

**TRAFFIC AND PARKING IMPACTS REPORT
FOR A DEVELOPMENT APPLICATION
FOR A PROPOSED RESIDENTIAL DEVELOPMENT
AT Nos. 45 – 49 WARRIEWOOD ROAD, WARRIEWOOD NSW 2102**

Property address	45 – 49 Warriewood Road, Warriewood NSW 2102
Client	Archidrome
Prepared by	O. Sannikov, MEngSc (Traffic Engineering), MIEAust, PEng, FAITPM
Date	21/09/2020
Job No.	19082
Report No.	19082 Rep 01d

Item	Report
Site location	<ul style="list-style-type: none"> Refer to Figure 1.
Existing land use	<ul style="list-style-type: none"> Vacant lot
Proposed development	<ul style="list-style-type: none"> 34 residential flat buildings Basement car park <ul style="list-style-type: none"> 81 car parking spaces <ul style="list-style-type: none"> 68 spaces for residents <ul style="list-style-type: none"> Including four (4) spaces for people with disabilities 13 spaces for visitors <ul style="list-style-type: none"> Including two (2) spaces for people with disabilities One (1) car wash bay 12 bicycle spaces The above development is part of the proposed subdivision of Lot 2 (DP 349085). The subdivision includes 7 separate lots with frontages to Lorikeet Grove and 4 separate lots with frontages to Warriewood Road. <ul style="list-style-type: none"> A dwelling house is proposed on each lot in the future (subject to detailed Development Applications (DAs)). The internal car parking design for each lot will be assessed separately at part of the DA applications. Traffic impacts (in terms of the access point and trip generation) for the 11 separate lots have been assessed within the contents of this report.



Figure 1. Site location.

Item	Report
Street characteristics	<p>Existing traffic and parking situation</p> <ul style="list-style-type: none"> Refer to Figure 2. The main roads bounding the proposed development are described below. <ul style="list-style-type: none"> Warriewood Road <ul style="list-style-type: none"> Warriewood Road (north of Macpherson Street) is classified as a local collector road and Warriewood Road (east of Macpherson Street) is classified as a sub-arterial road by the Pittwater 21 Development Control Plan 2004 and Warriewood Valley Roads Masterplan 2018 (refer to the 'Planning control document' section in this report) Warriewood Road (north of Macpherson Street) has 2 travel lanes and parking opportunities on both sides Pheasant Place <ul style="list-style-type: none"> Local road 2 travel lanes and parking opportunities on alternate sides Bubalo Street <ul style="list-style-type: none"> Local road 2 travel lanes and parking opportunities on alternate sides Macpherson Street <ul style="list-style-type: none"> Macpherson Street is classified as a sub-arterial road by the Pittwater 21 Development Control Plan 2004 and Warriewood Valley Roads Masterplan 2018 (refer to the 'Planning control document' section in this report) 2 travel lanes and parking opportunities on both sides Other streets in the surrounding area are local/local collector roads. Street conditions are typical for a residential area, with low to moderate traffic volumes. <ul style="list-style-type: none"> General speed limit is 50 km/h on local streets around the site.
Bus	<p>Public Transport</p> <ul style="list-style-type: none"> The site is located approximately 25 metres from a bus stop located along the northern and southern sides of Warriewood Road. Refer to Figure 3. <ul style="list-style-type: none"> Bus Route 185 <ul style="list-style-type: none"> PrePay-Only – Warringah Mall to Mona Vale via Warriewood <ul style="list-style-type: none"> 6 services operate during the morning peak hours. 1 service operates during the afternoon peak hours. PrePay-Only – Mona Vale to Warringah Mall via Warriewood <ul style="list-style-type: none"> 2 services operate during the morning peak hours. 6 services operate during the afternoon peak hours. Bus Route E85 <ul style="list-style-type: none"> PrePay-Only – City Wynyard to Mona Vale via Warriewood (Express Service) <ul style="list-style-type: none"> No services operate during the morning peak hours. 11 services operate during the afternoon peak hours. PrePay-Only – Mona Vale to City Wynyard via Warriewood (Express Service) <ul style="list-style-type: none"> 7 services operates during the morning peak hours. No services operate during the afternoon peak hours. The morning peak hours were between 6:30 a.m. and 9:30 a.m. and the afternoon peak hours were between 3:30 p.m. and 6:30 p.m.

Item	Report
NSW Transport on Demand	<ul style="list-style-type: none"> Keoride on-demand pick-up and drop-off services are available from any location to and from Warriewood to Palm Beach. Refer to Figure 4. This transport on demand solution offers a flexible pick-up and drop-off schedule from any location through an online booking which takes seconds to confirm. The Keoride application for smart phones is available on the Google and iOS play stores.

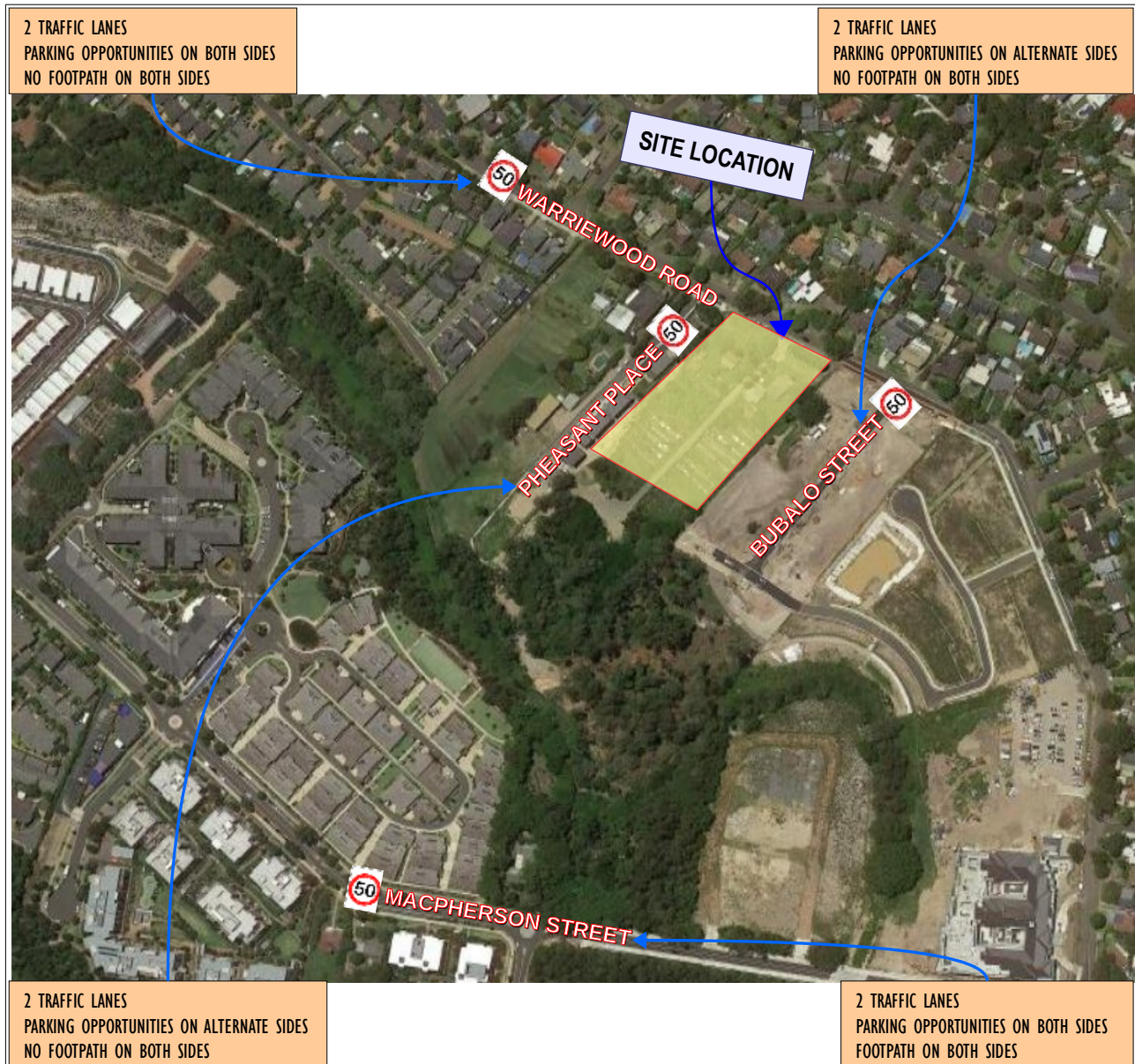


Figure 2. Street characteristics.

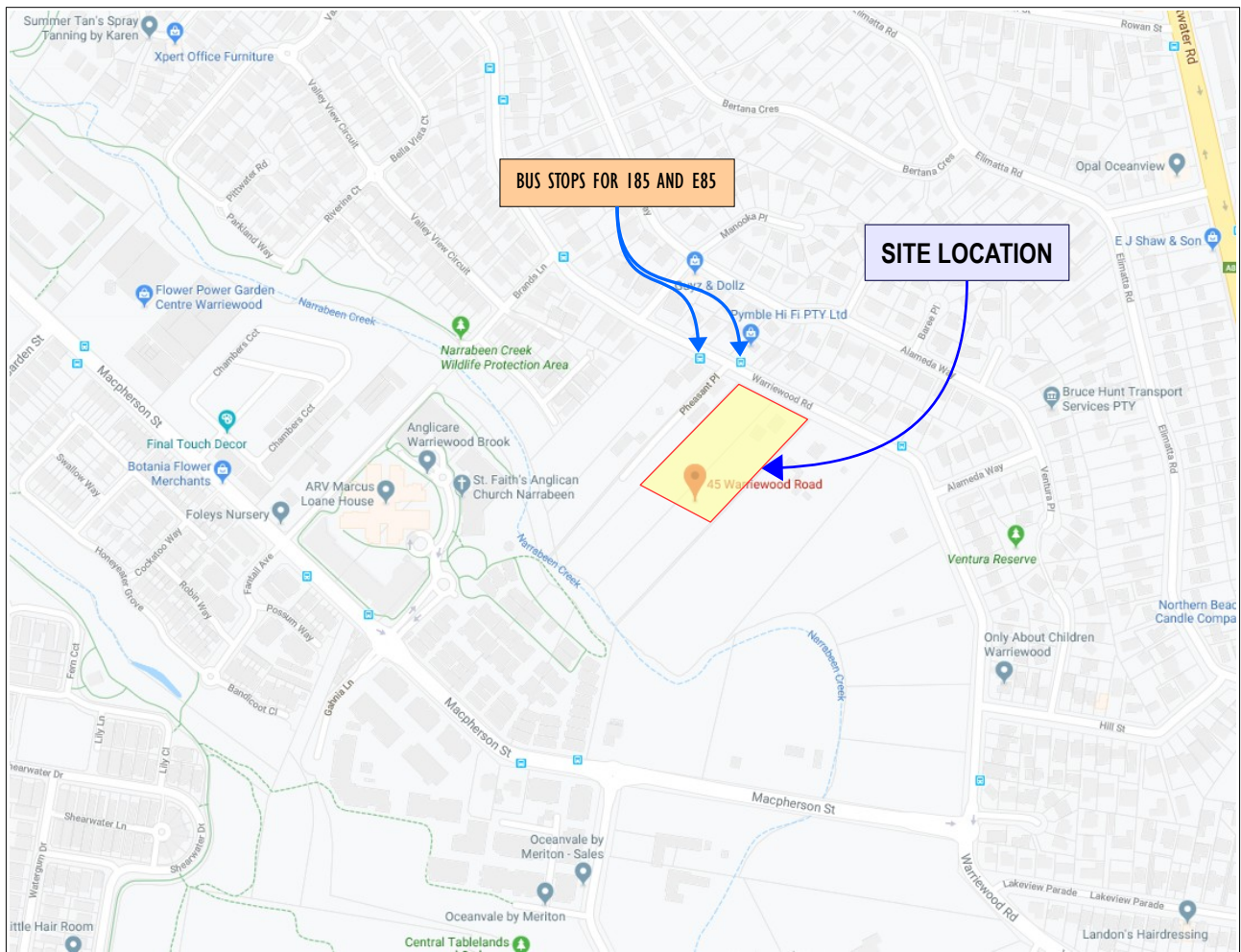


Figure 3. Public transport.



Figure 4. Keoride On Demand Service Areas.

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Planning control document	<ul style="list-style-type: none"> Pittwater 21 Development Control Plan 2004 <ul style="list-style-type: none"> Part B – General Controls Part C – Development Type Controls 																																					
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	Shared Driveways and Access Driveways located in front of adjoining properties	N/A
	Shared Access Driveways shared between adjoining private properties and Access Driveways located in front of adjoining properties will be considered on merit, based on Council's consideration of the site constraints.	N/A
	Access Driveway for Service Vehicles to Loading Dock	N/A
	Access Driveways providing access for service vehicles to loading docks must be separated from access used by the general public for access to public parking areas.	N/A
	Access Driveways providing access for service vehicles to loading docks shall, where practical, be located on a rear public road frontage providing separation from pedestrian activity.	N/A
	Where Access Driveways are located on the same frontage, the minimum distance between an Access Driveway for service vehicles and an Access Driveway for the general public shall be 5 metres from the inside edge to the inside edge of the Access Driveways.	N/A
	Access Driveway Location	N/A
	Access Driveways shall be designed and located to provide adequate sight distance to maximise pedestrian and vehicular safety as follows:	N/A
	<ul style="list-style-type: none"> • minimum clear distance along the road frontage edge of kerb of 50 metres for 40 and 50 kph speed limit roads measured from a point on the centreline of the driveway 2.5 metres from the face of kerb; and • minimum clear distance along the frontage footway of 5 metres, measured from a point on the centreline of the driveway 2.5 metres from the edge of footway area closest to property boundary. 	N/A
	For corner allotments, the closest point of the Access Driveway shall be located at the maximum practical distance from the intersection of adjoining roads, being no closer than 6m from the tangent point at the kerb.	N/A
	For corner allotments adjacent to traffic signals, the location of the Access Driveway will be subject to the approval of the Roads and Maritime Services as the authority responsible for traffic signal facilities.	N/A
	For developments in commercial centres where separate entry/exit vehicular access is required, access driveways for entry and exit are to be separated by a minimum distance of 2 metres.	N/A
	The location of the Access Driveway is to maximise the retention of trees and native vegetation in the public road reserve.	N/A
	Access Driveway Width	N/A
	The maximum width of an Access Driveway for dual occupancies, dwellings houses, secondary dwellings, exhibition homes, rural works	N/A

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	Requirement Compliance

dwelling and tourist and visitor accommodation shall be as follows:

Distance Building Line to Boundary	Width at Boundary	Width at Kerb
Nil to 3.5m	Width of car parking area or garage opening	Width of car parking or garage opening plus 0.5m
Greater than 3.5m to 6.5m	4.0m	4.5m
Greater than 6.5m	3.0m	3.5m

