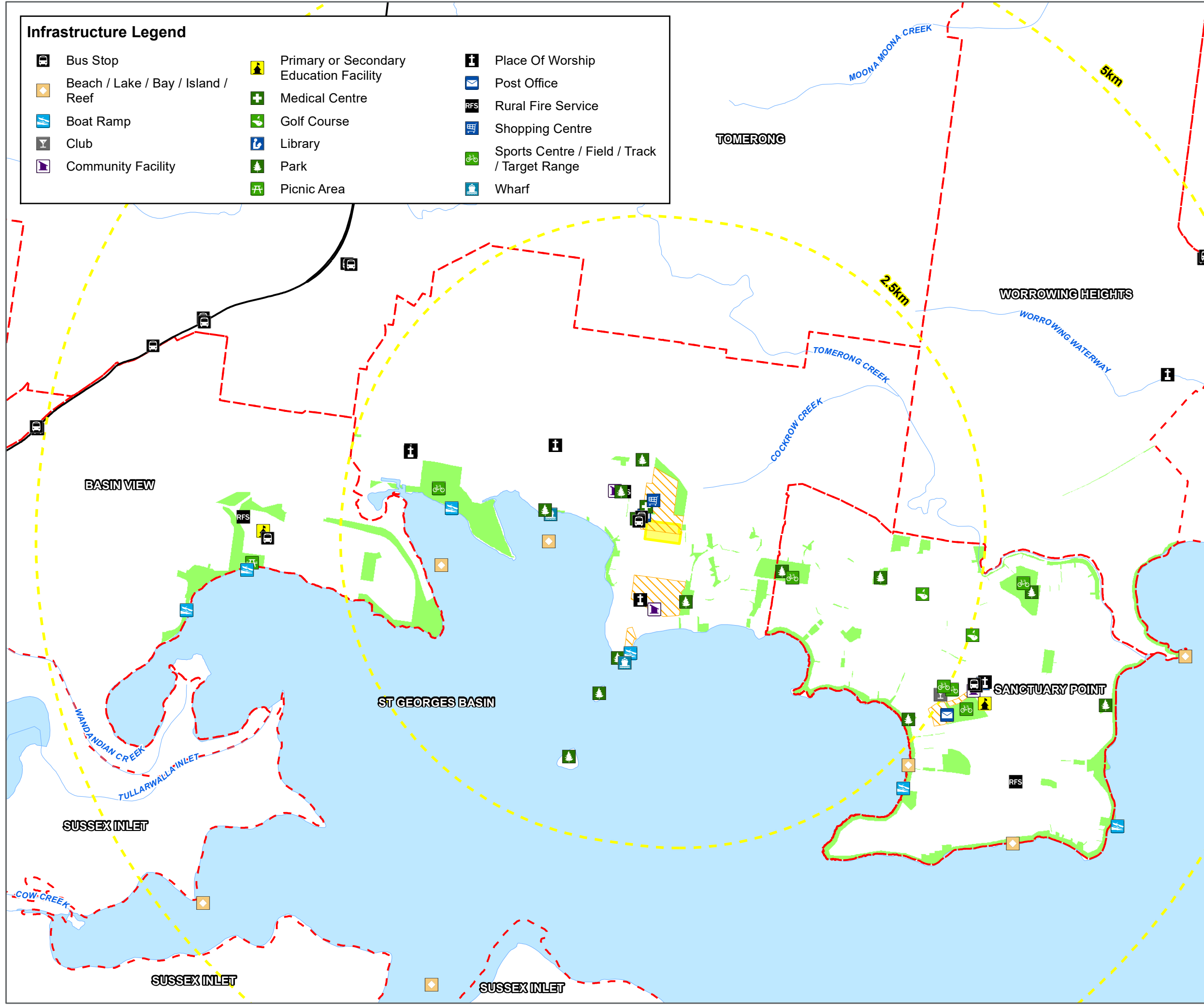
- | | | | | | |
|--|------------------------------------|--|---|--|--|
| | Bus Stop | | Primary or Secondary Education Facility | | Place Of Worship |
| | Beach / Lake / Bay / Island / Reef | | Medical Centre | | Post Office |
| | Boat Ramp | | Golf Course | | Rural Fire Service |
| | Club | | Library | | Shopping Centre |
| | Community Facility | | Park | | Sports Centre / Field / Track / Target Range |
| | | | Picnic Area | | Wharf |

Infrastructure Analysis

BAY AND BASIN AREA

Legend

- Site Boundary
- Distance Buffer
- Major Roads (LPI)
- Major Watercourse (LPI)
- Analysed Suburbs
- Commercial Centre
- Public Open Space



1:30,000 Scale at A3

