

Housing Development

Pacific Link Housing

Traffic Impact Assessment

March 2026

SECAsolution 

Residential Development
Ashton Avenue, The Entrance, NSW

Traffic Impact Assessment

Author: Cathy Thoms/Sean Morgan/Lachlan Thomas

Client: Pacific Link Housing

Issue: Ver 03

Reference: P2637

25 March 2026

Quality Review and Document History

Version	Date	Description	Prepared By	Reviewed and Approved By
Ver01	24/12/25	Draft	C. Thomas	S. Morgan
Ver02	29/01/26	Final	C.Thomas	S. Morgan/L.Thomas
Ver03	24/3/26	Final plan	C.Thomas	S.Morgan / L.Thomas

Contents

1	Introduction.....	3
	Background.....	3
1.1	Scope of Report.....	3
1.2	Issues and Objectives of the study.....	3
1.3	Planning Context.....	3
2	Existing Situation.....	4
2.1	Site Description and Proposed Activity.....	4
2.2	Site Location.....	4
2.3	Site Access.....	5
2.4	Existing Traffic Conditions.....	5
2.5	Traffic Flows.....	6
2.6	Parking Supply and Demand.....	8
2.7	Pedestrians and Cyclists.....	9
2.8	Public Transport.....	9
3	Proposed Development.....	10
3.1	The Development.....	10
3.2	Access.....	10
3.3	Review of Car Parking.....	11
4	Transportation Analysis.....	14
4.1	Traffic Generation.....	14
4.2	Traffic Distribution and Assignment.....	14
4.3	Impact on Road Safety.....	15
4.4	Impact of Generated Traffic.....	15
5	Preliminary Construction Traffic Review.....	17
6	Summary and Recommendations.....	20
	Appendix A – Site Plan.....	21
	Appendix B– Swept Paths.....	22

1 Introduction

Background

Seca Solution Pty Ltd has been commissioned by Pacific Link Housing to prepare a traffic, access and parking assessment for the proposed affordable housing development at Ashton Avenue, The Entrance. The plans allow for a 50 unit multi-level residential development including a mix of affordable housing (60%).

Parking is provided on site with all vehicle access from Ashton Avenue and Campbell Avenue with Ashton Avenue allowing entry only while Campbell Avenue provides for two way movements.

As part of the project, Seca Solution has collected traffic data at the key location of The Entrance Road and Ashton Avenue and The Entrance Road and Campbell Avenue and have observed the traffic operations in the locality of the site during both morning and afternoon peak periods.

1.1 Scope of Report

This report has been prepared to respond to the SEARs Housing issued for SSD-84190958 Pacific Link - Ashton Avenue, The Entrance.

The scope of this report is to review and assess the external traffic arrangements for the proposed development and consider the impacts on the local road network. Also, to consider the parking and access arrangements and confirm they are consistent with AS2890, SEPP (Housing) 2021 and the Central Coast DCP 2022 as applicable.

1.2 Issues and Objectives of the study

The issues relative to the proposal are:

- Assess impact on the local road network due to the additional traffic flows;
- Assess the impact of the parking generated by the proposed development;
- Review the access arrangements for the development;
- Review the service arrangement for the development; and
- Assess any other transport impacts associated with the development.
- Consider the construction traffic demands associated with the development
- Consider opportunities for Active Transport

The objective of the report is to document the impacts of the proposed development, confirm the suitability of the local road network to accommodate the project demands 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:

- Guide to Transport Impact Assessments (GTIA), November 2024 published by Transport for NSW;
- State Environmental Planning Policy (Housing) 2021 (Housing SEPP)
- Central Coast Development Control Plan 2022
- 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 Central Coast Local Government Area being part of the township of The Entrance.

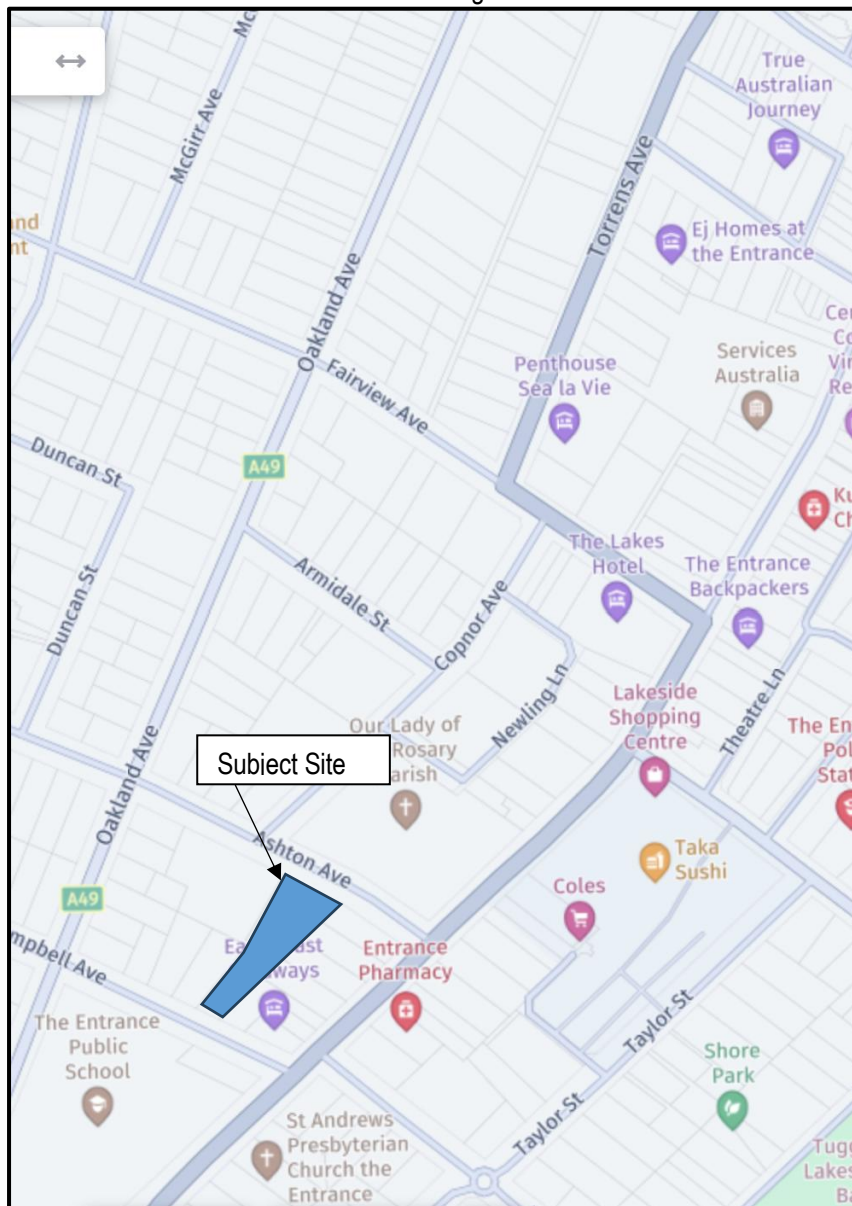
The site is vacant.

