138 Maroubra Road, Maroubra

Transport Impact Assessment

Prepared for: **Maroubra Property Developments Pty Limited**

4 July 2025

PROJECT INFORMATION

Project Name:	138 Maroubra Road, Maroubra
Client:	Maroubra Property Developments Pty Limited
Project Number:	2253
Prepared By:	JMT Consulting

DOCUMENT HISTORY

Document Title	Revision	Date issued	Author
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CONSULTANT DECLARATION

PROJECT DETAILS	
PROJECT NAME	**138 Maroubra Road, Maroubra**
Application number	SSD-81426710
APPLICANT DETAILS	
Applicant name	Maroubra Property Developments Pty Limited
Applicant address	21 Solent Circuit, Baulkham Hills NSW 2153
REPORT DETAILS	
Name of report this declaration relates	Transport Impact Assessment
Report date	04.07.25
Company name	J Milston Transport Consulting Pty Ltd – ABN 32635830054
Author name	Josh Milston
Author qualifications	MIEAust CPEng
DECLARATION BY CONSULTANT	
Name	Josh Milston
Registration no.	3077628
Organisation registered with	Engineers Australia
Declaration	The undersigned declares that Transport Impact Assessment • has been prepared in accordance with the following policy, guidelines, or legislative requirements: - Transport for NSW Guide to Transport Impact Assessment - Guide to Traffic Management – Part 12: Traffic Impacts of Developments (AUSTROADS) • contains all available information relevant to the environmental assessment of the development, activity or infrastructure to which the transport impact assessment report relates; • does not contain information that is false or misleading; • identifies and addresses the relevant Planning Secretary's environmental assessment requirements (SEARs) for the project; • identifies and addresses the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments to which the report relates; • contains a consolidated summary of the proposed or necessary mitigation measures
Signature	
Date	**04.07.25**

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1 Introduction

1.1 Background

JMT Consulting was engaged by Maroubra Property Developments Pty Limited to prepare a transport impact assessment to support a State Significant Development Application (SSDA) for the site at 138 Maroubra Road, Maroubra. The intention is for the development to provide 64 residential apartments with ancillary retail space and associated car parking facilities.

1.2 Report purpose

The purpose of this report is to summarise the transport implications of the proposed development of the site. The report considers the following items:

- Existing transport conditions in and around the site, including site access arrangements, car parking and the adjacent public transport network
- Future transport access arrangements including:
    - Vehicle access arrangements
    - Car parking arrangements for residents and visitors
    - Bicycle parking provision for residents and visitors
    - Potential impacts on the adjacent road network as a result of the proposal

1.3 Response to SEARs

This report has been prepared in response to the Secretary's Environmental Assessment Requirements (SEARs) for SSD- 81426710 relevant to traffic and transport as summarised in Table 1.

Table 1 SEARs requirements

SEARs Item	Description of Requirement - SSD-82548708	Response
Item 9. Transport	• Provide a Transport Impact Assessment (TIA) in accordance with the processes and methodology recommended in the Guide to Transport Impact Assessment (GITA) published by TfNSW.	As per the recently released GTIA the subject development is considered to have a 'low' impact level given the proposal does not meet the criteria for either Columns 2 and 3 of Schedule 3 in the State Environmental Planning Policy (Transport and Infrastructure) 2021. The GTIA recommends the development of a 'Transport Impact Statement' for this scale of development, covering the following items: • site location and context • development scale and access arrangements • trip generation and distribution The above items have been addressed in this report.
	• If the construction of the development would cause interruptions to regular pedestrian and transport routes (including public transport, active transport or general traffic), a preliminary Construction Traffic (or Transport) Management Plan (CTMP) should be prepared as part of the TIA to mitigate any such impacts.	A detailed CTMP will be prepared prior to any works commencing on site, this requirement can be reinforced via a suitably worded consent condition. Notwithstanding the above a preliminary CTMP has been prepared and outlined in Section 4 of this document.

2 Existing Conditions

2.1 Site location and vehicle access

The site at 138 Maroubra Road ('the site') is located in the suburb of Maroubra and located within the Randwick Local Government Area (LGA). The site currently comprises a two storey glass and concrete block commercial building with metal roofing. There is one basement level with ramp off Piccadilly Place.

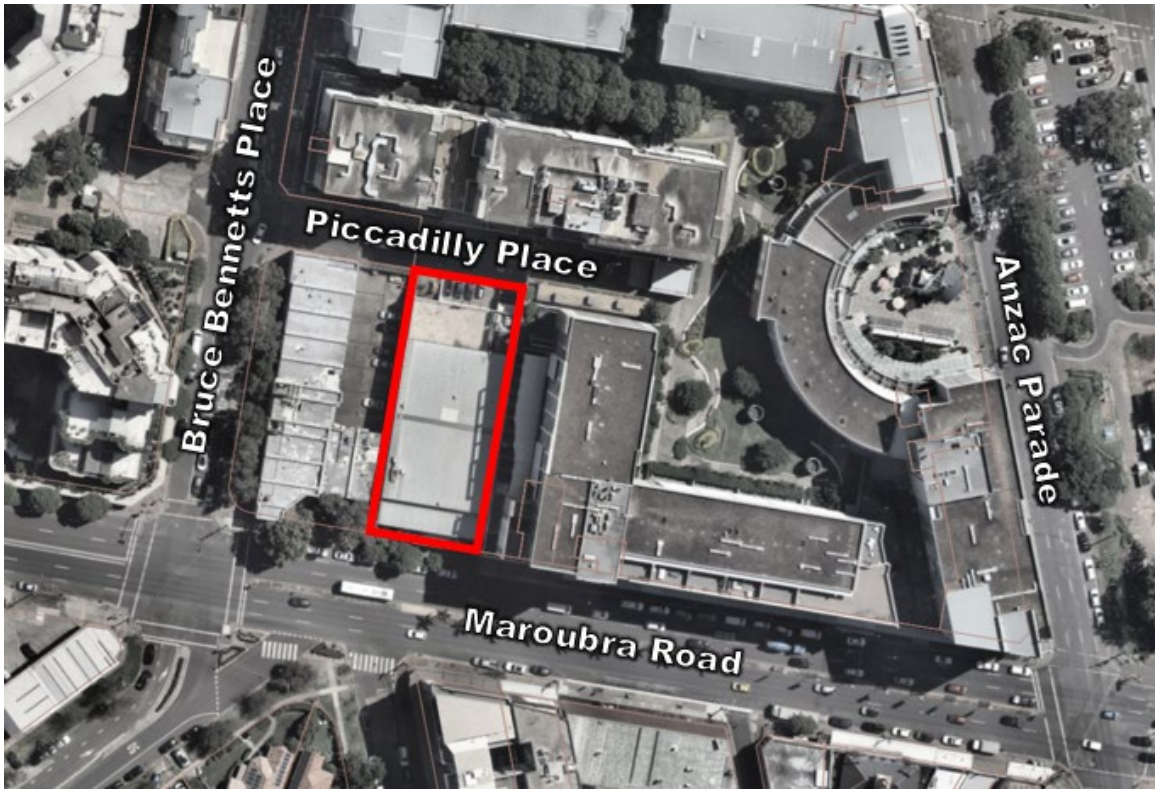

Figure 1 Site location

2.2 Vehicle access

Vehicle access is currently provided via a driveway on Piccadilly Place as illustrated in Figure 2.

Figure 2 Existing vehicle access driveway

2.3 Car parking

There is currently on-site car parking for up to five cars within the site at ground level and a further 46 vehicles in the basement access via Piccadilly Place. The ground floor parking area is shown in Figure 3 below.

Figure 3 Existing on-site car parking

2.4 Surrounding road network

To manage the extensive network of roads for which councils are responsible under the Roads Act 1993, Transport for NSW (TfNSW) in partnership with local government established an administrative framework of *State, Regional,* and *Local Road* categories. State Roads are managed and financed by TfNSW and Regional and Local Roads are managed and financed by councils.

Key State and Regional roads which provide access to the site are illustrated in Figure 4 below, with Anzac Parade and Bunnerong Road being the key State roads in the vicinity of the site. Maroubra Road fronting the site is identified by TfNSW as an unclassified Regional Road which performs the function of a collector route through the local area, with no access permitted from this roadway. Piccadilly Place and Bruce Bennetts Place are neither classified as a State or Regional road and therefore no restrictions in terms of vehicle access are necessary.

