

Seniors Living, Fern Bay

Newcastle Golf Club

December 2023

SECAsolution 

Seniors Living, Newcastle Golf Club
Fern Bay, NSW

Traffic Impact Assessment

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1 Introduction

Background

Seca Solution Pty Ltd has been commissioned to prepare a traffic, access and parking assessment for the proposed seniors living development at 4A Vardon Road, Fern Bay. The site forms part of the existing Newcastle Golf Course and is proposed to have an access direct to Nelson Bay Road which shall provide left in and left out movements.

As part of the project, Seca Solution has reviewed the plans and information provided, collected traffic data at the key locations and have observed the traffic operations in the locality of the site during peak periods.

1.1 Scope of Report

This assessment has been completed with regard to the relevant requirements outlined in the Port Stephens Development Control Plan (2014), with reference to the Guide to Traffic Generating Developments published by TfNSW and Australian Standard AS2890.1: Off-street Car Parking Facilities as well as the Housing SEPP (2021).

1.2 Issues and Objectives of the study

The issues relative to the proposal are:

- Assess the suitability of the parking proposed for the development;
- Review the access arrangements for the development;
- Review the service arrangement for the development;
- Assess impact on the local road network due to the additional traffic flows; and
- Assess any other transport impacts associated with the development.

The objective of the report is to document the impacts of the proposed development and provide advice on any infrastructure work required as part of the development.

1.3 Planning Context

In preparing this document, the following guides and publications were used:

- RTA Guide to Traffic Generating Developments, Version 2.2 Dated October 2002;
- RMS TDT 2013/04 "Update Traffic surveys August 2013".
- SEPP (Transport and Infrastructure) 2021
- SEPP (Housing) 2021
- Port Stephens Development Control Plan 2014
- Australian / New Zealand Standard – Parking Facilities Part 1 : off-street car parking (AS2890.1:2004);

2 Existing Situation

2.1 Site Description and Proposed Activity

The subject site is located within the grounds of the Newcastle Golf Course being on the western side of the facilities.

The proposed development will allow for a seniors living development with ancillary facilities for residents.

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2.2 Site Location

The subject site is located at 4AVardon Road, as shown below in Figure 1.

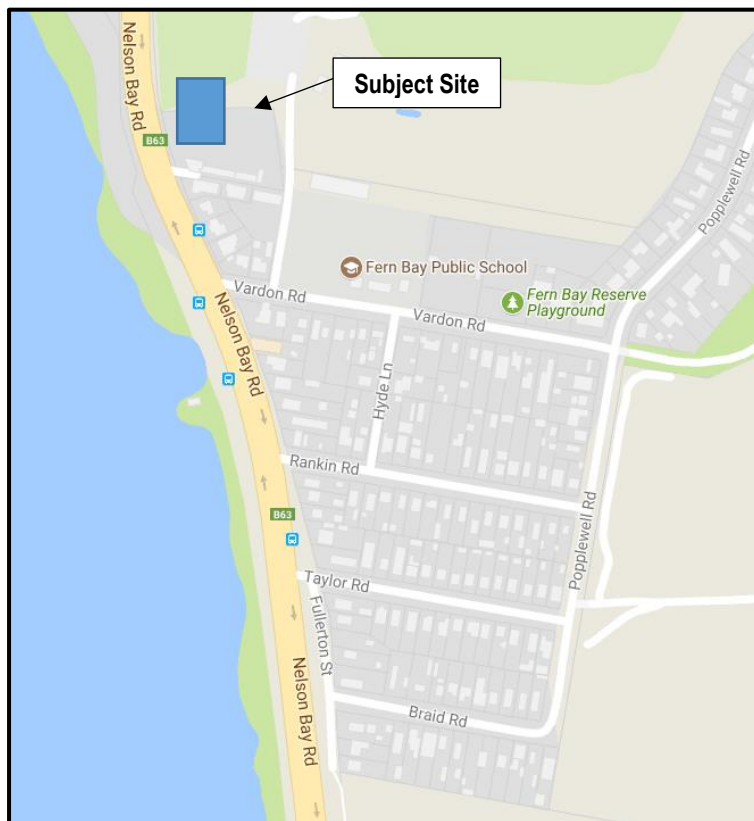


Figure 1 – Subject site in the context of the local road network

The subject site forms part of the Newcastle Golf Club with a motel and residential development to the south and the golf course to the north and east. It has frontage to Nelson Bay Road with no vehicle access proposed via the existing golf course and its driveway connection to Vardon Road. All vehicle access to the site is proposed via a new connection to Nelson Bay Road.

2.3 Road Hierarchy

Nelson Bay Road is the major road passing through the locality. It forms part of the regional road network (B63) and provides the primary link between Newcastle and Port Stephens, including to Newcastle Airport and the Williamtown RAAF base. In the vicinity of the subject site, it operates under the posted speed limit of 70km/hr. Along the site frontage, to the north, it provides a single travel lane in each direction becoming a dual carriageway separated by a raised central median towards the southern end. Wide shoulders allow for kerbside parking. Kerb and guttering are provided along the western roadside only. There is a sheltered right turn lane provided at Vardon

Road for southbound vehicles to undertake a U-turn in this location. Street lighting is provided at the intersection with Vardon Road, with a pedestrian footpath provided along the eastern side of Nelson Bay Road.

2.4 Current Road Network Operation

2.4.1 Peak Hour Flows

Seca Solution has undertaken morning and afternoon traffic surveys at the intersection of Nelson Bay Road and Vardon Road to determine traffic demands in the vicinity of the site. The surveys were undertaken on 25th March 2021 7am – 9am and 3pm-6pm. The peak periods for vehicle movements were determined as 7.15-8.15am and 4:15-5:15pm, with the two way movements and southbound/northbound U-turns shown below in Table 1.

Table 1 Two-way movements on Nelson Bay Road in the vicinity of the subject site

Nelson Bay Road	AM Peak	PM Peak
Northbound	956	1397
Southbound	1381	1382
U-Turns	2	7

The two-way flows along Nelson Bay Road in this location are highest in the PM, with 2779 vehicles per hour (vph) which are split evenly in both directions. As a dual carriageway, TfNSW Guidelines gives a Level of Service (LoS) B for Nelson Bay Road, with less than 1400 vehicles per hour/per direction. For the single carriageway however the level of service is LoS E. This is described as being *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. Flow is unstable and minor disturbances within the traffic stream will cause a traffic-jam.*

Equivalent traffic data collected in February 2018 showed two-way flows in the PM of 2,325 vph indicating that traffic growth in this area has increased significantly during these three years. This reflects the housing development that has occurred to the immediate north of the site as well as long term background growth along this key road corridor. The Transport for New South Wales web site indicates that as part of the ongoing duplication of Nelson Bay Road, the Fern Bay to Williamstown section is in planning.

2.4.2 Pedestrian and Cycling Facilities

There is a pedestrian footpath provided along the site frontage on the eastern side of Nelson Bay Road.

There are no formal cycling facilities within the vicinity of the site with cyclists able to ride along the sealed shoulder on Nelson Bay Road.

2.5 Traffic Safety and Accident History

In the five years 2018-2022 there have been no accidents in the vicinity of the proposed site access. There have been three accidents along Nelson Bay Road between Vardon Road and Sunrise Parade to the north, all resulting in serious injury. Two were off road into object crashes whilst one involved emerging from a driveway. There is no indication of whether speed was involved in the off road crashes. One occurred at dawn and the other on darkness. There is no pattern to these incidents.

