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53A & 53B Warriewood Road, Warriewood Residential Subdivision – Integrated DA Transport Impact Assessment

Prepared by CTP Consult Pty Ltd for Sekisui House Services (NSW) Pty Limited



53A & 53B Warriewood Road, Warriewood

Residential Subdivision – Integrated DA

Transport Impact Statement

Client	Job Number
Sekisui House Services (NSW) Pty Limited	22-003

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1. Introduction

1.1 Background

A Development Application (**DA**) is to be submitted to Northern Beaches Council for the construction of 31 residential dwellings (consisting of 29 lots with 2 x lots with secondary dwellings i.e. studios above the garage) on land located at 53A and 53B Warriewood Road in Warriewood (hereafter referred to as the 'subject site' or 'the site').

DA2024/1079 was lodged 26 August 2024 and seeks consent for the five (5) lot Community Title Subdivision of the site, including the future public reserve, the extension of Lorikeet Grove, an internal road, stormwater works, associated landscaping and tree removal to facilitate the future residential development of the site.

Three (3) super lots are proposed which will be further subdivided at a later date. This is the first (1st) of the integrated DAs which uses consistent subdivision plan from DA2014/1079. Revisions to the original DA from the Council assessment process will accord with the subject DA to ensure alignment.

The proposed development will achieve the minimum dwelling requirements noting the proposed secondary dwellings are proposed to super lot 4, not this subject DA.

This development will be assessed under Part 4 of the *Environmental Planning and Assessment Act 1979* act and primarily the following documents:

- > Pittwater Local Environmental Plan 2014 (PLEP 2014)
- > Pittwater 21 Development Control Plan (PDCP 21)
- > Pittwater 21 Development Control Plan Appendices.

This development does not propose access from a classified road and is not of a size that requires referral to TfNSW (Roads and Maritime) under Schedule 3 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021*.

With 31 residential dwellings and estimating an average of 2.9 people per dwelling¹, this equates to a total of approximately 90 future residents.

CTP Consult was commissioned by Sekisui House Services (NSW) Pty Limited in November 2024 to prepare a transport impact statement of the proposed development.



https://abs.gov.au/census/find-census-data/quickstats/2021/SAL14191 - accessed 5/12/24

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1.2 Scope and Objectives of this Report

This report sets out an assessment of the anticipated transport implications of the proposed development, including consideration of the following:

- 1) the active transport requirements (pedestrians and cyclists)
- 2) the public transport in the vicinity of the subject site
- 3) the existing conditions surrounding the subject site
- 4) the suitability of the vehicle access for the subject site
- 5) the loading, service and emergency vehicle requirements
- 6) the transport generating characteristics of the proposed development
- 7) the transport impact of the proposal on the surrounding road network.

1.3 References

The following were referenced as part of the preparation of this report:

- > Pittwater Local Environmental Plan 2014 (PLEP 2014)
- > Pittwater 21 Development Control Plan (**PDCP 21**)
- > Pittwater 21 Development Control Plan Appendices.
- > Northern Beaches Council Waste Management Guidelines Chapter 3
- > TfNSW Guide to Transport Impact Assessment, 2024
- > Austroads Guide to Traffic Management Part 5: Link Management, 2020
- plans for the proposed development prepared Enspire Solutions Pty Ltd (a selection of which, are provided in Appendix A of this report)
- > Pre-lodgement Meeting Notes, PLM2022/0235, 9 February 2023 (*PLM Notes*)
- > Australian Standard, Parking Facilities, Part 1: Off-Street Car Parking AS/NZS 2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2018
- Australian Standard / New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS/NZS 2890.6:2009
- > Warriewood Valley Roads Masterplan 2018 (*Masterplan 2018*)
- Integrated Public Transport Service Planning Guidelines Sydney Metropolitan Area, December 2013
- > State Transit Bus Infrastructure Guide July 2011
- > Documentation submitted as part of DA2024/1079, including the parent lot subdivision and civil documentation
- > Additional documents and data identified throughout the report.