The plan for the proposed development allows for a multi-storey development which includes 50 residential units as well as parking on site for 39 vehicles, 2 motorbike spaces and storage for 26 bicycles.

2.2 Site Location

The site is located between Ashton Avenue and Cambell Avenue within the commercial precinct of The Entrance.

The location of the site is shown below in Figure 2-1.



■ Figure 2-1 - Site Location

2.2.1 Zoning and Adjacent Land Use

Zoning for the land and surrounds is E1.

To the west of the site the land is zoned R3 with The Entrance Public School located opposite the site on Campbell Avenue.

2.3 Site Access

Vehicle access to the site will be from both Ashton Avenue and Campbell Avenue with all egress to Campbell Avenue only. This will allow for two-way movements at Campbell Avenue and a drive through arrangement to support site servicing.

2.4 Existing Traffic Conditions

2.4.1 Road Hierarchy

Ashton Avenue and **Campbell Avenue** are local roads within The Entrance town centre. In the vicinity of the site they have widths in the order of 12.5 metres which allows a single lane of travel in each direction and parking on each side. They have a posted speed limit of 50km/h with a 40km/h school zone on Campbell Avenue. They have kerb and guttering, a footpath generally on one side only and street lighting consistent with their function as town roads.

Parking is permitted along both sides of the streets with normal restrictions at intersections and driveways.

Ashton Avenue and Campbell Avenue intersect with The Entrance Road sign posted Give Way controlled T-intersections with The Entrance Road having priority.



Photo 1 View east along Campbell Avenue showing typical cross section



Photo 2 View east along Ashton Avenue looking towards The Entrance Road showing typical cross section

To the east of the site **The Entrance Road** is a local collector road with a north-south orientation which services the town centre and surrounds. To the south it becomes a State road which provides for local and regional traffic along the eastern seaboard. Locally this arterial function is provided to the west of the site along Oakland Avenue (Central Coast Highway) which provides a bypass to the town centre.

2.4.2 Roadworks, Traffic Management and Bikeways

At the time of the site visit there were no roadworks occurring in the immediate locality of the site.

No traffic management works or cycleways are noted.

2.5 Traffic Flows

2.5.1 Peak Hour Flows

Traffic counts were undertaken on Wednesday 28th August 2024 7.30AM-9.30AM at the intersection of Ashton Avenue and The Entrance Road and on Wednesday 11th December 2024 between 7.30AM-9.45AM at the intersection of Campbell Avenue and The Entrance Road. These times were selected to determine morning road peak associated with both local residential and school demands and to determine two-way movements along the site frontages. Afternoon peaks are expected to be less given that the school and residential/shopping peaks don't coincide.

Whilst both intersections are T-intersections, Campbell Avenue was surveyed as a cross street to understand the impact of Warigal Street which creates a staggered intersection with some cross movements.

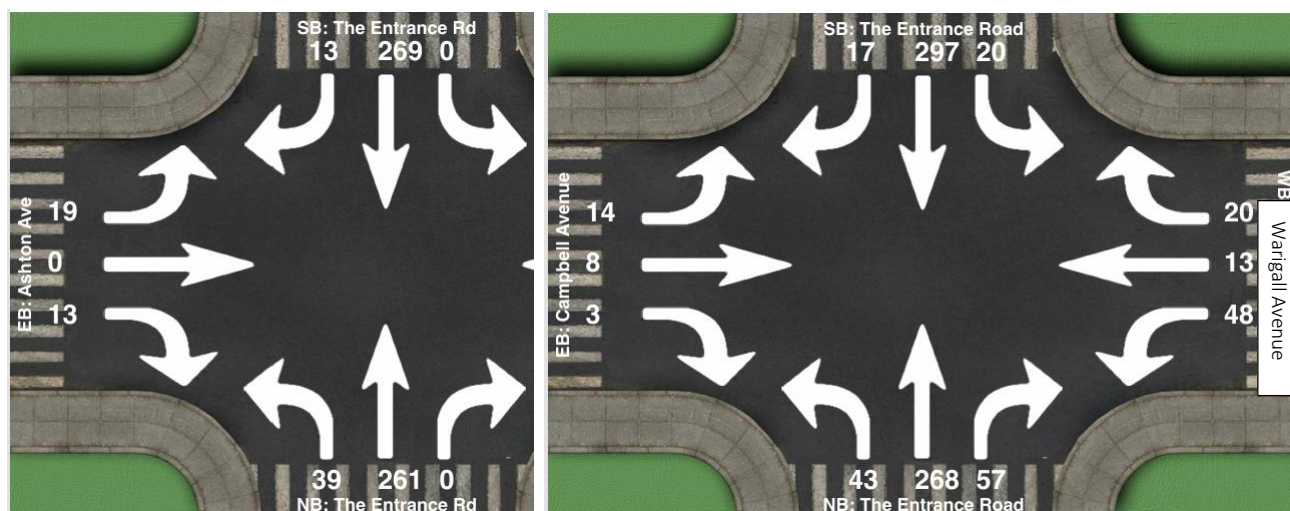


Figure 2-2 Morning peak hour traffic demands (8.30-9.30AM)

The counts determined that the two-way flows on Ashton Avenue in the morning peak are 84 vehicles per hour (vph), 38% eastbound (32vph) and 62% westbound (52vph).

Flows on Campbell Avenue are similar being 98 vph two way 25% eastbound (25vph) and 75% westbound (73vph).

Traffic demands on The Entrance Road are higher (600-700vph) reflecting its role in the road hierarchy with flows evenly distributed to the north and south.

2.5.2 Daily Traffic Flows

There is no recent traffic data published in the vicinity of the site.

The permanent count station on The Entrance Road (ID05199) south at Shelley Beach showed two way flows of 27,600 vehicles per day (vpd) in 2021 fairly evenly split to the north and south. Flows on the arterial road west of the site may see similar demands.

Applying Austroads Guidelines peak hour flows represent between 8-12% of the daily flows. Allowing 10%, daily flows on either Ashton Avenue or Campbell Avenue would be in the order of 1000 vpd whilst daily flows on The Entrance Road would be approximately 6,000 – 7,000 vehicles per day.

2.5.3 Daily Traffic Flow Distribution

The daily traffic volumes in this area is reasonably balanced in both directions.