Nelson Bay Road in this location provides a generally straight alignment with a gentle bend on the southern end approach to the site straightening to the north, allowing good visibility for drivers in all directions. The provision of a central median provides vehicle separation whilst sheltered turn lanes for right turns and U-turns allow for the safe movement of turning vehicles. Due to the width of the road and lack of interaction with parked cars and driveways vehicles can travel above posted speeds outside peak periods.

2.6 Car Parking

On-street carparking is permitted along Nelson Bay Road, particularly on the western side and to the south, associated with various residential lots. Along the site frontage there was no demand for parking noted.

Off-street parking is generally available within residential lots and is provided for golf club members within the golf course site with access off Vardon Road to the south of the subject site.

2.7 Public Transport

Regular bus services operate along Nelson Bay Road, with bus stops on the site boundary for the southbound bus and approximately 600 metres north of the site for the northbound bus movement.

- Route 130 Fingal Bay to Newcastle via Gan Gan Road Monday to Friday 5am – 9.30pm and weekend services
- Route 131 Fingal Bay to Newcastle (Express Service) 3 services throughout the day
- Route 136 Raymond Terrace to Stockton Monday to Friday 6.15am-7.30pm and weekend services
- Route 138 Newcastle to Lemon Tree Passage 4 services throughout the day

2.7.1 Bus Routes and Associated Facilities

Bus stops are located on Nelson Bay Road less than 250 metres to the south of the site and approximately 100 metres to the north of the site (1041 Nelson Bay Road) for northbound services. There is a footpath along the site frontage providing access to both of these stops.



Photo 1 – Bus stop south of subject site looking south along Nelson Bay Road

2.8 Road network upgrades

The project team has been provided with a copy of the “Nelson Bay Road, Fern Bay Between Sunrise Parade and Taylor Road” traffic and transport study dated 8th November 2023 prepared for Port Stephens Council. This study has been completed by Streetwise Road Safety and Traffic Services Pty Ltd and as part of the development of this study there has been no consultation with the Newcastle Golf Club with regards to this project or the potential impacts upon the land owned by the Golf Club.

It is noted from the traffic study that a number of options have been identified for upgrading Nelson Bay Road in this location, which include duplication of Nelson Bay Road and upgrading the access to Palms Lake Resort (located opposite off Nelson Bay Road) and Bayway Village (to the immediate north of the subject site) and has identified the preferred intersection option is to consolidate these two access points, together with access to the golf club (and the subject project) via a roundabout or signal controlled intersection.

Whilst this study and its findings have not been formally adopted by the road authority, it is noted that the project identifies a significant amount of road works within the golf club land holdings but no consultation has been held with the golf club. The plans show an access road to the existing golf club house running across the existing golf course and a second road linking north to Bayway Village across the golf course land. The road also runs across Aboriginal protected land within the golf club land holding. The Newcastle Golf Club's response to this is included in **Appendix E**.

The study does not identify any funding mechanism for this work.

2.9 Other Developments

Ongoing development continues in the Fern Bay area with future development of the Rifle Range site to the east with the potential for up to 300 residential lots. There are a number of other future developments also proposed in the locality between Fern Bay and Stockton North. To the north, there is residential development occurring on Fullerton Cove Road whilst a retail centre is proposed on Fullerton Cove Road which will provide a large neighbourhood shopping centre.

3 Proposed Development

The proposal is a Seniors Living Development and includes the following key components:

- Site preparation & establishment activities – clearing existing vegetation, demolition of existing golf course via earthworks, bulk earthworks.
- Establishment of vehicular access from Nelson Bay Road
- Construction and occupancy of a seniors living development comprising:
 - ▢ Three (3) apartment buildings containing 125 serviced self-care dwellings
 - ▢ Forty seven (47) single storey (villas) serviced self-care dwellings
- Carparking - 295 spaces across the site with each villa being provided with a double garage (94 spaces) and 201 basement carparking spaces within the three apartment buildings
- Provision of pedestrian and vehicular access to and from the site
- Establishment of a Community centre & administration building
- Pickle ball courts, lawn bowls facility, open space, landscaping, picnic shelter, public art, open lawn area for passive recreational activities and formal striking planting
- Civil works including internal access roads, pedestrian linkages to Nelson Bay Road and the golf club
- Connection to Country 'Keeping Place'
- Extension and enhancement of physical infrastructure utilities as needed

Table 2 Number of apartments and bedrooms

	Number of Units	Bedroom Mix	Total Bedrooms
Golf Frontage Villas	37	3 bedroom	111 bedroom
Duplex Villas	10	3 bedroom	30 bedroom
Apartments	125	88 x 3 bedroom 37 x 2 bedroom	338 bedroom

The plans for the development show provision for 201 parking spaces within 3 basement car parks for the apartments along with double garages for the various villas providing a total of 295 resident spaces. As well there are visitor parking spaces provided at grade within the site.

A concept plan for the proposed development is included in **Attachment A**.

3.1 Access Requirements

The layout of the access driveway and internal circulation is to be designed in accordance AS2890 and Councils requirements, including that all vehicles be able to enter and exit the site in a forward direction.

Section 26 of the Housing SEPP requires that residents have access to facilities and services. Part c states that in the case of a proposed development on land in a local government area that is not within the Greater Sydney (Greater Capital City Statistical Area)—there is to be a transport service available to the residents who will occupy the proposed development.

In summary, this transport service must be located within 400 metres of the site, be accessible by a suitable access pathway, be available for a return service at least once a day during daylight hours (Monday-Friday) and take residents to a place located within 400 metres of retail, commercial and medical services.

3.2 Access

Discussion with TfNSW and Council for the project has included the requirements of the SEPP (Transport and Infrastructure) 2021, clause 2.119 which states the following:

2.119 Development with frontage to classified road

(1) *The objectives of this section are—*

(a) *to ensure that new development does not compromise the effective and ongoing operation and function of classified roads, and*

(b) *to prevent or reduce the potential impact of traffic noise and vehicle emission on development adjacent to classified roads.*

(2) *The consent authority must not grant consent to development on land that has a frontage to a classified road unless it is satisfied that—*

(a) *where practicable and safe, vehicular access to the land is provided by a road other than the classified road, and*

(b) *the safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development as a result of—*

(i) *the design of the vehicular access to the land, or*

(ii) *the emission of smoke or dust from the development, or*

(iii) *the nature, volume or frequency of vehicles using the classified road to gain access to the land, and*

(c) *the development is of a type that is not sensitive to traffic noise or vehicle emissions, or is appropriately located and designed, or includes measures, to ameliorate potential traffic noise or vehicle emissions within the site of the development arising from the adjacent classified road.*

The subclause (a) has been reviewed with regards to this project as TfNSW and Council have requested that access should be considered via a connection through the golf club car park to connect to Vardon Street. This option has been considered and a plan prepared by Northrop Engineers to assess if this access route is practicable and safe. The following comments are provided in this regard:

- There is an area of aboriginal heritage land on the south-west corner of the site, to the immediate west of the existing golf club car park. The access road cannot be constructed over this area.
- The plan prepared to review the option for access via the golf club car park (refer **Appendix B** to this assessment) shows that the provision of a 2-way driveway and 1.5 m wide footpath would have a significant impact upon the existing car park area. This impact would result in the removal of 41 parking spaces within the golf club car park. There is no space within the golf club land to replace these parking spaces, which would mean that when full, there is potential need for 41 cars to park on the local streets adjacent to the site. This could have an unacceptable impact for the local residents here and per the Council DCP, parking for the golf club should be provided within the site and not reliant upon on-street parking. Refer to **Appendix D** for letter from Golf Club with regards to this impact being unacceptable.
- The site access proposed on Nelson Bay Road allows for left in and left out traffic movements, with a left turn deceleration lane provided in accordance with Austroads Guidelines. This access design shall have a negligible impact on the through traffic movements on Nelson Bay Road (refer to Sidra modelling below) and can provide a safe means of access for the project site.
- As a residential development there will be minor impacts associated with smoke or dust from the development.
- The nature, volume and frequency of the traffic associated with the project shall have an acceptable impact on Nelson Bay Road. As a seniors living development, the traffic impacts during the traditional

peak periods on the external road network shall be minor, with minimal impacts during the PM peak period.