2. Existing Conditions

2.1 Site Location

The subject site is located at 53A and 53B Warriewood Road in Warriewood. The subject site has a frontage of approximately 81m to Warriewood Road and a total site area of approximately 15,500m². The subject site is currently zoned as R3 in the PLEP 2014 and is occupied by a single dwelling on each lot (total of 2 dwellings).

The surrounding properties predominantly include residential uses. To the south and west of the subject site on the opposite side of Narrabeen Creek is an aged care facility.

The location of the subject site and its surrounds is shown in Figure 2.1.





Base map source: https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address – Accessed 5/12/24

The subject site is located in the Warriewood Valley Release Area which is shown in Figure 2.2.





Figure 2.2: PLEP 2014 Urban Release Area Map

Base Map Source: https://eplanningdlprod.blob.core.windows.net/pdfmaps/6370_COM_URA_012_010_20150921.pdf - Accessed 22/7/24

Figure 2.2 indicates that the subject site is identified as Buffer Area 1b and 1c.

Information provided by the Proponent is that they are in discussion with Council to purchase the land identified as Area '1d' in the map, known as 53 Warriewood Road, Warriewood.'

2.2 Local Area Travel Statistics

CTP Consult has reviewed the local area travel statistics from the 2021 census to understand how the people living in the new development could potentially travel to and from the subject site. The travel statistics are shown in Figure 2.3.



Existing Conditions

Figure 2.3: 2	2021 Warriewood Census	Travel Statistics
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Method of travel to work on the day of the Census, top responses Employed people aged 15 years and over	Warriewood	%	New South Wales	%	Australia	%	
Car, as driver	1,589	38.4	1,587,613	43.1	6,347,498	52.7	
Car, as passenger	115	2.8	117,143	3.2	466,904	3.9	
Walked only	84	2.0	92,368	2.5	306,045	2.5	
Bus	57	1.4	34,408	0.9	175,085	1.5	
Bicycle	23	0.6	14,466	0.4	79,089	0.7	
Did not go to work	547	13.2	487,646	13.2	1,417,449	11.8	
Worked at home	1,610	38.9	1,141,467	31.0	2,531,262	21.0	
People who travelled to work by public transport (a)	84	2.0	147,492	4.0	554,711	4.6	
People who travelled to work by car as driver or passenger (b)	1,737	42.0	1,737,359	47.2	6,961,762	57.8	
Note: Respondents had the option to report up to three methods of travel to work on the day of the Census.							
(a) Includes people who used public transport (train, bus, ferry, tram/light rail), as at least one of their methods of travel to work on Census day. (b) Includes people who travelled by car (as a driver, or as a passenger), as at least one of their methods of travel to work on Census day.							

More information on <u>Method of travel to work (MTWP</u>) Table based on place of usual residence

https://www.abs.gov.au/census/find-census-data/quickstats/2021/SAL14191 - Accessed 5/12/24

The 2021 census was affected by COVID-19 restrictions and a comparison has been made to the 2016 census data shown in Figure 2.4.

Figure 2.4: 2016 Warriewood Census Travel Statistics

Travel to work, top responses Employed people aged 15 years and over	Warriewood	%	New South Wales	%	Australia	%
Car, as driver	2,434	65.0	1,953,399	57.8	6,574,571	61.5
Bus	261	7.0	133,903	4.0	323,201	3.0
Worked at home	257	6.9	163,026	4.8	503,582	4.7
Car, as passenger	146	3.9	144,820	4.3	489,922	4.6
Walked only	89	2.4	130,957	3.9	370,427	3.5
People who travelled to work by public transport	353	9.4	540,215	16.0	1,225,668	11.5
People who travelled to work by car as driver or passenger	2,655	70.6	2,182,854	64.6	7,305,271	68.4

https://www.abs.gov.au/census/find-census-data/quickstats/2016/SSC14173 - Accessed 5/12/24

Figure 2.4 indicates that when compared to the New South Wales average, more people from Warriewood on average take the bus to work, more people work at home and more people drive to work.