Access Driveway width can be varied subject to a merit based consideration. N/A

Access Driveway Profile and Gradient N/A

Access Driveway profiles shall conform to the profiles as illustrated in Appendix 10 - Driveway Profiles. N/A

Access Driveway Construction and Finishes N/A

All Access Driveways shall be constructed with an impervious pavement and gutter crossing construction N/A

Gutter crossings are to be in plain concrete. N/A

Access Driveways are to be in plain concrete. Cosmetic Access Driveways on a public road reserve are not permitted. N/A

Access Driveways are to match with the adjacent constructed footpaths or alternatively adjacent constructed footpaths are to be adjusted to provide a continuous surface with no trip points with a maximum 1:14 (V:H) transition. N/A

The Access Driveway is to be structurally adequate for its intended use. N/A

Suspended driveways must not use the existing road structure for support. N/A

Ancillary Structures within the Road Reserve N/A

Ancillary structures within the Road Reserve will be supported for the purposes of structurally supporting the access driveway only. Ancillary structures include retaining walls. N/A

Encroachment into the road reserve is to be minimised. N/A

Where retaining walls and structures are visible from a public place, preference is given to the use of textured finishes of dark earthy tones or sandstone-like finishes. N/A

All structural elements within the Road Reserve must be certified by a Structural Engineer. N/A

In addition, where the land is identified on the Landslip Hazard Map, the design of all structural elements must satisfy the Landslip Hazard Controls. N/A

Access Driveway - Stormwater Drainage N/A

All Access Driveways on the low side of the road are to be designed and constructed such that stormwater drainage is directed away from the Access Driveway. N/A

Access Driveway and Public Utilities Costs N/A

The cost for Access Driveways construction and maintenance and adjustment of any utility N/A

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	<p>Requirement</p> <p>service is the responsibility of the Applicant.</p> <p>Compliance</p>
	<p>Variations N/A</p> <p>Access Driveway Location N/A</p> <p>If driveways are located where the sight distance is below the minimum criteria, consideration will be given on a merit basis subject to the submission of a Traffic Assessment Report by a suitably qualified Traffic Engineer.</p> <p>Access Driveway Profile and Gradient N/A</p> <p>A new driveway or an existing structurally sound driveway with gradients up to 1:3 (V:H) may be permitted to remain on merit subject to demonstration through a Traffic Assessment Report and relevant certification that the Access Driveway including surface finish is safe for its intended use and that a pedestrian footpath either can be accommodated in the road reserve or is not required.</p> <p>Dual Occupancy / Secondary Dwelling Development N/A</p> <p>For Dual Occupancy and Secondary Dwelling development, a separate Access Driveway to each dwelling will be considered on merit, based on Council's consideration of the site constraints.</p> <p>Alternative Design on steeply sloping sites N/A</p> <p>Where it can be demonstrated to Council's satisfaction that this control is not applicable in the case of steeply sloping sites and steeply sloping public road reserve verges, the design of the Access Driveway may be in accordance with the current edition of the following Australian standard, based on turning paths for a B85 vehicle and subject to provision for a 1.5metre footpath width, kerb and gutter and stormwater drainage being directed away from the Access Driveway:</p> <ul style="list-style-type: none"> • Australian Standard AS/NZS 2890.1 "Parking Facilities Part 1" Off-Street Car Parking. N/A <p>Category 5 Access Driveways as Defined in ASNZS 2890.1: Parking Facilities – Off-Street Car Parking N/A</p> <p>Category 5 Access Driveways are to be constructed as an intersection to the public road either by way of 'T'-intersection, signalised intersection or roundabout. A section of land of a minimum depth of 3 metres by the width of the entry road plus provision for footpaths will be required to be dedicated to Council as public road reserve.</p> <p>The cost for all intersection improvements is the responsibility of the Applicant. N/A</p> <p>B6.2. Internal Driveways N/A</p> <p>General N/A</p> <p>An Internal Driveway must be provided for in:</p> <ul style="list-style-type: none"> • Any new development; N/A • Development where additional car parking spaces and/or garages are N/A

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	<p>required by Council's plans or policies;</p> <ul style="list-style-type: none"> Any alterations and additions where the sum of the additional Gross Floor Area (GFA) of the dwelling exceeds 30 m² ; and Development where additional car parking spaces and/or garages are proposed. 	<p>N/A</p> <p>N/A</p>
	<p>If the applicant proposes to retain the existing driveway, the applicant will need to demonstrate compliance with the outcomes and driveway standards of this control.</p>	N/A
	Internal Driveway	N/A
	<u>Internal Driveway Profiles</u>	N/A
	<p>Internal Driveways are to be designed and constructed to provide safe access and shall have a maximum gradient of 1:5 (V:H). Recommended maximum gradient of an Internal Driveway for a distance of 2m on the approach to a garage, parking area or carport is 1:20 (V:H). There must be a minimum 2 metre long transition between the driveway and the garage/parking area/carport in accordance with the standards.</p>	N/A
	<p>For Internal Driveways on steeply sloping or difficult sites, gradients may be increased up to 1:4 (V:H) over a maximum 20 metre length.</p>	N/A
	<p>Provision is to be made for vehicles to enter and leave the site in a forward direction, where:</p>	N/A
	<ul style="list-style-type: none"> The internal driveway grade exceeds 1:4 (V:H) The land abuts a roadway subject to high pedestrian use (e.g. School, Commercial Centre) Driveways are more than 30m in length The driveway enters onto a classified road. 	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>
	<u>Internal Driveway Stormwater Drainage</u>	N/A
	<p>Internal Driveway grades, cross falls and grated drains are to be designed to reduce discharge into the public drainage system and to maximise stormwater discharge into adjacent landscape areas by the use of grass swales and soakage pits.</p>	N/A
	<u>Internal Driveway Construction/Finishes</u>	N/A
	<p>Internal Driveways shall have a stable surface for all weather construction.</p>	N/A
	<p>Internal Driveways where visible from a public road or public place are to be constructed of materials that blend with the environment and of dark earthy tones or natural materials.</p>	N/A
	<p><u>Internal Driveway Design for all other uses than dual occupancies, dwelling house, secondary dwellings, exhibition homes, rural works dwellings and tourist and visitor accommodation</u></p>	N/A
	<p>The design of all Internal Driveways and ramps shall be in accordance with the current edition of the following Australian Standards:</p>	N/A
	<ul style="list-style-type: none"> Australian Standard AS/NZS 2890.1- 	N/A

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	<p>2004: <i>Parking Facilities – Off-Street Car Parking.</i></p>
	<ul style="list-style-type: none"> Australian Standard AS/NZS 2890.2-2002: <i>Parking Facilities – Off-Street Commercial Vehicle Facilities</i> except as qualified in this control. N/A
	<p><u>Driveway width for dual occupancies, dwellings, secondary dwellings, exhibition homes, rural works dwellings and tourist and visitor accommodation.</u> N/A</p>
	<p>The Internal Driveway shall be contained within the driveway corridor. The minimum width of the driveway corridor (i.e. impervious pavements together with grassed shoulder area) shall be as follows: N/A</p>
	<ul style="list-style-type: none"> Single Dwelling: 3.0 metres minimum. N/A
	<ul style="list-style-type: none"> Dual Occupancy: 3.0 metres minimum. N/A
	<ul style="list-style-type: none"> Combined driveway for more than 2 dwellings: 3.0 metres minimum except where the driveway length exceeds 40 metres, a passing bay to an overall minimum width of 5.0 metres for a length of 10 metres with suitable transitions to the adjacent narrow driveway. N/A
	<p><u>Internal Driveway and Driveway Corridor Width for all other development than dual occupancies, dwellings, secondary dwellings, exhibition homes, rural works dwellings and tourist and visitor accommodation</u> N/A</p>
	<p>Internal Driveways shall be designed and constructed to the minimum practical pavement width needed to facilitate access and turning movements. N/A</p>
	<p>Internal Driveways shall be designed and constructed to minimise the area of impervious pavement within the land. Track style driveways are encouraged where practical. N/A</p>
	<p>Turning movements are to be in accordance with the turning paths for a B85 vehicle (Australian Standard AS/NZS 2890.1-2004: <i>Parking Facilities – Part 1: Off-Street Car Parking</i>). N/A</p>
	<p>Variations N/A</p>
	<p>For existing Internal Driveways on steeply sloping or difficult sites proposing dual occupancies, dwelling houses, secondary dwellings, exhibition homes, rural works dwellings and tourist and visitor accommodation, gradients up to a maximum of 1:3 (V:H) may be maintained subject to demonstration through a Traffic Assessment Report and the relevant certification that the Internal Driveway including surface finish is safe for its intended use. N/A</p>
	<p>Any alternate design of the Internal Driveway (based on turning paths for a B85 vehicle) is to be in accordance with the current edition of Australian Standard AS/NZS 2890.1 "Parking Facilities Part 1" Off-Street Car Parking. N/A</p>
	<p>A variation may be considered subject to demonstration through a Traffic Assessment Report and the relevant certification that an N/A</p>

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alternate vehicular access arrangement to the site is safe for all pedestrian and vehicular traffic.

B6.3. Off-Street Vehicle Parking Requirements

The minimum number of vehicle parking spaces to be provided for off-street parking is as follows for dual occupancies, dwelling houses, secondary dwellings, exhibition homes, rural workers' dwellings and tourist and visitor accommodation: N/A

For a Secondary Dwelling a minimum of 1 space is required in addition to existing requirement for the principal dwelling (based on number of bedrooms in principal dwelling). N/A

Minimum dimensions of internal space for on-site parking are: Complies with AS/NZS 2890.1:2004

Single car parking spaces on hard stand and Single Carport	2.4 metre x 5.5 metre with 0.3m minimum clear space each side for access to doors
Enclosed garage(internal dimension)	3.0 metre x 6.0 metre, with 2.4 metre minimum width entry
Multiple side by side carport and enclosed garage(internal dimension)	5.7 metre x 6.0 metre for 2 adjacent vehicles + 2.7 metre width for each additional vehicle with, 2.4 metre minimum width entry per vehicle space

The maximum cross-fall in any direction for an open car parking space is 1:20 (V:H). N/A

For all other uses, the minimum number of vehicle parking and service spaces to be provided within the development site for new development and extensions to existing development is to be in accordance with the following:

- The total number of spaces as set out in TABLE 1 below; Calculations are shown below.
- PLUS the number of on-street parking spaces lost as a direct result of the development due to access and traffic facilities requirements. No on-street car parking spaces are lost. N/A

TABLE 1: Onsite Car Parking requirements

Development Type	Minimum Number of. Car Spaces	
Multi Dwelling Housing, Residential Flat Buildings and Shop-Top Housing:	1 bedroom dwellings	1 space per dwelling
	2 or more bedroom dwellings	2 spaces per dwelling
	Adaptable Housing in accordance with control C1.9 of the Pittwater 21 Development Control Plan.	1 space per dwelling in accordance with AS 4299-1995: Adaptable Housing.
	The provision of parking for people with disabilities must be provided at a rate of 3% of the required parking spaces, excluding parking required for Adaptable Housing.	
	Separate visitor parking is to be provided at a rate of 1 space per 3 dwellings rounded up.	
	Provision must be made for garbage collection, removalist vans and emergency vehicles.	
	For developments with 10 or more dwellings, a vehicle wash bay is to be provided.	

Car parking required	Car parking proposed
There are a total of 34 dwellings with 2 or more bedrooms.	68 spaces for residents are proposed.
<ul style="list-style-type: none"> 34 x 2 = 68 spaces 	Complies