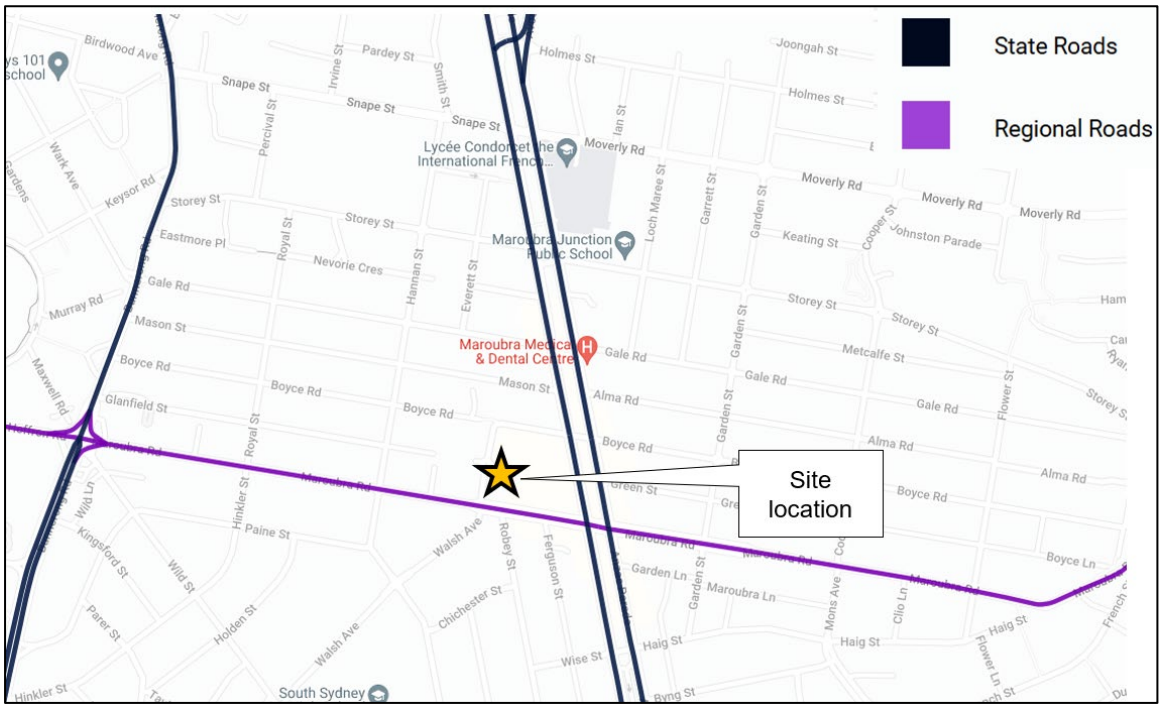

Figure 4 Existing road network

2.5 Public transport

The site is well located to take advantage of numerous bus services available, including the high frequency Anzac Parade bus corridor. As shown in Figure 5 below six different bus routes run along Anzac Parade adjacent to the site, with a further two routes using Maroubra Road. Direct bus services travel to the Sydney CBD, with other routes providing passengers with an option to interchange at the nearby Juniors Kingsford light rail stop. Bus stops are located within a three to four minute walk of the site as illustrated in Figure 6.

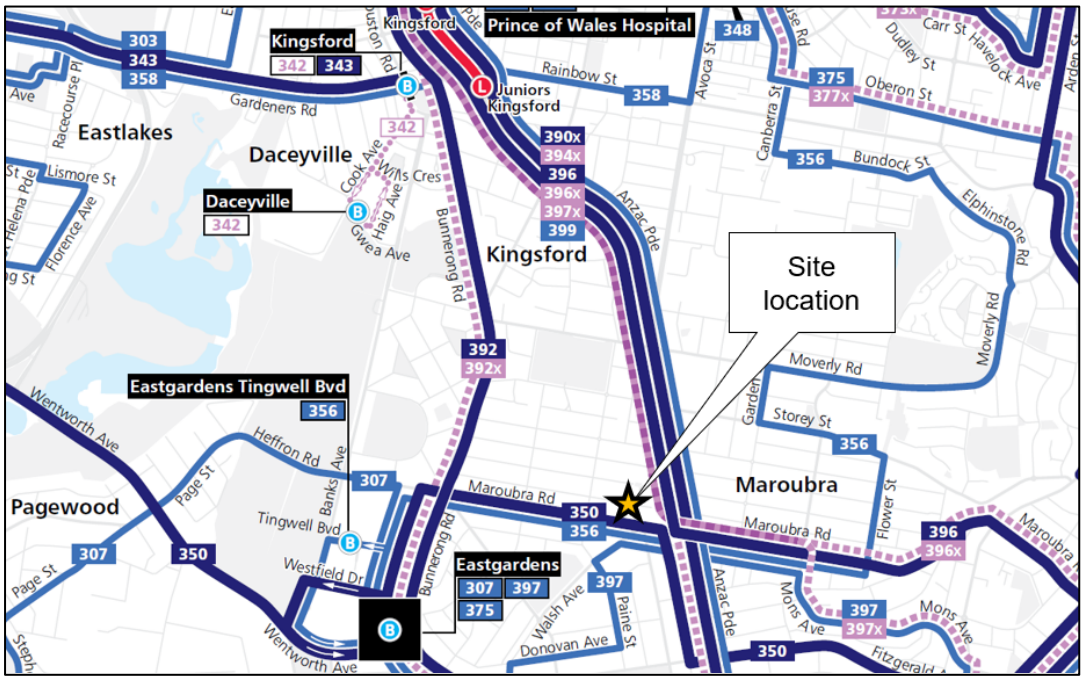

Figure 5 Bus network servicing the site

Figure 6 Bus stops adjacent to the site

2.6 Public transport accessibility

A key indicator of the level of public transport accessibility a site contains is the number of locations accessible within a 30 minute public transport catchment. A key objective of the Greater Sydney Commission's Greater Sydney Region Plan is to deliver a 30-minute city where jobs, services and quality public transport spaces are in easy reach of residences.

As illustrated in Figure 7 a number of key employment centres across Sydney can be reached within 30 minutes public transport travel time of the site, including Central / Redfern, Sydney CBD, Green Square, Mascot and Sydney Airport. The highly accessible nature of the site will facilitate the use of public transport, particularly the Anzac Parade bus corridor.

