



5 Blue Street, North Sydney

Transport Impact Assessment

Prepared for:

**Zurich Australian Insurance
Properties Pty Ltd**

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1 Introduction

1.1 Background

This transport impact assessment supports the detailed State Significant Development Application (SSDA) (SSD-86270706) and concurrent rezoning being lodged with the Department of Planning, Housing and Infrastructure (DPHI) for the adaptive reuse of a mixed-use development at 5 Blue Street, North Sydney (the site). The proponent for the SSDA is Zurich Australian Insurance Properties Pty Ltd.

The proposal aims to:

- Respond to the housing challenges facing Sydney through the delivery of diverse housing types in a highly accessible location.
- Deliver a diverse mix of residential apartments, including market housing and co-living dwellings that will enjoy excellent amenity, taking advantage of the site's strategic location, proximity to services and employment opportunities.
- A planning envelope with setbacks to respect the local context and capable of achieving acceptable levels of solar access, wind comfort and daylight in adjoining public places.
- Enhancement of the Blue Street Plaza, contributing to the improved pedestrian amenity, site permeability and access to and around North Sydney Station.
- Enable the development of high-performance buildings in terms of amenity and sustainability.

1.2 Housing Delivery Authority and National Accord

The NSW State Government has agreed to a National Housing Accord (Accord) with other states and territories, local government, institutional investors and the construction sector. The Accord includes an initial aspirational target agreed by all parties to build 1.2 million new well-located homes over 5 years from mid-2024. NSW has a target to deliver 377,000 new homes over five years by July 2029 under the Accord.

To accelerate the delivery of much needed homes and help meet NSW's target under the Accord, the NSW Government has established the HDA. The HDA offers a clear planning pathway for large residential and mixed-use developments to be assessed as SSD or SSD with a concurrent rezoning. This process aims to improve consistency in planning decisions and speed up assessment, without sacrificing housing quality.

The proposed development is well placed to deliver additional uplift to help achieve these housing goals, being a large, consolidated land holding under single ownership in an accessible location with exceptional public transport connections.

1.3 The site

The site located at 5 Blue Street, North Sydney on a prominent corner of Blue Street and Miller Street and sitting directly above North Sydney Railway Station. The site is situated approximately 2km to the north of the Sydney Central Business District (CBD) within the North Sydney Local Government Area (LGA), and is legally identified as Lot 4 in DP1134234. An aerial map of the side is provided at Figure 1.

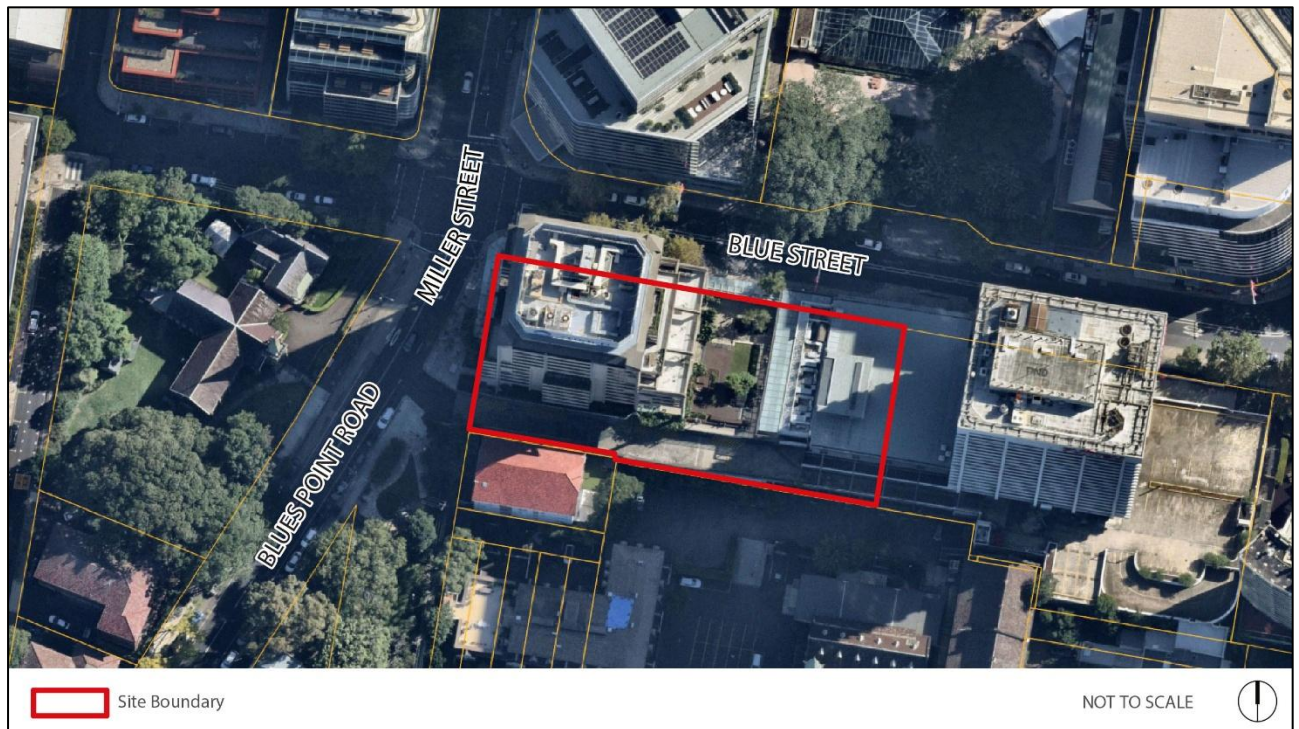


Figure 1 Site aerial

Source: Nearmap edited by Colliers Urban Planning

1.4 Proposal description

The proposed above station adaptive reuse seeks to transform the landmark site into a vibrant mixed-use precinct that integrates residential, retail and public domain enhancements into the broader North Sydney precinct. Specifically, the proposal seeks approval for:

- Adaptive reuse of a mixed-use development, comprising residential and non-residential ground floor uses, including:
 - Two levels of basement car parking, comprising plant, bicycle storage areas and car parking spaces.
 - Ground floor retail and residential lobbies.
 - Co-living on Levels 1-3, to be operated as affordable housing by a Community Housing Provider in perpetuity.

- Residential dwellings on Levels 4-14.
- Public domain and landscaping improvements, including the retention and enhancement of Blue Street Plaza at the eastern portion of the site.
- Extension and augmentation of services and infrastructure as required.
- Concurrent amendments to the *North Sydney Local Environmental Plan 2013* to facilitate the SSDA.

1.5 Secretary's Environmental Assessment Requirements

In accordance with section 4.39 of the Environmental Planning & Assessment Act 1979 (EP&A Act), Secretary's Environmental Assessment Requirements (SEARs) (SSD-86270706) have been issued. This report has been prepared to respond to the issued SEARs, as set out in Table 1.

As per the recently released TfNSW Guide to Transport Impact Assessment (GTIA) the subject development is considered to have a 'low' impact level given the proposal does not meet the criteria for either Columns 2 or 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.

Table 1 SEARs requirements

SEARs Item	Description of Requirement - SSD- 86270706	Response
Item 10. Transport	Identify the requirements for parking for each mode of transport (GTIA Section 8.3 & 8.5) Document the number of parking spaces by mode proposed by the development. Consideration should be given to Part B, Section 10 of the NSDCP 2013, which outlines the maximum car parking rates applicable to the precinct.	3.5 (car parking) 3.6 (bicycle parking)
	The provision of well-designed active transport connections both within the site and linking to the surrounding area. To support the best practice design, please refer to the following guidance documents: ❖ Cycleway Design Toolbox (2020) ❖ Walking Space Guide (2020).	Bicycle parking is discussed in Section 3.6. For further details around pedestrian connectivity refer to the architectural design report.