2.5.4 Vehicle Speeds

No speed surveys were completed as part of the study work. Traffic on The Entrance Road may be impacted by parked cars and driveways creating side friction along with pedestrian activity through the town centre. The school zone south of Ashton Avenue also reduces speed during school peaks.

2.5.5 Existing Site Flows

The site is vacant although a review of aerial images indicates it has provided informal parking to a small number of vehicles (2-7).

2.5.6 Heavy Vehicle Flows

Heavy vehicles flows in the morning were surveyed as being 5% including buses and trucks associated with local deliveries and site servicing.

2.5.7 Current Road Network Operation

Observations on site indicate that the local roads operate well with minimal delays and congestion.

Intersections operate without delay and with minimal queues.

Both Ashton Avenue and Campbell Avenue operate well within their environmental capacity of 300 vehicles per hour two-way (desirable), 500vph maximum given their roles as local collector streets connecting between the arterial road network and The Entrance Road.

2.5.8 Traffic Safety and Accident History

A review of crash data published online by TfNSW during the 5 year period between 2020-2024, indicates there have been no accidents along the site frontages. There has been one accident at the intersection of Ashton Avenue and The Entrance Road (2021) involving a pedestrian which resulted in a serious injury. One in 2020 on The Entrance Road at Warrigal Street being off road into an object saw no casualty (towaway only).

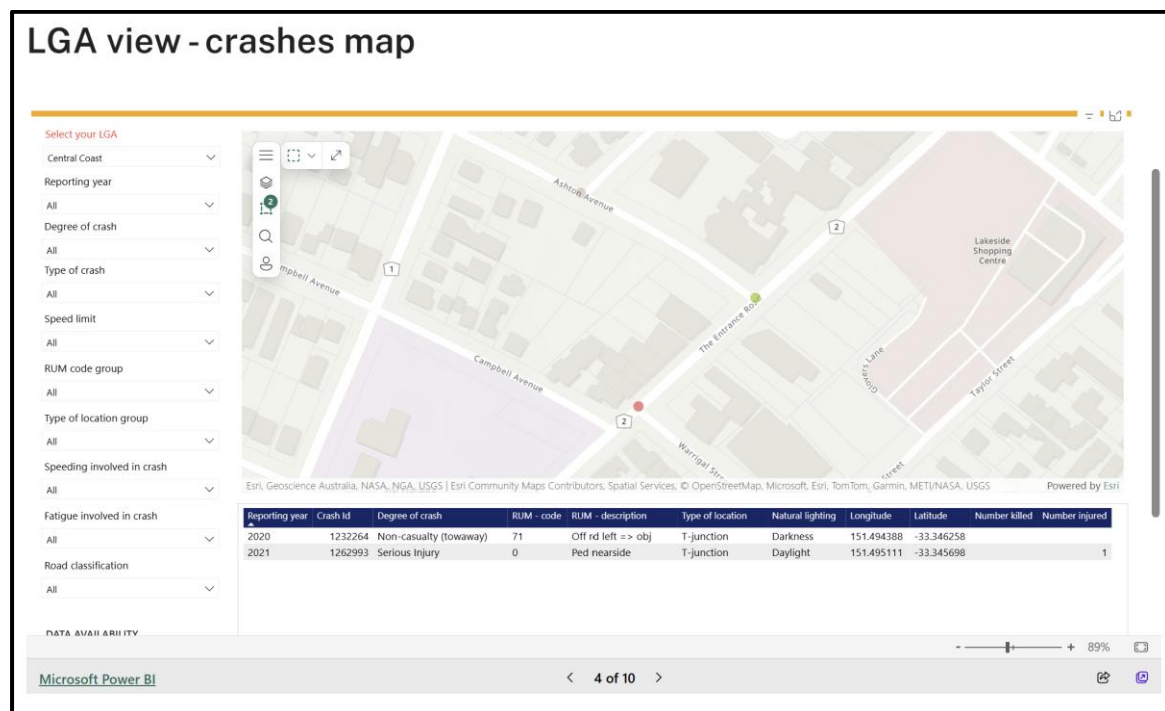


Figure 2-2 Published crash data 2020-2024

There have been no accidents at the intersection with Oakland Avenue.

A review of the local road network shows that the roads are well laid out and visibility at the various intersections meets Austroads requirements. It is considered that there are no specific road safety concerns in the locality of the subject site highlighted by this data.

2.6 Parking Supply and Demand

2.6.1 On-street Parking Provision

Parking is permitted on both sides of the local roads in the vicinity of the site. Timed parking on the northern side of Ashton Avenue opposite the site supports local businesses by ensuring a turn over of parking. There are no parking controls on Campbell Avenue.

2.6.2 Off-Street Parking Provision

Individual lots typically provide for off-street parking with areas of at grade parking associated with the town centre.

2.6.3 Parking Demand and Utilisation

Observations indicate that parking demands on Ashton Avenue are low whilst there are some demands noted on Campbell Avenue.

2.6.4 Short term Set down or pick up areas

There are no set down or pick up areas noted in the locality of the site.

2.7 Pedestrians and Cyclists

Pedestrian Facilities – There are footpaths on both sides of The Entrance Road and along one side or the other of Ashton Avenue and Campbell Avenue. Pedestrian crossings allow for the movement of pedestrians across The Entrance Road. There are no footpaths across either site frontage.

For cyclists, there are limited designated facilities within the immediate locality of the subject site, reflective of the wide roads and the generally low traffic and cyclists demands however, there a number of existing bike paths and links in the local area allowing for connection and circulation through The Entrance. Council has identified a number of local upgrades for cyclist paths as well as identifying key bike routes that run along the arterial road network e.g. Central Coast Highway. These routes will continue to be upgraded and allow for improved access to the subject site and its environs.

The major connection for pedestrians and cyclists in the locality is The Entrance Coast to Lake walk, parts of which are fully accessible for all pedestrian traffic, as well as cyclists.

Local schools are within walking distance of the site with footpaths along the southern side of Campbell Avenue allowing for both pedestrian and cyclists (under 16 years).

2.8 Public Transport

Train Services – None locally with the closest station at Tuggerah.

Bus Service - along The Entrance Road, which provide services throughout the Greater Central Coast Area. There are bus stops on each side of The Entrance Road north of Ashton Avenue.