2.3 **Pedestrian Facilities**

Pedestrian paths in the vicinity of the subject site are described as follows:

- > There are currently no footpaths adjacent to the subject site on the northern side Warriewood Road.
- > A shared path is currently being constructed on the southern side of Warriewood Road as properties adjacent to Warriewood Road are redeveloped.
- > A footpath on the northern side and a shared path on the southern side of Lorikeet Grove are currently being constructed as properties adjacent to Lorikeet Grove are redeveloped.
- > There are no formal crossing points on Warriewood Road or Lorikeet Grove in the vicinity of the subject site.



2.4 Cycle Facilities

The existing cycle facilities in the vicinity of the subject site are shown in Figure 2.5.



Figure 2.5: Existing Cycle Network



Figure 2.5 indicates that there are existing and proposed Tier 3 local connections along Warriewood Road and there is a Tier 2 District Route along Lorikeet Grove. There is also a Tier 2 local connection between Lorikeet Grove and Warriewood Road via Bubalo Street.

2.5 Public Transport

A review of the public transport available in the vicinity of the subject site is shown in Figure 2.6 and are summarised in Table 2.1.





Figure 2.6: Public Transport in the Vicinity of the Subject Site

Source: https://transportnsw.info/document/5202/1H2024-R8-network-map.pdf - Accessed 5/12/24

Table 2.1: Public Transport Provision

Mode	Route	Route Description	Location of Nearest Stop	Frequency On/Off peak
Bus	185	Mona Vale to Narrabeen via Warriewood Valley	Approximately 80m to 130m (1-2 minutes) to the east	10 minutes peak / 30 minutes off peak

2.6 Road Network

The road network in the vicinity of the subject site is described in the following sections.

2.6.1 Adjoining Roads

Details of the roads in close proximity to the subject site are provided in Table 2.1 as outlined in the *Masterplan 2018*.



Existing Conditions

Road Name	Classification	Orientation	Configuration	Approx. Carriageway Width	Target Daily Volume [1]	On-Street Restrictions
Warriewood Road (north of MacPherson Street)	Collector	East-West	1 lane in each direction	7.4m	5,000	Unrestricted car parking
Lorikeet Grove	Local Street	East-West	1 lane in each direction	5.5m to 7.5m	2,000	Unrestricted car parking
Pheasant Place	Access Street	North-South	1 lane in each direction	6m	<300	Unrestricted car parking on the eastern side of the street
Brands Lane	Access Street	North-South	1 lane in each direction	7.5m with a 5.5m wide threshold treatment near Warriewood Road	<300	Unrestricted car parking on the eastern side of the street
Bubalo Street	Access Street	North-South	1 lane in each direction	7.5m	<300	Unrestricted car parking

Table 2.2 Summary of Adjoining Road	Table 2.2	Summary	/ of Ad	ioining	Roads
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[1] As outlined in the Masterplan 2018

2.6.2 Surrounding Intersections

The existing intersections in the vicinity of the subject site are summarised in Table 2.3.

Table 2.3 Existing Major Intersections in the Vicinity of the Subject Site

Intersection	Intersection Control
Warriewood Road / Monooka Place	Priority Controlled T-Intersection
Warriewood Road / Hill Street	Roundabout
Warriewood Road / MacPherson Street	Roundabout



3. Proposed Development

3.1 Overview

The proposed development seeks consent for the construction of 31 residential dwellings as follows:

- > 5 x free standing dwellings on land larger than 300m²
- > 5 x free standing dwellings on land smaller than 300m²
- > 10 x duplex dwellings
- > 7 x attached terraces
- > 2 x dual occupancy (4 dwellings).

Based on the 2021 Census and an average of 2.9 people per dwelling², this equates to a total of approximately 90 future residents. The proposed development shown in Figure 3.1.

Figure 3.1: Proposed Dwelling Structure



3.2 Vehicle Access

Vehicle access to the properties within the subject site is proposed via Lorikeet Grove, Warriewood Road and Road No. 1, Road No. 2 and Pheasant Place.

The suitability of the proposed access arrangements is discussed in Section 5 of this report.



https://abs.gov.au/census/find-census-data/quickstats/2021/SAL14191 - accessed 22/7/24

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4. Operational Impacts

4.1 Trip Generation

Traffic generation estimates for the proposed development have been sourced from the TfNSW Guide to Transport Impact Assessment, 2024 (**GTIA**).

GTIA provides traffic generation estimates for low density residential developments across Sydney which are:

- > 0.68 movements per dwelling during the weekday AM peak hour
- > 0.77 movements per dwelling during the weekday PM peak hour
- > 8.12 daily movements per dwelling.

Application of the above rates to the proposed 31 dwellings results in the following estimated traffic generation:

- > 21.08 (adopt 21) movements during the weekday PM peak hour
- > 23.87 (adopt 24) movements during the weekday AM peak hour
- > 251.72 (adopt 252) daily movements.

4.2 Transport Impact Assessment

As set out in PLEP 2014 - Reg 6.1 the site has been estimated to cater for 30 to 42 future residential dwellings.

Based on the proposed development falling within the range of 30-42 dwellings as envisaged by the PLEP 2014, no additional road upgrades are proposed beyond those already envisaged and against existing traffic volumes in the vicinity of the subject site, the additional traffic generated by the proposed development is not expected to compromise the safety or function of the surrounding road network.



5. Recommended Vehicular Access Driveway Locations

5.1 Design Guidelines

The design guidelines for the placement of driveways has been based on the following:

- Masterplan 2018 which provides guidelines for the design of new roads within the Warriewood Valley and states that driveways are to conform to Council specifications in the Pittwater 21 Development Control Plan.
- > AS2890.1:2004 which provides guidance on driveway locations.

5.2 **Driveway Locations**

As per the *PLM Notes*, the PDCP 21 seeks to minimise the number of driveways along Warriewood Road. Driveways are proposed to Warriewood Road where access to the rear is not feasible. Other lots are proposed to have access via the local road network.

The Applicant has provided indicative driveway locations which are shown in Figure 5.1.



Figure 5.1: Indicative Driveway Locations

It is recommended that where possible, proposed driveway locations accord with AS2890.1:2004.

5.3 Visitor Car Parking

The PDCP 21 section B6.3 Table 1 identifies a visitor car parking rate of 1 space per 3 dwellings for multi-unit dwellings. It is noted that many of the proposed dwellings are on a single lot and although not considered strictly applicable to all the proposed dwellings, it is considered a reasonable rate for aim for in this instance.

Based on the driveway locations proposed, there are expected to be approximately 10 on-street parking spaces. This is satisfactory to cater for the 31 proposed residential dwellings. In addition there are extra spaces that will be available on Pheasant Place and Lorikeet Grove and as such, the quantum of on-street visitor parking is expected to be satisfactory to cater for the proposed dwellings.



5.4 Vehicle Swept Paths, Refuse Collection and Emergency Vehicles Access

CTP Consult has undertaken a swept path assessment of the proposed design which is provided in **Appendix B**. The assessment shows that an HRV can turn around within the Road No. 1 'hammerhead' turning area clear of parked cars and adjacent properties.

Refuse collection is proposed on-street by Council collection vehicles. The swept path assessment also demonstrates that refuse collection vehicles can enter and exit Road No. 1 from Lorikeet Grove satisfactorily and exit via Pheasant Place. As HRVs can access the proposed development via Road No. 1, access for emergency vehicles is also facilitated.