The design of the residential units shall ensure that the noise and vehicle emissions from Nelson Bay Road are acceptable for the future residents.

Based on the above, access to the site is therefore proposed with a left in left out access to Nelson Bay Road.

The driveway into the site will allow for two-way movements and be designed to accommodate the swept path movements of larger vehicles including waste collection. The driveway will be designed in accordance with AS2890.1, for a Category 4 facility being for a car park with over 300 spaces accessed off an arterial road. This requires a separated driveway with a minimum separation of 1 metre and a width of 6-8 metres per driveway.

This driveway access shall allow for free flow into the site, with no queuing anticipated for vehicles entering or leaving the site.

3.2.1 Sight Distances

As part of the project work, Seca Solution has reviewed the sight lines along the site frontage on Nelson Bay Road. To the north Nelson Bay Road provides a straight and flat road alignment, which ensures that there is appropriate visibility for vehicles exiting the site or approaching along Nelson Bay Road. Sight distance requirements for an access driveway are prescribed by Australian Standard AS2890.1:2004 Parking Facilities (Off-street Car Parking), which requires a minimum sight distance of 85 metres for the posted speed limit of 70 km/hr, with a desirable sight distance of 97 metres.

The Austroads Guide provides advice on Safe Stopping Distances and for a frontage road with a posted speed of 70km/hr the minimum distance is 141 metres with a desirable sight distance of 151 metres.

As the access is proposed as a left in left out only, sight lines to the north only are required for assessment. Visibility to the right out of the site extends some 190 metres, therefore exceeding the desired sight lines under both AS2890.1 and Austroads Guidelines.

Allowing for the peak hour turn volumes (Table 3) and the through movements on Nelson Bay Road this access would trigger the need for a short left turn auxiliary lane (AULs) based on the Austroads Guide to Traffic Management Part 6 Warrants for turn treatments as shown below in Figure 2.

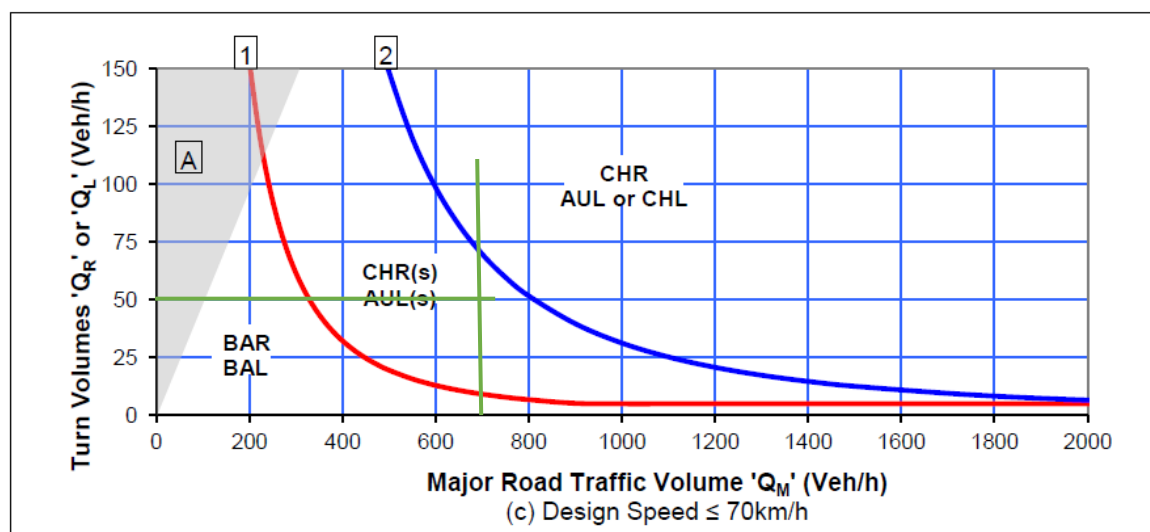


Figure 2 Warrants for Turn Treatments (Source GTMPt6 Fig 3.25 Warrants for turn treatments on major roads at unsignalised intersections)

3.2.2 Service Vehicle Access

Servicing for the site will be primarily associated with waste management. Waste collection will be completed internal to the site via a standard Council waste collection vehicle. The internal roadways shall allow for appropriate circulation enabling all vehicles to enter and exit in a forward direction. Other servicing for the development would generally be undertaken by small or medium rigid vehicles or commercial vans e.g. HiAce which can utilise visitor parking or driveways within the site.

The site layout shall be able to accommodate emergency vehicles, with the largest required being a fire appliance. Whilst most fire appliances are smaller than the largest service vehicle for the site (waste collection vehicle) and can therefore be accommodated on site, an aerial fire appliance has an overall maximum length of 12.4m and should also be able to access the site if required.

3.3 Internal Roads

A review of the plans shows that within the site there is proposed a spine road with a secondary circuit to provide access to the various dwellings and apartment buildings along with a turn head at the end to enable larger vehicles (garbage truck etc) to undertake a turn to exit in a forward direction. All access to the dwellings is provided from this internal road along with three driveways connecting to the basement parking below the three apartment buildings.

All internal parking aisles shall be designed in accordance with AS2890.1. For circulation roadways a minimum of 3 metres between kerbs is required for one-way roadways, whilst a minimum 5.5 metres is required for two-way.

3.4 Parking

3.4.1 Parking Supply

The 47 villas each have a double garage to provide for the parking demands of these residents (94 spaces).

A total of 201 car parking spaces are provided within the basement car parks on site. These are provided in 3 parking modules along with at grade parking adjacent to the internal roadway to provide for visitor demands.

3.4.2 Authority Parking Requirements

The Port Stephens DCP (PSDCP) refers to SEPP (Housing for Seniors or People with a Disability) 2004 for parking requirements for Seniors Housing. Housing For Seniors has been replaced with SEPP (Housing) 2021.

SEPP (Housing) 2021 provides the following parking requirements for independent living units:

- 0.5 car spaces for each bedroom (for developments provided by a person other than a social housing provider).

Private car accommodation

If parking (not being car parking for employees) is provided:

- (a) car parking spaces must comply with the requirements for parking for persons with a disability set out in AS 2890.6, and*
- (b) 5% of the total number of car parking spaces (or at least one space if there are fewer than 20 spaces) must be designed to enable the width of the spaces to be increased to 3.8 metres, and*
- (c) any garage must have a power-operated door, or there must be a power point and an area for motor or control rods to enable a power-operated door to be installed at a later date.*

Given the development shall provide Independent Living Units catering predominantly for people over 60, who maintain an active lifestyle (living on a golf course) it is considered the vast majority of users shall not require parking to accommodate disabled access but rather ensure full door opening for all cars. As well, recent direction from the Department of Planning and Environment (Explanation of Intended Effects of the SEPP (Housing) 2021 November 2022) provides guidance on the intent of the above clause, clarifying this to remove the requirement for all parking to be disabled parking.

a) For resident car parking attached to an independent living unit — car parking spaces, or at least 1 space where 2 or more are provided, must comply with the following —

- (i) be at least 3.8m wide and 5.4m in length, and
- (ii) have a minimum vertical clearance of 2.5m, and
- (iii) have a maximum grade of 1:40.