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This requirement is exceeded by the proposed 13 spaces. </td></tr> <tr> <td> Car parking required for people with disabilities There are four (4) adaptable units, requiring one (1) accessible space each. <ul style="list-style-type: none"> 4 spaces For the remaining 30 units (excluding parking required for adaptable housing), 60 car parking spaces plus 12 visitor spaces are required <ul style="list-style-type: none"> 72 x 0.03 = 2.16 spaces, say 2 spaces Total: <ul style="list-style-type: none"> 4 + 2 = 6 spaces </td><td> Car parking proposed for people with disabilities 6 spaces are proposed as per DCP requirements. However, it must be noted that spaces for people with disabilities are not required for buildings of Class 2 (residential units) by the BCA. Complies and exceeds BCA requirements </td></tr> <tr> <td></td><td> Provision for garbage collection On-site waste collection at the ground floor level is proposed. Entry and exit from the collection point in a forward direction is achievable by a typical large waste collection vehicle (9.9 m long). </td></tr> <tr> <td> Wash bay required 34 dwellings are proposed. <ul style="list-style-type: none"> 1 wash bay </td><td> Wash bay proposed One (1) car wash bay is proposed. Complies </td></tr> <tr> <td> Bicycle Storage For residential development (other than a dwelling house, dual occupancy, secondary dwellings, exhibition homes and rural workers' dwellings), secure bicycle storage facilities must be provided within the building at the rate of 1 bicycle rack per 3 dwellings. </td><td> As below. </td></tr> <tr> <td> Bicycle parking required There are a total of 34 dwellings. <ul style="list-style-type: none"> 34/3 = 11.3, say 11 spaces For Business/Industrial development or additions, comprising of 200m² GFA or more, secure enclosed bicycle storage facilities must be provided within the building at the rate of 1 bicycle rack per 1000m² GFA, or a minimum of 4 bicycle racks, whichever is the greater. </td><td> Bicycle parking proposed 12 spaces are proposed. Complies and exceeds N/A </td></tr> <tr> <td> Motor Cycle Parking For Business/Industrial development or additions, comprising of 200m² GFA or more, provision is to be made for motor cycle parking at a rate of 1 motor cycle parking space per 100 motor vehicle spaces. </td><td> N/A </td></tr> <tr> <td> Shop top housing </td><td> N/A </td></tr> </table>	Requirement	Compliance	Visitor car parking required There are a total of 34 dwellings. <ul style="list-style-type: none"> 34/3 = 11.3, say 12 spaces 	Visitor car parking proposed 13 visitor spaces are proposed. Complies and exceeds The level of visitor parking provision required by DCP appears to be excessive, particularly considering that each unit is provided with two (2) car parking spaces. RMS (2002) Guide to Traffic Generating Developments requires only one (1) visitor space per 5 residential units. If the RMS rate was applied, then the total requirement would be 7 visitor spaces . This requirement is exceeded by the proposed 13 spaces.	Car parking required for people with disabilities There are four (4) adaptable units, requiring one (1) accessible space each. <ul style="list-style-type: none"> 4 spaces For the remaining 30 units (excluding parking required for adaptable housing), 60 car parking spaces plus 12 visitor spaces are required <ul style="list-style-type: none"> 72 x 0.03 = 2.16 spaces, say 2 spaces Total: <ul style="list-style-type: none"> 4 + 2 = 6 spaces 	Car parking proposed for people with disabilities 6 spaces are proposed as per DCP requirements. However, it must be noted that spaces for people with disabilities are not required for buildings of Class 2 (residential units) by the BCA. Complies and exceeds BCA requirements		Provision for garbage collection On-site waste collection at the ground floor level is proposed. Entry and exit from the collection point in a forward direction is achievable by a typical large waste collection vehicle (9.9 m long).	Wash bay required 34 dwellings are proposed. <ul style="list-style-type: none"> 1 wash bay 	Wash bay proposed One (1) car wash bay is proposed. Complies	Bicycle Storage For residential development (other than a dwelling house, dual occupancy, secondary dwellings, exhibition homes and rural workers' dwellings), secure bicycle storage facilities must be provided within the building at the rate of 1 bicycle rack per 3 dwellings.	As below.	Bicycle parking required There are a total of 34 dwellings. <ul style="list-style-type: none"> 34/3 = 11.3, say 11 spaces For Business/Industrial development or additions, comprising of 200m ² GFA or more, secure enclosed bicycle storage facilities must be provided within the building at the rate of 1 bicycle rack per 1000m ² GFA, or a minimum of 4 bicycle racks, whichever is the greater.	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	The provision of parking is to be in accordance with the associated land use parking requirements i.e. parking must be provided at the requirement rate for the commercial floor space requirements if commercial floor space is proposed.	N/A
	Location of patron parking for Retail and/or Commercial land use should not to be restricted or obstructed (for example behind roller doors).	N/A
	<u>On-Site Car Parking Facilities</u>	
	The design of all parking areas shall be in accordance with the current edition of the following Australian Standards:	
	<ul style="list-style-type: none"> Australian Standard AS/NZS 2890.1:2004: <i>Parking Facilities Part 1: Off Street Car Parking</i>; 	Complies with AS/NZS 2890.1:2004
	<ul style="list-style-type: none"> Australian Standard AS/NZS 2890.2:2002: <i>Parking Facilities – Part 2: Off-Street Commercial Vehicle Facilities</i>; 	Complies with AS/NZS 2890.2:2018
	<ul style="list-style-type: none"> Australian Standard AS/NZS 2890.3:1993: <i>Parking Facilities Part 3: Bicycle Parking Facilities</i>; and 	Complies with AS 2890.3:2015
	<ul style="list-style-type: none"> Australian Standard AS/NZS 2890.6:2009: <i>Parking Facilities – Part 6: Off-Street Parking for People with Disabilities</i> except as qualified in this control. 	Complies with AS/NZS 2890.6:2009
	<u>Surface Car Parking Areas</u>	N/A
	At grade car parking areas are to be landscaped to a minimum of 20% of the car parking area using primarily native species of vegetation and are to achieve the following:	N/A
	<ul style="list-style-type: none"> Shade, shelter and amenity; 	N/A
	<ul style="list-style-type: none"> Protection and management of existing trees, bushland habitat and existing/potential wildlife corridors; 	N/A
	<ul style="list-style-type: none"> Enhancement of the streetscape and internal areas by the provision of canopy trees; 	N/A
	<ul style="list-style-type: none"> Minimum 2 metre width for landscape islands to break up parking rows; 	N/A
	<ul style="list-style-type: none"> Application of Water Sensitive Urban Design Principles to landscaped areas, 	N/A
	<ul style="list-style-type: none"> Safety and amenity of pedestrians and vehicles; and 	N/A
	<ul style="list-style-type: none"> lighting. 	N/A
	<u>Residential Car Parking for Residential Flat Buildings, Shop Top Housing, Mixed Use Development, Multi Dwelling Housing and Seniors Housing</u>	
	The following are applicable in respect of residential car parking areas:	Noted
	<ul style="list-style-type: none"> Where there are dwellings with two (2) or more bedrooms in a development, tandem parking spaces may be permitted where all of the following criteria are met: 	

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	<ul style="list-style-type: none"> Two parking spaces have been allocated per two (2) or more bedroom apartments; Complies The proportion of tandem parking spaces does not exceed 10% of the total residential parking for two (2) or more bedroom units; and Complies It can be clearly demonstrated that vehicles parked are directly associated to a single dwelling/unit and that such vehicles do not restrict or impede the parking, manoeuvring or access of other vehicles; Complies Parking spaces are to be located as close as possible to their respective dwelling; Complies Rows of multiple garages and long driveways, particularly those that create a "gun barrel" effect are avoided; Complies Visitor parking spaces are to be easily accessible and clearly marked "Visitor"; Complies For developments resulting in 10 or more dwellings, Control C1.18 Car/Vehicle/Boat Wash Bays also apply; and Complies Parking spaces for people with disabilities must be appropriately signposted and in accordance with Australian Standard AS/NZS 2890.6-2009: <i>Parking Facilities – Part 6: Off-street Parking for People with Disabilities</i>. Complies with AS/NZS 2890.6:2009
	<div>Development not included in the above table</div> <div>N/A</div>
	<p>The minimum number of vehicle parking requirements must be determined using the appropriate guidelines for parking generation and servicing facilities based on development type comparison based on the <i>Roads and Maritime Services Guide to Traffic Generating Development</i> or analysis drawn from surveyed data for similar development uses. Provision must be made within the development site for access and parking of all service vehicles servicing the site, visitor parking and parking for people with disabilities.</p>
	<div>Variations</div> <div>N/A</div>
	<div>Car Parking for Secondary Dwelling or Dual Occupancy</div> <div>N/A</div>
	<p>A reduction in the car parking requirements for a secondary dwelling or dual occupancy to a minimum of 2 spaces per allotment may be considered on merit.</p>
	<div>Changes in Use</div> <div>N/A</div>
	<p>For change of use and developments within existing commercial centres consideration may be given to a variation to the minimum parking and service facilities requirements subject to the outcomes of this control being achieved and adequate justification being provided.</p>
	<p>In the Mona Vale Commercial Centre, no additional on-site parking is required for lots</p>

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	where there is a 'change of use' to residential and where the street frontage is to Bungan Street or Pittwater Road (between Barrenjoey Road and Bungan Street) and the subject site has a street frontage width of less than 15 metres.	
	Variations to parking requirements will be considered for the temporary use of vacant premises for a maximum period of 3 months.	N/A
	Off-Set of On-Site Car Parking Requirements	N/A
	Visitor parking requirements may be offset by:	N/A
	<ul style="list-style-type: none"> The provision additional on-street parking facilities over and above existing provisions within the public road reserve or proposed road reserve (provided the additional on-street parking facilities can be accommodated within the road reserve adjacent to the site and not to the detriment of the streetscape environment and authorisation provided by Council as the road authority under Section 138 of the <i>Roads Act 1993</i>) and on the basis that the offset only applies to the visitor parking component of the residential development. 	N/A
	Masterplans	N/A
	Variations to the minimum car space number will be considered on a merit basis where a Masterplan has been adopted by Council nominating car space numbers based on an overall development scenario.	N/A
	A variation to the minimum number of car spaces required will be considered on merit where such variation can be justified based on an analysis drawn from survey data for similar development uses or alternate use of an existing development or in a case of Avalon, Newport and Mona Vale Commercial Centres, the time of operation of the business and availability of adjacent carparking facilities.	N/A
	Newport Commercial Centre	N/A
	In the Newport Commercial Centre, no on-site parking is required for lots with vehicular access solely from Barrenjoey Road and with a street frontage width of less than 18 metres.	N/A
	Parking Requirements on Steeply Sloping Sites	N/A
	On steeply sloping sites, car parking solutions may need to be negotiated for each individual site.	N/A
	The range of possible car parking solutions is outlined below:	N/A
	<ul style="list-style-type: none"> The provision of suspended or rooftop car parking to provide direct access from the road; and/or Shared vehicular access with adjoining properties may be acceptable where there is a mutual agreement. 	N/A
	The provisions for car parking on the steepest sloping sites may be waived, subject to the merit consideration for each case.	N/A
	Parking Requirements on Sites with High	N/A

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	<p><u>Environmental Value</u></p> <p>On sites with high environmental value, carparking solutions may need to be negotiated for each individual site. N/A</p>
	<p><u>Alternative Design</u></p> <p>The design of off-street parking facilities may alternatively be in accordance with the current edition of the following Australian standard based on turning paths for a B85 vehicle: N/A</p> <ul style="list-style-type: none"> Australian Standard AS/NZS 2890.1-2004: <i>Parking Facilities – Part 1: Off-Street Car Parking</i>. N/A
	<p>B6.5. Internal Driveways</p> <p>N/A</p>
	<p><u>Approval for works on the public road reserve under Section 138 of the Roads Act 1993</u></p> <p>N/A</p> <p>Applicants will be required to obtain approval under Section 138 of the <i>Roads Act 1993</i>, providing authorisation for works on the main road to construct an Access Driveways and associated structures located on a public road reserve except in the case for a Dwelling House where there is existing kerb and gutter and the proposed driveway is of slab or paving on ground construction requiring minimal alteration of the existing ground level. N/A</p> <p>The issue of the approval for works on a public road reserve to be undertaken by the Applicant, will be subject to development consent for the adjacent land being issued by the Council. N/A</p>
	<p><u>Egress from an Access Driveway</u></p> <p>N/A</p> <p>All Access Driveways with access to a Main Road shall be designed to ensure vehicles enter and leave in a forward direction. N/A</p>
	<p><u>Access to Alternative Public Road</u></p> <p>N/A</p> <p>An Access Driveway from allotments adjoining a Main Road is not permitted where alternative access to a local road is available or can be made available via a right-of-way or easement. N/A</p>
	<p><u>Access Driveways in Newport Commercial Precinct and Mona Vale Commercial Precinct</u></p> <p>N/A</p> <p>An Access Driveway from allotments adjoining a Main Road in the Newport Commercial Precinct and Mona Vale Commercial Precinct is not permitted onto the Main Road where alternative access to a local road is available or can be made available via a right-of-way or easement. N/A</p> <p>The number of Access Driveways is to be minimised within the Commercial Precincts to enhance the pedestrian amenity. Access Driveways are to be combined with adjoining allotments where practical. N/A</p> <p>Access Driveways for allotments adjoining a Main Road providing access for service vehicles to loading docks are not permitted onto the Main Road. N/A</p>
	<p>Variations</p> <p>N/A</p>
	<p><u>Egress from an Access Driveway</u></p> <p>N/A</p> <p>Egress from an Access Driveway in the reverse N/A</p>

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	<p>Requirement</p> <p>direction where allotments front a Main Road where the traffic volumes are low may be considered on a merit based consideration.</p> <p>Compliance</p>
	<p><u>Access to Alternative Public Road</u> N/A</p> <p>Where access via the alternative public road is not considered suitable due to steep grades, safety or other access constraints, consideration on a merit basis may be given to waiving this requirement.</p>
	<p>B6.6. On-Street Parking Facilities N/A</p>
	<p><u>On-Street Parking Facilities</u> N/A</p> <p>On-street parking facilities may be provided within the public road reserve or proposed public road reserve adjacent to the development site, either as additional parking facilities to enhance the development or as part of the development to offset the on-site parking requirements, both of which are subject to a merit based consideration. On-street parking facilities must not reduce similar opportunities for adjacent development sites.</p>
	<p><u>Design Requirements</u> N/A</p> <p>The design of all On-street Parking Facilities shall be in accordance with the current edition of Australian Standard:</p> <ul style="list-style-type: none"> • Australian Standard AS/NZS 2890.5-1993 - <i>Parking Facilities On-Street Parking</i> except as qualified in this control. N/A
	<p><u>On-Street Parking Facilities Requirements</u> N/A</p> <p>On-street parking facilities must also comply with the following requirements:</p> <ul style="list-style-type: none"> • A fully constructed and sealed road pavement with kerb and street drainage is to be provided to accommodate on-street parking facilities. N/A • A footpath on public road reserve is to be provided around the on-street parking facilities for public access along the road and to the development. N/A • Landscaping of the area adjacent to the on-street parking facilities must be provided with maximum retention of native vegetation and trees in the public road reserve. N/A • On-street parking facilities are to provide for the safety and amenity of pedestrians, vehicles and other transport modes. N/A • Adequate street lighting, signs and traffic facilities are to be provided. N/A
	<p><u>On-Street Parking Facilities and Public Utilities Costs</u> N/A</p> <p>The cost for on-street parking and adjustment of any utility services required to service the development is the responsibility of the Applicant.</p>
	<p>Variations N/A</p>

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	<u>On-Street Parking on a Main Road</u>	N/A
	On-street parking facilities may be permitted on a Main Road subject to low traffic volumes and Roads and Maritime Services authorisation.	N/A
	B6.7. Transport and Traffic Management	
	<u>Transport and Traffic Planning</u>	N/A
	Where development generates pedestrian, cyclist, traffic and transport requirements in excess of the capacity of the existing road and transport network, the capacity of the surrounding public infrastructure and transport network is required to be upgraded to at least match the additional demands generated by the development.	N/A
	Any improvement works external to the development site, required to ensure the development complies with this control, must be provided as part of the development at the full cost to the applicant.	N/A
	All traffic assessments are to be undertaken in accordance with the Roads and Maritime Services <i>Guidelines for Traffic Generating Developments</i> or similar guidelines.	N/A
	All proposed traffic facilities must comply with the Roads and Maritime Services and/or relevant Australian Standards.	N/A
	An assessment of the impact of traffic generated by the proposed development on the local street system must be undertaken.	N/A
	Adequate vehicular entrances to and exits from the site are to be provided so that vehicles using those entrances and exits will not endanger persons using adjoining roads.	N/A
	Adequate space is to be provided within the site of the building or development for the loading, unloading or fueling of vehicles, and for the picking up and setting down of passengers.	N/A
	<u>Traffic and Transport Facilities and Public Utilities Costs</u>	N/A
	The cost for traffic and transport facilities and adjustment of any utility service is the responsibility of the Applicant.	N/A
	B6.8. Access Driveways and Works on the Public Road Reserves on or Adjacent to a Commercial Centre Primary Road	
	<u>Access to Alternative Public Road</u>	N/A
	An Access Driveway from allotments adjoining Avalon Parade and Old Barrenjoey Road in the Avalon Commercial Precinct and Bungan Street, Waratah Street, and Park Street in the Mona Vale Commercial Precinct is not permitted onto either Avalon Parade, Old Barrenjoey Road, Bungan Street, Waratah Street, or Park Street where alternative access to a local road is available or can be made available via a right-of-way or easement.	N/A
	The number of Access Driveways is to be minimised within the Commercial Precincts to enhance the pedestrian amenity. Access Driveways are to be combined with adjoining	N/A

