

RESIDENTIAL SUBDIVISION OF LOTS 1/DP524083 AND 1809/DP752038 FRENCHS FOREST, NSW

Traffic Impact Assessment

26 MARCH 2024



SCT Consulting acknowledges the traditional owners of the lands on which we work.
We pay our respects to Elders past, present and emerging.



Quality Assurance

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Executive summary

SCT Consulting was engaged by Sekisui House to undertake a Traffic Impact Study to support the Development Application (DA) of a proposed subdivision at 49 Blackbutts Road and 21A Warili Road, Frenchs Forest, located in Northern Beaches Local Government Area (LGA). The proposed DA seeks to include 12 residential dwellings on a land area of about one hectare and an access road connecting Warili Road.

The key roads within the vicinity of the site are Forest Way (arterial road), Blackbutts Road (distributor road) and Warili Road (local road). There are bus stops on Blackbutts Road that provide direct access to Chatswood via Route 281 and City via Route 274. The overall bus service interval will be around five minutes in the vicinity of the site, which is moderate for bus users. Cycling facilities are generally limited in terms of connectivity and safety with no dedicated infrastructure directly connected to the site. The footpath network surrounding the site is discontinuous and very limited, especially within the residential areas. The northern frontage of the site directly connects to the local footpath network which provides access to key community facilities such as Glenrose Village. Several formal pedestrian crossings exist along Blackbutts Road, Glen Street and Pringle Avenue to assist pedestrians and cyclists in crossing the road to access Lionel Watts Reserve and Glenrose Village.

The site is proposed to be subdivided for residential development, with associated roads and services. The dwelling houses will be serviced by a north-south access road that connects with the intersection of Warili Road and Curra Close. The only exception is Lot No. 4 which has an independent driveway on Blackbutts Road.

The proposed road cross-sections include a carriageway width of 5.5m or 6m. There are five on-street parking spaces along the access road where an additional 2.1m parking lane is provided. A 1.5m wide footpath is provided on the eastern side of the road that connects with the footpath on Blackbutts Road to the north and terminates at Warili Road to the south. The cross-section design is considered reasonable and complies with the DCP.

The scale of additional car trips in the network is no more than 10 vehicles per hour in the peak period, which is insignificant in terms of the general traffic variance of the network. This level of increase in traffic will not exceed the environmental capacity of the surrounding local residential streets (of 300 veh/hr) and the regional roads surrounding the site are expected to be able to cater for these volumes. It is recommended that traffic modelling is not required for such a small network increment.

Given the scale of the development, it is expected that there would be no impact on the public transport network and active transport network.

The Traffic Impact Study concluded that the development scale represents a small increase in traffic and the impacts of the proposed subdivision are at a level able to be accommodated by the existing and planned infrastructure.

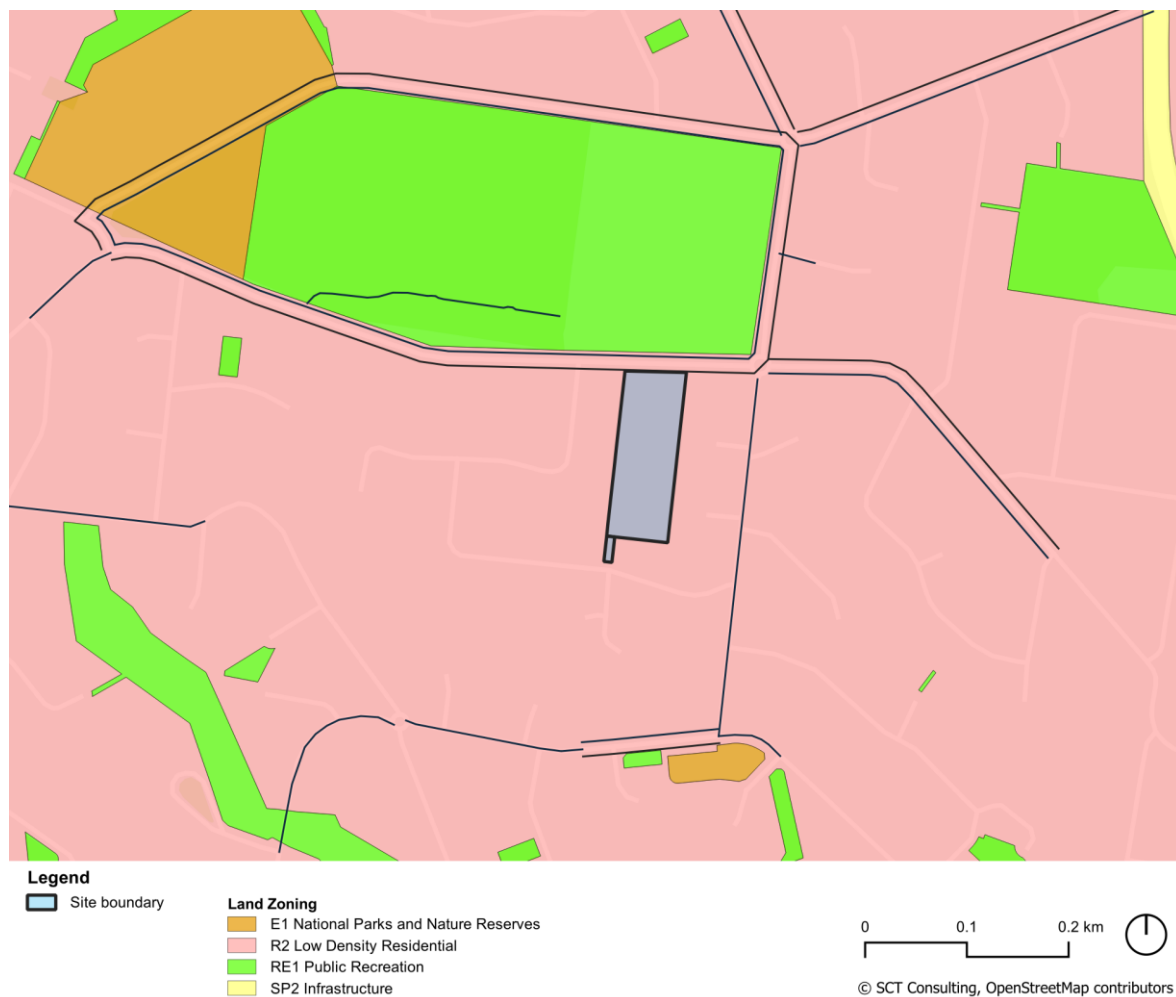
1.0 Introduction

1.1 Background

SCT Consulting has been engaged by Sekisui House to prepare a Traffic Impact Assessment for a proposed subdivision at 49 Blackbutts Road and 21A Warili Road, Frenchs Forest.

The study supports the proposed subdivision shown in **Figure 1-1**, which is zoned as R2 – Low Density Residential and occupies an area of approximately 1.07 hectares. An estimated 12 single dwellings are anticipated to be accommodated for this subdivision.

Figure 1-1 Lot boundaries and current zoning map for proposed sub-division



1.2 Purpose of this report

SCT Consulting has assessed traffic and transport impacts to support the subdivision. The report includes the following:

- A review against Warringah Council Development Control Plan (DCP) and transport planning requirements
- A summary of existing traffic conditions
- Future vehicle trip generation from the proposed development and distribute the trips to the surrounding road network based on preferred access strategies and travel patterns
- Assessment of impacts on the road, active transport, and public transport network.

1.3 Pre-lodgement comments

A pre-lodgement meeting was held on 5 October 2023 with Council to discuss the proposal. The key comments raised are outlined in **Table 1-1**.

Table 1-1 49 Blackbutts Road and 21A Warili Road Traffic and Transport Requirements

Requirement	Section addressed in this report
Northern Beaches Council's requirements	
1. Applicants shall demonstrate that the location of vehicular and pedestrian access meets the objectives.	Section 3.1 and 3.2
2. Vehicle access is to be obtained from minor streets and lanes where available and practical.	Section 3.1
3. Vehicle crossing approvals on public roads are to be in accordance with Council's Vehicle Crossing Policy (Special Crossings) LAP-PL413 and Vehicle Access to Roadside Development LAP-PL 315	To be addressed separately by civil design
4. Vehicle crossing construction and design is to be in accordance with the Council's Minor works specification	To be addressed separately by civil design
5. Laneways are to be used to provide rear access to carparking areas where possible; Where garages and carports face the street, ensure that the garage or carport opening does not exceed 6 metres or 50% of the building width, whichever is the lesser.	To be addressed separately by civil design
6. Carparking is to be provided in accordance with Appendix 1	Section 3.3

1.4 Report structure

The report comprises the following sections:

- **Section 2** describes the existing transport conditions for all modes of transport.
- **Section 3** describes the proposed development, including its access strategy and proposed road network.
- **Section 4** assesses the estimated trips generated, their distribution based on the preferred access strategy, and the likely traffic impacts associated with the additional trips.
- **Section 5** summarises the report and presents the conclusion.

2.0 Existing conditions

2.1 The site

The proposed development site is located in the Northern Beaches Local Government Area (LGA), situated between Blackbutts Road and Warili Road in Frenchs Forest. The site is located directly opposite Lionel Watts Reserve with recent new sports and recreational facilities upgraded by the council. The site is also located within walking distance of Glenrose Village to the northwest and is within a bus stop or a five-minute drive to Forestway Shopping Centre and the Northern Beaches Hospital.

2.2 Road network

The site is situated in the north of Frenchs Forest as shown in **Figure 2-1**. The following are key roads within the vicinity of the site:

- **Forest Way** is an arterial road located east of the site, which is the main north-south link for the residential clusters between French Forest and Belrose. The road connects to Warringah Rd at the south and Mona Vale Rd to the north. Within proximity of the site, the road has an 18m carriageway with three lanes travelling in each direction. Its signposted speed limit is 70km/h. Clearway is implemented during both commuting peak hours on weekdays.
- **Blackbutts Road** is an east-west distributor road located at the site's northern frontage. It connects Forest Way via Adams Street to the east. The corridor caters for several bus routes. It has a 13m carriageway that permits two-way two-lane travel as well as parking on both sides. The sign posted speed limit is 50km/h. Footpaths are available on both sides of the road. A zebra crossing is provided to the east close to Pringle Avenue whereas a refuge is provided close to Athol Street to the west.
- **Warili Road** is an east-west local road located at the site's southern frontage. It has a 7.1m carriageway that permits two-way two-lane travel as well as parking on both sides. The sign posted speed limit is 50km/h. Warili Road connects with Pringle Ave to the east which further intersects with Blackbutts Road for strategic access.

Figure 2-1 Road hierarchy and key roads in the vicinity of the site

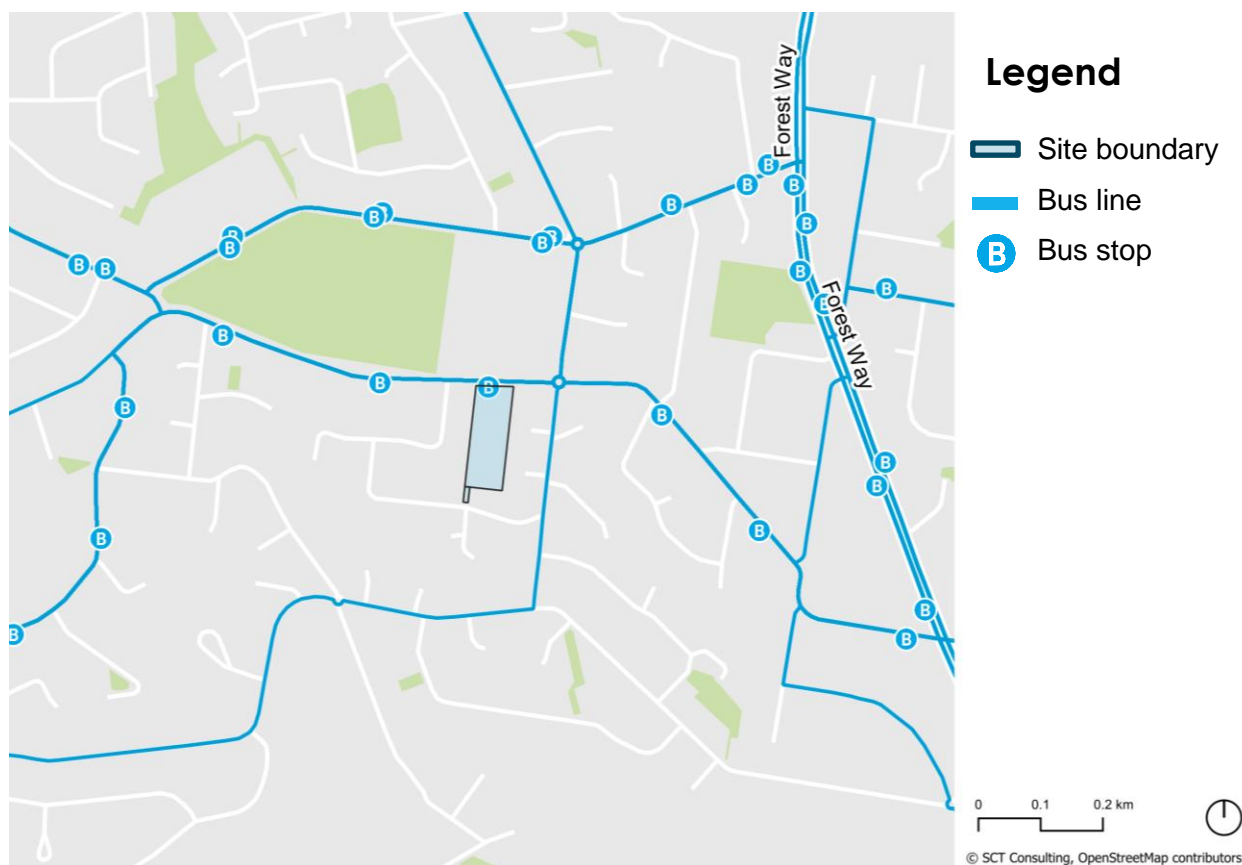


2.3 Public transport

The public transport network around the site mainly comprises bus services. There are bus stops on Blackbutts Road that provide direct access to Chatswood via Route 281 and City via Route 274.

Routes 141, 271 and 283 which travel to Manly, Auslink and City, Belrose/Davidson and City and Chatswood respectively are located at Glenrose Village Shopping Centre and Glen Street, which are within walking distance to the north of the site.

Figure 2-2 Bus routes and stops near proposed sites



Source: TFNSW, 2023

The peak period service frequency is shown in **Table 2-1**, indicating that the overall bus service interval will be around five minutes in the vicinity of the site, which is moderate for bus users.

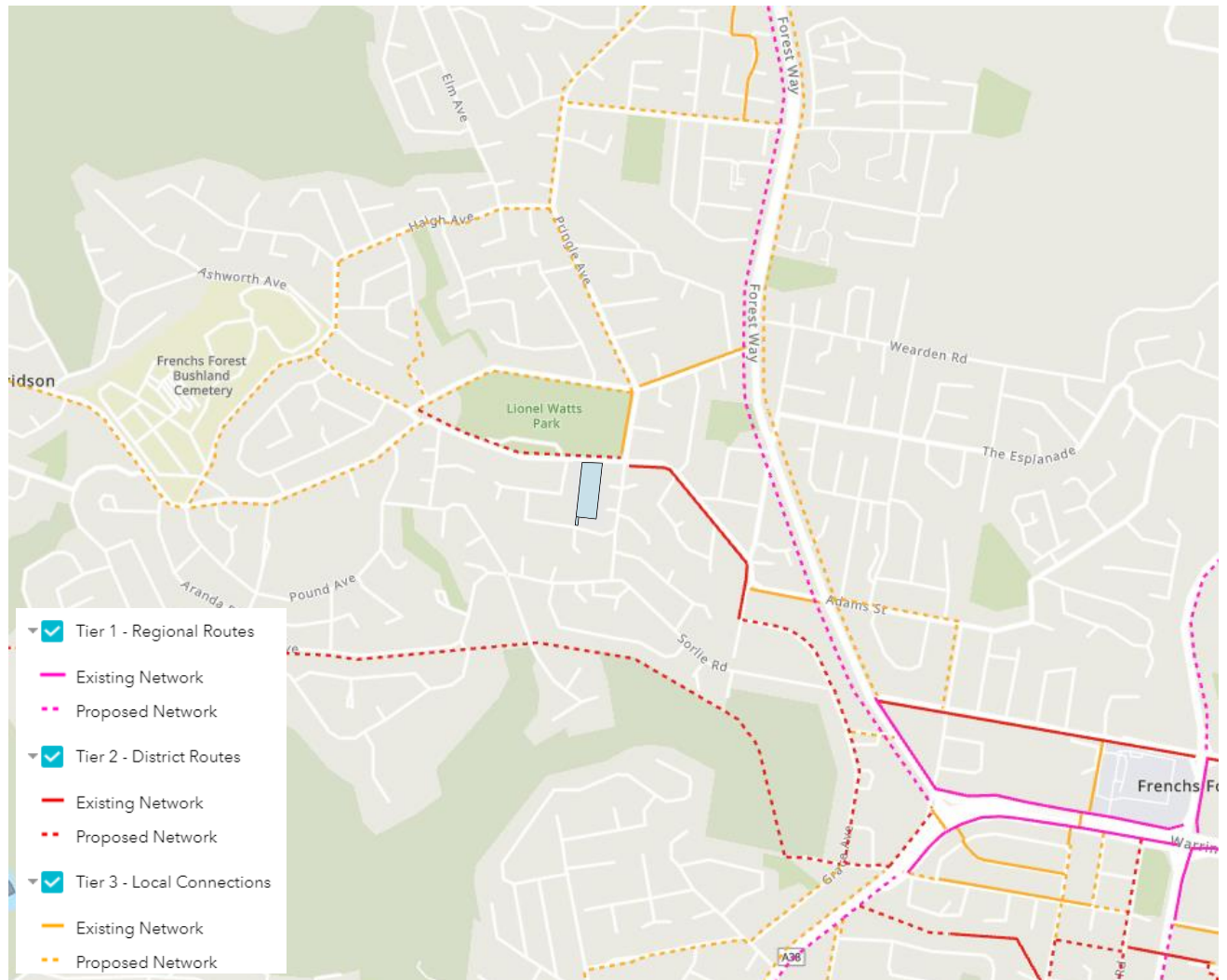
Table 2-1 Bus routes frequency during peak hour

Route Number	Origins and destinations		Frequency per hour (both directions)
141	Auslink	Manly	2-3 services
271	Belrose	City QVB	3 services
274	City QVB	Davidson	1 service
281	Chatswood	Davidson	3 services
283	Chatswood	Belrose	2 services

2.4 Walking and cycling infrastructure

The cycling infrastructure around the site is shown in **Figure 2-3**. Cycling facilities are generally limited in terms of connectivity and safety with no dedicated infrastructure directly connected to the site. The future proposed cycling network would improve the site's cycling connectivity.

Figure 2-3 Cycling Infrastructure in the vicinity of the site



Source: [Bike Plan 2020 - Safe Cycling Network \(arcgis.com\)](#), 2023

Footpaths and pedestrian infrastructure within the catchment of the site are shown in **Figure 2-4**. The footpath network surrounding the site is discontinuous and very limited, especially within the residential areas. The northern frontage of the site directly connects to the local footpath network which provides access to key community facilities such as Glenrose Village. Several formal pedestrian crossings exist along Blackbutts Road, Glen Street and Pringle Avenue to assist pedestrians and cyclists in crossing the road to access Lionel Watts Reserve and Glenrose Village.

Figure 2-4 Footpaths within the walking catchment of the proposed site

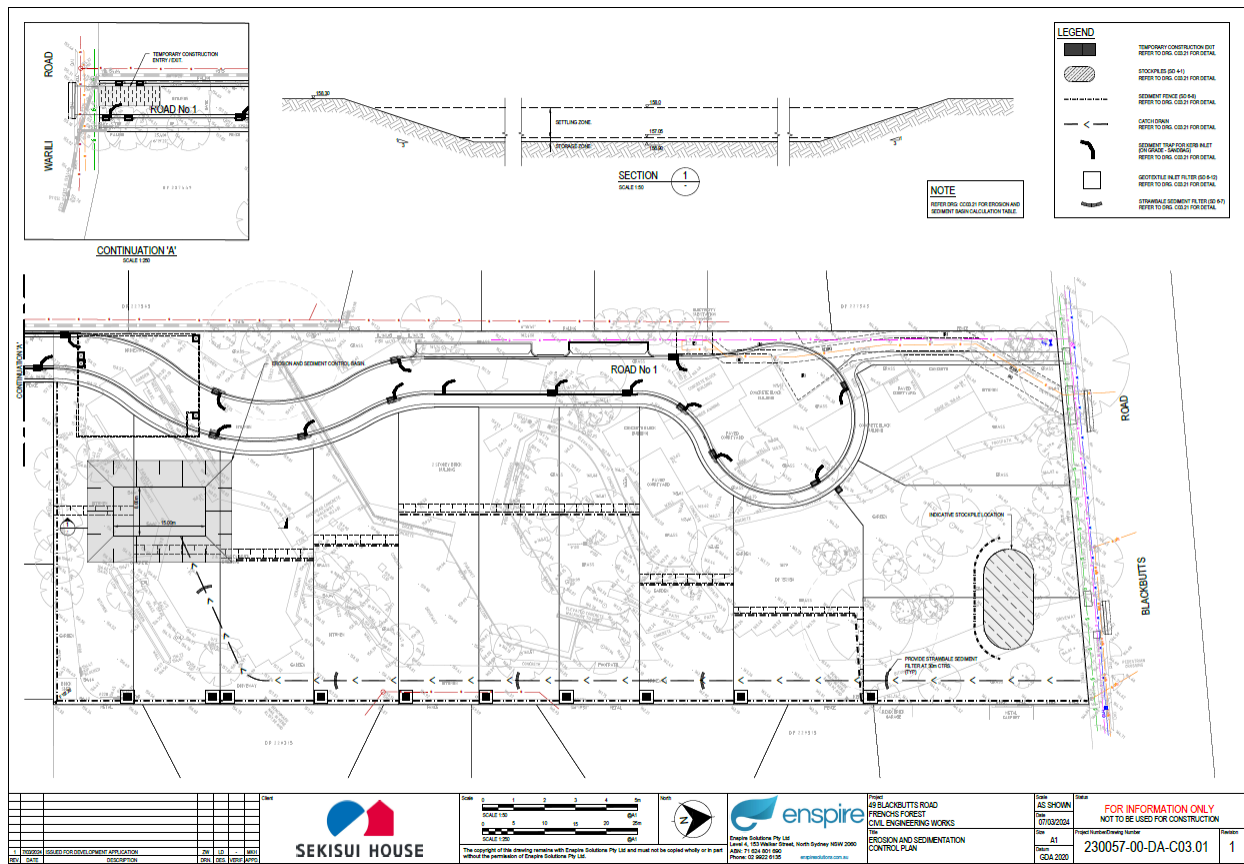


3.0 Proposed development

3.1 Proposal

The proposed subdivision layout is shown in **Figure 3-1** including proposed lots and an access road/cul-de-sac for vehicles' turnaround.

Figure 3-1 Proposed Subdivision Layout



Source: Enspire Solutions Pty Ltd, 2024

The site is proposed to be subdivided for residential development, with associated roads and services. The subdivision will create 13 lots including 12 single-dwelling homes and one lot for ancillary use. The dwelling houses will be serviced by a north-south running access road that connects with the intersection of Warili Road and Curra Close. The only exception is Lot No. 4 which has an independent driveway on Blackbutts Road.

3.2 Street cross-section requirements

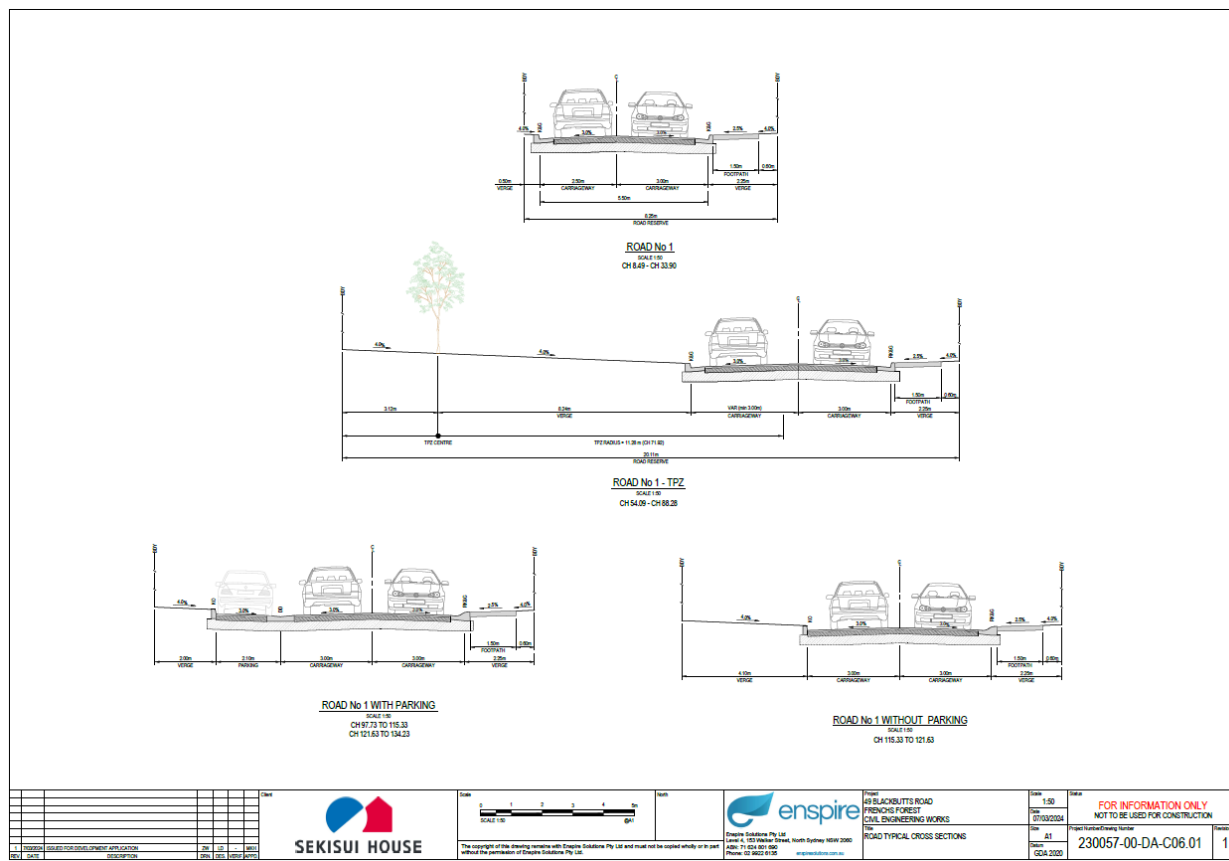
The Council pre-lodgement meeting determined that the cross section of the access road should satisfy:

- The 5.5m section of road near Warila Road will need to be signposted as No Stopping on both sides of the road to maximise available road width and prevent parking.
- A 7.5m road width with small kerb build outs for landscaping and streetlighting with parking bays between the build outs is suggested.
- Turning of the largest vehicle requiring regular access to the subdivision (the waste collection vehicle) will need to be accommodated and demonstrated with swept path plots.
- A publicly accessible footpath link between Warila Road and Blackbutts Road of 1.5m in width should be provided to cater for safe pedestrian access within and through the subdivision and to and from Lionel Watts Reserve and other community facilities.

- Waste Services requires all road pavements must be a minimum of 6 metres wide where on-street parking is not provided/permitted; a minimum of 7.5m wide where on-street parking is provided/permitted.

The proposed road cross-sections are shown in **Figure 3-2** including a carriageway width of 5.5m or 6m. There are five on-street parking spaces along the access road where an additional 2.1m parking lane is provided. A 1.5m wide footpath is provided on the eastern side of the road that connects with the footpath on Blackbutts Road to the north and terminates at Warri Road to the south.

Figure 3-2 Proposed road cross-section



Source: Enspire Solutions Pty Ltd, 2024

The cross-section design is considered reasonable and complies with the DCP (**Table 3-1**).

Table 3-1 Comparison of the required width and proposed width

Location	Required carriageway width	Proposed carriageway width	Remark
Near Warila Road	5.5m	5.5m	No Stopping signs provided
Where on-street parking is provided	7.5m	8.1m	-
All road width without parking	6m	6m	Except for the section near Warila Road
Footpath	1.5m	1.5m	-

3.3 Parking provision

Except for the five parallel parking along the access road, parking is proposed to be provided within each lot boundary which includes a garage and driveway. This will be regulated by signage.

3.4 Swept path

The swept path assessment (using a B99 car and a 10.5m long truck) for the access road is provided by civil engineers, which is excluded in this report.

4.0 Impact assessment

4.1 Road network

4.1.1 Traffic generation

The *Guide to Traffic Generating Developments* (GTGD) was used to inform traffic generation for the proposed development. The rate for low-density 'dwelling houses' was adopted.

For the worst case, it was assumed that trip rates during day and evening peak periods would be similar and therefore, the rate provided by the GTGD was used for both the AM and PM periods.

Table 4-1 Development traffic generation

Yield	Traffic generation rate		Total traffic	
	Day	Peak hours (both)	Day	Peak hours (both)
12 dwellings	9.0 veh/ dwg	0.85 veh/dwg	108 veh / day	10 veh / h

The current site offers packaging services which are estimated to generate low car trips during typical commuting peak hours. For worst-case scenarios assessment, the trip generation from the existing facility will not be considered, which will not offset any trips generated from the proposed development.

Based on the trip generation review, it is evident that the development will generate an additional 10 trips during the peak hour, which is equivalent to about one car every six minutes.

The scale of additional car trips in the network is no more than 10 vehicles per hour in the peak period, which is insignificant in terms of the general traffic variance of the network. This level of increase in traffic will not exceed the environmental capacity of the surrounding local residential streets (of 300 veh/hr) and the regional roads surrounding the site are expected to be able to cater for these volumes. It is recommended that traffic modelling is not required for such a small network increment.

4.2 Walking and cycling

The existing pedestrian infrastructure, including footpaths and various pedestrian crossings at intersections in the vicinity of the site, will ensure pedestrian comfort and safety while shortening walking distances overall, both from surrounding services and public transport.

The bicycle network expansion has been proposed according to the Council's bike plan. Cycle paths would be available on extended to the west in Davidson and north along Pringle Avenue, making the residential precinct cyclist-friendly.

The number of person/bicycle trips generated by the development during the peak periods would be limited, hence no significant impact on the active transport network. Given the scale of the development, the number of walking and cycling trips generated by the development during peak hours could be accommodated by the existing infrastructure.

4.3 Public transport

The site has direct access to the bus stop on Blackbutts Road for routes 281 and 274 bus routes which provide direct access to Chatswood and city, respectively. The site is also within walkable distance of bus stops at Glenrose Village Shopping Centre / Glen Street for Routes 141, 271 and 283, providing access to Manly, Auslink and City, Belrose/Davidson and City and Chatswood respectively for future residents.

Given the scale of the development, it is expected that the public transport demand would be limited, hence no significant impact on the public transport network.

5.0 Conclusion

The proposal for the subdivision contains 12 residential dwellings and related access and services in Frenchs Forest. This traffic impact assessment confirms:

- The dwelling houses will be serviced by a north-south running access road that connects with the intersection of Warili Road and Curra Close. The only exception is Lot No. 4 which has an independent driveway on Blackbutts Road.
- The proposed cross-sections within the subdivision satisfy the Warringah Council Development Control Plan.
- The scale of additional car trips in the network is no more than 10 vehicles per hour in the peak period, which is insignificant in terms of the general traffic variance of the network. This level of increase in traffic will not exceed the environmental capacity of the surrounding local residential streets (of 300 veh/hr) and the regional roads surrounding the site are expected to be able to cater for these volumes. It is recommended that traffic modelling is not required for such a small network increment. No further infrastructure upgrade would be required as a result of this proposal.
- Given the scale of the development, it is expected that there would be no impact on the public transport network and active transport network.



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