(b) For resident car parking spaces provided in communal car parks —

- i if 10 or more car parking spaces, not including car parking spaces for employees, are provided at least 10% of the spaces must comply with the requirements for parking for persons with a disability set out in AS/NZS 2890.6, and
- ii if fewer than 10 car parking spaces, not including car parking spaces for employees, are provided—at least 1 of the spaces must comply with the requirements, and

(c) any garage must have a power-operated door, or there must be a power point and an area for motor or control rods to enable a power-operated door to be installed at a later date.

3.4.3 Parking Layout Requirements

The minimum parking requirement under AS2890.1 for residential parking is classified as user class 1A, which allows for 2.4 x 5.4 metre spaces with 3-point manoeuvre in/out of spaces. To cater for the Seniors Living element it is appropriate to allow for manoeuvring in/out of parking in a single movement, with clearance available for full opening of all car doors. As such the parking layout (90° angle) would be designed as user class 2:

- Minimum 2.5 x 5.4 metre parking spaces;
- Minimum 5.8 metre aisle widths (for both one-way and two-way movements);
- Where parking is on one side of an aisle only and the other side is confined by a wall or high vertical obstruction, the aisle width shall be increased by 300mm;
- At blind aisles, the aisle shall be extended a minimum of 1 metre beyond the last parking space.

Disabled parking spaces shall be 2.4 x 5.4 metre spaces with a 2.4 x 5.4 metre shared space either next to, or between two spaces. These shared spaces may provide access for pedestrians.

3.4.4 Parking Demand

Applying the SEPP rate to the total beds in Table 2 (338 bedrooms) would see a demand for 169 parking spaces associated with this Seniors Living development.

Allowing for 94 garage spaces and 201 basement spaces, of which 122 are in stacked configuration allowing 61 dual space combinations to be allocated to individual units, all units have a dedicated parking space with some to have access to additional parking. The parking meets the requirement of the SEPP with 295 resident parking spaces across the site.

The proposed community centre is for the exclusive use of residents and as such is ancillary to the residential development. In doing this it does not generate a separate demand for parking.

Whilst there is no visitor parking requirement under the SEPP for Seniors, the project proposes in the order of 20 at grade visitor parking spaces throughout the site to ensure all parking demands are contained within the site.

Additionally, the SEPP requires a bus capable of carrying 10 people, to be available both to and from the proposed development to a local centre providing nominated services at least once between 8am and 12pm each day and at least once between 12pm and 6pm each day.

A review of the bus timetable for Route 136 between Raymond Terrace and Stockton confirms this service meets these requirements, however the northbound bus stop is located approximately 600 metres from the site and not within the 400 metres required by the SEPP. The provision of the mini-bus on site shall assist in this regard.

4 Transportation Analysis

4.1 Traffic Generation

Standard traffic generation rates provided by the Guide to Traffic Generating Developments published by TfNSW have been used as a basis for determining the future traffic flows associated with the development.

For seniors living developments, using TfNSW rates (TDT 2013/04A), a peak generation rate of:

- 0.4 vehicles per dwelling in the evening peak and
- 2.1 trips per dwelling per day is specified.

Accounting for up to 125 dwellings for the subject site generates 50 trips in the evening peak and 264 trips per day (132 inbound/132 outbound).

Given the nature of the development and its location the site is not expected to have a high demand for pedestrian nor cyclist movements external to the site.

4.2 Traffic Distribution and Assignment

Per the TfNSW Guide, demands associated with the seniors living typically coincide with the local road network peak in the PM but not in the AM.

Given this development shall cater predominately for retirees, future residents on site will generate external traffic demands associated with retail centres, medical service, entertainment etc. Taking into consideration the surrounding area, the Newcastle CBD and Stockton town centre will offer key attractions. There may also be demand for day trips to the north with broader trips to the Hunter Valley and beyond to the west (M1 Motorway and Hunter Expressway).

Access to these various centres is via Nelson Bay Road. Allowing for the access being left in left out only all traffic movements will approach from the north and depart to the south.

U-turn facilities at Vardon Road allow for traffic with a destination to the north whilst U-turn opportunities to the north of the site (eg roundabout at Seaside Boulevard) allow for traffic with an origin from the south.

A typical PM split of 80% inbound/20% outbound for residential developments has been applied.

Although flows on Nelson Bay Road are equally split, the majority of traffic associated with this development (80%) is expected to have an origin/destination to the south with the balance (20%) to the north).

Table 3 - Distribution of traffic in PM peak hour

PM		
Origin / Destination	INBOUND (80%)	OUTBOUND (20%)
To / From the north 20%	8	2
To / From the south 80%	32	10
Total	40	10

4.3 Impact on Road Safety

The key impact of the development will be associated with the access onto Nelson Bay Road. The access is proposed as a left in left out only and is located on straight section of road with good visibility for drivers entering and exiting the site. Drivers shall be able to safely enter and exit the site in this location with sight visibility exceeding the Austroads Guidelines. The access has been designed in accordance with AS2890 with no queuing anticipated at the access.

For traffic wishing to access the site from the south, the drivers shall continue past the site and can continue to the roundabout at Fullerton Cove Road to complete a U-turn. This roundabout caters for these movements in a safe manner. These drivers can then continue south to the subject site to turn left into the site via the left turn deceleration lane. For traffic from the site wishing to head north, the drivers shall exit left and then proceed to Vardon Street, where there is a dedicated central right turn lane. From here, drivers have a clear view along Nelson Bay Road and can determine a suitable gap to complete a U-turn into the 2 northbound travel lanes (and sealed shoulder) in this location. This can be completed in a safe manner with no impact upon general road safety in this location.

4.4 Impact of Generated Traffic

4.4.1 Impact on daily Traffic Flows

The development could result in an increase in peak hour flows along Nelson Bay Road of 50 vehicles in the PM.

The two-way flows along Nelson Bay Road are high and have been modelled by the RMS (now TfNSW) as part of their ongoing review of classified roads. During the PM peak period there are 2,779 vph. The increase in traffic of 50 vehicles will increase this to 2829 vph with no change to the existing Level of Service on Nelson Bay Road to the south of this location (LoS B).

4.4.2 Peak Hour Impacts on Intersections

The development will result in an increase in through vehicle movements on Nelson Bay Road and therefore at the various intersections along its length. Various intersections south of the site, including Vardon Road, have been reviewed by Council (both Port Stephens and City of Newcastle) with upgrades identified where necessary to accommodate ongoing development and to ensure the safe and efficient operation of intersections within this locality.

During the PM peak the majority of traffic demands associated with the development will be inbound from the south. Outbound movements with a destination to the north will be minimal in the PM peak and so demands for U-turns at the intersection of Vardon Road and Nelson Bay Road will be in the order of 3 vph. U-turns at this intersection were observed during the surveys with 6 southbound vehicles in the PM peak undertaking a U-turn. Platooning in the traffic stream along Nelson Bay Road allows these movements to occur with minor delays for these turning movements.

The operation of the site access (up to 70vph) has been assessed using Sidra and the traffic data collected as part of this project at Vardon Road. The site access has been assessed for the current 2023 year and the future 2033 design year, with 2% per annum background growth applied along Nelson Bay Road. The results of this Sidra modelling is provided below.