The Entrance Rd at Ashton Ave

B 26	Torrens Ave At Coral St	11:43 AM	B 21	Hutton Rd Opp Wyuna Ave	3:28 PM
B 29	Wyong Hospital, Henry Moore Dr	11:49 AM	B 26	Torrens Ave At Coral St	3:41 PM
B 22	Torrens Ave At Coral St	12:07 PM	B 26	Torrens Ave At Coral St	3:52 PM
B 21	Hutton Rd Opp Wyuna Ave	12:20 PM	B 22	Torrens Ave At Coral St	4:12 PM
B 26	Torrens Ave At Coral St	12:32 PM	B 21	Wyong Hospital, Henry Moore Dr	4:29 PM
B 22	Torrens Ave At Coral St	1:05 PM	B 17X	Torrens Ave At Coral St	4:37 PM
B 21	Wyong Hospital, Henry Moore Dr	1:23 PM	B 26	Torrens Ave At Coral St	4:45 PM
B 26	Torrens Ave At Coral St	1:42 PM	B 17X	Torrens Ave At Coral St	4:52 PM
B 22	Torrens Ave At Coral St	2:05 PM	B 17X	Torrens Ave At Coral St	5:07 PM
B 21	Hutton Rd Opp Wyuna Ave	2:27 PM	B 22	Torrens Ave At Coral St	5:12 PM
B 29	Wyong Hospital, Henry Moore Dr	2:35 PM	B 14X	Torrens Ave At Coral St	5:14 PM
B 26	Torrens Ave At Coral St	2:44 PM	B 21	Hutton Rd Opp Wyuna Ave	5:19 PM
B 22	Torrens Ave At Coral St	3:06 PM			

Figure 2-3 Departure board for local bus services

3 Proposed Development

3.1 The Development

3.1.1 Proposed Development

The proposed development is for a Shop Top Housing development with a commercial development on Ashton Avenue with a residential housing development above built on behalf of Pacific Link Housing, a social housing provider. The development provides:

50 units being a mix of 30 x 1 bedroom units and 20 x 2 bedrooms.

Commercial tenancy – 49.88 m² GFA

39 parking spaces, three being accessible and storage for 26 bicycles is provided on site.

Access will be provided off both Ashton Avenue and Campbell Avenue with Ashton Avenue providing entry only.

The site plan is shown in Attachment A.

3.2 Access

3.2.1 Driveway Location

All vehicle access to the subject site will be via a single one way driveway providing entry from Ashton Avenue or and exit to Campbell Avenue.

3.2.2 Sight Distances

Campbell Avenue provides a straight and level alignment. There is good visibility for all drivers exiting the site.

Allowing for a frontage speed limit of 50 km/h on Campbell Avenue AS2890.1 requires a desirable sight distance of 69 metres and a minimum distance of 45 metres.

Visibility to the right (west) is available along Campbell Avenue for a distance of approximately 82 metres to the intersection with Oakland Avenue which exceeds the desirable sight distance. To the left (east) visibility is available to the intersection with The Entrance Road. The distance to the intersection is 58 metres. This meets the minimum requirement and it is also acknowledged that vehicles approaching the site having turned onto Campbell Avenue from The Entrance Road would be travelling at less than 50km/h.



Photo 3 View to left (east) showing straight alignment and visibility along Campbell Avenue



Photo 4 View to right (west) for drivers exiting the proposed site access showing straight alignment along Campbell Avenue

3.2.3 Service Vehicle Access

Site servicing demands are expected to be low being occasional deliveries and bi-weekly waste collection.

Waste collection shall be by contractor who shall enter the site from Ashton Avenue to pick up in the service layover and then exit the site onto Campbell Avenue in a forward direction.

Occasional deliveries are typically by van which can park using the service layover or on street. Similarly rare deliveries from larger trucks can also use the on site layover or be on street per the existing situation for other houses in the street.

3.2.4 Queuing at entrances

Access to the site will see boom gates or similar at the entry and exit points.

Traffic may approach from either the east or west and see both left and right turns into the site. Similarly outbound demands could be in either direction depending upon the required trip destination

Given the low opposing flows right turns into the site on Ashton Avenue can occur without delay. Similarly, any queuing associated with vehicles exiting the site onto Campbell Avenue would be minimal given the low overall traffic generation and would be contained within the site.

3.2.5 Access to Public Transport

Bus services along The Entrance Road to the east of the site can be accessed via the footpaths on Ashton Avenue.

3.3 Review of Car Parking

In accordance with the Housing SEPP 2021, 19(2)(e)

- (e) the following number of parking spaces for dwellings used for affordable housing—
 - (i) for each dwelling containing 1 bedroom—at least 0.4 parking spaces,
 - (ii) for each dwelling containing 2 bedrooms—at least 0.5 parking spaces,
 - (iii) for each dwelling containing at least 3 bedrooms—at least 1 parking space

- (f) the following number of parking spaces for dwellings not used for affordable housing—
 - (i) for each dwelling containing 1 bedroom—at least 0.5 parking spaces,
 - (ii) for each dwelling containing 2 bedrooms—at least 1 parking space,
 - (iii) for each dwelling containing at least 3 bedrooms—at least 1.5 parking spaces,

The Housing SEPP does not nominate a rate for bicycle storage for affordable housing.

3.3.1 Council code and local parking policies and plans

Central Coast DCP does not nominate a parking rate for affordable housing.

- Rate for shop-top housing: 1 car space per dwelling
- Rate for commercial use: 1 space per 40m²

The CCDCP rate for bicycle storage for shop-top housing is: 1 space per 3 dwellings for short stay and for long stay bike storage

3.3.2 Parking Assessment

Applying the Housing SEPP parking rates to the proposal will provide:

	No of Units	SEPP Housing Parking Rate Affordable	No of Units	SEPP Housing Parking Rate Other	Parking Demand
1 bedroom	18	0.4	12	0.5	13.2
2 bedroom	12	0.5	8	1	14
TOTAL	30		20		28 (27.2) spaces

Two spaces will be provided for the small **commercial tenancy**.

Allowing for the proposed development the parking requirement is 30 spaces with no visitor parking required per the Housing SEPP.

The provision of 39 parking spaces therefore exceeds this requirement.

One of these parking spaces can also allow for a car washing bay without impacting the minimum parking requirements per the Housing SEPP.

3.3.3 Parking Layout

Driveways and parking area can be designed and constructed in accordance with Council requirements and AS2890.

Internal to the site there are two accesses (Right of Carriageway) provided to adjacent sites. Per the requirements of this easement a swept path has been prepared (**Attachment B**) to allow for a B99 to exit via the sites' driveways. A driver exiting the RoC (left out only) will have suitable sight lines to the right for a vehicle traversing the subject site from the north reinforced through the inclusion of a painted kerb buildout where necessary within the main driveway where required.

3.3.4 Service Vehicle Parking

A dedicated service bay is provided within the site to allow for the collection of waste and other occasional deliveries. Signage will ban other users during contracted waste collection times.

Swept paths have been prepared (**Attachment B**) to demonstrate vehicle circulation for the largest design vehicle through the site (HRV) allowing for waste collection vehicles.

3.3.5 Pedestrian and Bicycle Facilities

Pedestrian access is provided to both Ashton Avenue and Campbell Avenue.

Bike storage for 26 bikes is provided on site including a secure storage unit on the ground floor. The bike storage allows for 22 resident bikes and 4 visitor bikes.

The DCP short term parking for visitors is the same as that for residents for shop top housing (1 space per 3 dwellings). Allowing for lower level commercial spaces to be similar in area to dwellings this is justifiable. This project however has only a small commercial space in which case the provision of four short term spaces for short stay is considered appropriate. By comparison, if this development was assessed as a multi-dwelling housing development the bike storage rates would be 1 space per 5 dwellings for long stay and 1 space per 12 dwellings for short stay, a total of 15 spaces.

This level of parking is therefore considered adequate given it represents an overall rate of 1 space per 2 units.

As primarily a residential development there is no requirement for end of trip facilities given units have access to showers and storage.

4 Transportation Analysis

4.1 Traffic Generation

Standard traffic generation rates for regional Medium density residential development, provided by the Guide to Traffic Impact Assessments published by Transport for NSW shall be applied to the development.

- AM – 0.41 vehicle trips per dwelling
- PM – 0.60 vehicle trips per dwelling
- Daily – 3.67 vehicles trips per dwelling per day

These rates are based on 68% car usage with 30% walking and 2% cycling.

Given the location and the distance to train services these rates are considered appropriate for the development allowing a high pedestrian demand for walking to local shops and services with car dependency for more distant trips.

Allowing for 50 units this would indicate some

- 184 movements per day evenly split between 92 inbound and 92 outbound trips daily.

During the peak periods, the flows would be in the order of

- **21 vehicles per hour in the morning peak**
- **30 vehicles per hour in the afternoon peak**

Typically, these will be split 80% outbound/20% inbound in the morning and the reverse in the afternoon.

Table 4-1 Trip Generation for residential use

Use	Inbound	Outbound	Total
AM Peak	4	17	21
PM Peak	24	6	30
Daily	92	92	184

The small commercial tenancy (49.88 m² GFA) is likely to generate minimal demands in the road peak however allowing for a staff member to arrive may see 1 vehicle trip in the AM peak inbound and 1 vehicle trip in the PM peak outbound. Given the small footprint this could suit as an office for a small business or some other service and as such be ancillary to the town centre, complementing other businesses and appealing to existing shoppers and visitors.

4.1.1 Daily and Seasonal Factors

There will be limited daily and seasonal variation in traffic movements. Weekday trips are typically higher than weekend demands.

4.1.2 Pedestrian Movements

Pedestrian movements associated with residents shall be accommodated along existing footpaths within the vicinity of the site.

4.2 Traffic Distribution and Assignment

4.2.1 Origin / destinations assignment

Given the peninsula nature of The Entrance, traffic will approach the site from generally the north or south and approach the site along Ashton Avenue from the east or west to enter the site. Outbound demands would be similar

with all vehicles exiting onto Campbell Avenue to then distribute to the east or west to disperse across various routes.

Consistent with flows on The Entrance Road, traffic has been distributed evenly to the north and south of the site. Flows on Ashton Avenue are split equally from the west and east whilst flows on Campbell Avenue are split 70/30 to the west and east.

Applying standard residential splits the AM flows are 80% outbound/20% inbound with the reverse applied in the PM peak.

The assignment of trips to the local road network are illustrated in Figure 4-1 below.

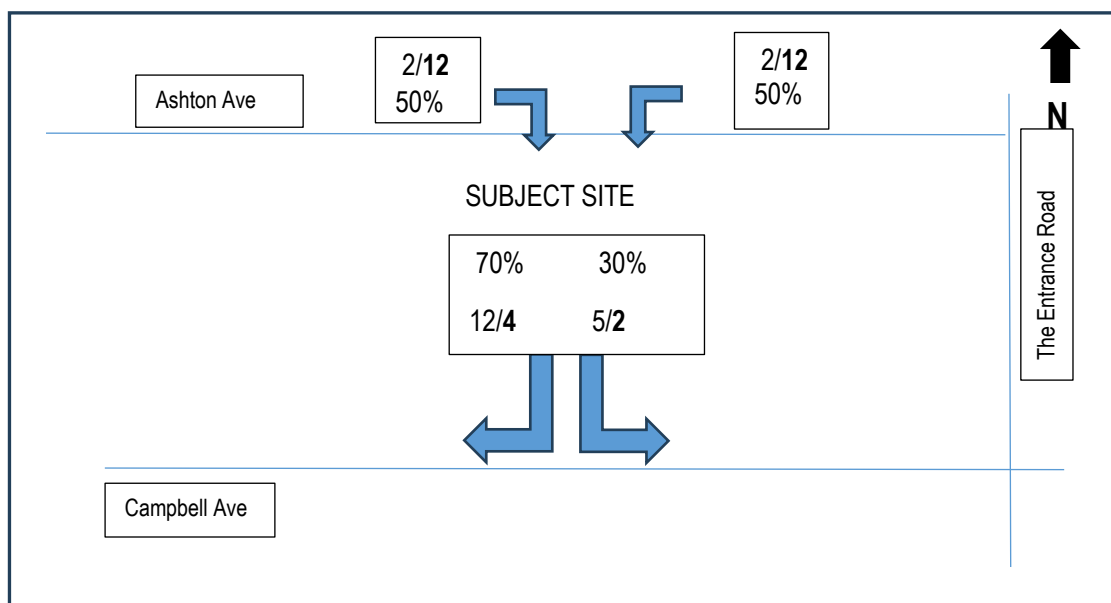


Figure 4-1 Diagram of future development traffic flows (AM/PM)

4.3 Impact on Road Safety

The additional traffic flows associated with the development of the subject site will have a minimal and acceptable impact upon traffic safety. The layouts of the local intersections reflect no crash patterns or safety concerns.

Sight lines on Campbell Avenue meet the requirements of AS2890 with the access able to be provided in a safe manner including providing visibility splays for pedestrians on Campbell Avenue. It is also noted that the main pedestrian pathway to the school on Campbell Avenue is on the opposite (southern) side of the road.

4.4 Impact of Generated Traffic

4.4.1 Impact on daily Traffic Flows

The existing daily traffic flows are well within acceptable limits for their classifications, and the project will generate low additional traffic demands.

The impact of an extra 12 vph on Campbell Avenue to the west of the site in the AM peak and 12 vph on Ashton Avenue in either direction in the PM peak will have minimal impact. Traffic flows on both streets will remain below 200 vehicles per hour two way and are therefore within the environmental capacity as per TfNSW guidelines for a local road ensuring the amenity of these roads is maintained.

Flows on The Entrance Road will also remain within the capacity of this urban road with southbound flows in the AM increasing to 353 (348+5) vph remaining within the current Level of Service B (less than 380 vph per direction)

This provides capacity for the development of this site and other infill development allowing for background growth over time.

4.4.2 Peak Hour Impacts on Intersections

The distribution of this development traffic during the peak hours across a number of intersections see the impact at any one reduced significantly. The main intersections would be for the PM right turns into Ashton Avenue from Oakland Avenue or the right turns into Ashton Avenue from The Entrance Road. Similarly there would be demands for right turns from Campbell Avenue onto Oakland Avenue in the AM peak. These additional demands are however are only 6 vph, or one vehicle every ten minutes, representing minimal extra demands at these various intersections.

The layout of the Oakland Avenue/Ashton Avenue intersection provides flaring and adequate width to allow a through vehicle northbound to pass a vehicle turning right. Forward visibility allows an approaching motorist to anticipate this turn and adjust their speed appropriately. Similarly, the right turn from The Entrance Road is consistent with all intersections along this length of road with motorists travelling at lower speeds anticipating these movements as well as side friction from parked cars and other activities. As flows on both Ashton and Campbell Avenues

Other intersections shall be impacted less with lower demands outbound on Campbell Avenue. The impact of the proposed development is therefore considered acceptable with no requirement for intersection modelling nor upgrades to accommodate these demands.

4.4.3 Options for improving services

There is no requirement for improved bus services. Whilst the site may generate some demands for local bus services these are expected to be within the capacity of existing services.

5 Preliminary Construction Traffic Review

5.1 Purpose and Scope

As there is no contractor appointed for the construction, and hence no construction methodology determined, the following provides a preliminary review of construction traffic impacts for the project.

A formal Pedestrian and Construction Traffic Management Plan (PCTMP) will be prepared by suitably qualified personnel and approved by the road authority as part of the CC stage of the development.

The PCTMP will consider factors such as the potential for speed zones, deliveries, vehicle movements, interactions with traffic including vehicles, pedestrians and cyclists as well as the interaction of the site with surrounding sites. These will include The Entrance Public School, Our Lady of the Rosary Parish Church, surrounding businesses and residents in Ashton Avenue and Campbell Avenue.

5.2 Project Objective

The project objectives are to allow for the safe movement of vehicles into and out of the site allowing for contractor vehicles, deliveries, site preparation etc.

Key objectives are to:

- Have minimal impact on traffic on the adjacent road network
- Allow for the safe movement of construction vehicles and other road users
- Allow for the safe movement of pedestrians and cyclists
- Provide a safe construction site for road users and workers

5.3 Responsibilities

Title	Role
Project Manager	Management of project as a whole. Focus on program, budget and procurement.
Works Supervisor	Onsite construction management, dealing directly with trades and suppliers. Plans works for the day provides OHS and quality management.
Team Leader	Works specific leader to guide trades for the construction of specific elements. Ensures materials are ordered, OHS issues are reported
Traffic Control	Provide safe access and egress from works site, ensure management of traffic past site. Ensure traffic signage is maintained.

5.4 Site Constraints

To be determined by the contractor as relevant at the time of construction however is expected to consider:

- Pedestrian movements along the site frontages on Ashton Avenue and Campbell Avenue including school aged children
- School drop off and pick up demands, particularly along Campbell Avenue
- Commercial/retail centre north of the site on The Entrance Road including high pedestrian activity

5.5 Schedule of Work

To be determined

5.6 Permits and Road Occupancy License

Road Occupancy License – Required to provide for the site accesses and any works in the verge

Change to Speed Zone –Change in speed zone anticipated to allow for any work in the verge or should a work zone be required.

Any approvals required for the transport of wide loads or oversized loads is from the National Heavy Vehicle Regulator.

5.7 Existing Traffic Conditions

Road and pedestrian facilities are detailed in the earlier chapter of the TIA along with public bus services.

A review of school bus service routes indicate that of the various services only two afternoon bus routes pass the site on Campbell Avenue departing the school at 15.24 and 15.30.

5.8 Traffic Routing

To be confirmed however no requirement for routing/traffic diversions is anticipated.

Should a work zone be required on either Ashton Avenue or Campbell Avenue this may impact some parking and require temporary traffic management depending upon vehicle movements.

There are no footpaths provided along either site frontage. There are formal paths on the opposite side of each street allowing for the diversion of pedestrians if required. These paths in turn connect with existing pedestrian crossings across The Entrance Road.

5.9 Construction Vehicle Movement and Traffic Impacts

The following is preliminary only and subject to confirmation by the contractor once appointed.

During construction, there will be a requirement for construction vehicles to access the site and additional traffic movements associated with workers.

Construction access to the site is anticipated via the existing access points on Ashton Avenue and Campbell Avenue which currently allow for all turn movements for both inbound and outbound traffic. It is anticipated these can operate in a suitable manner with minimal impact to through traffic demands.

Construction vehicles will vary in number with the potential for an average of 3-5 trucks per day associated with deliveries, ramping up during peak periods eg concrete pours potentially seeing up to 10 trucks per hour across a day depending upon the construction methodology. Similarly, the number of workers on site varies depending upon the stage of work with maximum worker numbers typically associated with structural pour days and the fit-out phase when there can be around 50 workers on site. Workers will typically car pool to reduce travel and parking demands.

The development flows were determined as being up to 184 vehicle movements per day with adequate capacity within local roads to accommodate these demands.

Allowing for 10 truck movements and up to 120 light vehicle/commercial vehicles per day the construction would generate less daily traffic demands than the completed project and therefore have less total traffic impacts.

Subject to confirmation of the origin and destination of workers and deliveries, waste collection etc, the majority of vehicles approaching the site are likely to approach along Oaklands Avenue, west of the site, which acts as a bypass of the commercial centre.

It is anticipated that deliveries and heavy vehicle movements will be managed where possible to avoid the peak drop off and pick up times associated with the local public school.

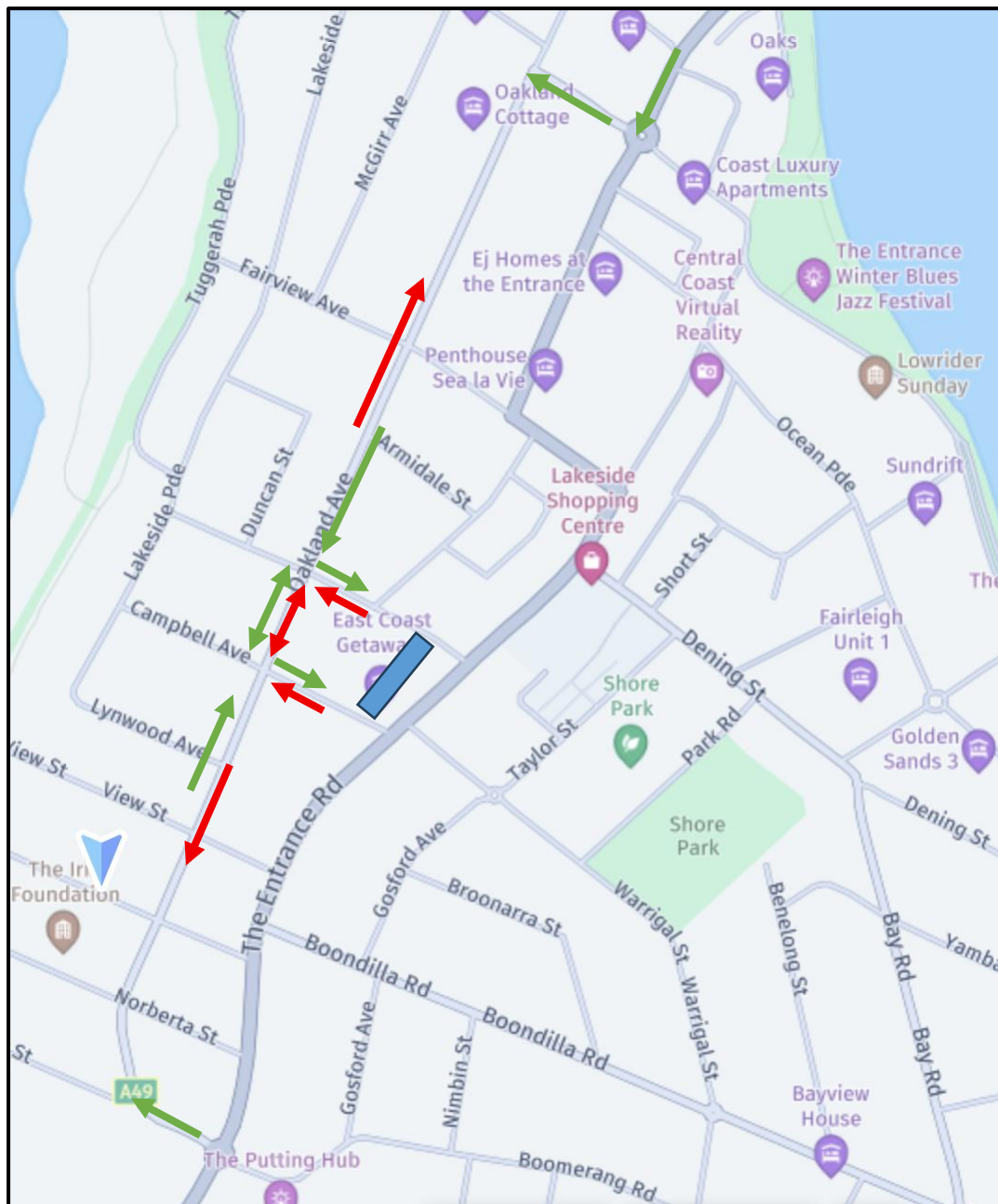


Figure 5-1 Indicative Heavy Vehicle Movements

5.10 Traffic Management Measures

Traffic management measures will be determined in response to a risk assessment and site appraisal undertaken in conjunction with the PCTMP.

A Traffic Guidance Scheme outlining the appropriate traffic management measures will be prepared by a suitably qualified person to meet the requirements of the road authority, taking into consideration TfNSW Traffic Control at Work Sites Manual Ver 6.1 where applicable, and will be provided for approval as part of the PCTMP.

6 Summary and Recommendations

6.1 Summary

The following summary is drawn from the investigations into the proposed Shop Top housing development at Ashford Avenue, The Entrance.

The development will allow for fifty 1 and 2 bedroom units, sixty percent of which are affordable and a small commercial tenancy. Thirty-nine parking spaces are included, three of which are in accordance with AS2890.6 to provide accessible parking with two for use by the commercial tenancy.

All parking will be accommodated within the proposed site in accordance with the Housing SEPP with parking also on site to allow for the small commercial tenancy.

Vehicle access to the site will be from Ashford Avenue with all exit movements being south to Campbell Avenue. The visibility at this exit meets the sight lines requirements of AS2890.

Servicing for the site will primarily be associated with waste collection and shall see a HRV travel through the site north to south as will occasional deliveries or the need for deliveries by larger vehicles.

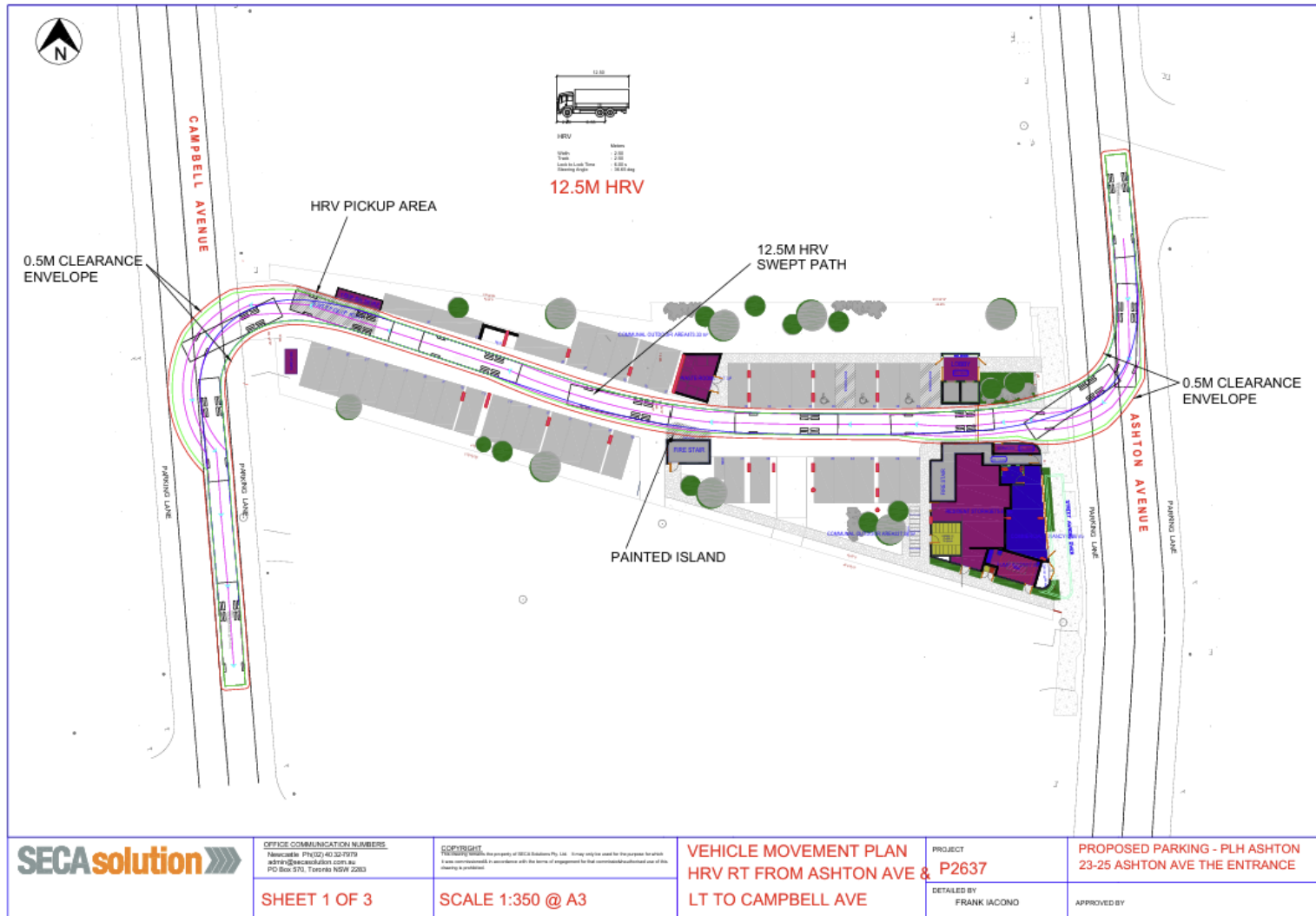
As part of the development, traffic survey data has been collected by Seca Solution at the intersections of The Entrance Road and Ashton Avenue and The Entrance Road and Campbell Avenue to determine traffic movements at these intersection as well as two-way movements past the site frontages. The distribution of traffic to both of these intersections as well as those west to Oakland Avenue reduces the impact at any individual intersection allowing for the impact of the project to have a minimal and acceptable impact on the road network as a whole.

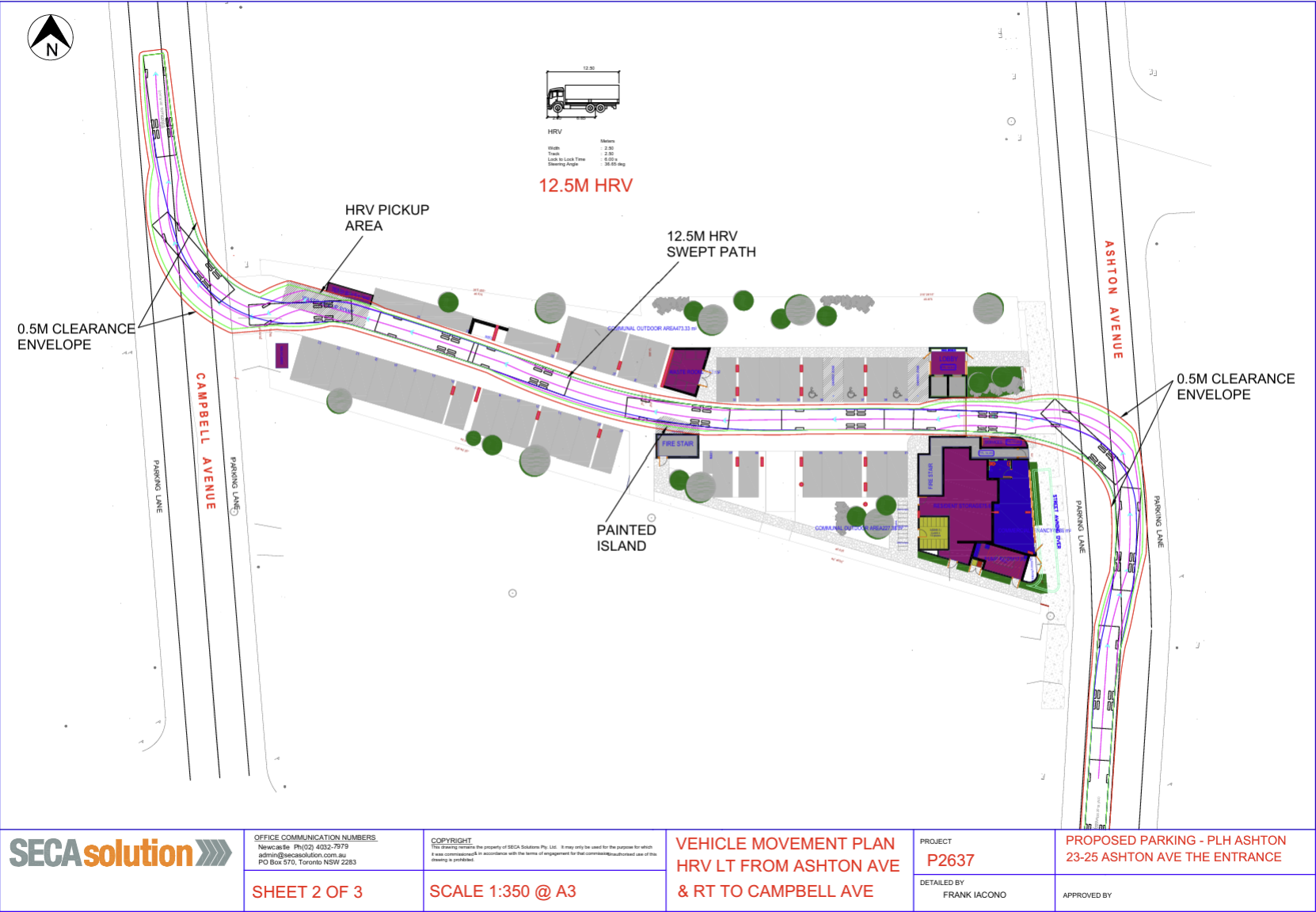
It is therefore recommended that the project be approved on traffic, parking and access grounds.

Appendix A –Site Plan



Appendix B– Swept Paths







	OFFICE COMMUNICATION NUMBERS Newcastle Ph: (02) 4032-7979 admin@secasolution.com.au PO Box 570, Toronto NSW 2283	COPYRIGHT This drawing remains the property of SECA Solutions Pty. Ltd. It may only be used for the purpose for which it was commissioned in accordance with the terms of engagement for that commission. Any other use of this drawing is prohibited.	VEHICLE MOVEMENT PLAN B99 VEHICLE ACCESS FROM ADJOINING PROPERTIES	PROJECT P2637	PROPOSED PARKING - PLH ASHTON 23-25 ASHTON AVE THE ENTRANCE
	SHEET 3 OF 3	SCALE 1:350 @ A3		DETAILED BY FRANK IACONO	APPROVED BY