SEARs Item	Description of Requirement - SSD- 86270706	Response
Item 10. Transport	Detail the safety and functionality of the development's proposed multimodal access arrangements and internal road/parking layout, including service and parking areas for all user groups (e.g. freight and servicing, general traffic, visitor parking, disabled parking, car share and car charging), and pedestrians and cyclists. Any proposed shared use of the loading dock must be supported by a detailed loading dock management plan.	3.1 (site access) 3.2 (parking design) 3.3 (loading dock) 3.4 (loading dock management)
	A statement by a chartered / registered engineer for any bicycle, car, commercial vehicle or mobility parking spaces that the parking spaces comply with AS2890 and that any new or modified driveway has sufficient sight distance and appropriate dimensions for the design vehicle (refer GTIA Section 7.3.1). Swept path plans should be provided as required to demonstrate compliance	Refer to Section 3.2 and 3.3 for commentary regarding suitability of the design with respect to Australian Standards, including vehicle swept paths
	Any proposed mechanical car stacker system must be accompanied by an operation management plan detailing its functionality and management. Adequate vehicle waiting space must be provided entirely within the site, to accommodate vehicles while the system is in use. The waiting area must be designed and located to ensure it does not obstruct access to or from the stacker, even when occupied by a vehicle.	Not applicable – no mechanical car stacker system proposed
	The TIA should assess the cumulative transport impacts arising from surrounding known or committed developments, including but not limited to adjacent sites at 15 Blue Street and 1–13 MacKenzie Street.	See section 3.10 for discussion of cumulative impacts

SEARs Item	Description of Requirement - SSD- 86270706	Response
Item 10. Transport	Construction Traffic Management Plan - A preliminary Construction Transport Management Plan (CTMP) must be developed to assess and mitigate the impact of construction-related traffic on the surrounding road network. The CTMP should provide a comprehensive overview of the proposed construction activities, including: - o The types and volumes of vehicles expected during each phase of construction - o Designated truck routes and construction access points - o Any potential cumulative traffic impacts arising from adjacent development sites - o Consideration should be given to the CTMP requirements outlined by North Sydney Council - Prepare a Construction Traffic Management Plan – North Sydney Council. - o Evidence must clearly demonstrate that consultation has been undertaken in accordance with the advice provided by TfNSW	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.

1.6 State Environmental Planning Policy (Transport & Infrastructure) 2021

With regards to the State Environmental Planning Policy (Transport & Infrastructure – T&I SEPP) 2021 the following is noted:

- The site does not have a direct frontage to a classified road, therefore not triggering the assessment requirements of clause 2.119 of the SEPP.
- The site does not adjoin a road with an annual average daily traffic volume of more than 20,000 vehicles, therefore not triggering the assessment requirements of Clause 2.120 of the T&I SEPP; and
- The proposal will provide for fewer than 300 dwellings and 200 parking spaces and is not expected to impact the operation of the local road network and is therefore not considered to be ‘traffic generating development’ as defined under Schedule 3 of the T&I SEPP.

2 Existing Transport Context

2.1 Travel behaviours

Journey to Work Census data confirms that North Sydney is one of the most transit-oriented and walkable employment centres in Greater Sydney. Public transport dominates commuter travel, with 68% of inbound workers and 40% of outbound residents using train or bus services. Walking also features prominently for local residents, with 37% walking to work, highlighting the compact urban structure and proximity to employment within the centre.

This data suggests that future residents of the proposed development are highly likely to commute via train, bus or on foot, particularly given the site's proximity to the new Victoria Cross Metro Station and North Sydney Train Station and dense commercial activity within walking distance.

Table 2 provides a mode share breakdown, reinforcing the site's strong alignment with sustainable travel patterns:

Table 2 Existing travel behaviours

Mode of travel	<i>Residents travelling to work from North Sydney</i>	<i>Employees travelling into North Sydney for work</i>
Car driver	17%	21%
Car passenger	3%	2%
Bus	6%	14%
Train	34%	54%
Walk	37%	5%
Bicycle	2%	1%
Other	1%	3%
Total	100.00%	100.00%

2.2 Current access arrangements

Vehicular access to the site is currently provided via one of three driveways accessed via a rear service lane (also known as Phillips Lane) as indicated in Figure 2. This service lane provides a connection to Miller Street to the west of the site as shown in Figure 3.

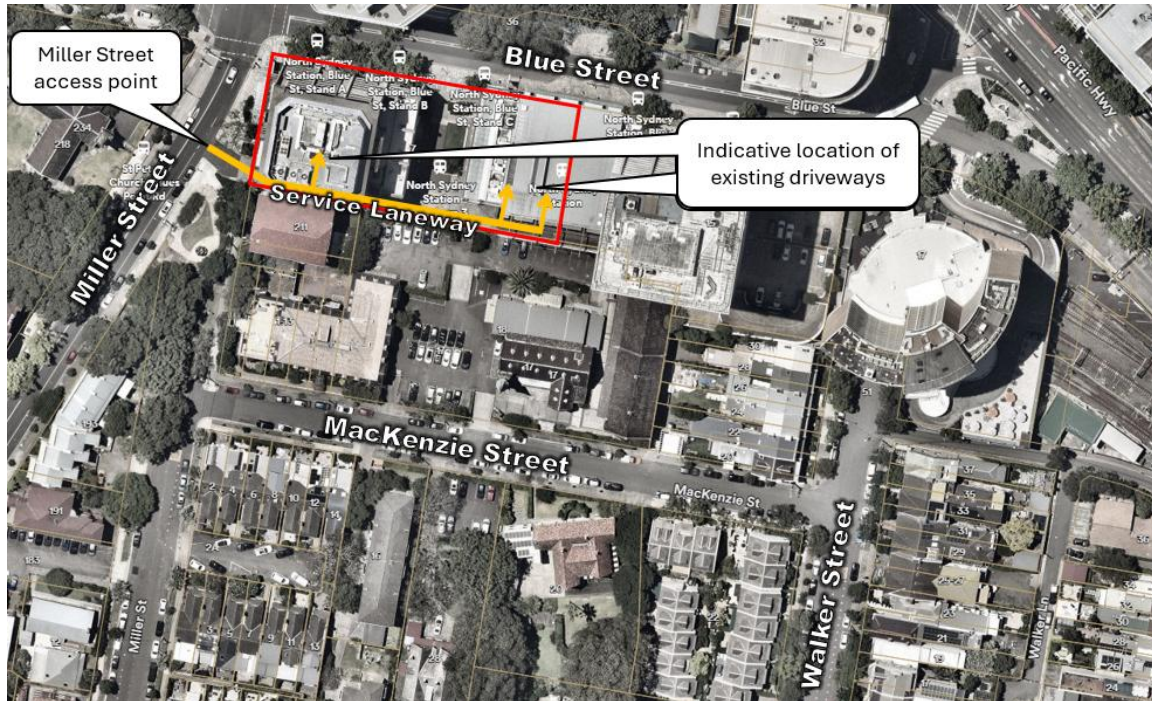


Figure 2 Existing site access arrangements



Figure 3 Existing vehicle access via Miller Street



Figure 4 Existing Phillips Lane

2.3 Car parking

The site currently provides for approximately 85 parking spaces over multiple levels. Access to the on-site car parking areas is obtained via the rear service laneway.

2.4 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.

Regional Roads perform an intermediate function between the main arterial network of State Roads and council controlled Local Roads. Key State and Regional roads which provide access to the site are illustrated in Figure 5.

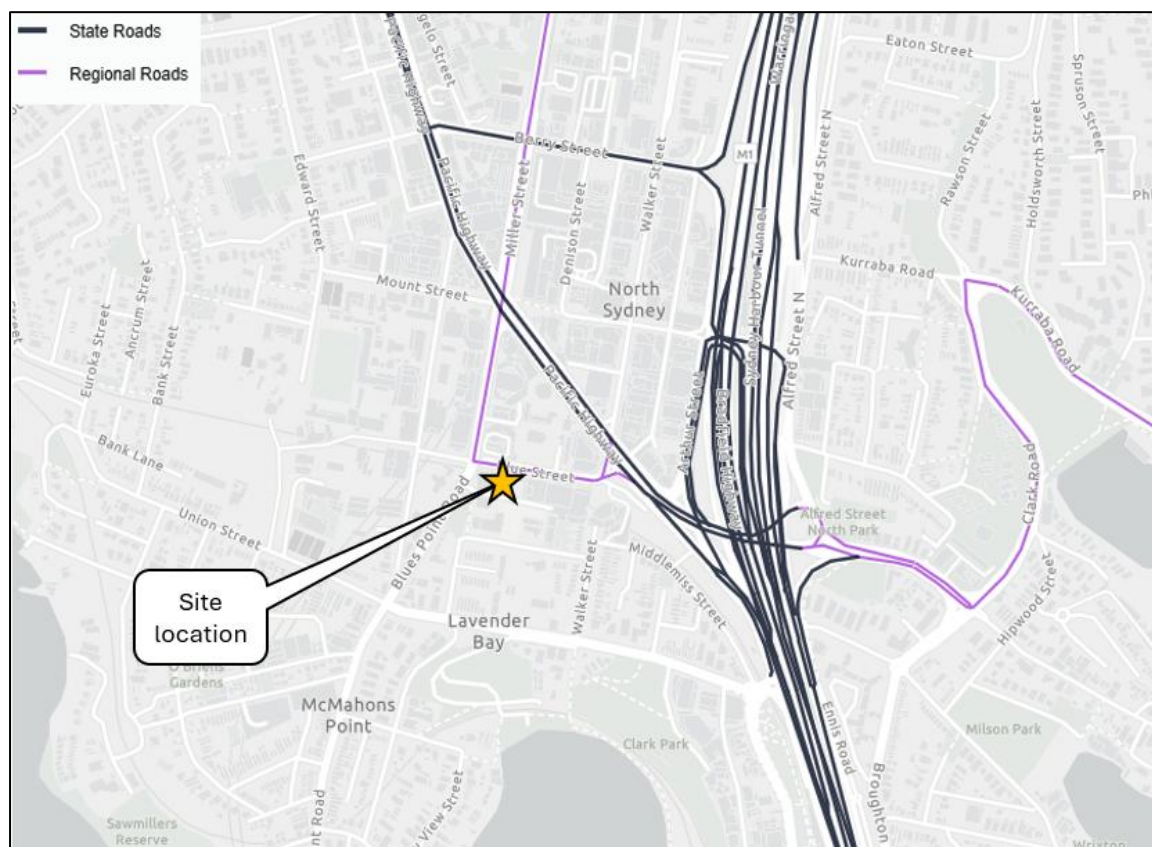


Figure 5 Road network serving the site

Key State roads providing access to the site include the Warringah Freeway, Pacific Highway and Berry Street. Blue Street and Miller Street are regional roads providing connectivity to the State road network. Both Walker Street and Miller Street (south of Blue Street) are local roads under the control of North Sydney Council.

2.5 Public transport

2.5.1 Overview

The North Sydney CBD is already well-served by an extensive public transport network, including metro, train, and bus services. The site benefits from high-frequency, multi-modal access, with major public transport nodes located within a short walking distance. Existing public transport services are illustrated in Figure 6, and include:

- North Sydney rail and bus interchange located immediately adjacent to the site
- Victoria Cross Metro station located on the corner of Berry Street and Miller Street just 400m or a 5 minute walk from the site
- Various bus stops available within a five minute walk of the site on Blue Street, Pacific Highway, Miller Street and Blues Point Road.

These services provide high-capacity, reliable access to major employment centres across Greater Sydney and support strong public transport uptake across the North Sydney CBD.

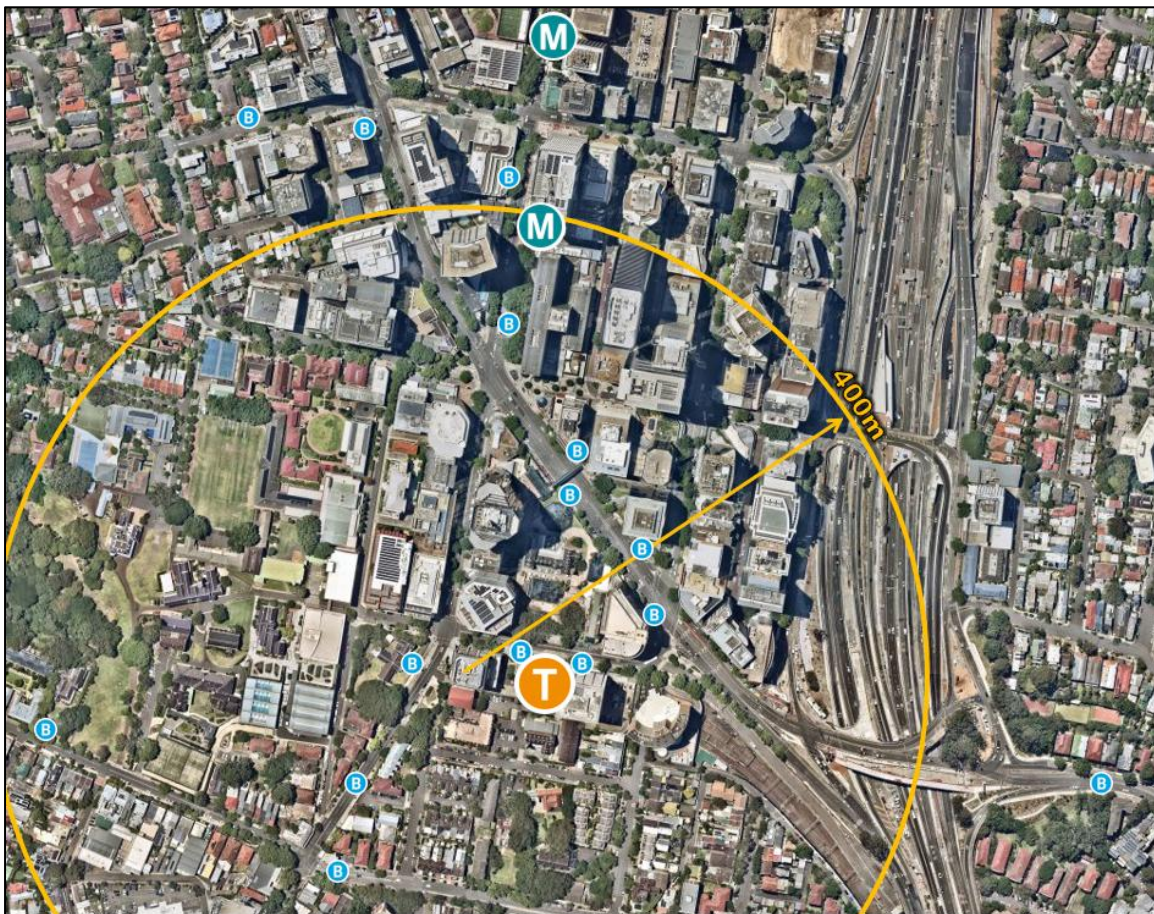


Figure 6 Existing public transport accessibility

2.5.2 Sydney metro

The introduction of the Sydney Metro (City and Southwest) service from August 2024 provided additional connectivity to and from the site. Victoria Cross Station was delivered as part of this project and is accessed on Miller Street at either Berry Street or McLaren Street. This metro station, which opened in August 2024, has significantly added to the already well provisioned public transport amenities in the area.

From Victoria Cross Station, which is only 400m walk from the subject site, Central Station may be reached in approximately 9 minutes and Martin Place Station in 5 minutes. The Sydney Metro route and station locations are shown in Figure 7.

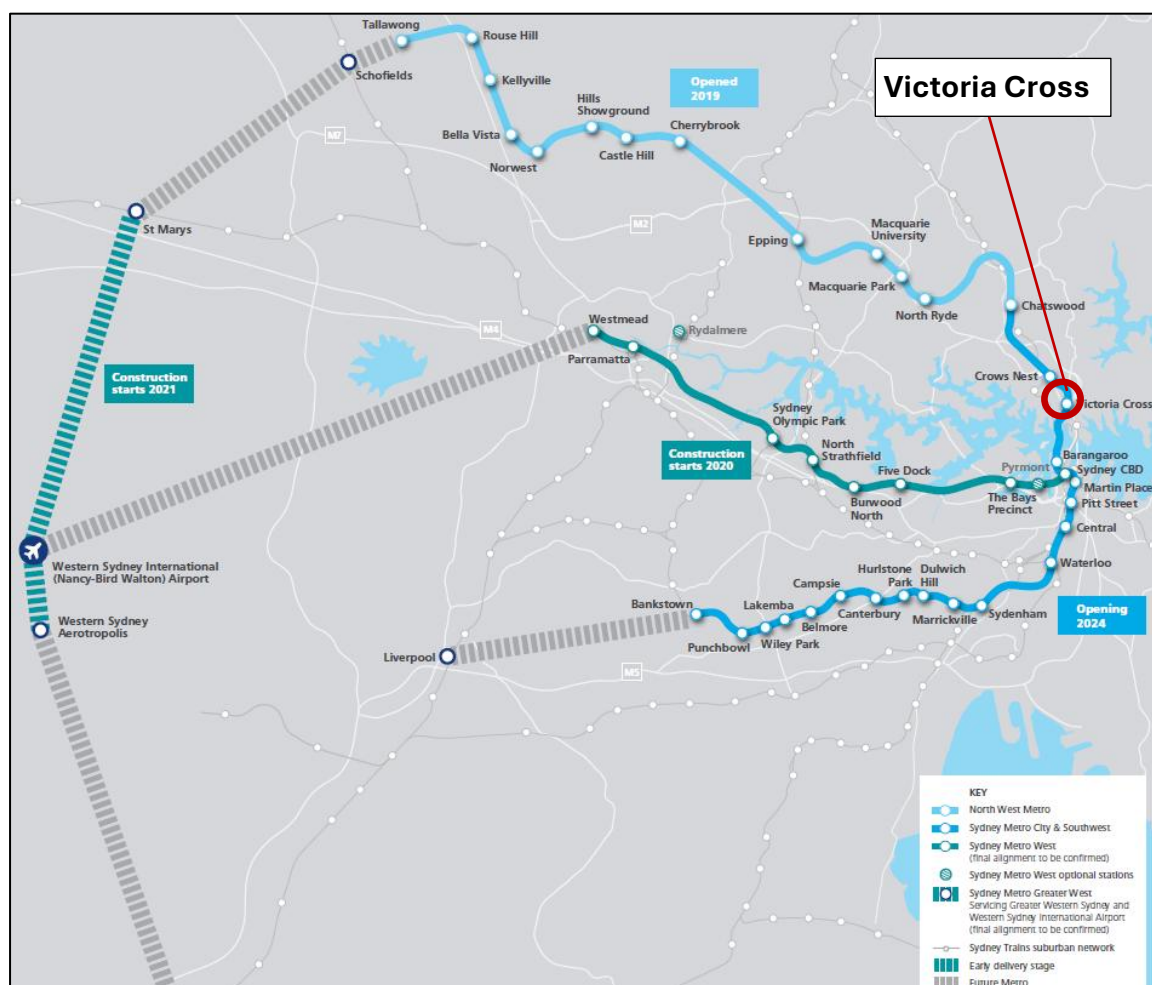


Figure 7 Sydney Metro network

Source: Transport for NSW

2.5.4 Heavy rail services

North Sydney Station is located immediately adjacent to the site and is part of the T1 North Shore Line and T9 Northern Lines – providing frequent services to destinations across Greater Sydney. Services operate from North Sydney station at up to three minute intervals during peak hours, providing a high level of public transport accessibility. The services provide direct access from North Sydney to notable destinations and high-density residential centres, including Central Station, Chatswood, Macquarie Park, Epping, Hornsby, Burwood, and Strathfield.



Figure 9 Sydney trains network

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, education, services and quality public transport spaces are in easy reach of residences.

As illustrated in Figure 10 several key centres across Sydney, including the Sydney CBD, North Sydney, Chatswood, and Macquarie Park are able to be reached within 30 minutes by public transport from the site. The local area is also highly accessible across the North Sydney Council area. This high level of accessibility strongly supports the use of public transport for daily commuting.

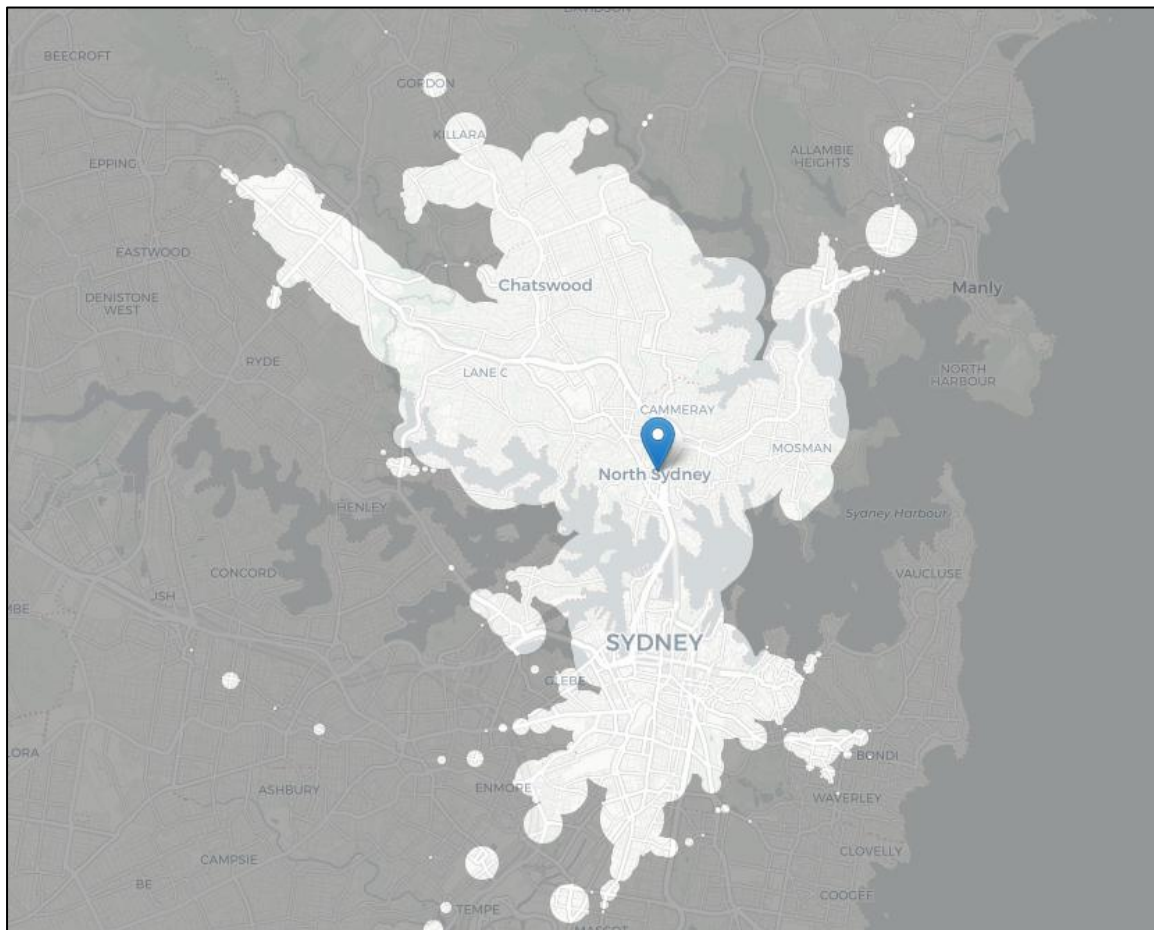


Figure 10 30 minute public transport catchment

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

2.7 Walking and cycling network

The site is located within the North Sydney CBD and benefits from an established network of pedestrian routes and crossing opportunities. Footpaths are available on all roads adjacent to the site, with formal pedestrian crossing opportunities available at all nearby signalised intersections.

Figure 11 shows an extract of the proposed North Sydney cycling network, indicating the site has access to numerous existing and future cycleways. Key routes near the site for cyclists include Miller Street, the Pacific Highway, Middlemiss Street and the recently completed Sydney Harbour Bridge northern cycleway ramp.



Figure 11 Extract of North Sydney cycling map

3 Transport Impact Assessment

3.1 Proposed site access

Being an adaptive reuse project the proposed vehicle access arrangements largely reflect the current environment as set out in Section 2.2 of this document. This includes retention of three individual access points connecting to the rear service laneway accessed via Miller Street.

As depicted in Figure 12 the three driveways provide access to parking at ground level, mezzanine level and basement level.

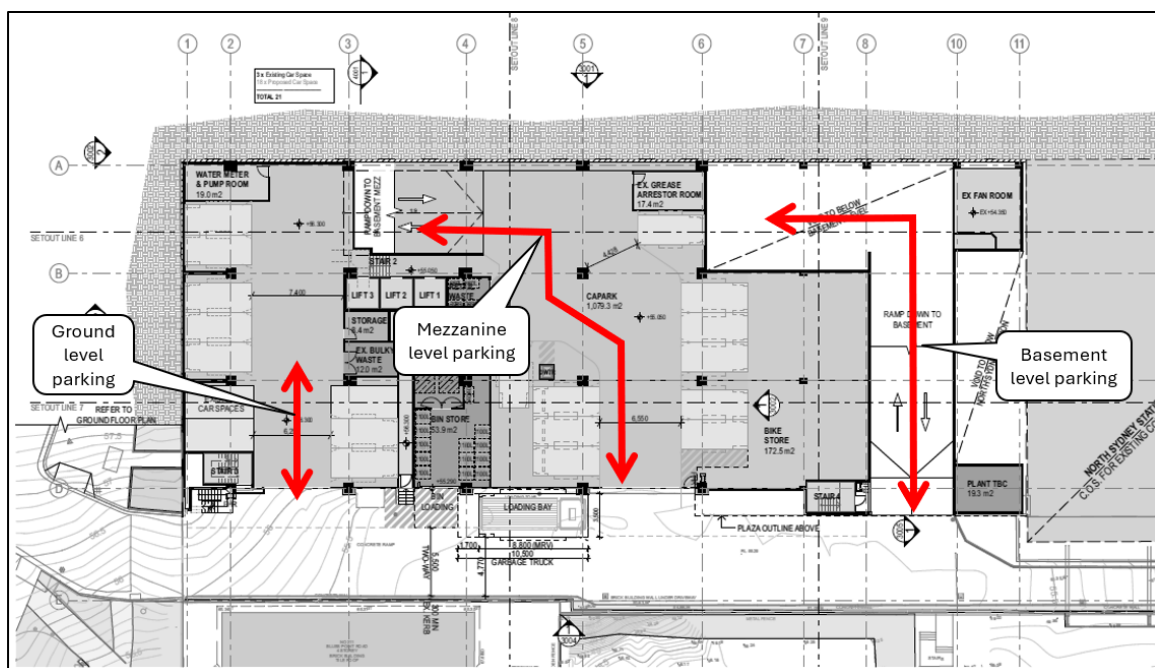


Figure 12 Vehicle access arrangements

3.2 Car park design

Typically all car parking provided for future residents is in accordance with AS2890.1 with respect to ramp gradients, circulation aisle widths and car space dimensions. Being an adaptive reuse project there are some existing parking spaces utilised by commercial workers, operating in an acceptable manner, that were designed and installed prior to the implementation of the most recent Australian Standard. Some of these spaces have slightly reduced head heights or design envelopes compared to the requirements under contemporary design standards. This arrangement is considered acceptable given the subject proposal:

- Does not impact these existing parking spaces in terms of access or manoeuvrability
- Does not reduce the available height clearance for vehicles; and

- Maintains existing arrangements whereby users familiar with each parking spaces will access the car park. No public / casual parking access will be provided – consistent with current conditions.

Any new or modified parking spaces provided in the car park fully comply with the current requirements of AS2890.1.

Swept path analysis indicating the vehicle access points and internal manoeuvrability is presented in Figure 13.

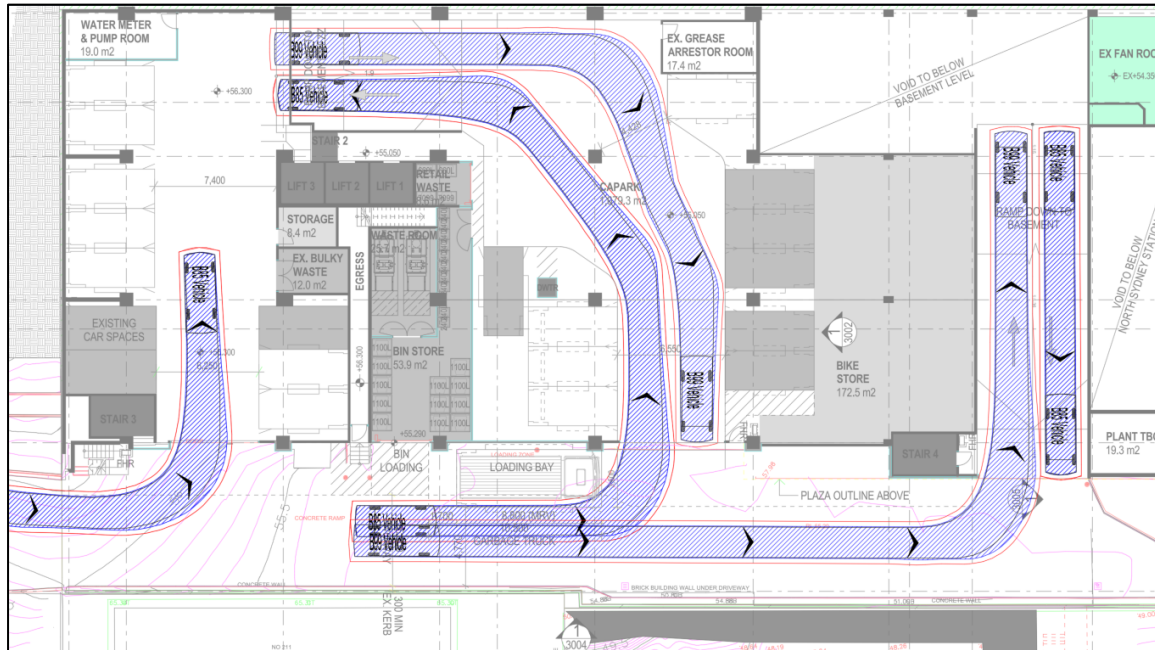


Figure 13 Swept path analysis – vehicle access points

3.3 Loading and servicing

Loading and servicing for the building is currently undertaken along the rear service laneway (Phillips Lane) as indicated in Figure 14. Vehicles drive forward into this loading zone from the Miller Street access point and turn around in the adjacent 15 Blue Street car park.

Being an adaptive reuse project it is not feasible to alter the fabric of the building structure to accommodate a large waste collection vehicle within the confines of the building itself. Therefore all loading and servicing (including waste collection) will continue to occur via Phillips Lane under the subject proposal. It should be noted that Phillips Lane is within the overall site boundary, and therefore waste collection / vehicle servicing will still occur on site as per typical Council requirements.

The design makes provision for a loading bay on Phillips Lane, immediately to a bin holding room. This will provide for safe, convenient and efficient waste collection by Council waste trucks. Swept path analysis presented in Figure 15 confirms that a 10.5m long North Sydney Council waste collection vehicle has the ability to appropriately manoeuvre into this loading zone.



Figure 14 Existing loading bay on Phillips Lane

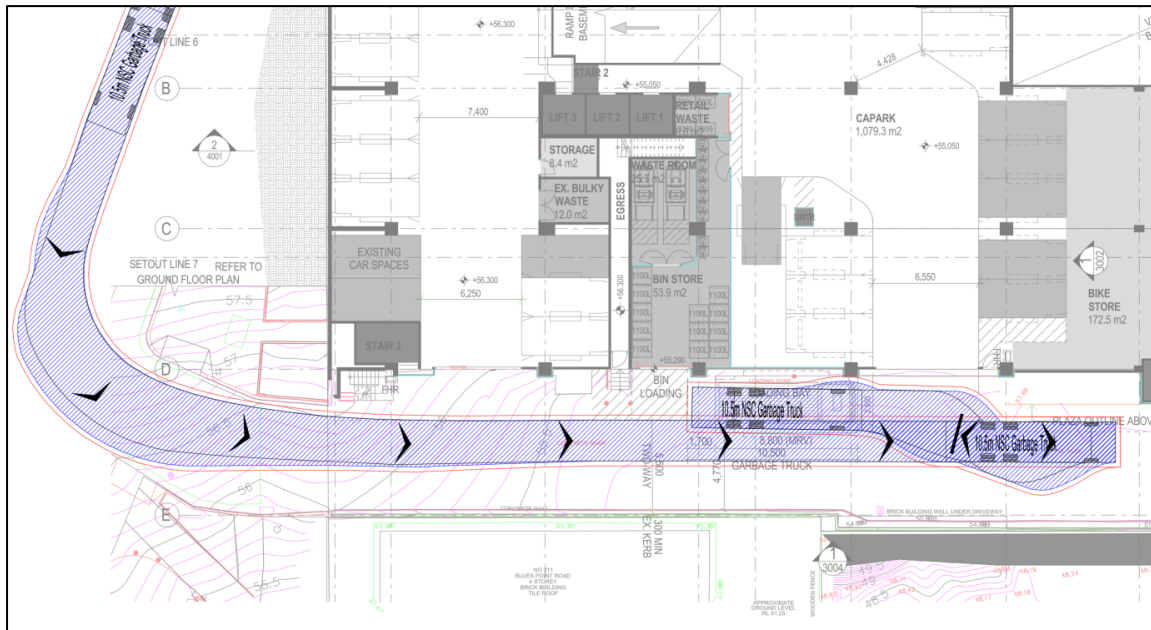


Figure 15 Swept path analysis – waste collection vehicle

In terms of access to the loading bay under different operating conditions / scenarios the following is noted:

Scenario 1: Prior to development of adjacent 15 Blue Street:

Collection arrangements consistent with current conditions. Vehicles drive forwards into the loading zone from Miller Street then use the adjacent car park at 15 Blue Street to turn around before exiting onto Miller Street in a forwards direction.

Scenario 2: During construction of adjacent 15 Blue Street

During construction of the adjacent development at 15 Blue Street Council trucks would temporarily be required to reverse down Phillips Lane into the on-site loading area. Traffic controllers would be present on Phillips Lane including at the Miller Street driveway to assist in the manoeuvring of trucks into and out of the site.

Scenario 3: Post development of adjacent 15 Blue Street

As per Scenario 1, however trucks will utilise the on-site turntable provided as part of the 15 Blue Street development to turn around and re-enter the road network in a forward direction.

3.4 Loading dock management

The building management team will be required to engage and maintain a Loading Dock Manager to organise and supervise delivery and removal activities. The Building Manager will need to be present on the site during all normal servicing hours and contactable by mobile phone at other times to oversee the operation of the loading dock areas.

Each retail tenant would be allocated one of the delivery windows for their deliveries to occur.

Residents would need to book-in times with building management if they require the loading dock for activities (such as moving/receiving furniture). A delivery schedule will be organised by building management to stagger and control arrival of deliveries.

3.5 Car parking provision

As the proposal is a State Significant Development local planning controls with respect to car parking such as Council's Development Control Plan (DCP) are not applicable. Instead reference is made to the following documents:

- TfNSW Guide to Transport Impact Assessment (Chapter 8) for residential developments – Category A accessibility
- Housing SEPP 2021 for co-living car parking requirements.

These parking rates and associated parking requirements are summarised Table 3 – demonstrating the proposed car parking provision is consistent with these relevant documents. Compliance with these guidelines will support travel to and from the site by sustainable forms of transport (public transport, walking and cycling) and limit the traffic related impacts of the development.

Table 3 Car parking allocation

Type		No. of units	Parking Rate		Spaces provided
			Parking Rate	No. of Spaces	
Residential Apartments	1 bed	12	0.4	5	56
	2 bed	19	0.7	13	
	3/4 bed	31	1.2	38	
	Sub-Total	62		56	
Co-Living		86	0.2	17	17
Total					73

The small amount of retail floor space (approximately 400m²) will predominantly service residents and workers of the North Sydney CBD and therefore not require any standalone car parking.

3.6 Bicycle parking

The proposed bicycle parking provision has been developed based on the requirements outlined in North Sydney Council's DCP and the Housing SEPP as summarised in Table 4.

State Environmental Planning Policy (SEPP) Housing 2021 discusses bicycle (and motorcycle) parking for co-living developments however is non-prescriptive in terms of specific requirements, noting *"the co-living housing will include adequate bicycle and motorcycle parking spaces"*

A reasonable bicycle parking provision for the co-living component of the development is one space per three dwellings, noting that as the site is adjacent to North Sydney station and within the North Sydney CBD most residents will not require bicycles for transport. Residents are also likely to make use of various bike share operators that exist in the area.

Table 4 Bicycle parking provision

Use	Quantum	Bicycle parking rate	Requirement
Residents	62 units	1 / unit	62
Residential visitors		1 / 10 units	6
Co-Living	86 units	1 / 3 units	29
Total Requirement			97

The proposal includes a large bike storage room (see Figure 16) totalling approximately 170m² which will be more than capable of accommodating the required number of bicycle parking spaces. All bicycle parking spaces will be designed in accordance with the requirements of AS2890.3, including a minimum 20% of spaces to be horizontally mounted.

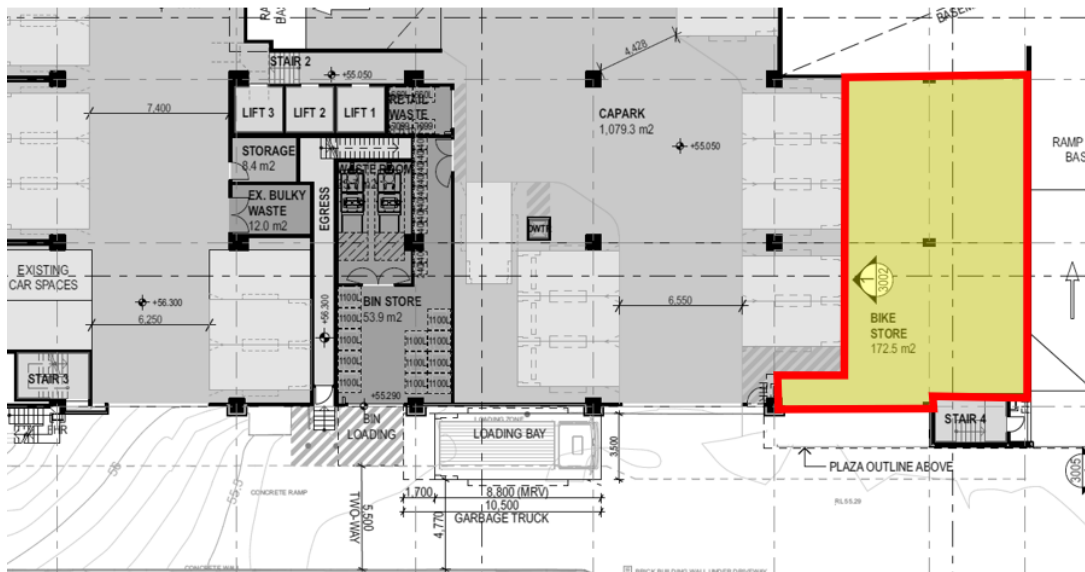


Figure 16 On-site bicycle parking

3.7 Future mode share and travel demand

A target mode split for the proposal has been set and is presented in Table 5 for both building residents and retail users. This modal split has been developed based on existing travel patterns (see Section 2) and the proximity of the site to current and future transport services. The majority of trips from the site will continue to be via public transport or walking. With the advent of the recently opened Sydney Metro station at Victoria Cross (approximately 5 minute walk from the site) as well as the limited on-site parking provision the proportion of residents using private vehicle to travel from the site is expected to be approximately 10%.

Table 5 Mode share and travel demand

Travel mode	Residential trips		
	Mode share	AM peak hour	PM peak hour
Car driver	10%	10	8
Car passenger	3%	3	3
Bus	8%	8	7
Train / Metro	38%	38	32
Bicycle	4%	4	3
Walk	37%	37	31
Total	100%	99	84

3.8 Forecast traffic generation

3.8.1 Existing traffic generation

The existing site comprises a commercial building containing approximately 85 car parking spaces. Traffic surveys were undertaken in September 2025 at the existing site access points to understand the level of traffic generated by the current site uses, with these surveys indicating the following traffic movements:

- AM Peak hour: 24 vehicles (20 vehicles in, 4 vehicles out)
- PM Peak hour: 23 vehicles (3 vehicles in, 20 vehicles out)

3.8.2 Future traffic generation

The TfNSW Guide to Transport Impact Assessment (GTIA, 2024) document describes vehicular trip rates for residential developments. Given the constrained parking environment within the site it is appropriate to forecast traffic movements based on the quantum of parking provided within the site.

The GTIA document notes the outcomes of surveys of high density residential developments across Sydney. These surveys highlighted those developments in the North Sydney area demonstrated one of the lower traffic generation rates during the morning and evening peak hours. As a conservative approach however the average Sydney wide rate has been adopted, those being:

- AM Peak hour: 0.15 vehicle trips per parking space
- PM Peak hour: 0.12 vehicle trips per parking space

Given the zero parking provision and typical walk up nature of the retail tenancies no traffic movements for this use are assumed during the peak hours of the day.

The forecast traffic generation arising from the development application is summarised in Table 6. This indicates the proposal would result in a **net reduction** in peak hour traffic movements compared to current conditions, therefore having an overall benefit to the surrounding road network.

Table 6 Forecast traffic generation

Scenario	Number	Unit	Traffic Generation Rate		Peak Hour Vehicle Trips	
			AM peak hour	PM peak hour	AM peak hour	PM peak hour
Existing (commercial building)	85	Parking Spaces	Based on surveyed data		24	23
Future (residential uses)	73	Parking Spaces	0.15	0.12	11	9
Net traffic movements (future minus existing)					-13	-14

3.9 Impact assessment

3.9.1 Road network

The proposal is not expected to impact the operation of the surrounding road network in the following context:

- When taking into consideration the expected traffic movements generated by the proposal, with regard for the traffic movements generated by the existing site use, the proposal is forecast to result in a **reduction** in peak hour traffic movements.
- The access driveway locations are positioned to align with existing points of access to the building, with no new driveways proposed on the adjoining street network including the more active Blue Street and Miller Street frontages.
- The development will provide limited on-site car parking which will support travel by public transport, walking and cycling.

3.9.2 Public transport

The site is a short walk from the extensive bus, heavy rail and metro rail services provided within the North Sydney CBD. Public transport demand is expected to grow with the proposed development alongside other nearby developments in the area.

The public transport system serving the site, in particular the train and metro networks, have significant carrying capacity and can comfortably accommodate the expected demands generated by the proposal.

The current commercial use of the site may, based on the estimated floor space of the building, generate upwards of 700 trips to the site in the morning peak period and a similar number in the afternoon peak period. Typically half of all trips for commercial are made in the peak hour, and therefore the current site use may generate 350 (or more) trips – the majority of which would be by public transport.

As previously noted in Section 3.7 of this document the public transport demands are anticipated to be approximately 40 trips per hour – significantly less when compared to current conditions.

In this context the proposed redevelopment of the site for residential apartments would result in no increase in public transport demands compared to current conditions. Therefore the public transport impacts of the proposal are considered low and acceptable.

3.9.3 Walking and cycling

No impacts to pedestrians or cyclists are anticipated as a result of the proposal given:

- The constrained on-site parking environment to be provided as part of the proposal will limit vehicular movements on the surrounding footpath network;
- No new vehicle driveways are proposed as part of the development, with the active frontages of Miller Street and Blue Street remaining unencumbered by driveways;
- Ground floor retail tenancies will support a more active pedestrian environment along Blue Street; and
- The relatively low number of walking / cycling movements can be accommodated by the established active transport infrastructure within the North Sydney CBD; and
- Residents will be provided with bicycle parking to support this mode of transport.

3.10 Cumulative traffic impacts

There are a number of nearby sites that are the subject of approved or pending development proposals which may have the potential to increase traffic movements on key roads surrounding the subject site. These sites include:

- 15 Blue Street, North Sydney; and
- 1–13 MacKenzie Street, North Sydney.

The site at 15 Blue Street is immediately adjacent to the subject site and shares an access arrangement through the use of Phillips Lane. The respective applicants for 5 Blue Street and 15 Blue Street have worked collaboratively to ensure transport arrangements are coordinated and managed along Phillips Lane and the broader area. Similar to the subject proposal, the 15 Blue Street development involves the conversion of an existing commercial building to residential uses and it could be expected that a similar outcome in terms of net traffic generation would be achieved relative to that presented in Section 3.10 for the subject site.

With respect to the impacts of 1–13 MacKenzie Street, this site is physically separated from 5 Blue Street with vehicular access to be obtained via MacKenzie Street. The impacts from this development are expected to be minor given the site's location adjacent to the North Sydney CBD.

It is also important to recognise that the subject proposal is forecast to result in fewer traffic movements on the surrounding road network compared to existing conditions.

Therefore in the above context any cumulative impacts arising from the development proposal are considered minor and would not impact the operation of the surrounding transport network.

4 Preliminary Construction Traffic Management Plan

4.1 Overview

A preliminary Construction Traffic Management Plan (CTMP) has been prepared. This preliminary CTMP 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 early in the design phase details around construction timeframes, methodology and processes are not yet confirmed.

Prior to the commencement of construction for the site, a detailed CTMP will be prepared. This will be reinforced through an appropriately worded condition of consent, with the purpose of the CTMP 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 CTMP, 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; and
- Safety measures to minimise impacts to pedestrians and cyclists;

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

4.2 Construction hours

Works are expected to be carried out during the following working hours:

- Weekdays: 7.00am – 7.00pm
- Saturdays: 7.00am – 5.00pm
- Sundays and public holidays: No work

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

4.3 Vehicle types

To facilitate the works on site it is expected that a range of vehicles will be utilised, including:

- 12.5m Heavy Rigid Vehicles (HRVs)
- 8.8m Medium Rigid Vehicles (MRVs)
- 6.4m Small Rigid Vehicles (SRVs).

On a daily basis it is also expected that smaller utes and vans will access the site. Special permits and approval from Council will be required to bring in larger and oversize vehicles during the works if required. These will be managed on a case by case basis in close consultation with North Sydney Council.

4.4 Forecast vehicle volumes

Being an adaptive reuse project the level of construction activity and vehicle movements for the subject development will be less than a typical new build project requiring more frequent concrete trucks. At this early stage it is expected the works may generate the following level of vehicle activity:

- Typical workday: 10 vehicles per day / 1-2 vehicles per hour
- Busy workday: 20 vehicles per day / 2-4 vehicles per hour

Trips generated by construction staff will typically be outside of the main road network peaks. The impact of construction traffic volumes on the external network is therefore expected to be low. The good availability of public transport in the area, particularly the nearby Victoria Cross metro station and North Sydney train station, will encourage many workers to minimise private vehicle use which will further reduce the impacts on the local road network.

4.5 Construction vehicle routes

The proposed construction vehicle access routes (for heavy vehicles) have been selected to align with key State and Regional roads such as the Warringah Freeway, Falcon Street, Pacific Highway and Miller Street.

The construction vehicle routes will be developed as the project progresses further, however for the purposes of this preliminary assessment the anticipated routes are illustrated in Figure 17. No queuing or marshalling of construction vehicles will be permitted on public roads.

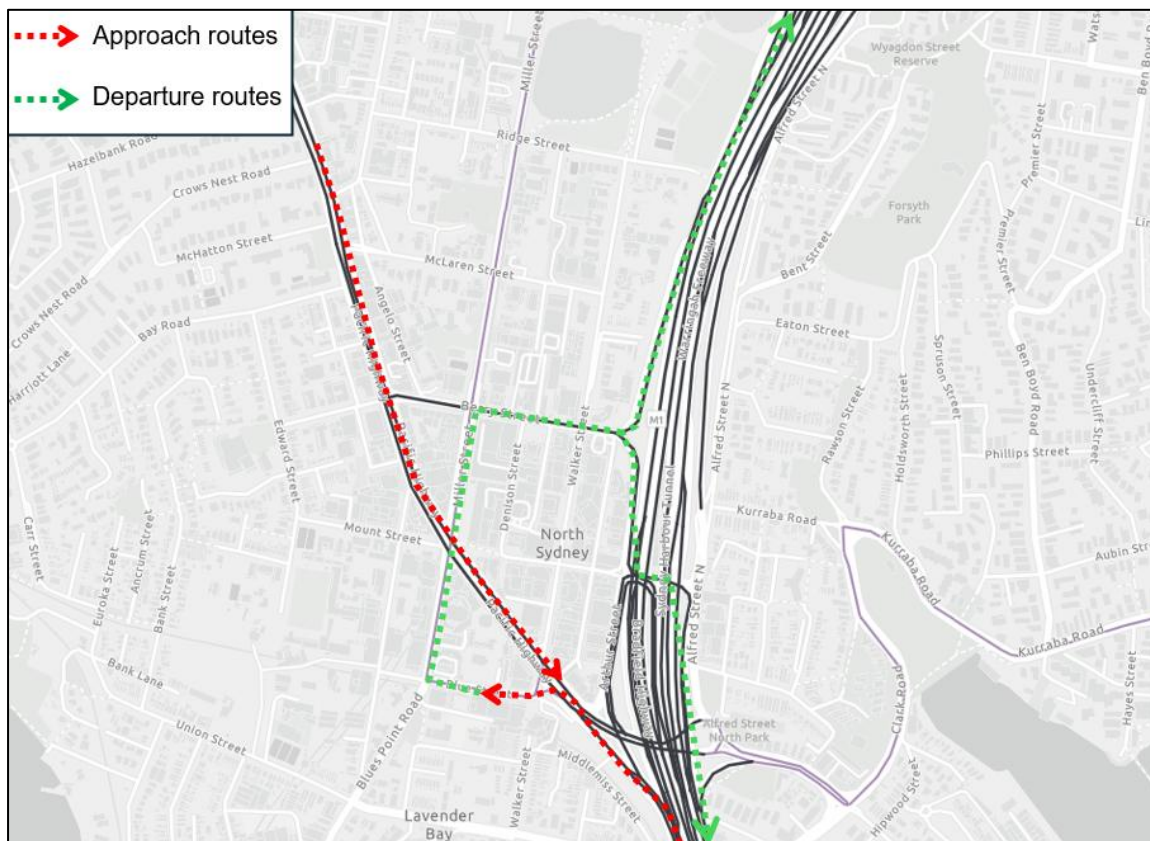


Figure 17 Construction vehicle routes

4.6 Pedestrian movements and road user safety

Temporary fencing and hoardings will be installed along the site frontages on Blue Street to maintain pedestrian movements and ensure the safety of pedestrians walking adjacent to the construction site. Footpaths will remain open at all times where practicable 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 detailing further measures to manage pedestrian safety will be provided as part of the detailed CTMP to be prepared prior to the commencement of works on the site.

4.7 Construction worker parking

Given the location of the site adjacent to nearby public transport no on-site car parking would be provided for works. This is consistent with the approach for other major construction projects in the North Sydney CBD.

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 including North Sydney train station, the Sydney Metro network and a number of high-frequency bus services that are routed through the CBD;
- 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.

For the small number of construction staff that elect to drive there are numerous commercial car parks within a five minute walk of the site, including:

- 76 Berry Street (133 spaces)
- 201 Miller Street (91 spaces)
- 20 Berry Street (110 spaces)
- 1 Denison Street (225 spaces)
- Northpoint (380 spaces)

4.8 Road network impacts

The number of construction vehicles associated with the construction works is relatively low at up to 2 - 4 vehicles per hour. This is considered acceptable in the following context:

- The site benefits from strong access via the arterial road network;
- Vehicles will be approaching the site from a number of different directions from the broader road network, distributing the traffic load across a number of access routes (refer to Section 4.5); and
- This volume of traffic is lower than that currently generated by the existing uses on the site.

4.9 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 through the appropriate forum.

4.10 Cumulative construction impacts

There will be a number of construction projects occurring at the same as the construction of the future building at 15 Blue Street. These projects include:

- 15 Blue Street
- 1-19 Mackenzie Street and 211 Blues Points Road

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 Contractor and Transport for NSW to minimise impacts on the road network. Regular coordination meetings are to be held between the respective project teams and contractors to discuss construction activities in the precinct and best manage the transport network.

The appointed building contractor will engage a traffic management consultant to review & consider existing CPTMPs currently implemented by surrounding developments. The detailed CPTMP for the building will address the cumulative construction impact assessment (i.e. arising from concurrent construction activity). This includes alignment of construction sequencing, access arrangements, logistics planning, and interface management to support a cohesive precinct-wide construction strategy that minimises disruption and maximises efficiency.

4.11 Mitigation measures

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

- Vehicles to enter and exit the site in a forward direction unless under the supervision of strict traffic control;
- Restrict heavy vehicle activity to designated routes;
- Construction access driveways to be managed and controlled by certified site personnel;
- Pedestrian movements across construction access driveways 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 the approved hours of work;
- Vehicle loads would be covered during transportation off-site;
- Activities related to the works would not impede traffic flow along local roads;

- Materials would be delivered during approved construction hours;
- During site induction, workers will be informed of the public transport network servicing the site;
- Construction vehicles not to queue on public roads and be wholly accommodated within the site or the approved loading zones;
- Construction traffic movements to/from the site to be minimised in peak periods to reduce the impact on the wider road network; and
- Seven (7) days notification would be provided to adjoining property owners prior to the implementation of any temporary traffic control measures.

4.12 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, limited 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.

4.13 Driver code of conduct

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

- a copy of the approved heavy vehicle 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 for the site at 5 Blue Street, North Sydney. The proposal would facilitate a mixed use development in close proximity to existing transport services, particularly North Sydney transport interchange and Victoria Cross metro station. Key findings of the assessment are as follows:

- The site benefits from being located within close walking distance of bus, heavy rail and metro services – thereby limiting the traffic related impacts of the proposal.
- The design largely retains existing vehicular points of access for cars and trucks, with all vehicles having the ability to enter and exit the site in a forward direction.
- Suitable levels of on-site car parking will be provided in accordance with relevant planning controls.
- The proposal makes allowance for all loading and servicing to be accommodated on site, including North Sydney Council's 10.5m long waste collection vehicle.
- Analysis indicates that the development would result in a **net reduction** in peak hour traffic movements compared to current conditions, therefore having an overall benefit to the surrounding road network
- Secure bicycle parking would be provided as a component of any future proposed development.

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