Table 4 – Sidra assessment, 2023 traffic flows PM peak for site access

Approach	Degree of saturation	Average delay (seconds)	Level of Service	Queue distance (metres)
Nelson Bay Road south approach	0.627	1.6	A	0.0
Site access	0.026	8.4	A	0.6
Nelson Bay Road north approach	0.374	0.3	A	0.0

Table 5 - Sidra assessment, future 2033 traffic flows PM peak for site access

Approach	Degree of saturation	Average delay (seconds)	Level of Service	Queue distance (metres)
Nelson Bay Road south approach	0.752	14.0	A	0.0
Site access	0.034	10.5	A	0.8
Nelson Bay Road north approach	0.448	0.3	A	0.0

The above Sidra assessment demonstrates that the site access on Nelson Bay Road shall have an acceptable impact with minimal delays for the through traffic movements along Nelson Bay Road.

Given the low number of additional traffic movements generated by the development it is considered that the development will have minimal impact on the existing operation of this and other intersections along this corridor.

4.4.3 Impact of Construction Traffic

The majority of construction work will be contained within the site so there will be minimal impact upon the external road network. There will be a requirement for construction vehicles to access the site and traffic associated with workers. Parking associated with construction vehicles shall be contained within the site to reduce impacts on the local area.

A Traffic Management Plan will be required for work on site and access controls associated with the construction of the new access. This will be completed as part of the detailed design process by the contractor on site and completed under a WAD process.

4.5 Pedestrian and Cyclists

There is an existing footpath along the site frontage that provides a connection south towards Fern Bay and local attractions. This path extends to the north to the roundabout at Fullerton Cove Road and then along Fullerton Cove Road, to provide a connection to this area and the future neighbourhood shops proposed in this location. This path also connects to the Bayway Village to the north of the site, with a central median just to the north of the driveway to Bayway Village connecting to the bus stop on the opposite side of Nelson Bay Road. From this location, pedestrians are also able to walk south to access the facilities within the Palm Lake Resort village.

5 Summary and Conclusion

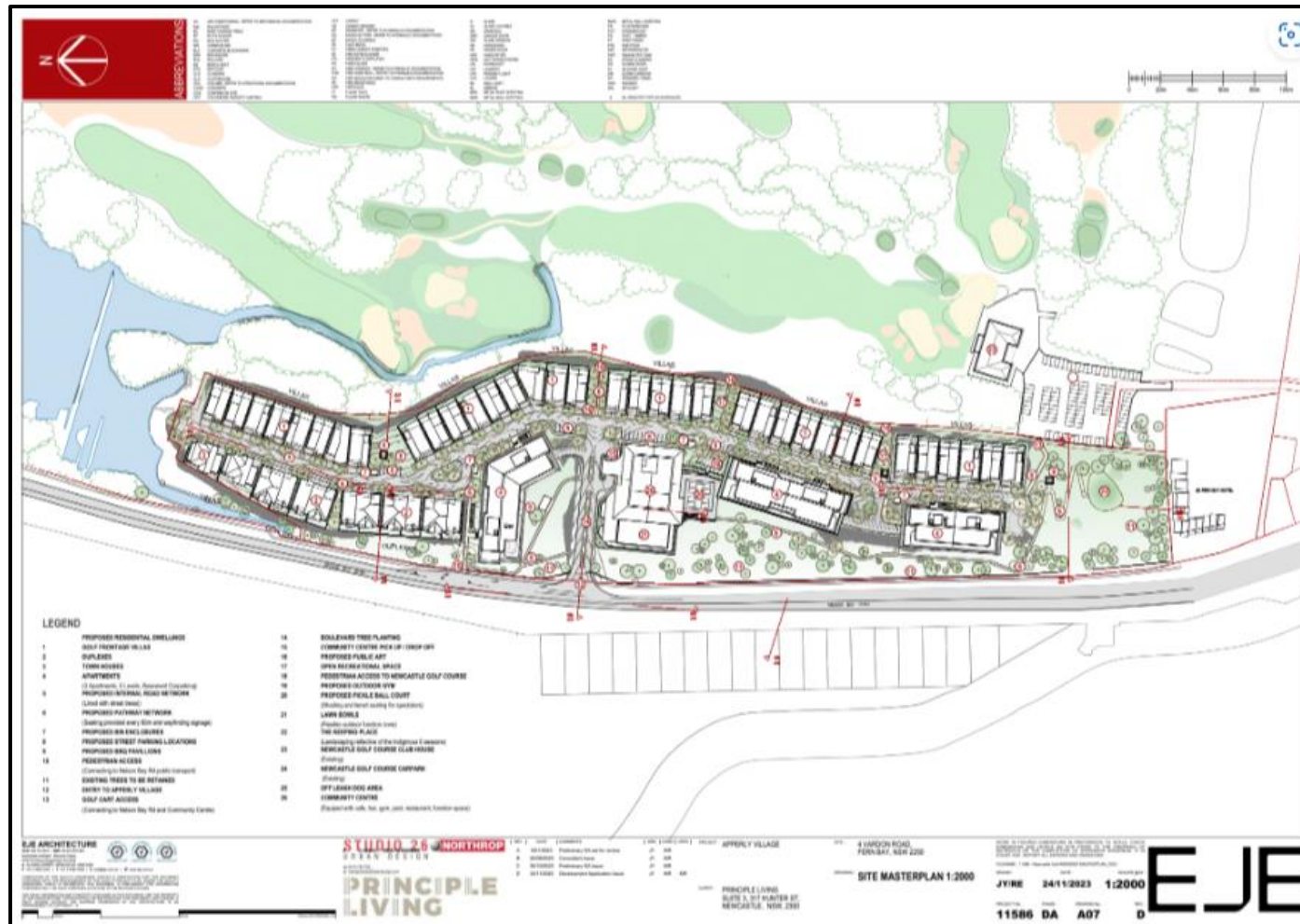
Overall, the proposed Seniors Living development will have a minimal and acceptable impact upon traffic in the local area and should be approved on traffic and access grounds.

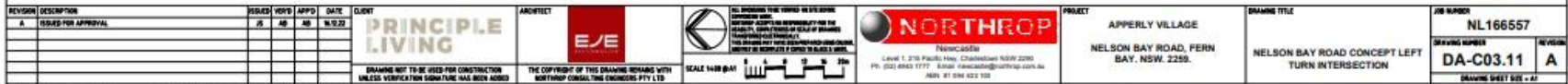
The access can be provided in a safe and appropriate manner allowing for left in left out movements only with all vehicles able to enter and exit in a forward direction with no delays for through traffic. Nelson Bay Road in this location is straight and offers good visibility for entering and exiting drivers in accordance with Austroads Guidelines.