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	<div>Requirement</div> <div>Compliance</div>
	allotments where practical.
	<p>Access Driveways for allotments adjoining Avalon Parade and Old Barrenjoey Road in the Avalon Commercial Precinct providing access for service vehicles to loading docks are not permitted onto Avalon Parade and Old Barrenjoey.</p>
	<p>Access Driveways for allotments adjoining Bungan Street, Waratah Street, and Park Street in the Mona Vale Commercial Precinct providing access for service vehicles to loading docks are not permitted onto Bungan Street, Waratah Street, and Park Street.</p>
	<p>B6.11. Access Driveways, Internal Driveways and Off-Street Parking Requirements - Dwelling - Scotland Island</p>
	<p><u>General</u></p>
	<p>The use of vehicles on Scotland Island is discouraged due to the environmental damage to the public roads.</p>
	<p><u>On-Site Carparking Requirements</u></p>
	<p>Where proposed, the maximum number of vehicle parking spaces provided for on-site parking is one space.</p>
	<p><u>Internal Driveway</u></p>
	<p>An internal driveway where proposed, is to be designed and constructed to provide safe access, reduce the impacts of stormwater run-off to any public land and provide a high value visual amenity.</p>
	<p>The internal driveway shall be designed and constructed to a minimum practical impervious pavement width to accommodate access and turning movements to minimise the area of impervious pavement within the land. Track style driveways or driveways of natural pavement materials are encouraged.</p>
	<p><u>Access Driveway in Public Road Reserve</u></p>
	<p>The access driveway where proposed, is to fit within the natural topography linking to the adjacent roadway such as not to interfere with road table drain. The access driveway may be constructed in natural materials, concrete or textured materials in dark or earthy tones. Driveway location to maximise retention of native vegetation, trees in particular, in the public road reserve.</p>
	<p>Access driveway profiles shall conform to the profiles as illustrated in Appendix 10 - Driveway Profiles.</p>
	<p>Part C - Development Type Controls</p>
	<p>Section C1 - Design Criteria for Residential Development</p>
	<p>C1.12. Waste and Recycling Facilities</p>
	<p>All development that is, or includes, demolition and/or construction, must comply with the appropriate sections of the Waste Management Guidelines and all relevant Development Applications must be accompanied by a Waste Management Plan.</p>

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Subdivision - Access Driveways and Off-Street Parking Facilities</td><td>N/A</td></tr> <tr> <td><u>(i) Off-Street Parking Requirements</u></td><td>N/A</td></tr> <tr> <td>The design of each individual lot created within the subdivision is to provide for off street parking facilities compatible with the proposed development uses for that lot.</td><td>N/A</td></tr> <tr> <td><u>(ii) Access Driveways (ie; driveway crossings)</u></td><td>N/A</td></tr> <tr> <td>A safe and functional access driveway must be designed and constructed from the road edge/kerb and gutter to the lot boundary for each individual lot within the subdivision as part of the subdivision works.</td><td>N/A</td></tr> <tr> <td>Only one driveway access to a public road is permitted for each lot.</td><td>N/A</td></tr> <tr> <td><u>(iii) Internal Driveways</u></td><td>N/A</td></tr> <tr> <td>The design of each individual lot created within the subdivision is to provide for an internal driveway compatible with the proposed development uses for each individual lot.</td><td>N/A</td></tr> <tr> <td>Where an internal driveway is located within a 'right of way' or proposed 'right of way', the internal driveway is to be designed and constructed as part of the subdivision works.</td><td>N/A</td></tr> <tr> <td>Variations</td><td>N/A</td></tr> <tr> <td><u>Access Driveways</u></td><td>N/A</td></tr> <tr> <td>Council may permit a second driveway access to a public road if the street frontage to the road is 30m or more, or where rear access to the lot is provided.</td><td>N/A</td></tr> <tr> <td><u>Internal Driveways</u></td><td>N/A</td></tr> <tr> <td>Consideration will be given on a merit basis where the applicant is proposing not to construct the internal driveway located within a right of way or proposed right of way as part of the subdivision works phase.</td><td>N/A</td></tr> <tr> <td>C4.3. Subdivision - Transport and Traffic Management</td><td>N/A</td></tr> <tr> <td>Where development generates pedestrian, traffic and transport requirements in excess of the capacity of the road and transport network, the capacity of the surrounding public infrastructure</td><td>N/A</td></tr> </table>	Requirement	Compliance	C1.18. Car/Vehicle/Boat Wash Bays		A designated wash bay is to be incorporated on the site where developments have more than ten units.	One (1) car wash bay is proposed. Complies	The wash bay must be designed and constructed so as to not allow polluted waters to enter the storm water drain and storm waters do not enter the sewer.	Capable of compliance at the Construction Certification stage	Variations	N/A	Where the use of vehicles or boats is not part of the activity associated with the proposed development this control does not apply.	N/A	Section C4 - Design Criteria for Subdivision	N/A	C4.1. Subdivision - Protection from Hazards	N/A	C4.2. 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The design of each individual lot created within the subdivision is to provide for off street parking facilities compatible with the proposed development uses for that lot.	N/A																																																
<u>(ii) Access Driveways (ie; driveway crossings)</u>	N/A																																																
A safe and functional access driveway must be designed and constructed from the road edge/kerb and gutter to the lot boundary for each individual lot within the subdivision as part of the subdivision works.	N/A																																																
Only one driveway access to a public road is permitted for each lot.	N/A																																																
<u>(iii) Internal Driveways</u>	N/A																																																
The design of each individual lot created within the subdivision is to provide for an internal driveway compatible with the proposed development uses for each individual lot.	N/A																																																
Where an internal driveway is located within a 'right of way' or proposed 'right of way', the internal driveway is to be designed and constructed as part of the subdivision works.	N/A																																																
Variations	N/A																																																
<u>Access Driveways</u>	N/A																																																
Council may permit a second driveway access to a public road if the street frontage to the road is 30m or more, or where rear access to the lot is provided.	N/A																																																
<u>Internal Driveways</u>	N/A																																																
Consideration will be given on a merit basis where the applicant is proposing not to construct the internal driveway located within a right of way or proposed right of way as part of the subdivision works phase.	N/A																																																
C4.3. Subdivision - Transport and Traffic Management	N/A																																																
Where development generates pedestrian, traffic and transport requirements in excess of the capacity of the road and transport network, the capacity of the surrounding public infrastructure	N/A																																																

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Subdivision – Public Roads, Footpath and Streetscape</td><td>N/A</td></tr> <tr> <td><u>Proposed public roads within the subdivision</u></td><td>N/A</td></tr> <tr> <td>Where the proposed public roads within the subdivision are to be dedicated to the Council, the design and construction of the road pavement, vertical kerb and gutter, footpaths (minimum 1.5m width) or cycleways (minimum 2.1m width), street lighting and landscaping to service the lots to be created shall be for the full width between the proposed lot boundaries within the subdivision land created as a road reserve by subdivision. The design and construction of works are to be funded by the applicant.</td><td>N/A</td></tr> <tr> <td><u>Subdivision to be created as a Community Title</u></td><td>N/A</td></tr> <tr> <td>Where a subdivision is to be created as a community title, allowing full public access, the design and construction of the road and pedestrian networks shall provide for full pedestrian and vehicular access and on-road parking as a public road network.</td><td>N/A</td></tr> <tr> <td><u>Subdivision adjoining a public road reserve</u></td><td>N/A</td></tr> <tr> <td>Where the subdivision adjoins a public road reserve, the subdivision shall include the design and construction of the perimeter road for half width construction including road pavement, vertical kerb and gutter, footpaths or cycleways (minimum 1.5m width or minimum 2.1m width where a cycleway is required), street lighting and landscaping, for full width of the development site frontage to all public road reserves and shall include any intersection to provide access the subdivision all at the full cost to the applicant.</td><td>N/A</td></tr> <tr> <td>Variations</td><td>N/A</td></tr> <tr> <td>Where the landscaping or infrastructure in the public road reserve currently exists to Council standard, the requirements of this control in respect to the specific landscaping or infrastructure item need not apply.</td><td>N/A</td></tr> </table>	Requirement	Compliance	and transport network is required to be upgraded to at least match the additional demands generated by the development.		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Subdivision – Landscaping of the Existing and Proposed Public Road Reserve Frontage to Subdivision Lots</td><td data-bbox="879 517 1439 618">N/A</td></tr> <tr> <td colspan="2" data-bbox="327 618 1439 685">Part C6 – Design Criteria for Warriewood Valley Release Area</td></tr> <tr> <td colspan="2" data-bbox="327 685 1439 719">C6.1. Integrated Water Cycle Management</td></tr> <tr> <td colspan="2" data-bbox="327 719 1439 797">C6.2. Natural Environment and Landscaping Principles</td></tr> <tr> <td colspan="2" data-bbox="327 797 1439 864">C6.3. Ecologically Sustainable Development, Safety and Social Inclusion</td></tr> <tr> <td colspan="2" data-bbox="327 864 1439 931">C6.4. 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Item	Report
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	<p><i>exceeding a length of 80m located within a Sector, buffer area or development site.</i></p> <ul style="list-style-type: none"> • Sector Entry Streets -Primary entrance street to a Sector, buffer area or development site.
	<p>Council shall not grant consent to development on land adjoining Pittwater Road or Mona Vale Road if the development proposes vehicular access to Pittwater or Mona Vale Roads.</p>
	<p>The design and construction of the road and pedestrian network shall, regardless of the form of subdivision and future ownership of the road(s), provide full pedestrian and vehicular access and on-street parking and function as a public road network.</p> <p>Full pedestrian and vehicular access is provided to each lot.</p> <p>On-street parking provision is not affected on Lorikeet Grove as it is a local road which does not require a separate on-street parking lane.</p> <p>Loss of on-street parking provision on Warriewood Road (north of Macpherson Street) will be minimised as much as possible. The four (4) adjoining lots will have two (2) adjacent driveways which will ensure maximum on-street parking opportunities for the public.</p> <p>Satisfactory</p>
	Design Requirements
	<p>A single access point to each sector, buffer area or development site serviced by a roundabout or other on-street traffic management facilities (if necessary) is to be provided with vehicular access to individual lots within the subdivision being from internal roads within that subdivision. Internal roads linking separate existing sites are to be provided.</p> <p>A single access point has been provided to the proposed development.</p> <p>Single access points to each of the separate lots will be proposed in the future.</p> <p>Access driveways located on Lorikeet Grove links the subject site to Warriewood Road (a local collector road) through Pheasant Place and Bubalo Street.</p> <p>Complies</p>
	<p>The street pattern must provide direct, safe, and convenient pedestrian and cyclist access from housing and employment areas to public transport stops and to areas of open space, services and other facilities. Connectivity within the sector, buffer area or development site is required to ensure the majority of dwellings are within walking distance to bus stops.</p> <p>Not within the scope of this assessment</p>
	<p>The street layout and design is to consider opportunities for the retention of existing significant trees within the road reserve where possible. Trees may be incorporated with small, informal spaces that provide opportunities for 'greening of the street'.</p> <p>Not within the scope of this assessment</p>
	<p>All roads in Warriewood Valley must be designed with traffic calming devices to lower vehicle speeds, which may incorporate pavement treatment and enhanced landscaping. The provision of safe crossing areas is required. All roads and any traffic calming devices in Macpherson Street, Warriewood Road, Ponderosa Parade, Garden Street and Boondah Road must be able to cater for ultra-low floor articulated buses. The road system is to cater for adequate vehicular access for waste removal services.</p> <p>Traffic calming devices will not be required at Lorikeet Grove as it is not an arterial or sub-arterial road. It is a local road which will not carry a large number of vehicles.</p> <p>The four (4) lots with the adjacent driveways on Warriewood Road (north of Macpherson Street) will not require traffic calming devices. As only one (1) dwelling house is proposed on each of the four (4) lots, there will be a low number of trips entering and exiting Warriewood Road which will ensure minimal traffic impacts.</p> <p>Complies</p>
	<p>Driveway locations on Sub-arterial Roads,</p> <p>No on-street parking opportunities will be lost on</p>

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	<div> <div>Requirement</div> <div>Compliance</div> </div>
	<div> <div>Collector, Local and Access Streets are to consider the impact on street trees and on street parking opportunities.</div> <div>Lorikeet Grove due to the proposed driveway locations.</div> </div>
	<div> <div>Loss of on-street parking provision on Warriewood Road (north of Macpherson Street) will be minimised as much as possible. The four (4) adjoining lots will have two (2) adjacent driveways which will ensure maximum on-street parking opportunities for the public.</div> <div>Satisfactory.</div> </div>
	<div> <div>Lane ways</div> <div>N/A</div> </div>
	<div> <div>For residential lots with double frontages, laneways should be used to provide rear loaded access. Laneways are not suitable for single frontage lots.</div> <div>N/A</div> </div>
	<div> <div>The design, dimensions and materials of the laneway should promote a slow speed driving environment, distinctively different from a street. Laneways are to be provided with a suitable level of passive surveillance.</div> <div>N/A</div> </div>
	<div> <div>Garbage collection areas are to be incorporated into the design of laneways to ensure access along the laneway is not hindered during garbage collection periods. Garbage bins are to be located in designated collection areas only during the collection period. The garbage collection area(s) is not to be used for parking or storage.</div> <div>N/A</div> </div>
	<div> <div>Temporary Roads</div> <div>N/A</div> </div>
	<div> <div>Where access arrangements have not been constructed in a timely manner, the construction of temporary roads may be permitted to enable an isolated property to develop ahead of the surrounding roads being constructed to facilitate direct access onto the existing public road network. In these circumstances temporary roads are permitted subject to the following criteria being satisfied:</div> <div>N/A</div> </div>
	<div> <div> <ul style="list-style-type: none"> A traffic report being prepared by an appropriately qualified professional demonstrating how the temporary road provides for the safe usage of all road users including service and passenger vehicles, pedestrians and cyclists; </div> <div>N/A</div> </div>
	<div> <div> <ul style="list-style-type: none"> The final road configuration (permanent road) for the development is consistent with the applicable specifications and cross section within the <i>Warriewood Valley Roads Masterplan</i>; </div> <div>N/A</div> </div>
	<div> <div> <ul style="list-style-type: none"> The temporary road is to cater for no greater than 300 vehicles per day, with a minimum carriageway width of 6m provided to cater for two-way traffic; </div> <div>N/A</div> </div>
	<div> <div> <ul style="list-style-type: none"> The safety of all road users including service and passenger vehicles; pedestrians and cyclists is not compromised by the temporary road; </div> <div>N/A</div> </div>
	<div> <div> <ul style="list-style-type: none"> Engineering design details are submitted for the temporary road, including details of any necessary water management, drainage and service utility provision requirements; </div> <div>N/A</div> </div>
	<div> <div> <ul style="list-style-type: none"> Where the development of adjoining </div> <div>N/A</div> </div>