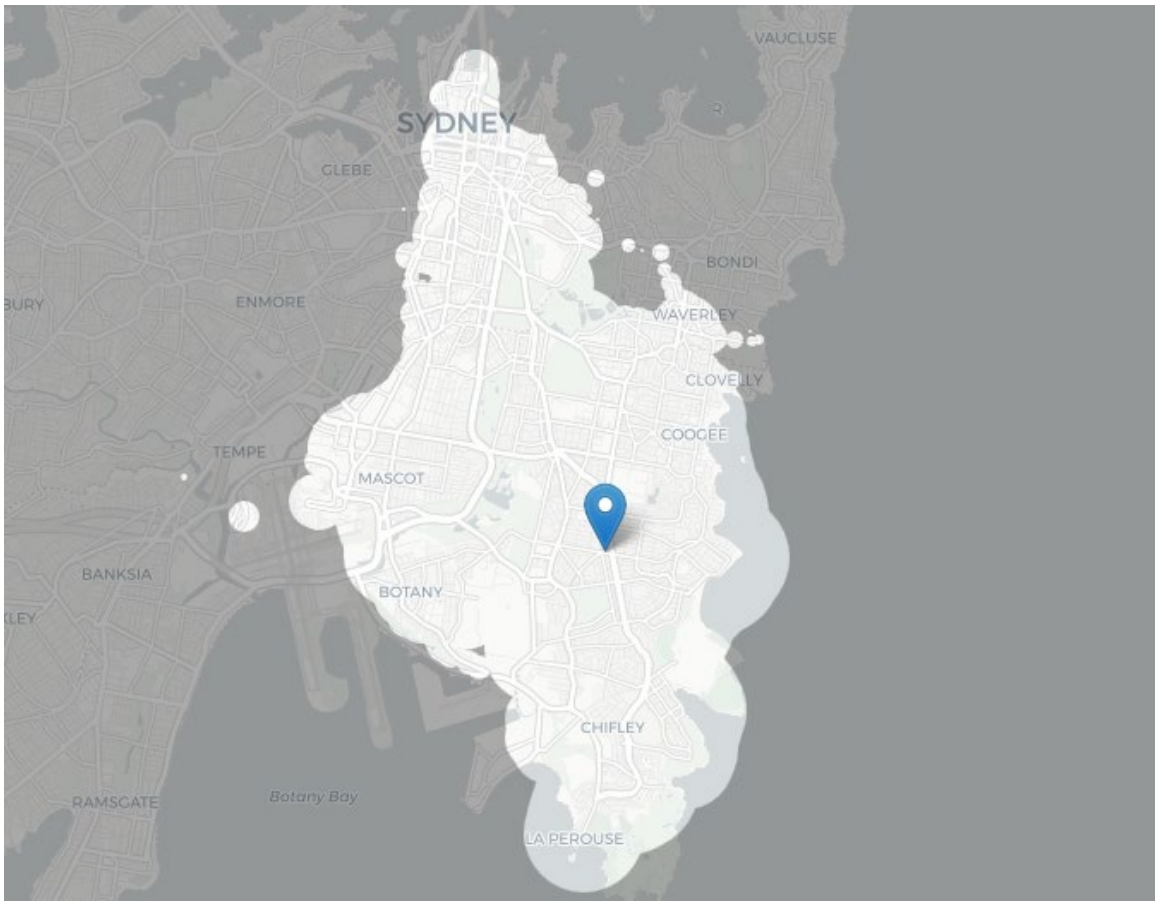

Figure 7 30 minute public transport catchment from site

Source: https://www.mapnificent.net/sydney

2.7 Crash data

A review of crash data published by Transport for NSW for the most recent five year period has been review and is shown in Figure 8. This indicates no recorded crash history at the existing site access driveway on Piccadilly Place.

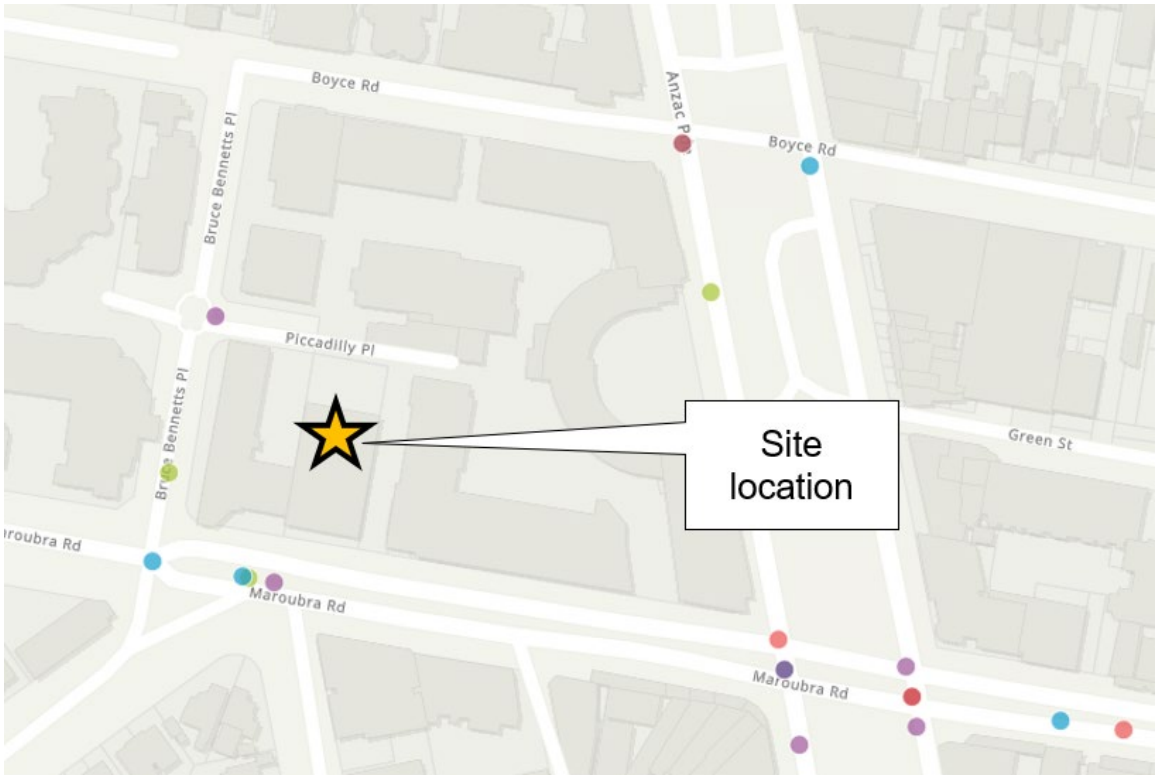

Figure 8 Crash data

Source: NSW Centre for Road Safety

2.8 Traffic volumes

Traffic counts were undertaken at the two key intersections surrounding the site, those being:

- Piccadilly Place / Bruce Bennetts Place; and
- Maroubra Road / Bruce Bennetts Place

The traffic volumes through these respective intersections during the morning and afternoon peak hours are illustrated in the figures below. These traffic volumes have been used as the basis for the detailed traffic analysis summarised in the following section of this document.

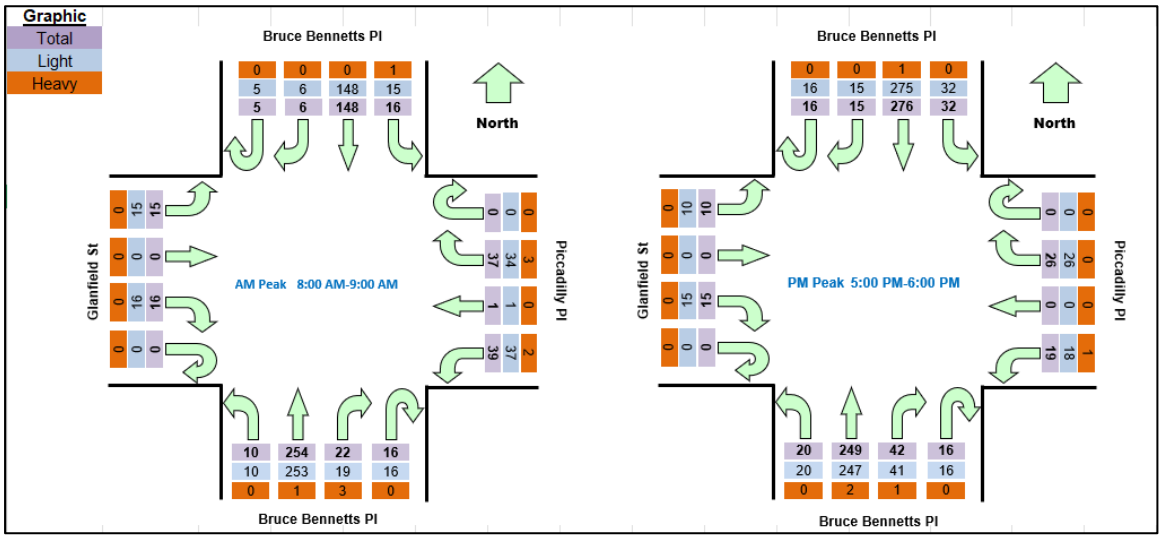

Figure 9 Existing traffic flows – Bruce Bennetts Place / Piccadilly Place

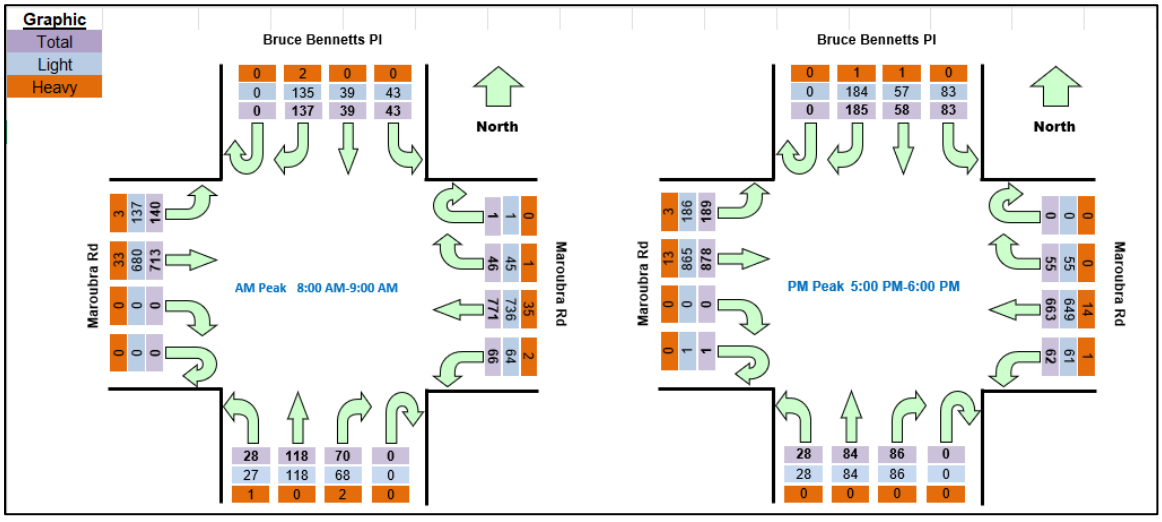

Figure 10 Existing traffic flows - Bruce Bennetts Place / Maroubra Road

3 Transport Assessment

3.1 Proposed vehicle site access

The proposed vehicle site access strategy is illustrated in Figure 11 below and includes the following:

- Entry for cars via Piccadilly Place
- Exit for cars via Maroubra Road
- Entry & exit for service vehicles accessing the loading dock via Piccadilly Place

This access strategy distributes traffic across the site and limits the impacts of future traffic movements to existing residents along Piccadilly Place. Maroubra Road is an unclassified regional road and therefore it is considered appropriate to utilise this for the purposes of exit movements.

Access to the basement car parking area will be via a conventional set of vehicle ramps.

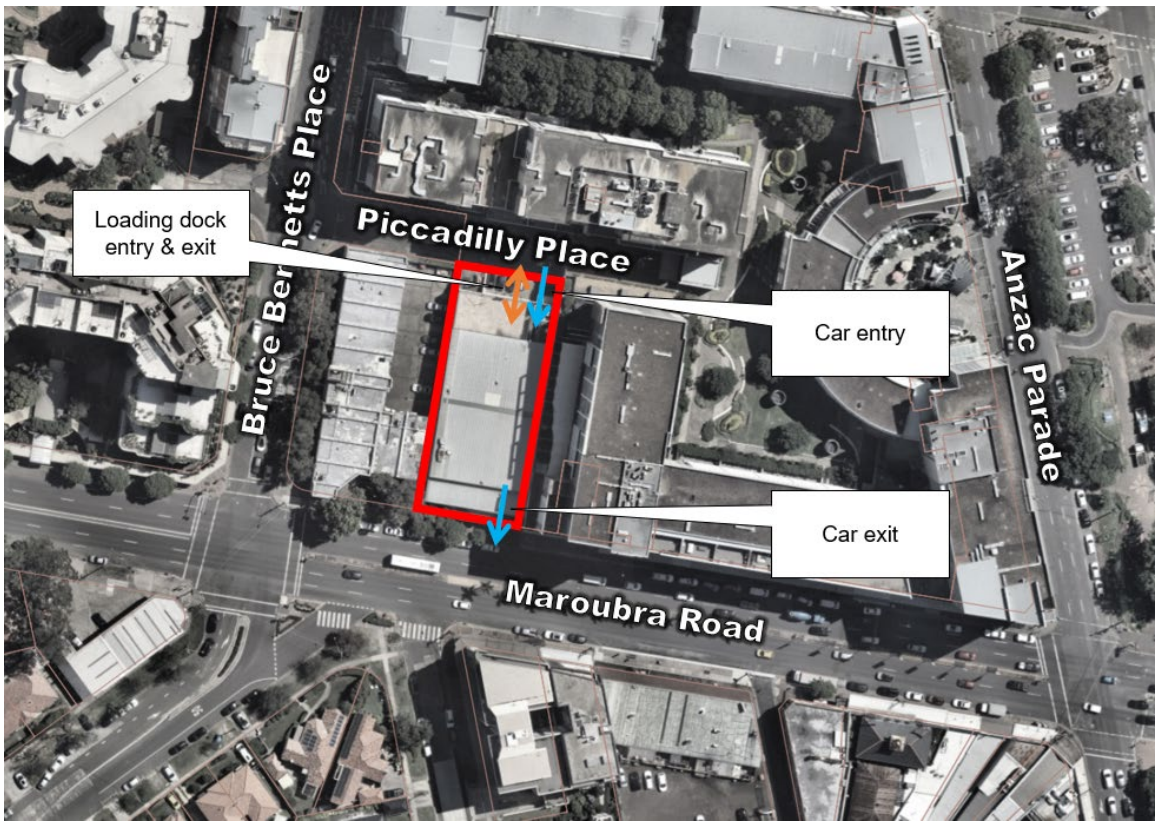

Figure 11 Proposed vehicle site access strategy

3.2 Car park design

The car park has been designed in accordance with AS2890.1 with respect to ramp gradients, circulation aisle widths and car space dimensions. A review of the plans has found that the car park layout complies with the requirements of AS2890.1-2004 for Class 1 parking areas (aisles minimum 5.8 metres wide with parking spaces 2.4 metres wide by 5.4 metres long). A 1m extension at the end of the dead end aisle is provided to facilitate vehicle movements into and out of the car space and ensure compliance with Australian Standards.

Accessible parking spaces (including adjacent shared areas) are provided in the basement which has been designed in accordance with AS2890.6 or in the case of adaptable apartments as per AS4299.

It is expected that a traffic light system will be in place for vehicles exiting the car park at the basement level. This traffic light system is to be designed to provide priority to vehicles entering the site to minimise the extent of any vehicle queueing along Piccadilly Place. The traffic light system will facilitate the safe egress of vehicles out of the site onto Maroubra Road.

Vehicle swept path analysis for the on-site parking areas are provided in Figure 12 and Figure 13.

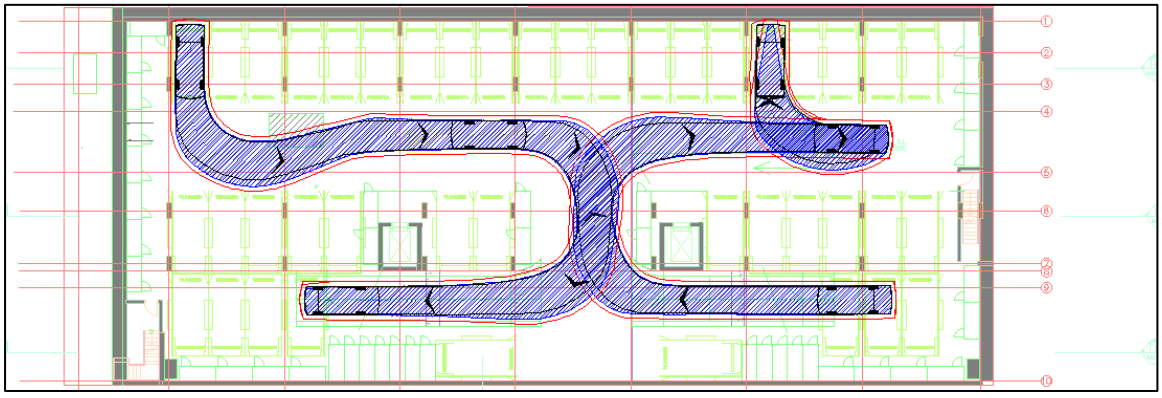

Figure 12 Vehicle swept paths – basement level

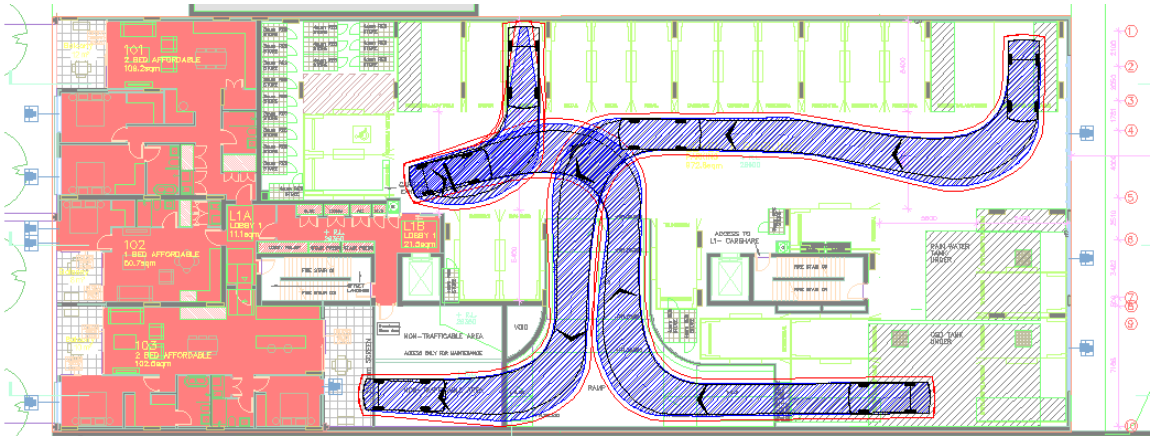

Figure 13 Vehicle swept paths – Level 01

3.3 Site servicing

The proposal includes a dedicated ground floor loading area which can accommodate a range of trucks including a Council waste collection vehicle. This is a significant improvement compared to current conditions where trucks have to park on Piccadilly Place in order to service the building. Swept path analysis indicating the movement of a 10.5m long Council waste collection vehicle into the loading area is presented in Figure 14.

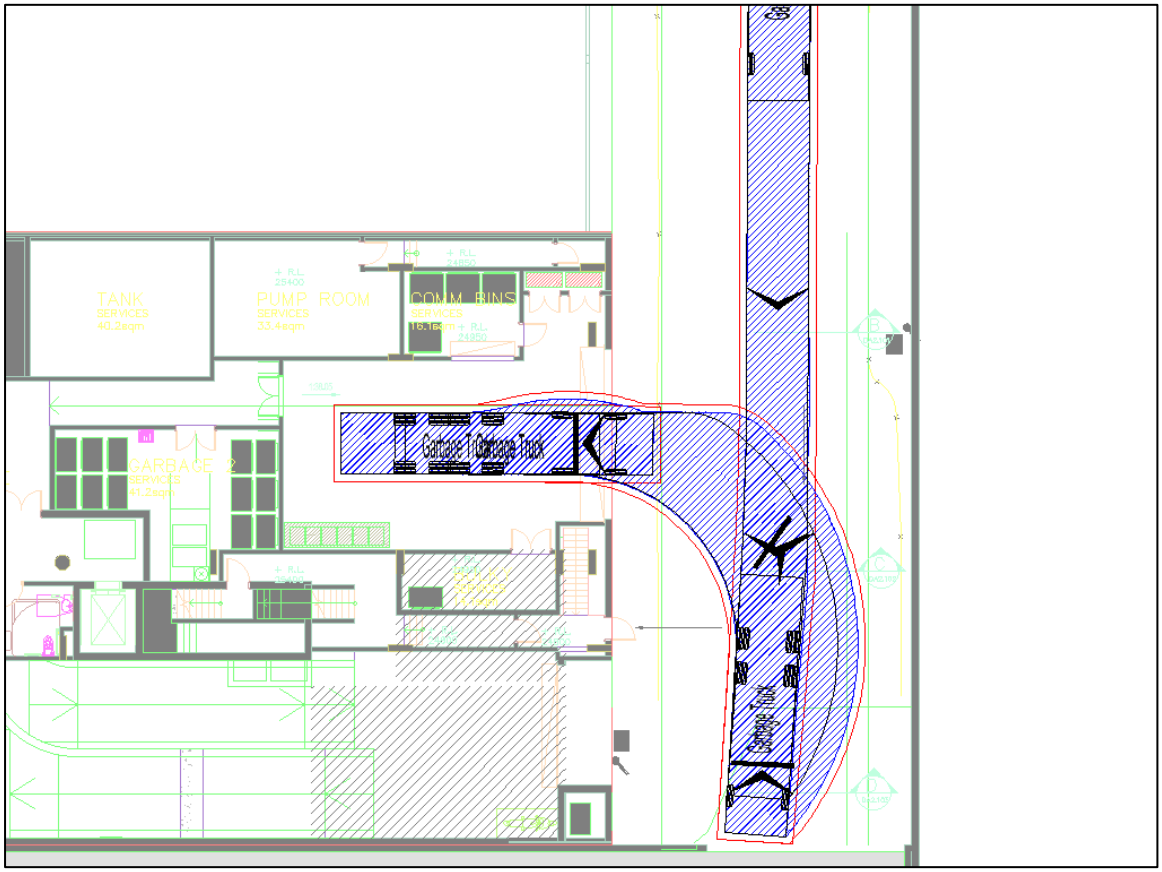

Figure 14 Vehicle swept path – ground floor loading area

3.4 Car parking provision

Based guidance for in-fill affordable housing noted in Part 2, Division 1 of the Housing SEPP 2021, a consent authority may not refuse an in-fill affordable housing development, if the following **minimum** parking requirements met:

- For dwellings used for affordable housing
  - For each dwelling containing 1 bedroom – at least 0.4 parking spaces
  - For each dwelling containing 2 bedrooms – at least 0.5 parking spaces
  - For each dwelling containing at least 3 bedrooms – at least 1 parking space
- For dwellings not used for affordable housing
  - For each dwelling containing 1 bedroom – at least 0.5 parking spaces
  - For each dwelling containing 2 bedrooms – at least 1 parking spaces
  - For each dwelling containing at least 3 bedrooms – at least 1.5 parking spaces.

Car parking for residential uses is to be provided in accordance with the minimum parking rates noted in the SEPP as summarised in Table 2. This demonstrates that the proposed residential car parking provision is compliant with the minimum parking requirements for in-fill affordable housing noted in Part 2, Division 1 of the Housing SEPP 2021.

The TfNSW Guide to Transport Impact Assessments (GTIA) recommends a visitor car parking rate of one space per 7 apartments. Based on the 64 apartments to be provided the development should provide 9 residential visitor parking spaces. The proposal complies with this requirement.

Table 2 Proposed car parking provision

Type		No. of units	Parking Requirements			Proposed Parking
			Parking Rate	Source	Minimum No. of Spaces	
Non-Affordable Housing	1 bed	20	0.5	Housing SEPP 2021	53	**59**
	2 bed	8	1.0			
	3/4 bed	23	1.5			
Affordable Housing	1 bed	7	0.4	Housing SEPP 2021	6	
	2 bed	6	0.5			
	3/4 bed	0	1.0			
Sub-Total - Residents		**64**	**-**	**-**	**59**	
Visitors		64	1 / 7 units	TfNSW Guide to Transport Impact Assessments	9	**6**
Retail		263m^2	1 / 40m^2	Randwick DCP	7	
Car Share		-	-	-	-	**5**
Total					**75**	**70**

As evident in the analysis the proposal accommodates resident car parking in accordance with Council's controls, however the number of residential visitor and retail parking spaces is reduced when compared with the typical parking rates. This reduction in car parking for these particular uses are considered acceptable for the following reasons:

- The proposal includes the provision of up to five car share spaces for building users. Car share spaces have the ability to reduce overall car parking requirements, with the Randwick DCP noting the following: "*Where car parking rates are being considered, Council will look more favourably on proposed reductions within close walking distance to strategic bus corridors and areas of high public transport provision and where a car share scheme is provided on site.*"

- Randwick Council's DCP controls are generic and do not distinguish parking rates for areas with high public transport accessibility such as Maroubra Junction. It is common for parking rates to vary according to the accessibility of a site. This fact is acknowledged in Randwick Council's Integrated Transport Strategy, with Outcome 3 of the strategy to *"Review DCP car parking requirements, particularly in areas with regular public transport services by 2023."* The parking rates for the non-residential uses noted in the DCP are more suited to areas where users have no alternative but to use a car, not Maroubra Junction which is serviced by a high number of bus routes.
- The parking rates outlined in the Randwick DCP are based on standalone uses rather than a mix of uses within a single development like the subject site. Contemporary transport planning recognises that shared car parking between different land uses would have different times of peak parking demand, and as such the patterns of demand for retail and residential visitor components need to be recognised so that a sustainable level of parking is provided on the site. The parking demand for the retail component of the site would typically peak in the middle of the day and reduce after 3pm/4pm, while the residential visitor demand slowly rises through the later afternoon and peaks mid-evening. As a result, it is anticipated that parking (when taking into consideration the residential visitor and retail parking) would be available to meet demand during all key periods of the day and evening.
- The retail floor space of the site is ancillary in nature and will draw in a mostly walk-up trade, with visitors unlikely to be reliant on car parking.
- For visitors that do drive to the site there are a range of parking options including over 200 surface car parking spaces are available in the Council car parking areas located between the northbound and southbound carriageways on Anzac Parade. There are also approximately 150 below ground public car parking spaces are provided at the adjacent Pacific Square shopping centre
- Limiting the amount of on-site car parking for visitors and non-residential uses will mitigate the traffic impacts of the proposal and support the continued efficient operation of the surrounding road network.
- Meeting parking demands of residents on-site will ensure that vehicles do not park all day and night on surrounding streets – negatively impacting surrounding residents.

3.5 Forecast traffic generation

Transport for NSW (formerly Roads and Maritime) published a Technical Direction that describes vehicular trip rates for various types of uses. For sits with good accessibility to public transport the surveys indicated the following levels of traffic generation:

Residential

- AM Peak hour: 0.19 trips per unit
- PM Peak hour: 0.15 trips per unit

Retail / Car Share

- AM Peak hour: 0.50 trips per parking space
- PM Peak hour: 1.00 trips per parking space

The forecast traffic generation arising from the development application is summarised in Table 3 below.

Table 3 Forecast traffic generation

Use	Number	Unit	Rate (per unit or parking space)		Vehicle trips	
			AM peak hour	***PM peak hour***	***AM peak hour***	***PM peak hour***
Future Residential	64	Apartments	0.19	0.15	12	10
Future retail	11	Parking spaces	0.5	1	6	11
Total Traffic Generation					**18**	**21**

3.6 Road network impacts

The forecast traffic generation from the development has been added to the existing traffic volumes noted in Section 2.8 of this document. Traffic was assumed to be distributed in the following manner:

- 30% depart to the north via Boyce Road
- 40% depart to the west via Bruce Bennetts Place and Maroubra Road
- 30% depart to the east via Bruce Bennetts Place and Maroubra Road Maroubra Road

The traffic modelling metric used to analyse the performance of the road network is Level of Service (LOS). Level of Service is a measure that uses the average delay experienced by vehicles to categorically assign each approach and movement with a qualitative ordinal grade (A through F, with A being the best and F being the worst). RMS Traffic Modelling Guidelines indicate the average delay relating to each grade, this is outlined in Table 4. In typical urban environments it is typical for intersections to operate at Level of Service D or E and still remain within acceptable performance levels.

Table 4 Level of service grades / description

Level of service grade	Average delay (seconds)	Description
A	Less than 14	Good operation
B	15 to 28	Good with acceptable delays and spare capacity
C	29 to 42	Satisfactory
D	43 to 56	Operating near capacity
E	57 to 70	At capacity. At signals, incidents will cause excessive delays. Roundabouts require other control mode
F	Greater than 71	Unsatisfactory with excessive queuing

The traffic modelling undertaken to support the proposal has been conducted using the TfNSW approved 'SIDRA Network' modelling package. SIDRA Network, unlike SIDRA Intersection, considers the operation of intersections in a coordinated manner including downstream and upstream queuing effects.

The SIDRA traffic model was calibrated via the use of video footage of the intersection – with this video footage corresponding to the date of the original traffic surveys. The video footage was used to calibrate the model in the following ways:

- Traffic light phasing arrangements
- Typical phase and cycle times of the traffic lights
- Impact of pedestrian crossing movements to delays for left and right turning vehicles from Maroubra Road
- Extent of typical queues and delays for vehicles turning right from Maroubra Road into Bruce Bennetts Place

A photo indicating typical traffic activity at this signalised intersection is shown below.

Figure 15 Maroubra Road / Bruce Bennetts Place – AM peak hour

The forecast performance of the road network is summarised in Table 5 and Table 6, with detailed traffic modelling outputs provided as Appendix A of this document.

Table 5 Road network performance – AM Peak Hour (8am – 9am)

Intersection	Intersection performance – Existing Conditions		Intersection performance – With Development	
	Degree of Saturation	Level of Service*	Degree of Saturation	Level of Service*
Piccadilly Place / Bruce Bennetts Place	0.21	A	0.22	A
Maroubra Road / Bruce Bennetts Place	0.46	B	0.48	B

Table 6 Intersection performance – PM Peak Hour (5pm – 6pm)

Intersection	Intersection performance – Existing Conditions		Intersection performance – With Development	
	Degree of Saturation	Level of Service*	Degree of Saturation	Level of Service*
Piccadilly Place / Bruce Bennetts Place	0.24	A	0.25	A
Maroubra Road / Bruce Bennetts Place	0.54	B	0.55	B

The modelling demonstrates that the two critical intersections adjacent to the site continue to perform at a strong level of service in both the AM and PM peak hours. The small amount of traffic added by the proposal, which equates to fewer than one vehicle every three minutes, does not impact the operation of the intersection nor does it change the existing level of service of the intersections. In this context the traffic impacts of the proposal are acceptable and no mitigation measures are required.

3.7 Bicycle parking

The development includes a suitable level of bicycle parking and complementary facilities for future residents and staff, including:

- Bike lockers on basement levels 2 and 3 for building residents (32 in total);
- Secure bicycle parking on ground level (8 spaces) for retail and commercial staff; and
- Lockers, showers and changing areas (end of trip facilities) at ground level for the use of the retail and commercial staff.

The design of the bicycle parking stands comply with the requirements outlined in AS2890.3[1]

[1] Australian Standards, Parking Facilities – Part 3: Bicycle Parking

3.8 Preliminary Green Travel Plan

3.8.1 GTP overview

A Green Travel Plan is a package of measures put in place by the development occupants to try and encourage more sustainable travel. It is a means for a development to demonstrate a commitment and take a pro-active step towards improving the environmental sustainability of its activities.

More generally, the principles of a GTP are applied to all people travelling to and from a site. Government authorities are placing increasing emphasis on the need to reduce the number and lengths of motorised journeys and in doing so encourage greater use of alternative means of travel with less negative environmental impacts than the car.

3.8.2 GTP objectives

A GTP is a package of measures aimed at promoting and encouraging sustainable travel and reducing reliance on the private car. The GTP for the site will assist in reducing car reliance by promoting alternative, sustainable modes of travel. The GTP aims to encourage and support the broader use of sustainable travel options by the community in carrying out their daily activities.

Sustainable travel options include active transport (including travel by foot, bicycle and other non-motorised vehicles) and public transport. The GTP focuses on minimising the impact of events on the local and wider transport network and encourages those accessing the site to do so by sustainable modes of transport, thereby reducing car dependency for residents, staff and visitors of the site.

The key objectives of the GTP are to:

- Achieve a high modal share for public transport, cycling and walking journeys for residents, staff and visitors of the site;
- Reduce private vehicle dependency as a means of access to the site;
- Ensure adequate facilities are provided at the site to enable users to travel by sustainable transport modes; and
- Raise awareness of, and actively encourage the use of, sustainable transport amongst users.

3.8.3 Potential strategies

A suite of potential measures is described below to be implemented as part of the GTP, which can be developed further as the development progresses.

Table 7 List of potential GTP measures

Action	Responsibility
Cycling	
Provide sufficient cycle parking to meet needs, which is easily accessible and secure	Developer
Provide adequate cycle parking facilities for visitors	Developer
Ensure cycle parking is clearly visible or provide signage to direct people to cycle bays	Building manager
Produce a map showing cycle routes and bike stands in the area	Building manager
Supply a communal toolkit for staff consisting of puncture repair equipment, a bike pump, a spare lock and lights.	Building manager
Promote the participation in annual events such as 'Ride to Work Day'	Tenants
Walking	
Identify tenants living near work that may be interested in walking to work	Building manager
Identify through the travel survey what incentives might need to be put in place for non-walkers to consider a mode shift	Building manager
Public Transport	
Develop a map showing public transport routes in the area	Building manager
Put up a noticeboard with leaflets and maps showing the main public transport routes to and from the site	Building manager
Carshare / Carpooling / Parking	
Develop a map showing car-share spots in the area to encourage staff and visitors to use a shared car (e.g. GoGet) if they are required to drive	Building manager and tenants
Provision of electric vehicle charging infrastructure	Developer

4 Preliminary Construction Traffic Management Plan

4.1 Overview

For the purposes of the SSDA a preliminary Construction Pedestrian Traffic Management Plan (CTPMP) has been prepared. This preliminary CPTMP outlines the key principles for how construction may be carried out on the site, subject to further planning to be undertaken during subsequent stages of the project. As the project is in very early concept phase details around construction timeframes, methodology and processes are not yet clear.

Prior to the commencement of construction for the site, a detailed CPTMP will be prepared. This will be reinforced through an appropriately worded condition of consent, with the purpose of the CTPMP to assess the proposed access and operation of construction traffic associated with the proposed development with respect to safety and capacity. The Contractor will be responsible for preparing the CTPMP, ensuring the following are addressed:

- Proposed construction vehicle routes;
- Indicative construction programme;
- Expected construction vehicle types and volumes;
- Car parking arrangements and site access during construction;
- Safety measures to minimise impacts to pedestrians and cyclists; and

The Contractor will also be responsible for monitoring and coordinating all vehicles entering and exiting the site.

4.2 Working hours

Working hours will be confirmed at the time of the development of the detailed CPTMP however are envisaged to take place during the following hours:

- Monday to Friday: 7am – 6pm
- Saturday: 8am – 1pm
- Sunday / public holiday: No work

The appointed contractor will be responsible for instructing and controlling all subcontractors regarding the hours of work. Any work outside the approved construction hours would be subject to specific prior approval.

4.3 Construction traffic routes

The construction vehicles routes to be utilised for the construction of the subject site would be selected in order to:

- Maximise vehicle use to the State and Regional road network, and not limit the extent of travel on residential streets;
- Avoid impacting concurrent construction projects in the vicinity of the site; and
- Minimise impacts to the public transport network

The potential construction vehicle routes are illustrated in Figure 16 and would involve the use of Wentworth Avenue / Southern Cross Drive to provide the primary access to the site. Vehicles would exit Wentworth Avenue onto Bunnerong Road and then turn right onto Maroubra Road to access the subject site.

These construction routes will be confirmed during the preparation of the detailed CPTMP developed prior to the commencement of construction.

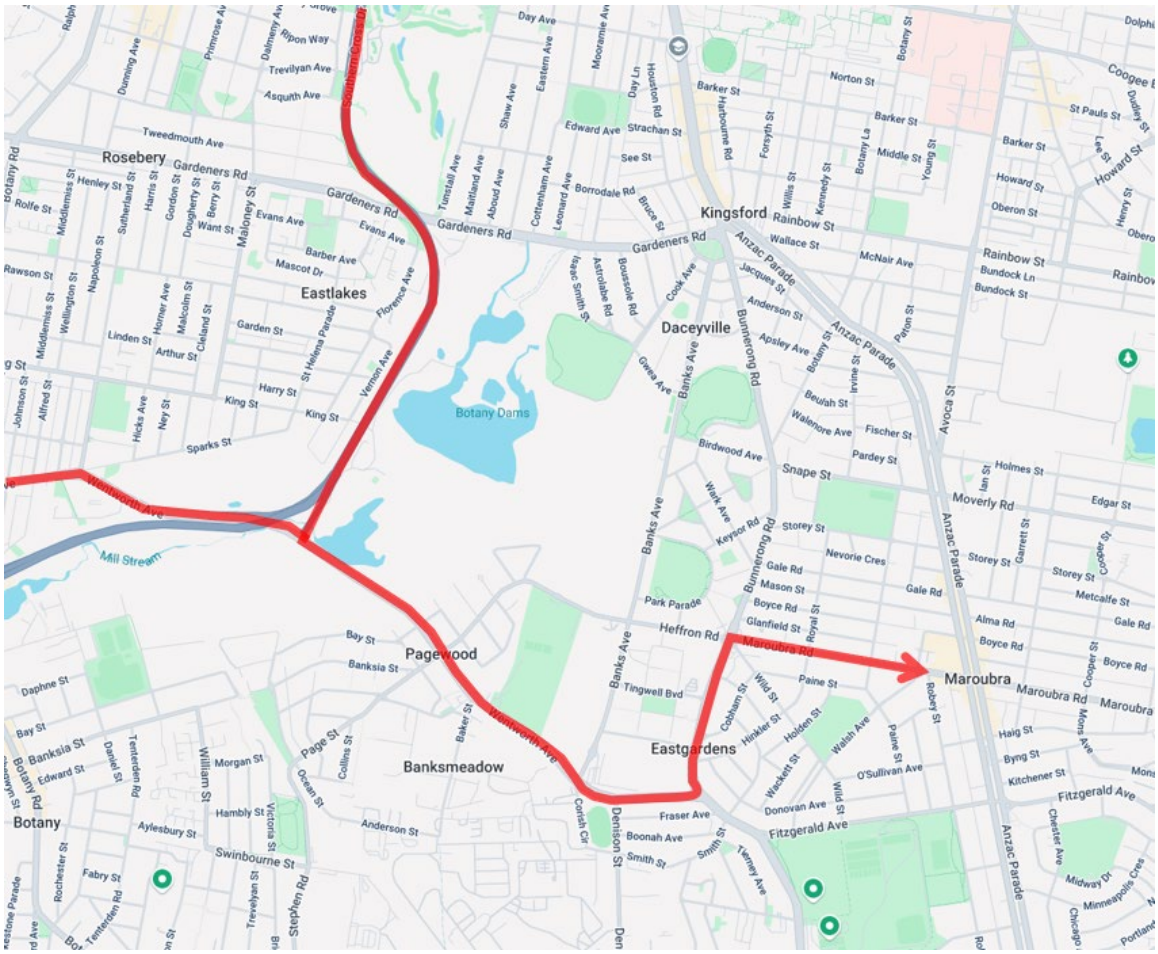

Figure 16 Potential construction vehicle routes

4.4 Temporary NSW Police parking

There are currently 6 on-street car parking spaces directly outside the subject site and adjoining NSW Police Force (NSWPF) building on Maroubra Road. To facilitate the construction of the subject site a works zone on Maroubra Road will be required given the constrained nature of Bruce Bennetts Place. This works zone will temporarily impact the existing NSWPF car parking and therefore an alternate parking arrangement has been developed to maintain these existing parking spaces. This temporary parking arrangement is shown in Figure 17, with key features as follows:

- 55 degree angled car parking, with all spaces 2.7m wide in compliance with the minimum requirements of AS2890.1.
- All car parking contained within the existing parking lane on Maroubra Road, consistent with current conditions.
- 1.8m footpath width on Maroubra Road which allows for suitable access to the Maroubra Police station for all user groups.

Maroubra Property Developments Pty Ltd has reached an in principle agreement with NSW Police in relation to this temporary arrangement which maintains their six on-street car parking spaces. Maroubra Property Developments Pty Ltd would be responsible for the delivery of all works associated with this temporary arrangement, including modifications to the footpath and necessary line-marking on Maroubra Road. Following the conclusion of the construction of the subject site the on-street car parking and Maroubra Road footpath would revert back to current conditions, with Maroubra Property Developments Pty Ltd responsible for these make good works.

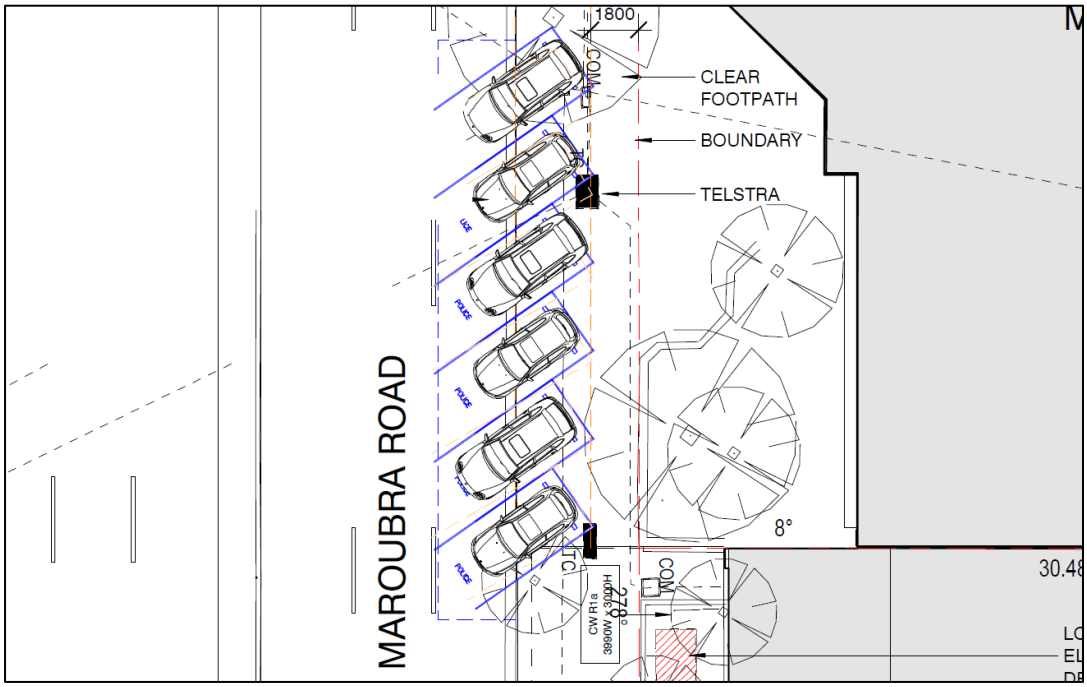

Figure 17 Temporary parking arrangement for NSWPF vehicles

4.5 Construction vehicle volumes

The number of construction vehicles accessing the site on a typical day may be in the order of 10-20 vehicles. This figure will be confirmed following the appointment of a contractor and will form part of the detailed CPTMP to be prepared prior to the commencement of construction. It should be noted however that the level of construction vehicle traffic will be less than that generated during the operational phase of the project.

4.6 Size and type of vehicles

The site will have various types of construction vehicles accessing the site, including:

- 12.5m Heavy Rigid Vehicles (HRVs)
- 8.8m Medium Rigid Vehicles (MRVs)
- 6.5m Small Rigid Vehicles (SRVs);
- Utes/vans

4.7 Works zones

To facilitate the construction project, a work zone may be established on the northern side of Maroubra Road adjacent to the site. The work zone would be approximately 12m in length and allow for large items to be lifted by cranes positioned within the site. B-Class hoardings will be installed adjacent to the work zone to provide protection to pedestrians.

The requirement for this works zone will be confirmed following the appointment of a contractor at the time of the preparation of the detailed CPTMP.

4.8 Impacts to pedestrians

Temporary fencing and hoardings will be installed along the site frontage on Maroubra Road and Piccadilly Place to maintain pedestrian movements and ensure the safety of pedestrians walking adjacent to the construction site. Footpaths will remain open at all times to pedestrians and therefore minimal impacts are anticipated.

Traffic controllers will be positioned at vehicle site access points to manage interactions between vehicles and pedestrians on the adjoining footpath. Traffic control plans for the site access points will be developed during the preparation of the detailed CPTMP (prior to the commencement of construction) which will further detail management arrangements to be in place to ensure the safety of pedestrians in the area.

4.9 Road closures and road occupancy

It is not anticipated that the works will necessitate the need for any road closures or occupation of roadways during the project. Should this need arise the appointed contractor would liaise closely with Council and TfNSW and schedule these works well in advance to minimise impacts to road users.

4.10 Public transport impacts

The construction works are not considered to impact adjacent public transport services given:

- No bus stop will be impacted by the future works, with the site not directly fronting any existing bus stops or shelters;
- The construction vehicle routes adopted avoid the key Anzac Parade bus corridor; and
- The construction is expected to generate relatively low levels of vehicles throughout the day, at most 2-4 vehicles per hour.

4.11 Construction worker parking

Given the location of the site, workers will be encouraged to use public transport as a means of access. Initially, there would be very little on-site parking, however, once the basement and parking levels are completed, contractors may be able use these facilities subject to availability. All other parking will be the responsibility of the individual and those requiring car parking will be directed to the nearby public car parks. It is intended that the majority of contractors will be utilising the excellent public transport services to travel to and from the site.

The potential car parking arrangements will be outlined within the detailed Construction Traffic Management Plan (CTMP) to be prepared prior to the commencement of works on the site. This CTMP would outline how workers will travel to the site and measures to be in place to minimise impacts to the surrounding street network. These measures may include (but are not limited to):

- During site induction staff will be informed of the existing public transport network servicing the site
- Identification of suitable off-site parking areas from where workers can either walk or use public transport to access the site; and
- To support construction workers in utilising public transport, appropriate arrangements will be made for any equipment/ tool storage and drop-off requirements

4.12 Cumulative construction impacts

There may be other construction projects occurring at the same as the proposed works at the site. Ongoing review of cumulative heavy vehicle traffic generation and coordination of heavy vehicle routes used by these projects will be undertaken on a regular basis between the appointed contractor, Council and TfNSW to minimise impacts on the road network. As other CTPMPs become available for adjacent projects, these will be reviewed by the contractor and discussions held with relevant stakeholders.

It is noted that the works at the site are anticipated to generate a relatively low level of construction vehicle activity of at most 2-4 vehicles per hour. This volume of vehicles would not impact the operation of the surrounding road network.

4.13 Emergency vehicle access

Emergency vehicle access will be maintained at all times, or if necessary site personnel will grant access to emergency vehicles entering the site itself.

The contractor will liaise with the NSW Police, Fire Brigade and emergency services agencies throughout construction and a 24-hour contact would be made available for 'out of hours' emergencies and access. The emergency services will be briefed

4.14 Mitigation measures

Mitigation measures will be adopted during construction to ensure traffic movements have minimal impact on surrounding land uses and the community in general, and would include the following:

- Trucks to minimise the use of local streets for access to the construction site;
- Trucks to enter and exit the site in a forward direction;
- Pedestrians near the ingress/egress points will not be held unnecessarily.
- At construction vehicle access/egress points, priority is to be given to trucks accessing the site over trucks egressing the site so as to have no impact to traffic flow on surrounding roads;
- Trucks to not circulate on the road network to wait to enter the site (unless exceptional circumstances do not permit)
- Restrict construction vehicle activity to designated routes which do not utilise any local roads;
- Truck drivers will be advised of the designated truck routes to/ from the site;
- Pedestrian movements adjacent the construction site will be managed and controlled by site personnel where required;

- Pedestrian warning signs and construction safety signs/devices to be utilised in the vicinity of the site and to be provided in accordance with WorkCover requirements;
- Construction activity to be carried out in accordance with approved hours of work;
- Truck loads would be covered during transportation off-site;
- Activities related to the construction works would not impede traffic flow along adjacent roads;
- Construction vehicles not to queue on adjacent streets;
- During site induction, workers will be informed of the existing public transport network servicing the site; and
- To support construction workers in utilising public transport, appropriate arrangements will be made for any equipment/ tool storage and drop-off requirements;

4.15 Site induction

All staff employed on the head contractor (including sub-contractors) would be required to undergo a site induction. The induction would include permitted access routes to and from the construction site for site staff and delivery vehicles, parking arrangements, as well as standard environmental, workplace health and safety, driver protocols and emergency procedures. The approved work hours must be included as part of this induction.

4.16 Driver code of conduct

The appointed contractor will include the following in all subcontract procurement packages:

- a copy of the approved truck routes as previously detailed in this document.
- the approved maximum truck size
- any other entry restrictions, or site access restrictions as agreed to by the authorities.

The appointed contractor will be responsible for managing all site access points and monitoring subcontractor behaviour and subcontractor truck access arrangements to ensure compliance with conditions of the contract. They will be responsible for ensuring there is no access to or from the site before or after approved construction hours and no queueing occurs on the surrounding road network.

5 Summary

This transport assessment has been prepared by JMT Consulting to accompany a Development Application to Randwick City Council for the development of a mixed use development located at 138 Maroubra Road, Maroubra. Key findings of the assessment are as follows:

- The site has excellent access to nearby public transport including the high frequency Anzac Parade bus corridor. Key centres can be accessed by public transport within a 30 minute timeframe including the Sydney CBD.
- Access to the site is proposed to be via a driveway on Piccadilly Place – consistent with the existing driveway location.
- The proposal includes a dedicated service vehicle bay for the purposes of loading and waste collection – a significant improvement when compared to current conditions where trucks are required to park on Piccadilly Place.
- The basement car park has been designed in accordance with relevant Australian Standards AS2890.1 and AS2890.6.
- On-site car parking for residents is to be provided in line with Council controls, with a reduced number of spaces provided for visitors and the non-residential uses compared to that required under the DCP. This reduction in car spaces is considered appropriate given the site's proximity to nearby public transport and availability of public car parking spaces in Maroubra Junction.
- The proposal is forecast to generate a small increase of less than 20 peak hour traffic movements – equivalent to fewer than one vehicle every three minutes. Traffic modelling undertaken in accordance with Transport for NSW guidelines which demonstrate the proposal would not impact the performance of the surrounding road network.
- Bicycle parking is to be provided for all users to support access via this mode of transport.

In the above context, the traffic and transport impacts arising from the proposal are considered acceptable.

Appendix A: Traffic Modelling Outputs