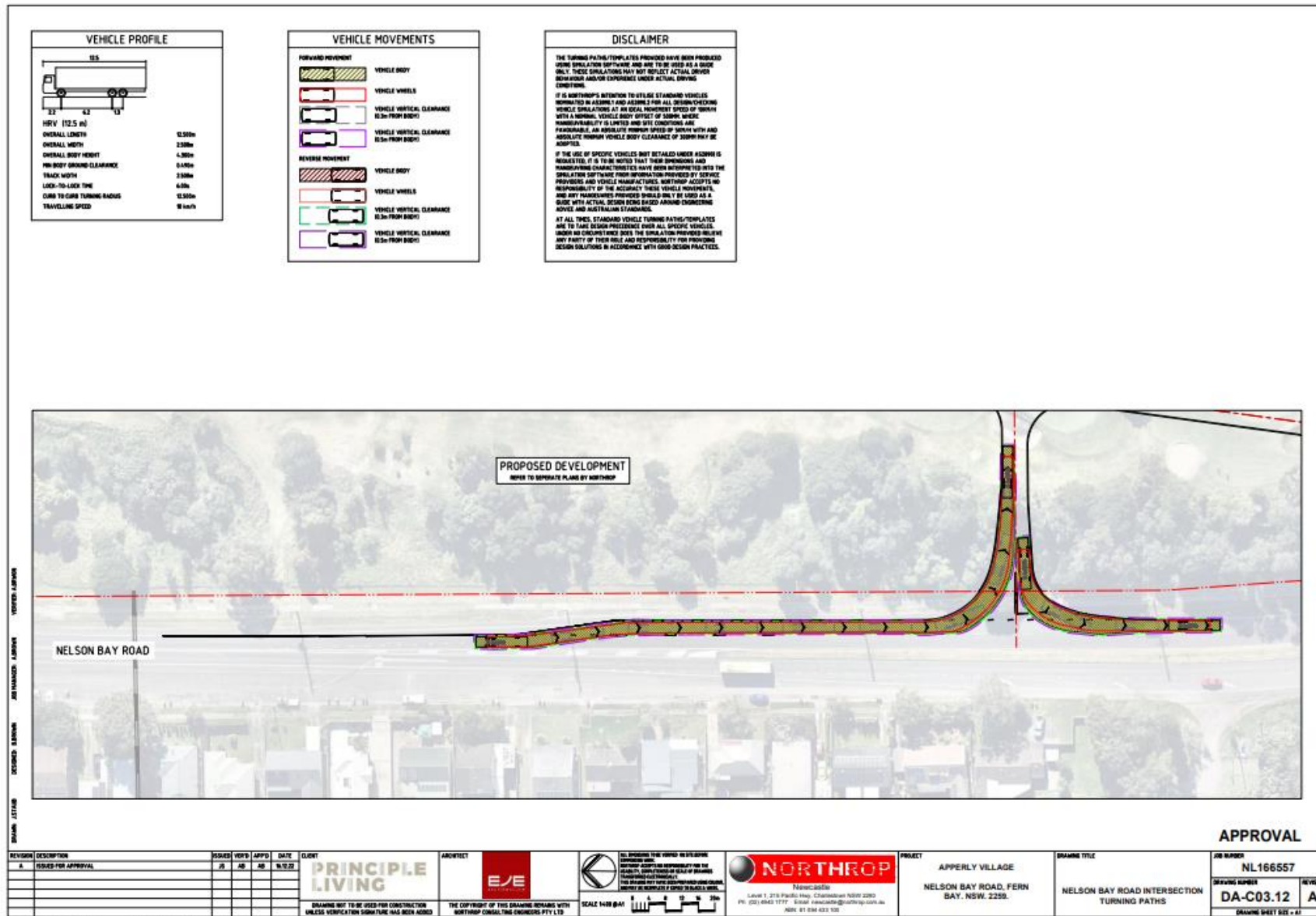
The internal layout of the site allows for site servicing including waste collection.

Parking is to be provided in accordance with the SEPP and can be contained within the site.

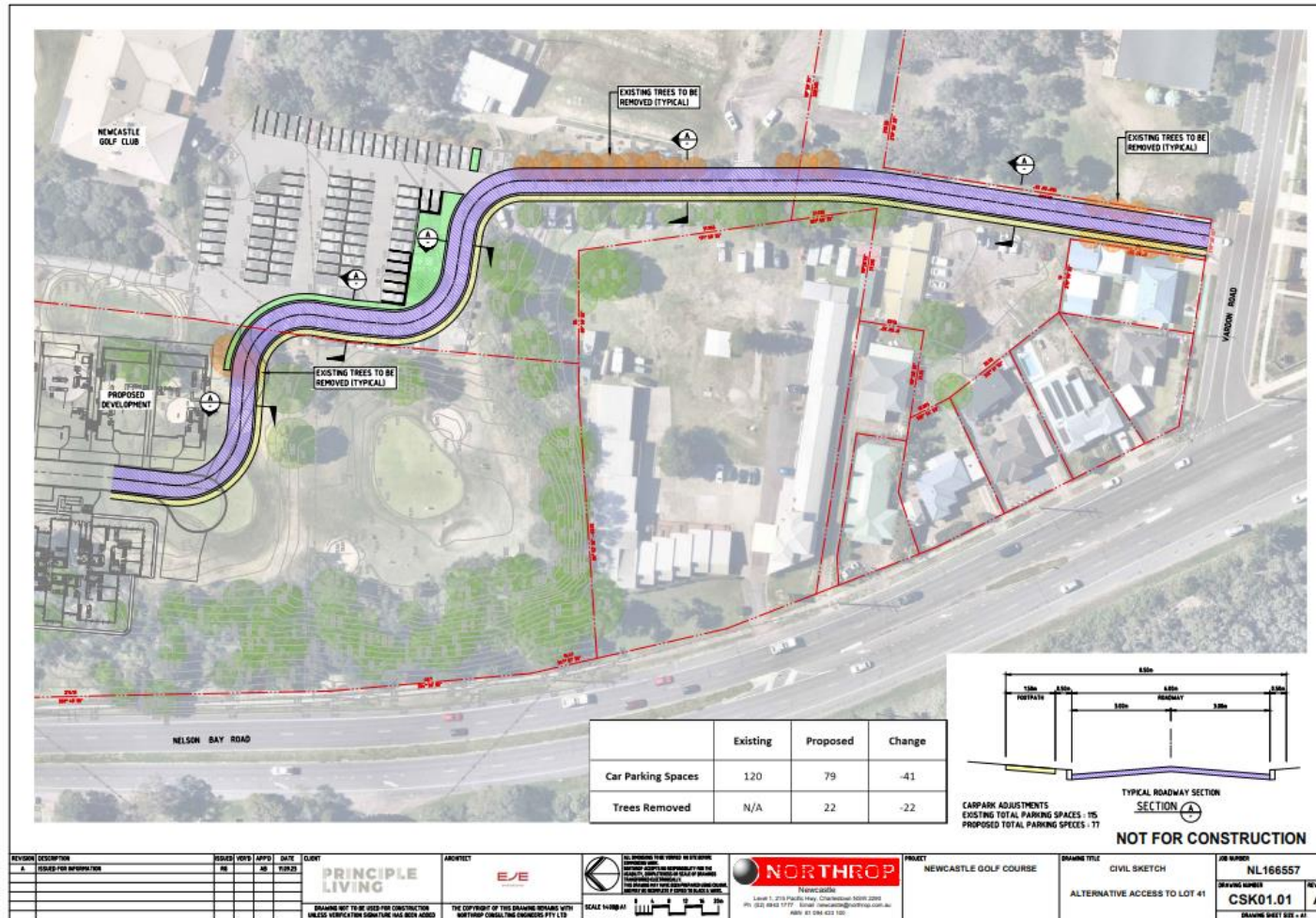
6 Appendix A – Concept Plans including access