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	<p>development sites results in them being temporarily isolated from formal and final road infrastructure, arrangements between developers of these sites is to result in temporary roads being located so that a full width temporary road can be provided i.e. the temporary road on each development site should be adjacent to the other temporary road; and</p> <ul style="list-style-type: none"> The temporary road being removed once direct access to the newly completed public road network has been achieved.
	<div>Half Width Road Construction</div> <div>N/A</div>
	<p>Due to the narrow width of some Sectors, Buffer Areas or Development Sites in Warriewood Valley, it may be necessary for roads to be constructed across the boundary of two adjoining properties.</p>
	<p>Where a road is to be constructed along the boundary of two properties, the partial/half width construction of the road is permitted subject to the following criteria being satisfied:</p>
	<ul style="list-style-type: none"> a traffic report is submitted with the application prepared by an appropriately qualified professional demonstrating how the partial road proposal provides for the safe usage of all road users including service and passenger vehicles, pedestrians and cyclists; N/A a minimum carriageway width of 6m is provided to cater for two-way traffic; N/A the development potential of all adjoining allotments is maintained. The proposed development shall not render any allotment of future redevelopment opportunity undevelopable in the event that this allotment does not meet the development standards set out in Pittwater LEP 2014 or the controls set out in this DCP; N/A the safety of all road users including service and passenger vehicles, pedestrians and cyclists is not compromised by the partial road construction; N/A engineering drawings are provided with the application for the partial and full width of the road, including details of any necessary water management, drainage and service utility provision requirements; N/A where the road classification requires a footpath to be provided, the footpath is to be provided along the first completed side of the road; N/A reciprocal right of access is afforded to the adjoining property(s); and N/A the final road configuration is consistent with the applicable specifications and N/A

Item	Report	Compliance
	<p>Requirement</p> <p>cross section within theWarriewood Valley Roads Masterplan, as amended.</p>	
	<p>Subdivision adjoining an existing public road</p>	
	<p>Where the subdivision adjoins an existing public road reserve, plans are to be submitted for the intersection treatment to the public road reserve and any works within the public road reserve including road pavement, vertical kerb and gutter, footpaths and cycle ways (minimum 1.5m wide footpath or a minimum 2.1m wide where a cycle way is required).</p>	Complies
	<p>All works associated with the intersection treatment (except those identified under the Warriewood Valley Section 94 Development Contributions Plan as amended) and any works within the public road reserve are to be carried out at full cost to the developer.</p>	Noted
	<p>Pedestrian and Cyclist Network</p>	<p>Allowances have been made for the pedestrian pathway/cycleway which will connect to the adjoining developments. The 2.5 m pathway follows the southern side of Lorikeet Grove until it deviates. The pathway will then run adjacent to the western side boundary where it will connect with the existing pathway network at the rear of 53 Warriewood Road.</p> <p>Refer to the architect's drawing attached in the 'Appendix' of this report.</p>
	<p>A pedestrian and cyclist network is to be provided in accordance with theWarriewood Valley Landscape Masterplan & Design Guidelines (Public Domain).</p>	Complies
	<p>The pedestrian/cycleway link should be located off road, where practical. Where a pedestrian/cycleway link is located in:</p>	Complies
	<ul style="list-style-type: none"> • A public reserve, the minimum width is 2.5 metres; and 	Complies
	<ul style="list-style-type: none"> • The road verge adjacent to the road carriageway, the minimum width is 2.1 metres. 	Complies
	<p>The location of the pedestrian path/cycleway is variable within the creekline corridor to ensure connectivity with existing sections of the path and facilitate retention of vegetation so long as the pedestrian path/cycleway is sited above the 20% AEP flood level to reduce the incidence of flood damage to a manageable level and achieve a satisfactory safety level for regular use. The alignment of the pedestrian/cycleway network must provide adequate sightlines for cyclists.</p>	
	<p>Where a pedestrian/cyclist link is identified within or adjoining a sector, buffer area or development site, the applicant is to identify on their development drawings the location for this infrastructure.</p>	
	<p>The pedestrian/cycleway network must be accompanied by appropriate landscaping and vegetation. Details of the proposed landscaping and vegetation must accompany any development application.</p>	
	<p>Reference should be made to Warriewood Valley Landscape Masterplan & Design Guidelines</p>	Noted

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	<p>(Public Domain) for further information.</p>
	<p>Approval for works on the public road reserve under Section 138 of the Roads Act 1993</p>
	<p>Any new road, regardless of ownership, connecting to the existing public road network, will require separate approval from Pittwater Council as the Roads Authority under the <i>Roads Act 1993</i>.</p>
	<p>Access Driveways</p>
	<p>Driveways shall be designed and constructed to:</p>
	<ul style="list-style-type: none"> • provide safe access and reduce the impacts of storm water run-off to any public land;
	<ul style="list-style-type: none"> • the minimum practical pavement width needed to facilitate access and turning movements; and
	<ul style="list-style-type: none"> • minimise the area of impervious pavement within the land.
	<p>The cost for Access Driveways construction and maintenance and adjustment of any utility service is the responsibility of the Applicant.</p>
	<p>Access Driveway Location</p>
	<p>Access Driveways shall be designed and located to provide adequate sight distance to maximise pedestrian and vehicular safety as follows:</p>
	<ul style="list-style-type: none"> • minimum clear distance along the road frontage edge of kerb of 50 metres for 40 and 50 km/h speed limit roads measured from a point on the centre line of the driveway 2.5 metres from the face of kerb; and
	<ul style="list-style-type: none"> • minimum clear distance along the frontage foot way of 5 metres, measured from a point on the centre line of the driveway 2.5 metres from the edge of foot way area closest to property boundary.
	<p>The location of Access Driveways is to maximise the retention of trees and native vegetation in the public road reserve.</p>
	<p>Access Driveways located in front of adjoining properties will be considered on merit, based on Council's consideration of the site constraints.</p>
	<p>Ancillary structures within the public road reserve may be considered where the intended purpose is to structurally support the access driveway only however, encroachment into the road reserve is to be minimised. Suspended driveways must not use the existing road structure for support.</p>
	<p>Access Driveway design, widths and profiles</p>
	<p>The maximum width of an Access Driveway for dwelling houses, dual occupancies and secondary dwellings shall be as follows:</p>

Item	Report										
	Requirement	Compliance									
	<table><tr><th>Distance Building Line to Boundary</th><th>Minimum Width at Boundary</th><th>Width at Kerb</th></tr><tr><td>Nil to 3.5m</td><td>3.0m</td><td>Width at the boundary plus 0.5m</td></tr><tr><td>Greater than 3.5m to 6.5m</td><td>4.0m</td><td>4.5m</td></tr></table>	Distance Building Line to Boundary	Minimum Width at Boundary	Width at Kerb	Nil to 3.5m	3.0m	Width at the boundary plus 0.5m	Greater than 3.5m to 6.5m	4.0m	4.5m	
Distance Building Line to Boundary	Minimum Width at Boundary	Width at Kerb									
Nil to 3.5m	3.0m	Width at the boundary plus 0.5m									
Greater than 3.5m to 6.5m	4.0m	4.5m									
	<p>Access Driveway profiles shall conform to the profiles as illustrated in Appendix 10 – Driveway Profiles.</p> <p>The Access Driveway is to be structurally adequate for its intended use. All structural elements within the road reserve must be certified by a Structural Engineer. In addition, where the land is identified on the Landslip Hazard Map, the design of all structural elements must satisfy the Landslip Hazard Controls.</p> <p>Access Driveways are to be in accordance with:</p> <ul style="list-style-type: none">Australian Standard AS/NZS 2890.1-2004: <i>Parking Facilities Part 1: Off-Street Car Parking</i>.Australian Standard AS/NZS 2890.2-2002: <i>Parking Facilities – Part 2: Off-Street Commercial Vehicle Facilities</i> except as qualified in this control. <p>Turning movements are to be in accordance with the turning paths for a B85 vehicle (Australian Standard AS/NZS 2890.1-2004: <i>Parking Facilities – Part 1: Off-Street Car Parking</i>).</p> <p>Provision is to be made for vehicles to enter and leave the site in a forward direction, where:</p> <ul style="list-style-type: none">the internal driveway grade exceeds 1:4 (V:H);the land abuts a roadway subject to high pedestrian use (e.g. School, Commercial Centre); and/ordriveways are more than 30m in length. <p>Access Driveways are to match in with adjacent constructed footpaths or alternatively adjacent constructed footpaths are to be adjusted to provide a continuous surface with no trip points with a maximum 1:14 (V:H) transition.</p>	<p>Complies with AS/NZS 2890.1:2004 and AS 2890.2-2018</p> <p>Complies with AS/NZS 2890.1:2004 and AS 2890.2-2018</p> <p>Complies with AS/NZS 2890.1:2004</p> <p>Complies</p> <p>Complies</p> <p>Complies</p>									
	<p>Access Driveway for Service Vehicles to Loading Dock</p> <p>For developments on land zoned B7 Business Park and IN2 Light Industrial, separate entry/exit vehicular access is required with Access Driveways for entry and exit separated by a minimum distance of 2 metres.</p> <p>Access Driveways providing access for service vehicles to loading docks must be separated from access used by the general public for access to public parking areas and where practical, be located on a rear public road frontage providing separation from pedestrian activity.</p>	<p>N/A</p> <p>The width of the lot available for provision of vehicular access is not sufficient for separated access for trucks and cars and therefore a two-lane access driveway is provided. It must be noted that the proposed development is not intended for access by general public but only by residents and their visitors. Most of these people will be very familiar with the access conditions. The only regular services vehicles will be waste collection trucks. The number of service vehicle movements and hence, the frequency of possible conflicts with cars will be very low. The proposed</p>									

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<p>waste collection area is separated from the general vehicular access ramp to the car park and from the pedestrian path.</p> <p>Safety measures to prevent pedestrians from entering the waste collection point are also proposed. The safety measures are listed below.</p> <ul style="list-style-type: none"> • Lights will be places on both sides of the waste collection point to alert pedestrians, • An alarm will start ringing when a waste collection vehicle will head towards the waste collection point or reverse from it and • Signs will be placed on both sides of the waste collection point to warn pedestrians. The signs are proposed to read 'CAUTION: WASTE COLLECTION VEHICLE MANOEUVRING' <p>Satisfactory.</p> <p>Where Access Driveways are located on the same frontage, the minimum distance between an Access Driveway for service vehicles and an Access Driveway for the general public shall be 5 metres from inside edge to inside edge of the Access Driveways.</p>	<p>N/A</p>
Access Driveway Construction and Finishes	
All Access Driveways shall be constructed with an impervious pavement and gutter crossing construction.	Capable of compliance at the Construction Certification stage
Gutter crossings are to be in plain concrete.	Capable of compliance at the Construction Certification stage
Access Driveways are to be either in plain concrete or a cosmetic finish consisting of concrete, asphaltic concrete or paver construction in dark earthy tones, (Cosmetic Access Driveways on a public road reserve are subject to a Deed of Agreement releasing Council in respect to liability and damage to the driveway by any means).	Capable of compliance at the Construction Certification stage
Where retaining walls and structures are visible from a public place, preference is given to the use of textured finishes of dark earthy tones or sandstone-like finishes.	Capable of compliance at the Construction Certification stage
C6.5. Utilities, Services and Infrastructure Provision	
C6.6. Interface to Warriewood Wetlands or Non-residential and Commercial/Industrial Development	
C6.7. Landscape Area (Sector, Buffer Area, or Development Site)	
C6.8. Residential Development Subdivision Principles	
Subdivision Principles	
The design of the subdivision should be generally consistent with the following key principles:	<ul style="list-style-type: none"> • The subdivision layout is to incorporate adequate pedestrian, cycle and vehicle links to the road network, public <p>Complies</p>

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	<p>transport nodes, pedestrian/cyclist network and public open space areas.</p> <ul style="list-style-type: none"> Roads should adjoin creek line corridors and open space areas to facilitate surveillance, provide access to and prevent isolation and degradation of these spaces. Where it is not possible to locate a road along creek line corridors and open space areas, Residential Flat Buildings or Multi Dwelling Housing products designed to facilitate casual surveillance should adjoin these areas. A single access point to each sector, buffer area or development site serviced by a roundabout, if necessary, or other on-street traffic management facilities is to be provided, with vehicular access to individual lots within the subdivision being from internal roads within that subdivision. The number of driveway entrances from any sector, buffer area or development site onto major roads in Warriewood Valley including Garden Street, Macpherson Street, Forest Road, Orchard Street and Warriewood Road is to be minimised. Opportunities for shared driveways maximise the on-street parking provision and create a more attractive street scape. Lots must have the appropriate area, dimensions and shape to accommodate the housing product proposed as well as canopy trees and other vegetation, a private outdoor open space, rainwater tanks, vehicular access and onsite parking. Continuous runs of garages fronting lane ways are to be avoided (i.e. break up through pairing, setback variation etc.) <p>Lots should be rectangular. Where lots are irregular in shape, they are to be large enough and orientated appropriately to enable a future dwelling to meet the controls in this DCP.</p> <p>In instances where the permitted maximum dwelling yield for the sector, buffer area or development site is to be achieved, the retention of existing dwellings on large lots greater than 500m², particularly along Warriewood Road, is not desired as it is not in keeping with the desired future character and limits the ability to achieve the adopted density. Lots suitable for housing typologies that reflect the streetscape character of existing housing on the opposite side of Warriewood Road, for example dual occupancies (attached or detached), should be sited fronting Warriewood Road.</p> <p>Lots less than 225m² in size or less than 9m wide are to be rear loaded, except where it can be demonstrated that:</p> <ul style="list-style-type: none"> Rear access is not practical due to the size or shape of the development site; or <p>Complies in terms of vehicular access being from internal roads within that subdivision for lots with frontages to Lorikeet Grove.</p> <p>Vehicular access to lots with frontages to Warriewood Road can only be made through two (2) sets of two (2) adjacent driveways.</p> <p>Two (2) adjacent driveways have been proposed for the four (4) lots with a frontage to Warriewood Road.</p> <p>Complies</p> <p>Complies with regard to vehicular access and parking</p> <p>N/A</p>

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	<ul style="list-style-type: none"> There will be no adverse impact on streetscape amenity and on-street parking. <p>The minimum width of a rear loaded lot is to be 4.5 metres.</p> <p>Where dwellings front two roads, dwellings are to present to the higher street classification and are to reflect the streetscape character of the higher street classification. Appropriate presentation to the higher street classification is to include a front door, front entry articulation such as a porch, letterbox and direct pedestrian access to the higher street classification from the dwelling. A front building setback is also applicable.</p>
	Street Network
	<p>The design of the internal street network should:</p> <ul style="list-style-type: none"> Establish a traditional grid street network pattern to facilitate walking and cycling and enable direct local vehicle trips; Complies Encourage a low speed traffic environment; Complies Optimise solar access opportunities for dwellings; Respond to the natural site topography to minimise cut and fill; Seek to retain significant trees or areas of bushland; and Provide frontage to and maximise surveillance of open space areas and riparian corridors.
	<p>Cul-de-sacs may be included only in limited circumstances such as where access-denied roads or shallow lots caused by irregular shaped areas exist and where the applicant can demonstrate that the outcomes of the control can be satisfied. N/A</p>
	Subdivision of existing small and narrow lots
	<p>Due to the dimensions and size of some sectors, buffer areas and development sites in Warriewood Valley, it may be difficult to achieve quality urban design outcomes and a mix of dwelling types. Narrow lots with single street frontages, in particular, are also likely to have difficulty in achieving access without compromising lot depth.</p> <p>Through site amalgamations however there may be opportunities to reduce unnecessary road duplication and deliver better quality urban design outcomes.</p> <p>Sectors, buffer areas and development sites with an effective lot width less than 60 metres should ideally pursue opportunities for site amalgamation to facilitate orderly planning and development outcomes and the efficient use of land.</p>
	Lot Diversity Requirements
	<p>A range of residential lot types (varying in area, frontage, depth and access) should be provided</p>

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	<p>the burdened lot and shall include a notation identifying the potential for a building to have a zero lot line;</p> <ul style="list-style-type: none"> the burdened lot is to include an easement for access and maintenance on the burdened boundary in accordance with the following: 900mm for single storey zero lot walls; or 1200mm for two storey zero lot walls; the easement is to enable servicing, construction and maintenance of the adjoining dwelling; the Section 88B instrument is to be worded so that Council is removed from any dispute resolution process between adjoining allotments; and No overhanging eaves, gutters or services (including rainwater tanks, hot water units, air conditioning units, downpipes, electrical conduits or the like) of the dwelling on the benefited lot will be permitted within the easement. <p>Allotments for attached and abutting dwellings are to be rear loaded, except where it can be demonstrated that rear access is not practical due to constraints arising from the shape or size of the development site.</p> <p>Where dwellings are proposed on lots with two street frontages (not corner lots), the dwellings are to present (have a street address) to the higher street classification and are to reflect the streetscape character of the higher street classification.</p> <p>The composition of attached/abutting dwellings needs to be determined at the subdivision stage to take into account the lot widths required in order for a 'break' to be provided.</p> <p>A 'break' (i.e. a larger lot width, an indentation in the dwelling with a width and depth of 1.5m on both levels, a housing product of a different width, a detached housing product) is to be provided between every 3 attached/abutting dwellings of the same lot width</p> <p>Where buildings are to be located on boundaries, retaining walls (as required) are to be built as part of the subdivision works. Details of the fill (depth, source and amount of fill material to be deposited) and retaining walls are to be submitted with the application.</p> <p>Corner lots are to be configured to allow the dwelling to address both street frontages as depicted in Figure 3 below. Multi-dwelling housing is a good example of a housing type that achieves this.</p>
	<p><u>Residential Flat Buildings and Multi-dwelling housing</u></p> <p>The minimum dimensions of a lot proposed to contain a residential flat building (but not multi dwelling housing) is 30 metres in any direction.</p>

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Residential Flat Buildings and Multi Dwelling Housing developments with 10 or more dwellings are to provide at least:

- 10% studio apartments/units;
- 10% 1 bedroom apartments/units; and
- 10% 2 bedroom apartments/units.

Variations

Where the subdivision proposal will result in the creation of less than 20 lots, compliance with the lot diversity requirements within this control will be considered on merit.

C6.9. Residential Land Subdivision Approval Requirements

The land subdivision approval process is to be consistent with the requirements of the table below:

Approval Pathway	Pathway 1: DA for subdivision	Pathway 2a: DA for subdivision and detached or abutting dwellings (Integrated Housing)	Pathway 2b: DA for subdivision and attached dwellings (Integrated Housing)
Application	Proposed lots equal to or greater than 225 square metres in area, and with a lot width equal to or greater than 9 metres.	Subdivision and dwelling construction involving detached or abutting dwellings on lots less than 225 square metres or on lots with a lot width less than 9 metres.	Subdivision and dwelling construction involving attached dwellings on lots less than 225 square metres or on lots with a lot width less than 9 metres
Plans required	Plan of Subdivision showing the building envelope for each lot is required. Plans of each dwelling are not required, as these will be included as part of any future Development Application or Complying Development Certificate.	Dwelling plans (floor plans, sections and elevations etc.) are required as part of an Integrated Housing proposal.	Dwelling plans (floor plans, sections and elevations etc.) are required as part of an Integrated Housing proposal.
Section 88B restriction on dwelling design	No	Yes – only approved dwelling can be built.	Yes – only approved dwelling can be built.
Timing of subdivision (registration of the subdivision with Land and Property Information)	Prior to approval of any land use including residential development.	Prior to the issue of a Construction Certificate for dwellings.	Prior to the issue of any Occupation Certificate (Interim or Final) for dwellings.

Pathway 1 – Application for subdivision only

If a Plan of Subdivision incorporating a Building Envelope Plan is provided with the Development Application, it must be in accordance with the following:

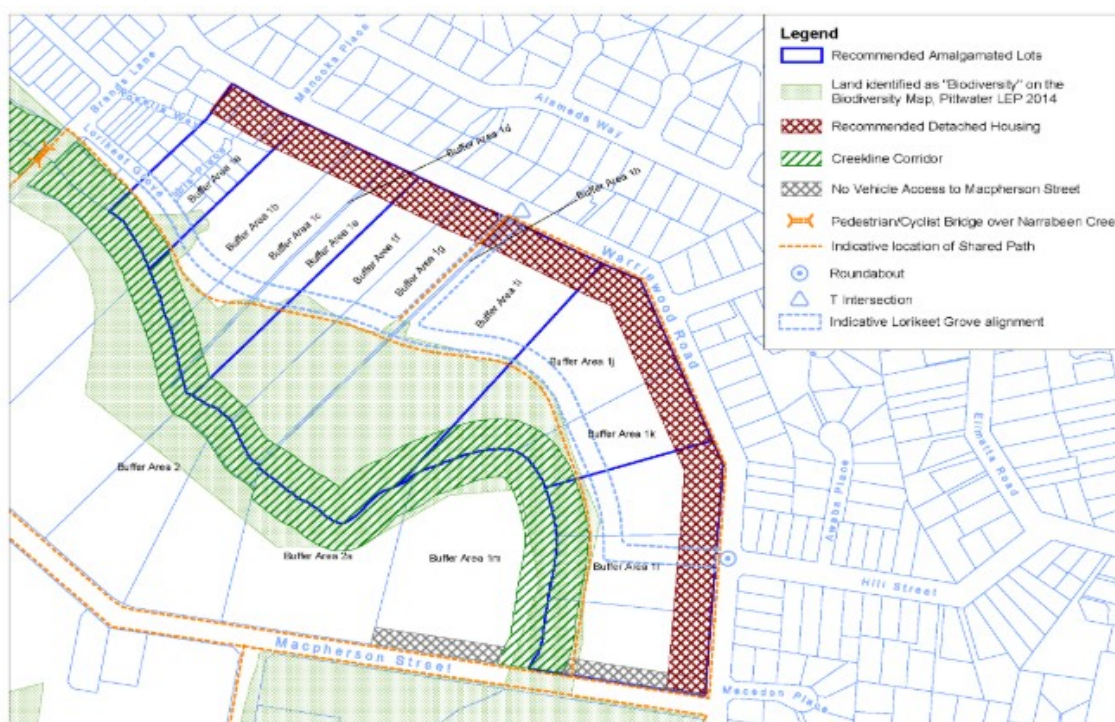
- The Building Envelope, shown on the Plan of Subdivision, should be at a legible scale and include the following elements:
- Maximum permissible building envelope (including site coverage for a Complying Development Certificate), specifying setbacks, storeys and articulation zones;
- Landscaped areas and deep soil areas;
- Preferred location of private open space;
- Driveway location and location of any Complies hardstand areas;
- Garage size (single or double) and Complies location; and
- Zero lot line boundaries.
- Other elements that may be relevant to include on the Building Envelope depending on the particular lot/development proposed include:
- Extent of basement car parking;

Complies

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	<table> <tr> <th data-bbox="327 226 879 262">Requirement</th><th data-bbox="879 226 1437 262">Compliance</th></tr> </table>	Requirement	Compliance
Requirement	Compliance		
	<ul style="list-style-type: none"> Retaining walls; Easements; For corner lots, the preferred entry/frontage; Frontage where vehicular access is not permitted; and Special fencing requirements. 		
	<p>Pathway 2a and 2b – Application for subdivision and dwelling construction</p>		
	<p>Subdivision of land creating residential lots with an area less than 225m² or a width less than 9 metres, shall include dwelling plans (floor plans, sections and elevations etc.) as part of the Development Application for subdivision, i.e. Integrated Housing approval for the subdivision and construction of the dwellings on each lot.</p> <p>Upon approval of the subdivision a Section 88B instrument will be attached to the lot restricting the built form to the approved dwelling plans.</p>		
	<p>C6.10. Additional Specifications for development of Buffer Area 1a to 1m</p> <p>Subdivision and Lot Layout</p>		
	<p>Individual buffer sectors with effective lot widths less than 60 metres should pursue opportunities for amalgamation to facilitate orderly planning and development outcomes and the efficient use of land. The Indicative Layout Plan included further in this control identifies Council's preferred site amalgamations.</p> <p>Denser housing typologies, including Residential Flat Buildings and Multi Dwelling Housing, should be located on the north eastern side of Lorikeet Grove, in close proximity to the creekline corridor.</p> <p>Where it is not possible to align Lorikeet Grove directly along the creekline corridor, Residential Flat Buildings and Multi Dwelling Housing products should be proposed adjoining these areas which will facilitate casual surveillance.</p> <p>Lots suitable for housing typologies that reflect the streetscape character of existing housing on the opposite side of Warriewood Road, for example dual occupancies (attached or detached), should be sited fronting Warriewood Road. The retention of existing dwellings on lots greater than 500m² in size along Warriewood Road is not desired as it is not in keeping with the future desired character and limits the ability to achieve the adopted density.</p>		
	<p>Access Arrangements</p>		
	<p>Lorikeet Grove extension is to traverse Buffer Areas 1a to 1l, and be:</p> <ul style="list-style-type: none"> Designed and constructed as a Local Road under the <i>Warriewood Valley Roads Masterplan</i> and comply with the specifications and cross section; and Generally in accordance with the alignment of Lorikeet Grove on the Indicative Layout Plan below. 		

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	<p>A maximum of two new public roads are to directly connect to Warriewood Road and Lorikeet Grove. Each new connection road is to comply with the specifications and cross section for a Local Road under the Warriewood Valley Roads Masterplan, as amended. One road connection is to be located across the boundaries of Buffer 1g, 1h and 1i. The second road connection is to be located within Buffer 1l, adjacent to Hill Street. The traffic management device for both proposed road intersections with Warriewood Road is to be in accordance with the Indicative Layout Plan contained further within this control.</p> <p>The number of driveways along Warriewood Road is to be minimised. This can be achieved through shared driveways for dwellings that front Warriewood Road.</p> <p>All other access roads within Buffer Areas 1a to 1l must be designed with traffic calming devices to lower vehicle speeds, which may incorporate pavement treatment and enhanced landscaping. The provision of safe crossing areas is required.</p> <p>No new vehicular access including driveways, is permitted onto Macpherson Street to ensure a safe approach to the bridge across Narrabeen Creek.</p> <p>A traffic analysis report will need to accompany any subdivision Development Application, taking into account the new East-West connection of Lorikeet Grove, and if applicable, the new North-South connections with Warriewood Road. Where the access arrangements have not been constructed in a timely manner, the construction of temporary roads may be permitted to enable the isolated property to develop ahead of the required roads being constructed. This will be assessed on a merit basis.</p> <p>The proposal is not consistent with the indicative layout plan, in that a roadway connecting Warriewood Road to Lorikeet Grove would not be located within the boundaries of the subject site. It should however be noted that the indicative road layout envisions the amalgamation of 41, 43, 54 and 49 Warriewood Road, and 41 Warriewood Road has already been separately developed.</p> <p>The constructed subdivisions approved at 25, 41 and 85 Warriewood Road have all included the construction of full/half width roads; three roads connecting Warriewood Road and Lorikeet Grove have therefore already been constructed. If the construction of an additional (i.e. fourth) through-road within the subject site were proposed, it would create a second full-width road intersection within a 120-metre section of Warriewood Road. It is therefore submitted that the proposed layout is suitable for both the proposed subdivision and the locality more broadly, and is supported by the traffic assessment submitted as part of this application.</p> <p>Two (2) adjacent driveways have been proposed for the four (4) lots with a frontage to Warriewood Road.</p> <p>Complies</p> <p>The subject site is within buffer area 1g.</p> <p>Traffic calming devices will not be required at Lorikeet Grove as it is not an arterial or sub-arterial road. It is a local road which will not carry a large number of vehicles.</p> <p>The adjacent driveways with a frontage to Warriewood Road (north of Macpherson Street) will not require separate traffic calming devices. As only one (1) dwelling house is proposed on each of the four (4) lots, there will be a low number of trips entering and exiting Warriewood Road which will not result in any discernible traffic impacts.</p> <p>Satisfactory.</p> <p>Not applicable</p> <p>A traffic and parking analysis is provided through the contents of this report.</p> <p>The subject site will be accessed through Lorikeet Grove which links the site to Warriewood Road (a local collector road and sub-arterial road) through Pheasant Place and Bubalo Street.</p> <p>The construction of temporary roads may be required if Lorikeet Grove is not constructed before the proposed development.</p>
	<p>Location of Pedestrian and Cycle way Network</p> <p>The alignment of the pedestrian and cycle way network is to be generally in accordance with the Indicative Layout Plan below.</p> <p>Complies</p>

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Variations N/A

The location of the pedestrian path/cycleway is variable to ensure connectivity with existing sections of the path and to facilitate the retention of existing vegetation. N/A

C6.11. Additional Specifications for Development of Sector 901A to 901H N/A

C6.12. Warriewood Valley Release Area Focal Neighbourhood Centre

A focal neighbourhood centre is to be established on the land labelled as Sector 801. N/A

Its central location in Warriewood Valley results in it being within reasonable walking and cycling distance of most residents and employees within in Warriewood Valley. The sector fronts Macpherson Street which is the primary vehicular and public transport route through Warriewood Valley along which medium density residential development is concentrated. N/A

The focal neighbourhood centre is to incorporate a gross floor area between 855m² 2,222m² to meet the retail convenience needs of the incoming population (such as a small general store, post office shop, ATM, internet/coffee shop, etc.). The retail potential in Warriewood Valley is limited to this size given nearby established retail/commercial centres at Mona Vale and Warriewood Square. N/A

The focal neighbourhood centre must be linked to public transport nodes and the pedestrian and cyclist network, and if possible, to the district park and/or community facilities. This will enable the majority of residents and people employed in the Valley to walk or cycle to the local shops, public transport, and services. This will also N/A

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	enhance the viability of the neighbourhood centre as a focal point in the Valley and reduce dependence on the car.	
	The opportunity exists for Shop Top Housing to be incorporated with the retail facilities within the focal neighbourhood centre.	N/A
	Safety and security are to be considered in the design of the centre.	N/A
	Car parking for the centre is to be in accordance with this DCP.	N/A
	Requirements under the <i>Disability Discrimination Act 1992</i> and this DCP must also be considered in the design of the centre.	N/A
Pre-DA consultation requirements		
Construction Traffic Management Plan (CTMP)		
	During the pre-DA consultation, the Northern Beaches Council informed the applicant that a CTMP would be required at the DA stage.	<p>Typically, Councils require a CTMP after the DA has been approved, because if the DA is not approved then no CTMP would be required. It would be illogical to prepare a CTMP and it would put an unfair financial burden on the applicant if the DA is not approved.</p> <p>Furthermore, a builder has not yet been appointed for this DA. A CTMP is normally prepared when the builder has been appointed as it requires interaction between the traffic engineer and the builder to work out exact details for the proposed construction activities in terms of vehicle types, material quantities and frequency of truck movements.</p> <p>This information will be available at the Construction Certification (CC) stage and once the DA has been approved, a CTMP will be provided as per the Council's request.</p>

Item	Report
	Traffic impacts
Traffic generation	<ul style="list-style-type: none"> • Base traffic generation rates <ul style="list-style-type: none"> ◦ From RMS (2002) Guide to Traffic Generating Developments <ul style="list-style-type: none"> ▪ Updated statistics from TDT 2013 / 04a • Existing traffic generation <ul style="list-style-type: none"> ◦ Vacant lot • Traffic generated by proposed development <ul style="list-style-type: none"> ◦ High density residential flat buildings (34 residential flat buildings) ◦ The definition of a high density residential flat building in the RMS (2002) is a building containing 20 or more dwellings. This definition is only for the purpose of calculating the trip generation. It is different from and does not affect the town planning definitions for land use and development density. <ul style="list-style-type: none"> ▪ Morning peak hour vehicle trips = 0.19 trips per unit ▪ Afternoon peak hour vehicle trips = 0.15 trips per unit ◦ Morning peak hour <ul style="list-style-type: none"> ▪ $0.19 \times 34 = 6.5$, say 7 trips (in and out) ◦ Afternoon peak hour <ul style="list-style-type: none"> ▪ $0.15 \times 34 = 5.1$, say 5 trips (in and out) ◦ 11 dwelling houses (on lots A1 to A7 and lots B1 to B4) ◦ Dwelling houses <ul style="list-style-type: none"> ▪ Weekday peak hour vehicle trips = 0.99 trips per dwelling <ul style="list-style-type: none"> • $0.99 \times 11 = 10.9$, say 11 trips (exiting in the morning peak hour and entering in the afternoon peak hour) ◦ Total: <ul style="list-style-type: none"> ◦ Morning peak hour <ul style="list-style-type: none"> ▪ $7 + 11 = \mathbf{18 \text{ trips}}$ (in and out) ◦ Afternoon peak hour <ul style="list-style-type: none"> ▪ $5 + 11 = \mathbf{16 \text{ trips}}$ (in and out)
Traffic impacts	<ul style="list-style-type: none"> • The street network in the Warriewood Precinct is yet to be developed. • The planned road infrastructure has been designed to accommodate for the forecast growth within the area, assuming that the specific developments are in accordance with the planned land uses and densities as specified in the Pittwater Local Environmental Plan 2014. <ul style="list-style-type: none"> ◦ The proposed development is located in the medium density residential zone (as per Pittwater LEP 2014) and complies with the density requirements of that zone. • When the development will have been constructed, vehicular trips by residents will occur in all directions, as needed for their travel to and from work, shopping and leisure destinations. • Most common road transport routes, as determined using Google maps travel guidance feature, are shown in Figure 5. • Figure 6 demonstrates distribution of additional vehicular trips on the road network for the morning commuter peak hour. <ul style="list-style-type: none"> ◦ It is evident from Figure 6 that the number of additional turning movements at the intersection of Warriewood and Pittwater Roads will be microscopic and would not have any noticeable effect on its operation whatsoever. • It must also be noted that the proposed development is subject to the Warriewood Valley Section 94 Contributions Plan which provides for collection of necessary funds for the road network upgrades identified in Warriewood Valley Roads Masterplan. These documents already identified necessary road upgrades due to new developments in Warriewood Valley.
Conclusion	<ul style="list-style-type: none"> • Therefore, the likely trip generation from the proposed development is within the planned levels and no negative impacts on traffic operations are expected.

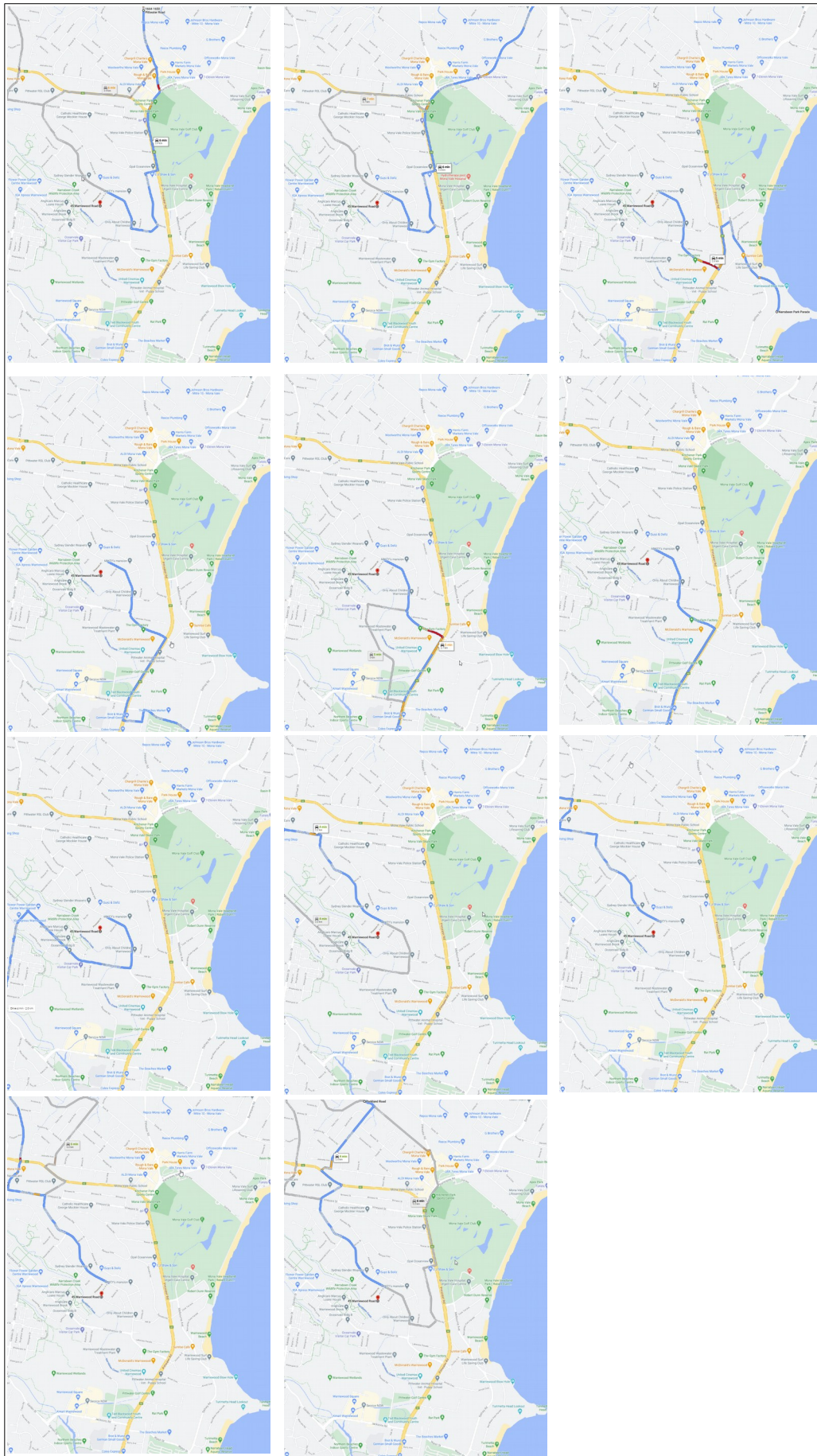


Figure 5. Common routes for road transport from the site in all directions (source: Google maps).

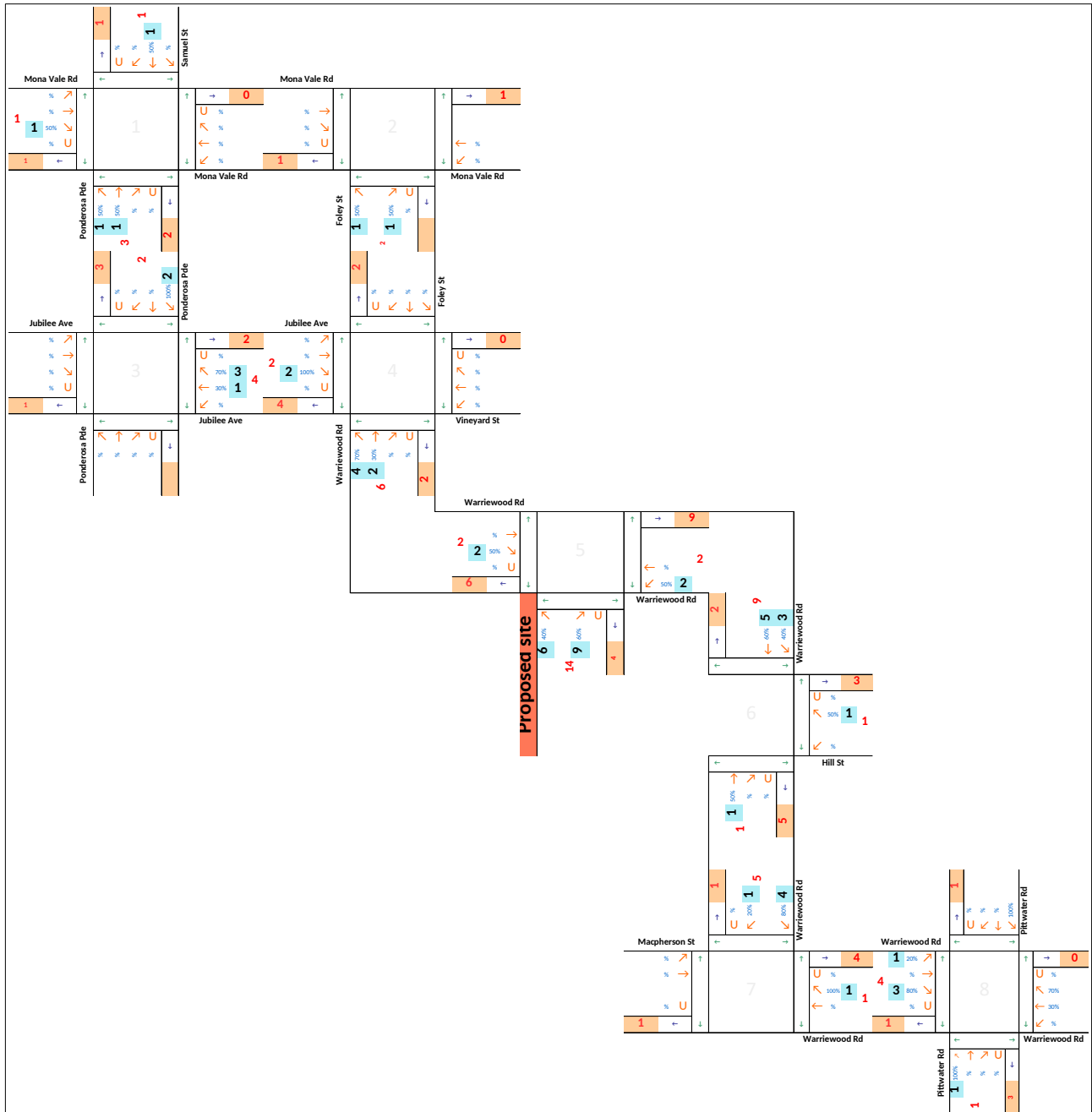



Figure 6. Trip distribution of traffic, generated by the proposed development during operation (morning commuter peak hour).

Conclusions

- Proposed parking provision
 - Complies with the Council's Development Control Plan requirements with regard to provision for residents, visitors and people with disabilities.
- Traffic impacts
 - The additional traffic from the proposed development will have no negative impact on the street network operation.
- Design of access, car parking and servicing facilities
 - Complies with the relevant Standards
- The proposed development is supportable on traffic and parking grounds.



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FAITPM

References:

Pittwater 21 Development Control Plan 2004

RMS (2002) Guide to Traffic Generating Developments

AS/NZS 2890.1:2004: Parking Facilities – Off-street car parking

AS 2890.2-2018: Parking Facilities – Off-street commercial vehicle facilities

AS 2890.3:2015: Parking Facilities – Bicycle parking

AS/NZS 2890.6:2009: Parking Facilities – Off-street parking for people with disabilities

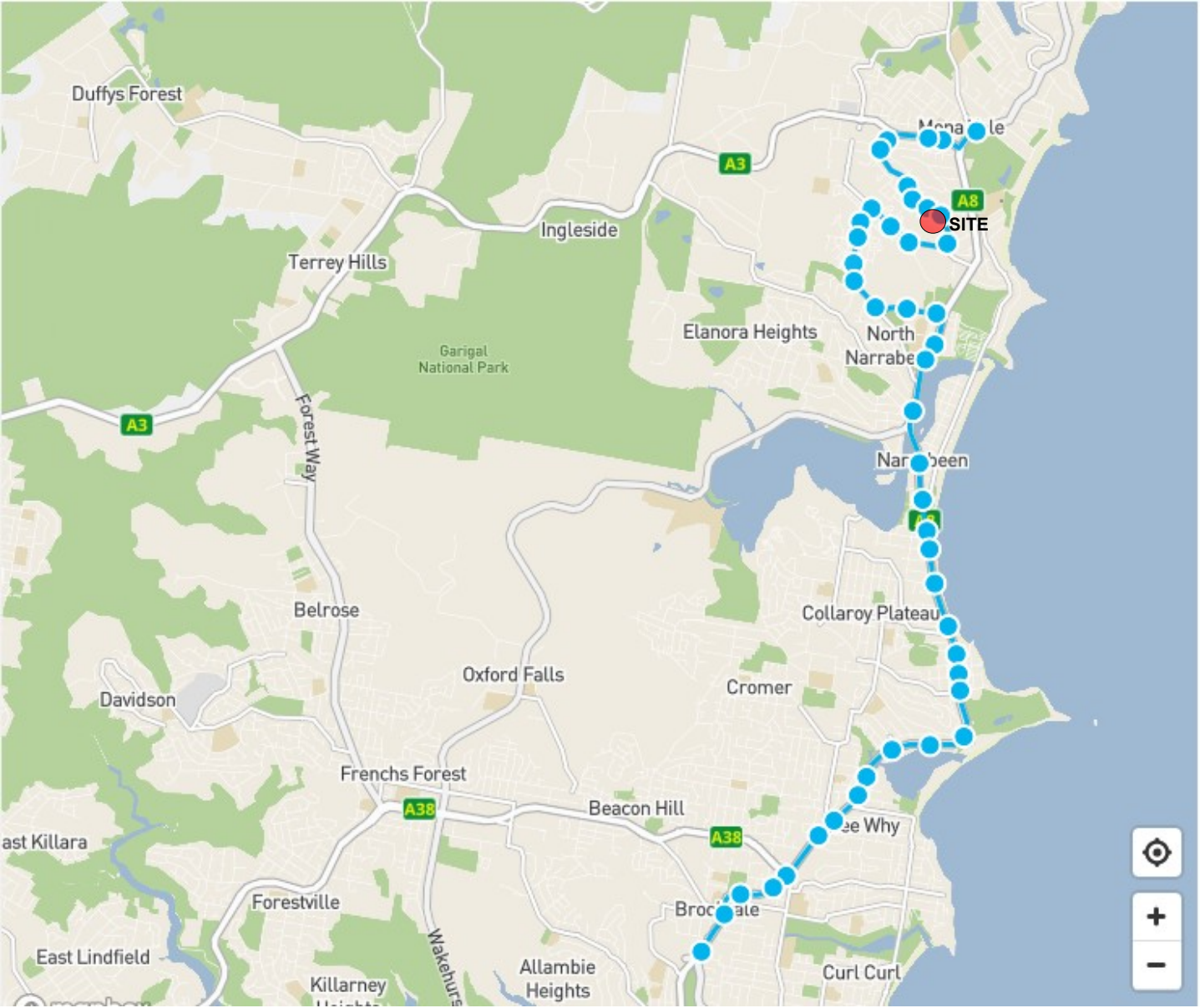
Appendix

Bus routes

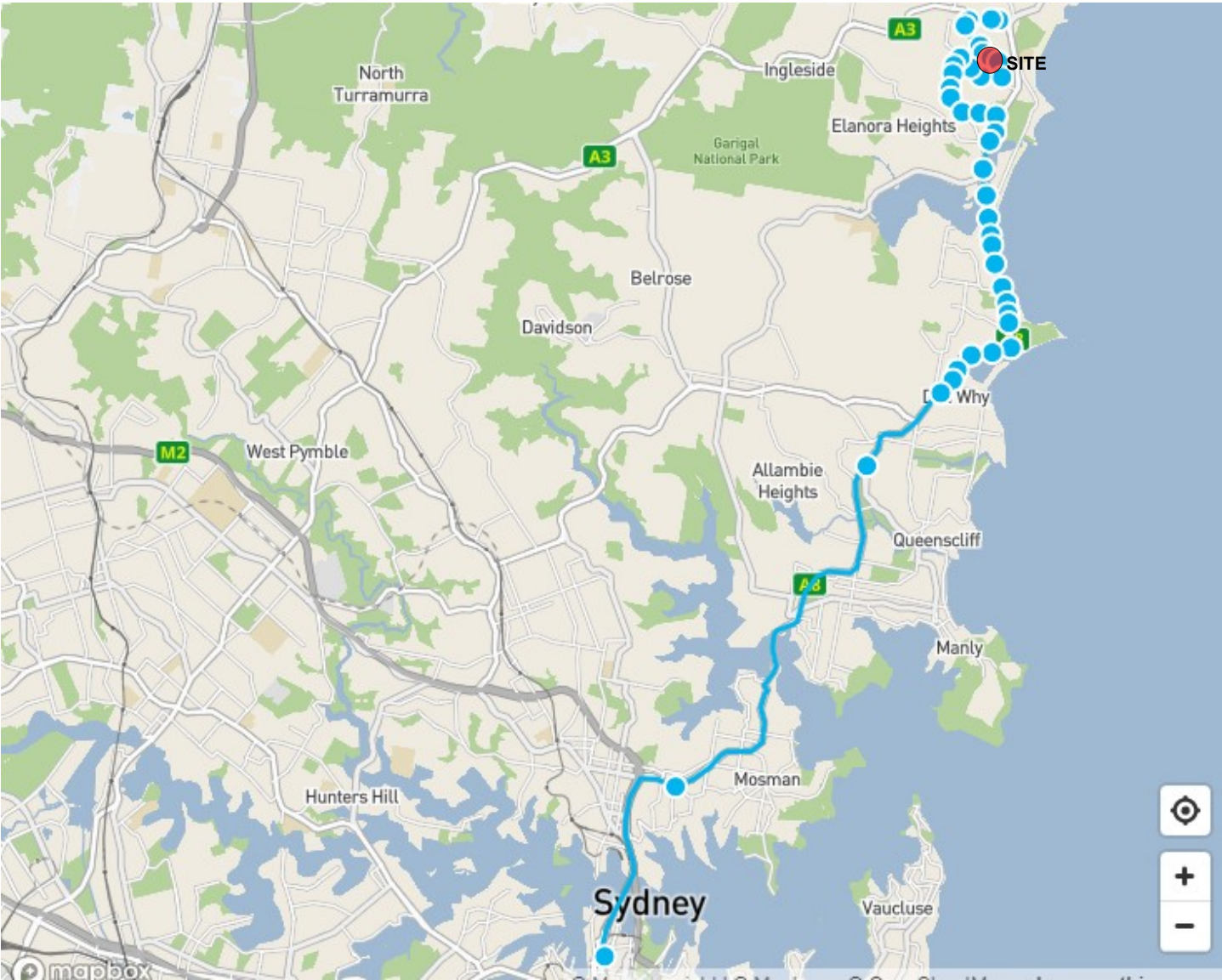
A reduced copy of the architectural drawing 'LANDSCAPE PLAN: SOUTH' (revision P1)

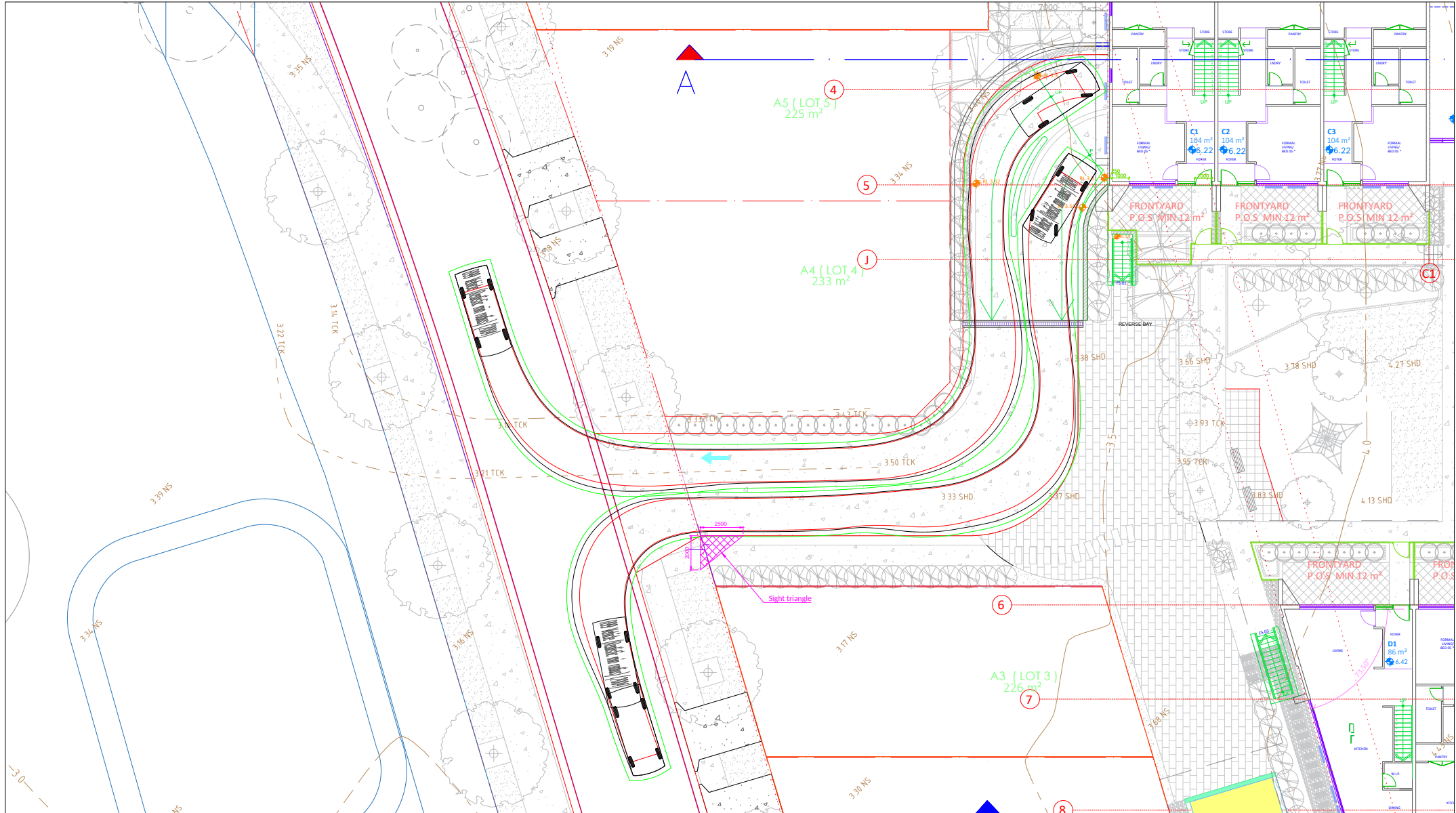
Car park design checks and vehicle turning diagrams

Bus Route 185

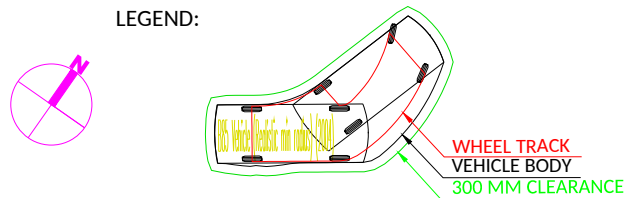


Bus Route E85





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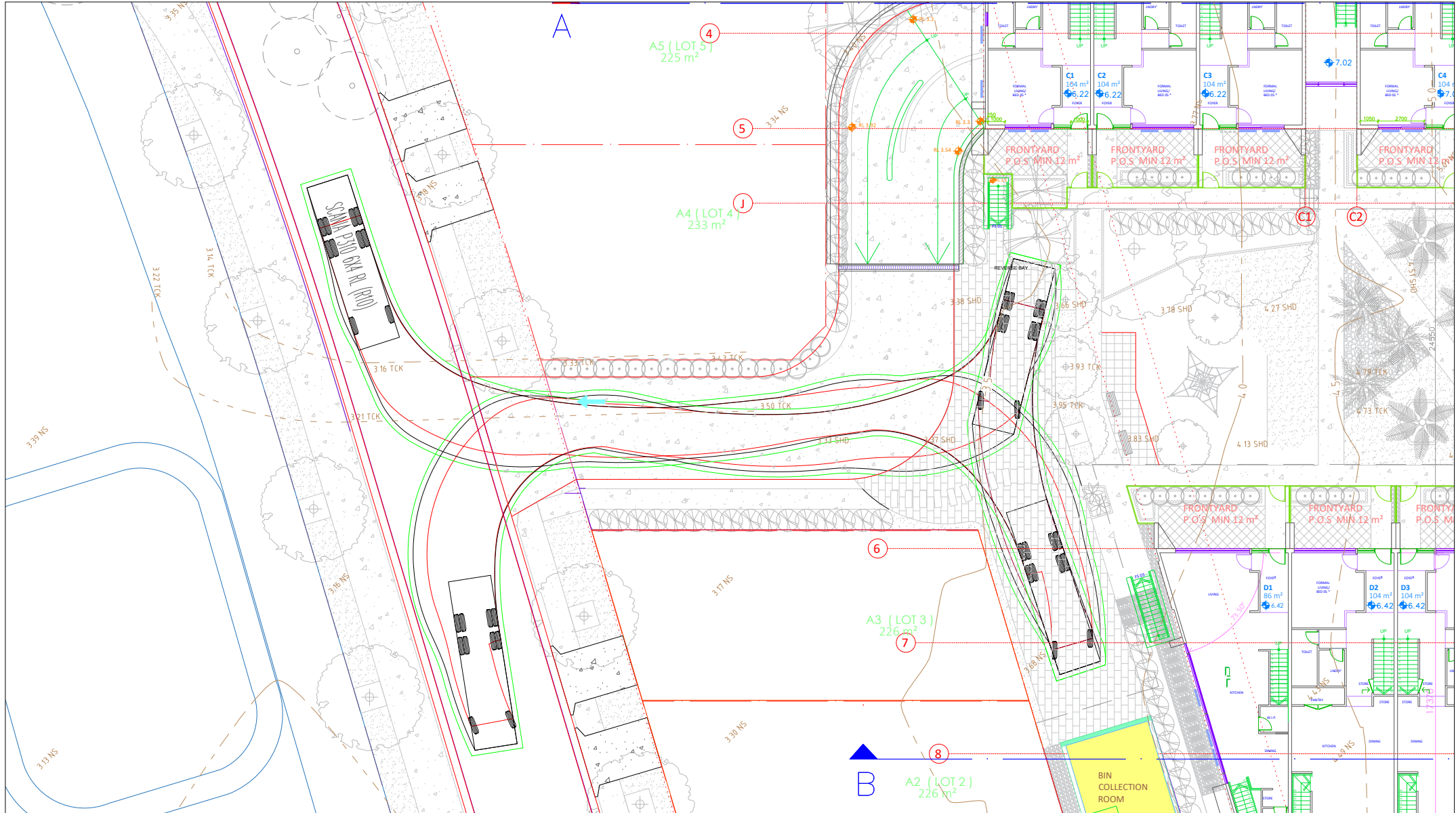
Dwg No 19082/01 | Rev. A | 21/09/2020

Client:
Archidrome

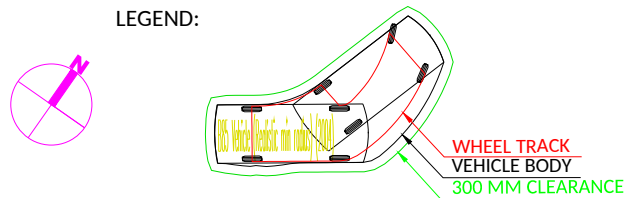
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DWG Design checks
Design checks as per AS/NZS 2890 series



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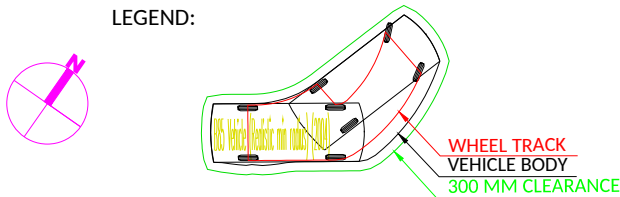
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DWG Design checks
Design checks as per AS/NZS 2890 series



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DWG Design checks
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