The proposal also benefits the Pheasant Place Community Association by providing direct access for refuse collection within Pheasant Place, reducing the need for residents to shift their bin to Warriewood Road for collection.

Based on the above, the proposed refuse vehicle access arrangements are considered satisfactory.

5.5 Sight Distance at the intersection of Road 1 / Lorikeet Grove

As outlined in Section 2.3 of the Warriewood Valley Roads Masterplan, Lorikeet Grove is considered to be a local street and has a design speed of 40km/h. Table 3.2 of the Austroads Guide to Road Design Part 4A identifies that for a 40km/h road and a reaction time of 2 seconds, a Safe Intersection Sight Distance of 73m is required. Figure 5.2 provides an estimate of the available sight distance at the proposed intersection of Road No. 1 / Lorikeet Grove and Pheasant Place / Lorikeet Grove.



Figure 5.2: Potential Sight Distance Available at Lorikeet Grove and Pheasant Place

Figure 5.2 indicates that with a restriction on the fence height for the properties fronting Lorikeet Grove between Pheasant Place and Road No. 1, the location of the intersection provides the ability to see the required distance to the north-west for drivers exiting onto Lorikeet Grove.

The dimensions in Figure 5.2 between each property show the distance that a fence or vegetation must be below 1m to provide satisfactory sight distance.



Recommended Vehicular Access Driveway Locations

As Lorikeet Grove isn't constructed to the south-east, and while there appears to be the ability to provide sufficient sight distance in both directions, this would have to be checked in more detail by others as part of the detailed design of Lorikeet Grove.

6. Conclusions

Based on the analysis and discussions presented within this report, the following conclusions are made:

1) The proposed development seeks consent for the construction of 31 residential dwellings as follows:

- 5 x free standing dwellings on land larger than 300m²
- 5 x free standing dwellings on land smaller than 300m²
- 10 x duplex dwellings
- 7 x attached terraces
- 2 x dual occupancy (4 dwellings).

2) Based on the proposed development falling within the range of 30-42 dwellings as envisaged by the PLEP 2014, no additional road upgrades are proposed beyond those already envisaged and against existing traffic volumes in the vicinity of the subject site, the additional traffic generated by the proposed development is not expected to compromise the safety or function of the surrounding road network.

3) Based on the driveway locations proposed, there are expected to be approximately 10 on-street parking spaces. This is satisfactory to cater for the proposed 31 residential dwellings. With additional spaces on Pheasant Place and Lorikeet Grove, the quantum of on-street visitor parking is expected to be satisfactory to cater for the proposed dwellings. It is also recommended that where possible, proposed driveway locations accord with AS2890.1:2004.

4) CTP Consult has undertaken a swept path assessment of the proposed road design. The assessment shows that an HRV can turn into Road No. 1 from Lorikeet Grove, can pass parked vehicles with appropriate clearance and can turn around within the proposed 'hammerhead' and exit via Pheasant Place. The proposal also benefits the Pheasant Place Community Association by providing direct access for refuse collection within Pheasant Place, reducing the need for residents to shift their bin to Warriewood Road for collection. The swept path assessment is shown in **Appendix B** of this report.



Conclusions

5) With a restriction on the fence height for the properties fronting Lorikeet Grove between Pheasant Place and Road No. 1, the location of the intersection provides the ability to see the required distance to the north-west for drivers exiting onto Lorikeet Grove. The dimensions in Figure 6.3 between each property show the distance that a fence or vegetation must be below 1m to provide satisfactory sight distance. As Lorikeet Grove isn't constructed to the south-east, and while there appears to be the ability to provide sufficient sight distance in both directions when exiting from the central accessway onto Lorikeet Grove, this would have to be checked in more detail by others as part of the future detailed design of Lorikeet Grove.



Appendix A

Assessed Plans





Appendix B

Swept Path Assessment





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CTP Consult Pty Ltd ABN: 68 649 792 709

www.checkthisproperty.com.au

info@checkthisproperty.com.au