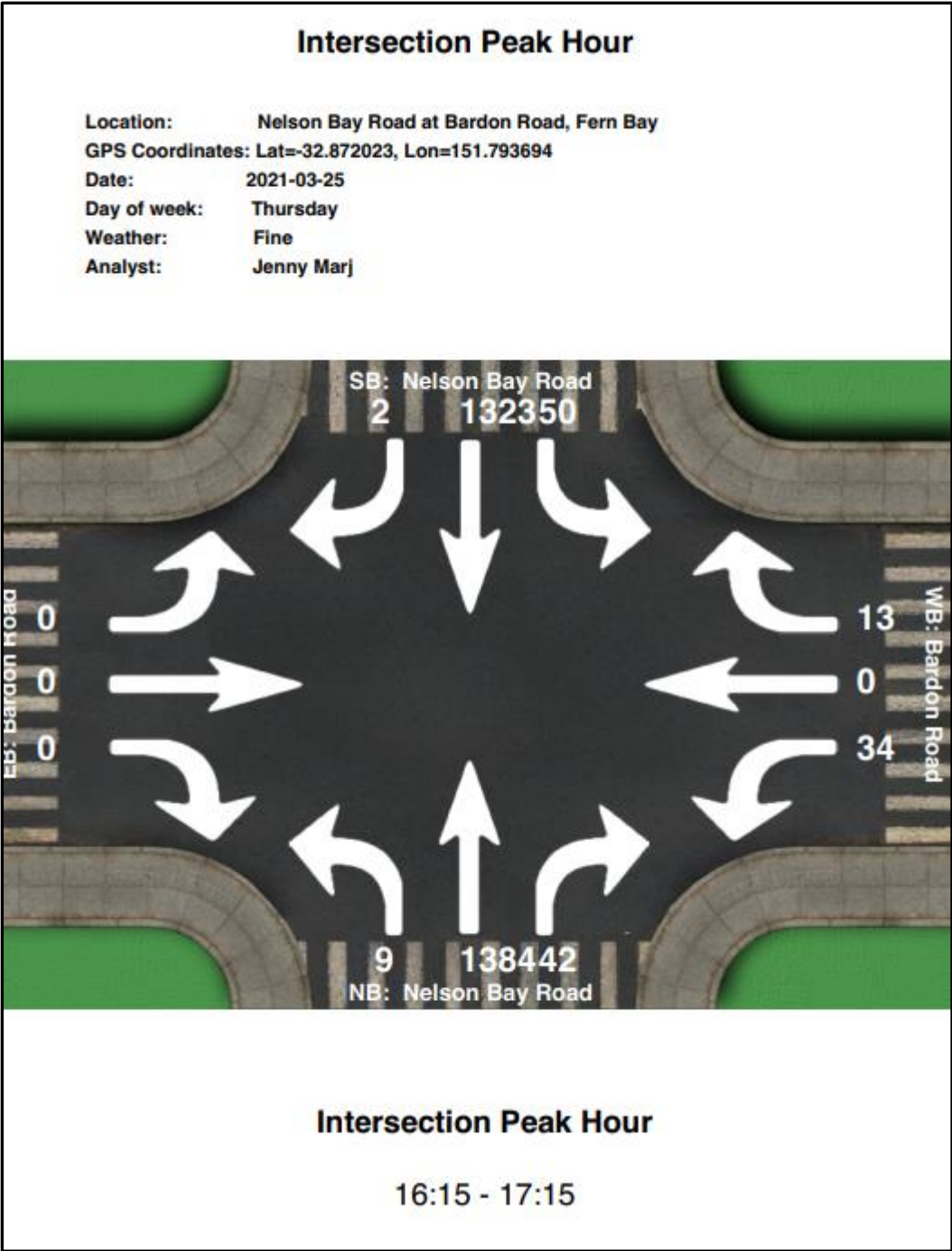




7 Appendix B – Concept Design for access via Golf Course



8 Appendix C – Traffic Surveys



9 Appendix D –Correspondence from Newcastle Golf course



6 September 2023

Chris Old
Principle Living
Blueheath At The Bower
34 Western Road
Medowie NSW 2318

By email:
chris.old@principleliving.com.au

Dear Chris

Potential Use of Newcastle Golf Club Driveway and Car Park for Access to Proposed Seniors Living Development

As part of its preparation of the required DA for the proposed Seniors Living development at Newcastle Golf Club (**Club**) we understand that Transport for NSW (**TfNSW**) has asked Principle Living to consider whether access to the village could be obtained through the Club's driveway.

We have considered the use of the Club's driveway for access but have concluded that it is not possible or practical for at least the following reasons:

1. The Club has been at its current site since 1915 and the Club's carpark has been in its current location since the early 1900's. Over the years the Club's member numbers have increased to assist with meeting the cost of running its significant golf course. We now have a little over 1000 members, most of which are in a full 7 day category. We currently have about 114 car parks in our existing car park. The Club's two busiest days are Saturdays and Wednesdays, closely followed by Sundays. We conduct competition golf every day of the week except Monday. On our busiest days we have more than 200 golfers compete in our competitions. The competitions are started in two waves – a morning wave from about 6:30am – 8:15am and then a second wave between around 10:45 – 12:30. A round of golf takes about 4hrs 30minutes. Because of our location at Fern Bay all golfers travel to golf by car – with most travelling by themselves. Between about 10:00am and 3pm on our busy days we have insufficient car parking to accommodate demand. This results in cars parking informally down our driveway, in front our maintenance facility, and in the area on the left hand side of the driveway as you enter (known at the club as the 'dust bowl'). **Attachment 1** shows the way cars use the driveway area during busy days (the photos were taken on Saturday 2 September 2023 at around 12pm).
2. The Club presently has two main sheds used as part of our golf course maintenance regime. They are the main maintenance facility on the eastern side of the driveway and the maintenance equipment storage shed on the western side of the driveway. The Club's maintenance staff move between these facilities with equipment throughout the day with unregistered maintenance equipment crossing the current driveway from time to time.

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3. There is an easement for access that is proposed as part of the subdivision creating the proposed development lot. That easement is shown on the plan at **Attachment 2**. The draft s88B instrument is also included in the attachment. Following the completion of a detailed Aboriginal cultural heritage study the connection to proposed Lot 41 now connects to a part of the proposed lot that has been identified as particularly sensitive from an Aboriginal cultural heritage point of view. In addition to the use of this access needing to accommodate cars using the car park it is now not feasible for the link through the carpark to sensibly access the area where the proposed development will take place. A photo of the area where the easement joins the car part is included in **Attachment 3**. The proposed development is about 50m further to the north than the connection.
4. The driveway is also currently used by a range of heavy vehicles to make deliveries to the golf club or to collect things from the Club. The Club regularly imports sand for bunkers and green renovation. Because of the access constraints on the site sand is usually delivered to the south western corner of the car park (sand can be seen in the relevant location in the photos). Fuel trucks also regularly attend site to deliver diesel and petrol. The Club also receives deliveries of chemicals and consumables that usually come on a heavy rigid vehicle (HRV). Waste collection vehicles also attend the site and need to use the driveway to turn around once on site. It is doubtful whether a HRV could use the proposed easement site when the car park is occupied by cars. Most HRVs presently access the site when the car park is empty. It would not be feasible to manage HRVs in this manner if they were attending the proposed seniors living development.
5. The Club is secured each night by locking the swinging gates at the driveway. If the driveway was used for access to the proposed seniors living development there would need to be access provided 24/7. That would make securing the golf course very difficult and impractical. The Club already experiences security issues and from time to time the course is damaged as consequence. Creating 24/7 access in circumstances where it becomes impossible to secure the course would be an unacceptable situation for the Club.
6. There is a significant amount of pedestrian activity in the Club's car park as golfers remove their golf equipment from their cars and walk it towards the Club's golf shop. The same happens in reverse when golfers conclude their round. The pedestrian activity that occurs in the car park is likely to be inconsistent with the use of the carpark for the purpose of accessing the development site.

Overall, the Club's driveway and car park do not provide a feasible access for any seniors living development on proposed Lot 41.

If you require any further information or access to the Club's land for the purpose of considering these issues, please let me know.

Yours faithfully



Robert Travis
General Manager

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ATTACHMENT 1





10 Appendix E –Correspondence from NGC dated November 2023



24 November 2023

Mr Chris Old
Principle Living
Blueheath At The Bower
34 Western Road
Medowie NSW 2318

By email:
chris.old@principleliving.com.au

Dear Chris

Traffic and Transport Study – Nelson Bay Road, Fern Bay between Sunrise Parade and Taylor Road

Thank you for providing a copy of the 'Traffic and Transport – Nelson Bay Road, Fern Bay between Sunrise Parade and Taylor Road' prepared for Port Stephens Council (Council) by Streetwise Road Safety and Traffic Services dated 8 November 2023 (Report).

Although it appears from page 2 that work started on preparation of the Report no later than June 2023, we note that the authors of the report have not consulted the Club about its contents. This is despite the major impacts the report recommendation of the report would have on the Club if implemented. That is both surprising and disappointing.

At the outset, we wish to make clear that the Club supports further development in the Fern Bay area. The Club is also supportive of the proposal to make upgrades to Nelson Bay Road (NBR). Notwithstanding that support, there are a number of proposed road changes that are either unacceptable, unrealistic or unnecessary and the Club does not see any way some recommendations could be practically implemented. We have set out below the reasons why the Club holds that view.

1. Current Golf Club Entry

The Report proposes the closures of the Club's existing Vardon Road access to vehicular traffic. There is discussion of the Club's existing access off Vardon Road in Section 5.2.3 of the Report. In its discussion, it is not clear whether the Vardon Road entry is being assessed for its suitability for access to the golf club or the proposed retirement village. The purpose of this access is, and will remain, for entry to the golf club. Although there is nominally a proposed easement from this access it is not suitable for access to the retirement village for the reasons set out in our letter of 6 September 2023.

The Report identifies that the relevant 'Entering Site Distance' cannot be achieved at the driveway. We assume this issue arises on the western side of the driveway (the Report identifies the relevant distance to the east is likely to be able to be achieved). The alleged deficiency in 'Entering Sight Distance' is used to justify closure of the intersection to vehicular traffic. The analysis is overly simplistic. It would appear from the relevant standard

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5. Conclusion

In summary:

- a) The Club supports the signalisation of the Vardon Road intersection using TfNSW preferred configuration but insists on its existing vehicular access being maintained. If that requires the speed limit on the relevant part of Vardon Road to be reduced to 40km/h then the Club would support that;
- b) The Club would strongly oppose any intersection treatment at Sunshine Drive that requires the Club's land to be accessed at that point. Such a proposal is unacceptable for the reasons set out in this letter;
- c) The Club supports the proposed 'Alternative 2' for access to the proposed seniors living development and the report does not provide any reason why that is unacceptable.
- d) The Club would support a relocation of the mid-block crossing and bus stops further to the north because of its likely benefit to pedestrians from both sides of the road;
- e) Any proposed pathway through the Club's land is unacceptable from a security point of view.
- f) The Club is happy to work with Council if some level of reconfiguration of the Club's Vardon Road driveway is required to improve sight lines as part of the Vardon Road intersection works.

Overall, the Club has significant issues with what is proposed in the Report but is happy to work with Council (including by attending meetings) to achieve an appropriate outcome for all stakeholders in the area.

Yours faithfully



Alan McKelvey

President

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- I. The proposed intersection is in a low-lying area and is likely to alter flood levels, including levels associated with managing stormwater from the proposed retirement village;
- II. It does not connect to the lot that has been approved on the Club's NBR frontage. It is not clear if the report is suggesting easements or opening the area as public road but, in either case, it is difficult to see any appropriate land tenure being available for the proposal;
- III. The proposed route unacceptably interferes with the golf course and the development lot. The proposed village has a spine road running through it but it will operate as a separate site to the course land. It is inappropriate for traffic to be directed through the seniors housing development to the Club's carpark.
- IV. The proposed intersection treatment severely interferes with an area that will be revegetated as part of the recent golf course development consent and is within an area covered by a Biodiversity Management Plan; and
- V. All proposed treatments look very expensive and the cost is likely to significantly outweigh any benefits.

The Club could not support either option. If some treatment is required, the Club would have thought a roundabout without a leg into the Club's land would be more appropriate.

4. Access to Proposed Senior Living Development

Section 5.2 of the Report considers the potential access options for the proposed seniors living development on the Club's land. The Club considers both Option A and Option B for the Sunshine Drive intersection to be unacceptable for the reasons set out above. It is also clear that accessing the village through the Club's carpark is unacceptable for the reasons already discussed.

The Report, at page 38, discusses what is described as '*Alternative 2 – Developer Proposed Access of Nelson Bay Road*' (Alternative 2). While the Report describes the proposed intersection as 'not ideal' it does not say it is unacceptable. It also concludes that with appropriate acceleration and deceleration laws the intersection can work acceptably (although there appears to be a question about whether an acceleration lane is required).

Alternative 2 is criticised by the Report because it would reduce the possibility to provide a safe midblock crossing for pedestrians. It appears that the options have not been properly explored. There would appear to be an opportunity to move the proposed midblock crossing and bus stop further to the north making them more useful to residents on both sides of the road. It is difficult to see why there is a bus stop at both the Sunrise Parade intersection and at the mid part of the Club's NBR frontage.

The 'Alternative 2' intersection – appears to be identical to the Bayway Village 'Option B – Transport Preference' (see Sheet 8 of 15 of the plans at the rear of the Report). It is difficult to see why that Bayway Village intersection configuration could not also be used for the Club's proposed retirement village.

that the issue could be resolved by reducing the speed limit on the relevant part of Vardon Road to 40km/h which, given the proximity to the Fern Bay Public School, might be appropriate. The Club would have no objection to the speed limit reduction.

The Report describes the existing brick wall and vegetation as requiring adjustment in accordance with Figure 3.3 of the Standard. While the reference to Figure 3.3 appears to be an error (it should be Figure 3.2) that issue would also probably be addressed by reducing the speed limit to 40km/h. The report fails to consider that option.

We note the Report, in Sections 5.8 and 5.9 discusses two (2) options – Option A and Option B – for the signalisation of Vardon Road. We note the Report's author, for inadequately explained reasons, prefers Option A while Transport for NSW (TfNSW) prefers Option B.

The difference between the two options is discussed on page 5 of the report. It is noted that Option A produces a queue length of 50.2m for the left out in the PM Peak and this fact is used to justify closure of the Club's driveway which is only 40m from the intersection.

The Report goes on to discuss TfNSW's Option B which it notes reduces the impacts on the Club's driveway. The Report prefers Option A without justifying why Option B should not be adopted given its beneficial impacts on queue lengths. The Club supports TfNSW preference because the alternative unnecessarily impacts on the Club's driveway without justification. If there is a difference in the LOS between the two options, they will still both be acceptable in all anticipated scenarios.

2. Pedestrians and Cyclists

The Report, at page 60, identifies the potential for a shared pathway through the golf club's land. That proposal is unrealistic, unnecessary and inappropriate. The golf club is private land that contains a valuable community asset. The proposed pedestrian pathway would severely compromise the security of both the golf course and the proposed retirement village. It is also inappropriate to have cyclists and pedestrians interacting with the Club's car park. This proposal has been put forward without consultation, is contrary to all strategic planning documents for the area, and makes little sense. The proposal should not form part of the Council's plans going forward. There is no justification for cutting through the golf course when there is a proposed (and planned) 2.1m widened shared path on NBR.

3. The NBR/Sunshine Parade Intersection

Again, without the consultation, the Report proposes the appropriation of a significant part of the Club's land for an intersection treatment at the intersection of NBR and Sunshine Parade.

Option A, said to be preferred, involves a large two lane roundabout at the intersection with one leg entering the Club's site and heading south with an intersection off that leg heading north to Bayway Village. Option B proposes a signalised intersection with a similar configuration but no access to Bayway Village.

The Club cannot see how either Option A or Option B is reasonable or feasible, for at least the following reasons: