Statement of Environmental Effects

Macquarie Centre Redevelopment

Stage 1 – Development Application

Prepared by Urbis on behalf of AMP Capital

December 2015

AMP CAPITAL

Macquarie Centre YOUR FACE OF FASHION

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OCULUS

urbis

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Executive Summary

PURPOSE OF THE REPORT

This Statement of Environmental Effects (SEE) has been prepared behalf of AMP Capital Investors Limited (AMPC) in support of a Stage 1 Development Application (DA) for the mixed use redevelopment of the Macquarie Shopping Centre (Macquarie Centre).

The Stage 1 seeks concept plan approval for the redevelopment of Macquarie Centre by establishing:

- Building envelopes and design parameters for future development on the site, including the proposed uses within the podium and tower components;
- The distribution of floor space across the site; and
- Future vehicle connections to the site.

The project will enable the significant transformation of Macquarie Centre into an attractive, vibrant mixed-use town centre that:

- Incorporates a quality retail, lifestyle and leisure offering;
- Will create a night time destination for Macquarie Park, with increased dining and entertainment options;
- Introduces commercial and residential components onto the site, which will support the delivery of the vision for *Macquarie University Station (Herring Road) Priority Precinct* of being a transit-oriented mixed use precinct;
- Can deliver civic and community uses;
- Creates a series of interconnected, active, high quality public and publicly accessible plazas;
- Provides much needed improved pedestrian permeability and activation along Herring Road and to the wider surrounding precinct and Macquarie University, with up to two new entries to the street;
- Will result in streetscape improvements to the existing bus interchange;
- Improves integration with public transport, with improved connections to the Herring Road Bus Interchange and the Macquarie University Railway Station;
- Reduces pedestrian and vehicle conflict (with consolidated loading docks); and
- Facilitate delivery of any future bus interchange.

This report assesses the development concept for the site as prepared by Allen Jack and Cottier (AJ+C) against the relevant considerations of Section 79C of the *Environmental Planning & Assessment Act 1979* (EP&A Act).

This concept is the product of design development and consultation with the City of Ryde Council (Ryde Council), Transport for New South Wales, Rail Corporation of NSW (Rail Corp), the Department of Planning and Environment and Macquarie University.

THE STAGE 1 DEVELOPMENT APPLICATION

The Stage 1 DA seeks concept approval for the mixed use redevelopment of Macquarie Centre under s.83B of the *Environmental Planning & Assessment Act* 1979. The first stage will seek concept approval only for:

- Mixed use development to enable a range of land uses. The final mix of land uses will be subject to and determined under the relevant Stage 2 detailed DAs.
- Building envelopes for the proposed basement, expanded podium and tower forms.
- The four tower envelopes fronting Herring Road will have maximum heights ranging from 90m and 120m above existing ground level. The building envelope for Tower 1 is of sufficient dimensions to accommodate alternate tower forms.
- Maximum additional gross floor area (GFA) of 148,000sqm.
- The new podium along Herring Road will replace the existing structure. This will provide an active frontage with separate pedestrian entries to Herring Road and the creation of a vibrant atrium space.
- The creation of 'Station Plaza' between the train station and shopping centre, framed by active uses and a landmark building known as the "Shard".
- The building envelopes for the proposed basement and upper levels of the expanded podium will accommodate a maximum of 2,175 additional car spaces.
- New vehicle access points.

The Stage 1 DA does not seek approval for:

- Any works, including demolition, excavation, construction and public domain improvements.
- The final arrangement of land uses.
- Layout, mix and number of residential units.
- A specific number of car spaces (as this will be determined having regard to the final mix of land uses).
- The design of the building exteriors including facades and roofs.
- Public domain and landscape design.

Such approvals will be sought via subsequent development applications following receipt of development consent for the Stage 1 DA.

The overview of the indicative mix of land uses within the proposed building envelopes is identified in **Table 1** below.

TABLE 1 – OVERVIEW OF INDICATIVE MIX OF LAND USES

COMPONENT	PROPOSED
Basement	▪ Loading docks, car parking and associated vehicle circulation, waste rooms, utilities, future connection to existing train station (subject to consent from Rail Corp) and retail premises.
Podium	▪ Retail premises, commercial premises, food and drink premises, entertainment facilities, recreation facilities (indoor), recreation area, car parking and associated vehicle circulation, community uses (subject to further discussions with Council) and communal open space associated with the towers.
Tower 1	▪ Mixed use development comprising commercial premises and/or residential accommodation and/or serviced apartments above a retail podium.
Towers 2, 3 and 4	▪ Mixed use development comprising residential accommodation and/or serviced apartments above a retail podium.

KEY BENEFITS

AMPC supports the NSW State Government's recognition of the strategic importance of the *Macquarie University Station (Herring Road) Priority Precinct*, which has been designated by the NSW Department of Planning and Environment (Department) as a Priority Precinct to deliver homes and jobs to support Sydney's growing population.

By 2031, the Priority Precinct will deliver up to 5,800 dwellings, new retail, high quality publicly accessible spaces, education and employment opportunities and improved connectivity to transport, including a potential major upgrade of the bus interchange. This will transform the area into a vibrant, connected, transit-orientated precinct.

Macquarie Centre is a key focal point within the Priority Precinct and provides significant opportunity to contribute positively to the delivery of this mixed use transit-orientated precinct. The site currently offers a wide range of retail, leisure and community services, and the Stage 1 DA will enable it to contribute to increasing the supply and mix of housing within the precinct.

AMPC has been working in consultation with the Department of Planning and Environment (Department) and Ryde Council since early 2013 to investigate opportunities for a mixed use development on Macquarie Centre in accordance with AMPC's long term vision:

> *"Our vision is to transform Macquarie Centre into a world class centre of discovery and innovation where people shop, play, live and work. Macquarie Centre will incorporate quality retail, lifestyle and leisure offers, civil and community uses as well as other land uses including residential and commercial along with improved connection transport infrastructure."*

The proposed Stage 1 DA will facilitate the realisation of AMPC's vision through establishing the building envelopes and mix of uses on the site, without adversely impacting on the surrounding built and natural environment. The concept will support the provision of a genuine mixed-use transit oriented development and diversify the offering of the site. The revitalisation of the site will provide a number of key social, cultural, economic and environmental contributions to Macquarie Park.

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1 Introduction

1.1 PURPOSE OF THE REPORT

This Statement of Environmental Effects (SEE) has been prepared on behalf of AMP Capital Investors Limited (AMPC) in support of a Stage 1 Development Application (DA) for the mixed use development at Macquarie Centre. The Stage 1 seeks concept plan approval for the redevelopment of Macquarie Centre by establishing:

- Building envelopes and design parameters for future development on the site, including the proposed uses within the podium and tower components;
- The distribution of floor space across the site; and
- Future vehicle connections to the site.

The project will enable a significant transformation of one of the key sites within Macquarie Park, which will support the delivery of the vision for the *Macquarie University Station (Herring Road) Priority Precinct* of being a transit oriented, mixed use precinct.

> ***"Our vision is to transform Macquarie Centre into a world class centre of discovery and innovation where people shop, play, live and work. Macquarie Centre will incorporate quality retail, lifestyle and leisure offers, civil and community uses as well as other land uses including residential and commercial along with improved connection to transport infrastructure."***

The SEE has been prepared by Urbis on behalf of AMP Capital Investors Limited (AMPC) and is informed by the Architectural Drawings and the Urban Design Report prepared by Allen Jack + Cottier (AJ+C) and NH Architecture in addition to other supporting technical investigations that are appended to this report.

This report has been prepared with the input of a number of specialist consultants and is structured in two parts:

- **Volume 1A & 1B:** Statement of Environmental Effects prepared by Urbis (including supporting technical reports and studies).
- **Volume 2**: Architectural drawings package as prepared by AJ+C and NH Architecture; Urban Design Report (including preliminary shadow and solar analysis, visual analysis and SEPP 65 statement) prepared by AJ+C; and a Public Domain Design Report prepared by Oculus.

A physical model of the proposed Stage 1 building envelopes for the site is submitted separately.

This report describes the site, its context and the proposed development, and provides an assessment of the proposal in terms of the relevant matters for consideration under Section 79C(1) of the EP&A Act.

The following specialist consultant inputs have assisted in the preparation of this report:

TABLE 2 – CONSULTANT TEAM

CONSULTANT	INPUT
AJ+C	Urban Design Analysis; Indicative Design Concept; Shadow and Sun Access Analysis; Visual Analysis; SEPP 65 Analysis and Architectural Drawings.
NH Architecture	Urban Design Analysis; Indicative Design Concept; and Architectural Drawings for retail podium.
Oculus	Landscape Plans
Urbis	Town Planning and Social Impact Assessment
Lend Lease	Construction Advisor
WT Partnership	Quantity Surveyor
Arup	Traffic Management and Access Plan
Colston Budd Rogers and Kafes	Internal Traffic and Parking Report
Steve Watson and Partners	BCA Assessment
Defire	Fire Engineering Assessment
William L Backhouse	Survey Plans
Norman Disney & Young	Services Assessment
Cundall	Sustainability Strategy
Jess Scully	Public Art Strategy
Mott MacDonald	Stormwater Management
Douglas Partners	Geotechnical Report and Contamination Report
Morris Goding Access Consulting	Accessibility Report
Cermak Peterka Pederson	Wind Assessment
Acoustic Logic	Acoustic Assessment
Foresights Environmental	Waste Management
Binyan Studios	3D Modelling
Elton Consulting	Stakeholder Consultation
MacroPlan Dimasi	Economic Impact Assessment

1.2 CITY OF RYDE COUNCIL REQUIREMENTS

As requested by the City of Ryde Council (Ryde Council), via email on 22 October 2015, the relevant requirements for the preparation of a Stage 1 DA have been addressed in this SEE. For ease of reference, **Table 3** below sets out where within the body of this SEE (and/or supporting technical documentation) the requirements have been addressed.

TABLE 3 – RYDE COUNCIL'S REQUIREMENTS FOR STAGE 1 DA

SECRETARY'S REQUIREMENTS	PROVIDED	RELEVANT SECTION IN SEE / APPENDIX
▪ *An architectural physical model.*	To be provided in January, for the public exhibition of Stage 1 DA.	N/A
▪ *Completed DA form with appropriate owners consent.*	✓	Refer separate attachment
▪ *Statement of Environmental Effects.*	✓	
▪ *Transport Management and Access Plan:* – *Traffic modelling existing and proposed.* – *Car parking demand assessment.* – *Provide details of a car sharing scheme.*	✓	Section 6.7 **Appendix A**
▪ *An Urban design report, including:* – *Site and context analysis.* – *Site layout plan showing existing/proposed access roads, building footprints, street setbacks, building separation and building depths.* – *Indicative architecture demonstrating the controls are achievable, these should potentially include basement footprints.* – *Indicative landscaped area/deep soil plans.* – *Must consider SEPP 65 requirements including solar access, ventilation and separation requirement.* – *Must consider the new Residential Apartment Design Code in terms of balcony size, façade and shading etc.* – *Consideration of potential views/view impact – view analysis is required.* – *Overshadowing and solar access studies.*	✓	**Volume 2**

SECRETARY'S REQUIREMENTS	PROVIDED	RELEVANT SECTION IN SEE / APPENDIX
▪ *Public Realm Concept Proposal and Report- Public Domain Plan is required which further addresses conflict of pedestrian movement across Waterloo Road.*	✓	**Volume 2**
▪ *Survey Plan (one copy should be of full scale as architectural).*	✓	**Volume 2**
▪ *Social Impact Assessment/Community Needs Assessment.*	✓	Section 6.8 **Appendix B**
▪ *Economic impact assessment (inc. details of retail floor space, impacts on adjacent local centres within 5km, the quantum of floor space and employment opp.)*	✓	Section 6.9 **Appendix C**
▪ *Arts Plan (to support the delivery of Public Art – requirements of the plan are subject to discussion with Ryde Council prior to the lodgement of a DA); Please refer to Section 5.10 "Public Accessible Art" of the Ryde DCP 2014 Part 4.5 Macquarie park Corridor - Preliminary Concept and implementation plan required.*	✓	Section **Appendix D**
▪ *Stormwater management design (including OSD provision if required) - WSUD principles must be included in the design as required by DCP control.*	✓	Section 6.14 **Appendix E**
▪ *Sustainability strategy.*	✓ .	Section 6.10 **Appendix F**
▪ *Wind Impact Assessment.*	✓	Section 6.6 **Appendix G**
▪ *Preliminary BCA/Fire Engineering capability assessment.*	✓	Section 6.16 **Appendix B**
▪ *Preliminary Accessibility Report.*	✓	Section 6.15 **Appendix J**
▪ *QS Cost estimate.*	✓	**Appendix K**
▪ *Geotech Report- need to also address impacts on railway tunnel and cavern - vibration study etc. please check with Rail Corp.*	✓	Section 6.12 **Appendix L**
▪ *Phase 1 Environmental assessment.*	✓	Section 6.13 **Appendix M**

SECRETARY'S REQUIREMENTS	PROVIDED	RELEVANT SECTION IN SEE / APPENDIX
▪ *Services/Infrastructure Assessment - At this stage to seek correspondence from authorities, as requirements may change by the time you get to stage 2 DA.*	✓	Section 2.6 and **Appendix O**
▪ *Preliminary Waste Management.*	✓	Section 6.17 **Appendix N**
▪ *Preliminary Acoustic report.*	✓	**Appendix P**
▪ *Indicative Staging Plan.*	✓	Section 4.9 **Volume 2**
▪ *Preliminary Construction Management Plan- Details of construction hours, car parking restrictions etc. are required as this was a major issue with previous Macquarie Centre DA.*	✓	Section 6.18 **Appendix Q**
▪ *Stakeholder consultation outcomes and strategy.*	✓	Section 3.6
▪ *Transport Management and Access Plan that utilises the Macquarie Park Integrated Transport and Movement Plan and entails the following measures:* – *Maximise access by sustainable modes of transport and reduce car-dependency (i.e. Public Transport, Cycling and Walking).* – *Maximise public access (example: Bus Stops, public pick-up and drop-off* – *Points, 'thru' links, high quality pedestrian connections and links to public transport nodes)* – *Preserve the natural, physical and cultural heritage of the site (as appropriate).* – *Protect the amenity of the local neighbours.* – *Provide pedestrian links (via a pedestrian bridge if appropriate) and interconnectivity between the Precinct sites along Pedestrian Desire Line.* – *Proposed access roads into and out of the site; including the provisions of on and off street parking; and Access into the Precinct sites for vehicles.* – *A framework Travel Plan (FTP) is required in accordance with Part 4.4 "Sustainable transport "of the Ryde DCP 2014 Part 4.5 Macquarie Park Corridor.*	✓	Section 6.7 **Appendix A**

1.3 CONSENT AUTHORITY

The site is located in the City of Ryde Local Government Area (LGA) and as such the DA will be assessed by Ryde Council's Planning and Environmental Assessment Team. Given that the estimated cost of works will exceed $20 million, the Sydney East Joint Regional Planning Panel will be the consent authority for the development.

2 Macquarie Centre Site and Surrounds

2.1 REGIONAL CONTEXT

The site is located within the suburb of North Ryde in the Ryde Local Government Area (LGA), approximately 15 kilometres north-west of the Sydney Central Business District. Key centres within close proximity to the site include Chatswood (approximately 5 kilometres away) and Parramatta (10 kilometres).

2.2 LOCAL CONTEXT

Macquarie Centre is located within the heart of the Macquarie Park Corridor (**Figure 1**), a major employment precinct that is generally bounded by arterial roads, including the M2 Motorway, Epping Road, and Lane Cove Road.

Macquarie Park currently has the second largest office market in NSW and is Sydney's fastest growing business precinct. Macquarie Park is characterised by a number of significant land uses including Macquarie Centre, Macquarie University and significant businesses (such as Optus, Foxtel, Sonic Healthcare, Oracle, Schneider Electric, Microsoft, etc.). Macquarie Park contains approximately 850,000sqm of commercial office space and employs more than 43,000 workers, with additional capacity for greater floor space. It is viewed as an innovative research, education, medical and technology employment centre.

Macquarie Centre is a key component of the recently gazetted Macquarie University *Station (Herring Road) Priority Precinct*. Changes in land use zoning and significant uplift in building height and density controls for the precinct were gazetted on 2 October 2015, which will facilitate the precinct's transformation into a vibrant, mixed use transit orientated centre. The precinct is prioritised for growth and it is expected that it will accommodate an additional 5,800 new dwellings by 2031.

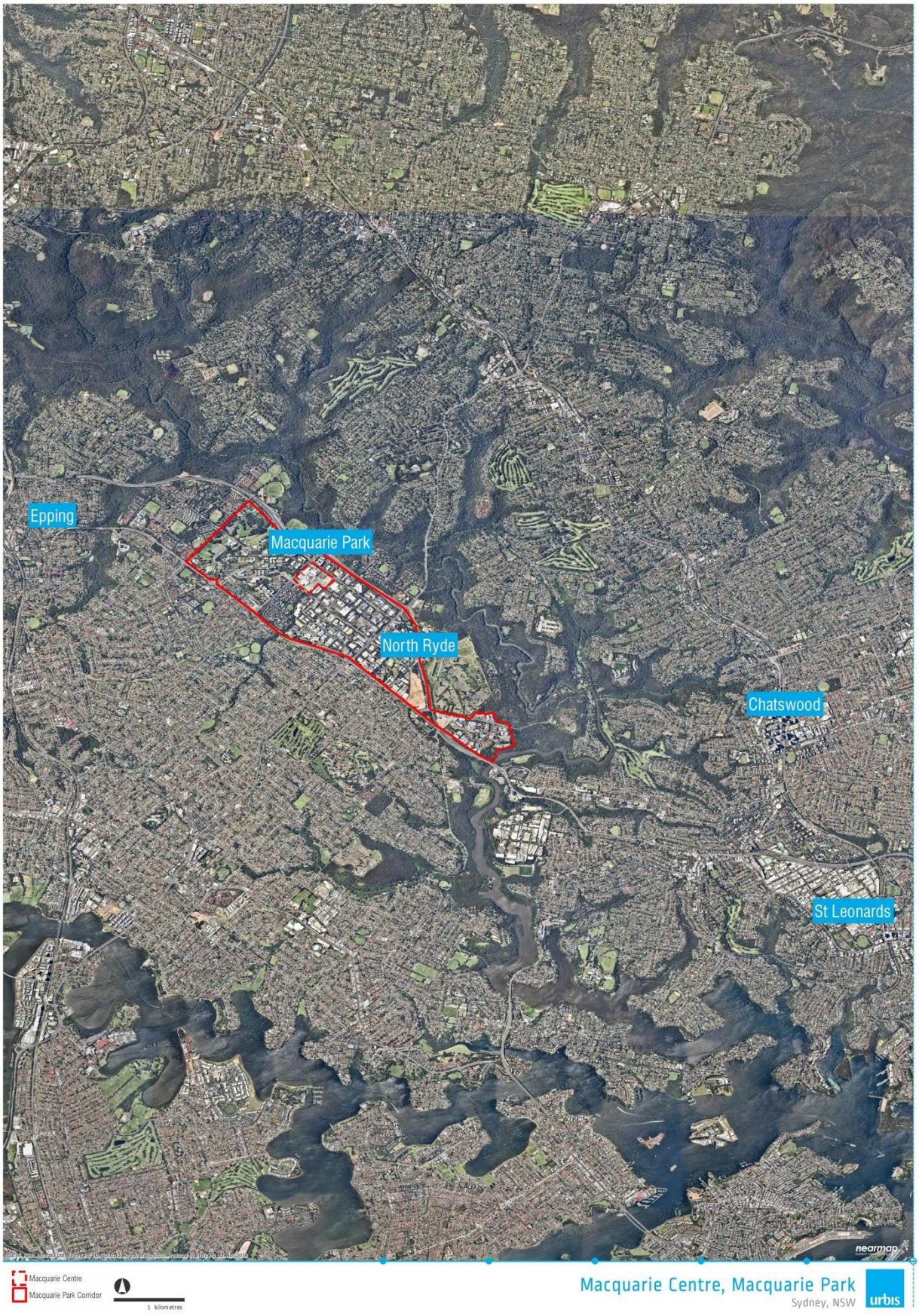
2.3 THE SITE

Macquarie Centre is approximately 11.25 hectares in area (excluding RailCorp land) and is located at the corner of Waterloo Road, Herring Road and Talavera Road, Macquarie Park. The site is legally described as Lot 100 in DP 1190494. Macquarie Centre is indicated in the location map and aerial photographs at **Figure 1** below.

This Stage 1 DA also includes land owned by the Rail Corp, legally described as Pt Lot 120 in DP 1130457 and Pt Lot 2 in DP 1047085.

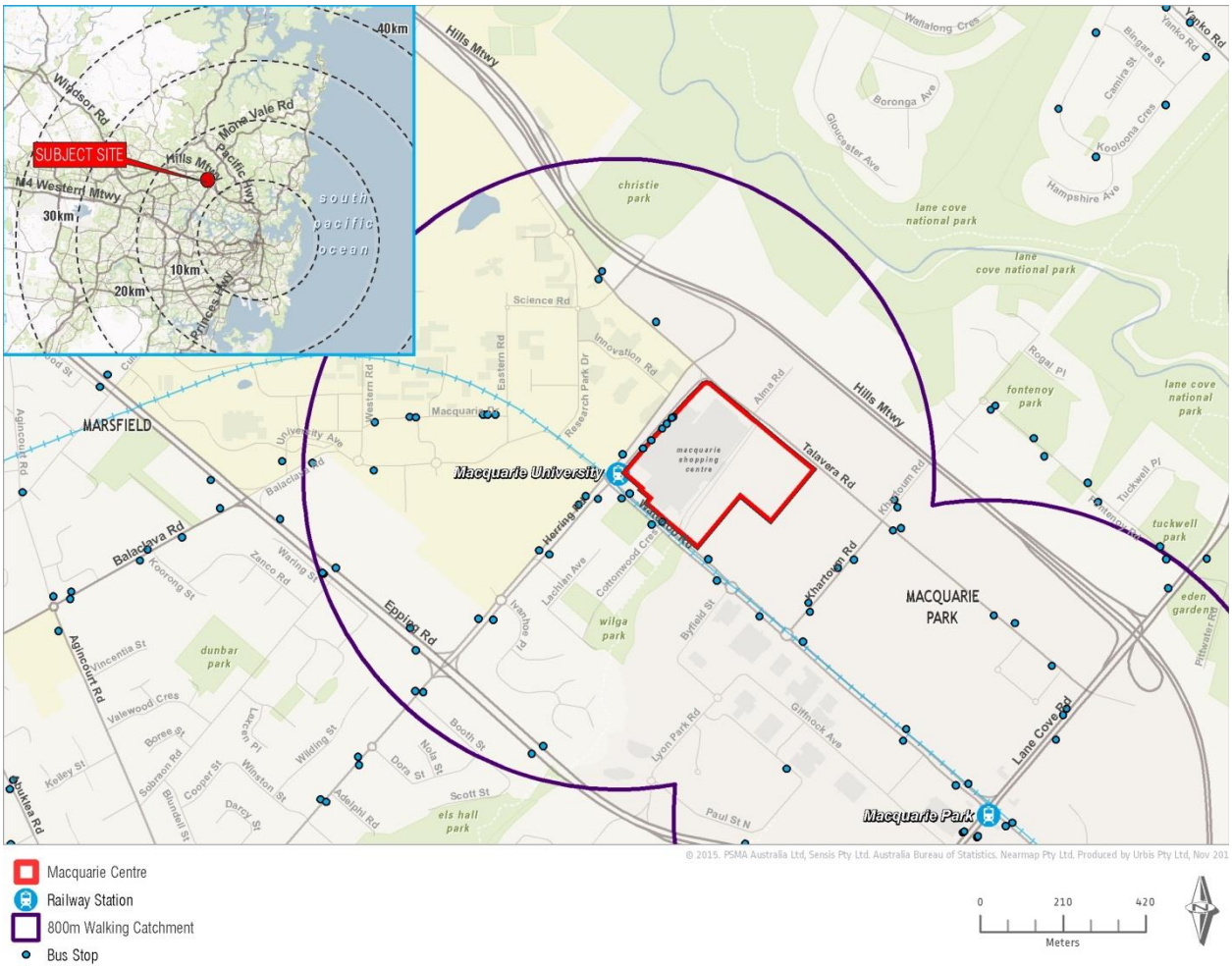
The site is bound by Herring Road to the north west, Talavera Road to the north east, commercial uses to the south east and Waterloo Road to the south west. The site has excellent access to public transport, situated immediately adjacent the Macquarie University Railway Station and the Herring Road Bus Interchange. Located between the M2 Hills Motorway and Epping Road, the site also enjoys excellent vehicle connectivity.

FIGURE 1 – SITE LOCATION



PICTURE 1 – REGIONAL CONTEXT AERIAL (NEARMAPS 2015)

PICTURE 2 – AERIAL OF THE SITE (NEARMAPS 2015)



PICTURE 3 – LOCATION MAP SHOWING EXISTING PUBLIC TRANSPORT

2.4 EXISTING DEVELOPMENT AND SITE CONDITIONS

Macquarie Centre was originally constructed in 1981. The centre has undergone various stages of redevelopment and extensions. A major refurbishment occurred in 2000, 2003 and most recently in 2014, creating a fresh food court, the addition of a new full line David Jones department store, a second full line supermarket (Coles), a value supermarket (Aldi), with new speciality food and convenience stores. Today Macquarie Centre is the largest shopping centre in NSW and the 8th largest shopping centre in Australia and includes a wide range of retail, entertainment and service offerings.

The shopping centre currently spans five levels accommodating 368 stores, including major retailers such as David Jones, Myer, Target, Big W, Aldi, Coles and Woolworths. The centre also houses a large number of mini major international retails stores including H&M, Zara, Uniqlo, Forever 21, GAP and Sephora. A number of entertainment offerings exist in the centre including a cinema complex and ice skating rink. The site currently has a gross floor area of 170,850m^2 and accommodates 4,755 car spaces.

Macquarie Centre has nearly one kilometre of street frontage along Talavera, Herring and Waterloo Roads combined, with Herring Road having a 355m street frontage and only one 7.5m wide entry to the centre.

As shown in detail in the Urban Design Report (**Volume 2**), the existing development is indicated in the pictures at **Figure 2**.

FIGURE 2 – EXISTING DEVELOPMENT

PICTURE 4 – VIEW OF THE SITE FROM WATERLOO ROAD

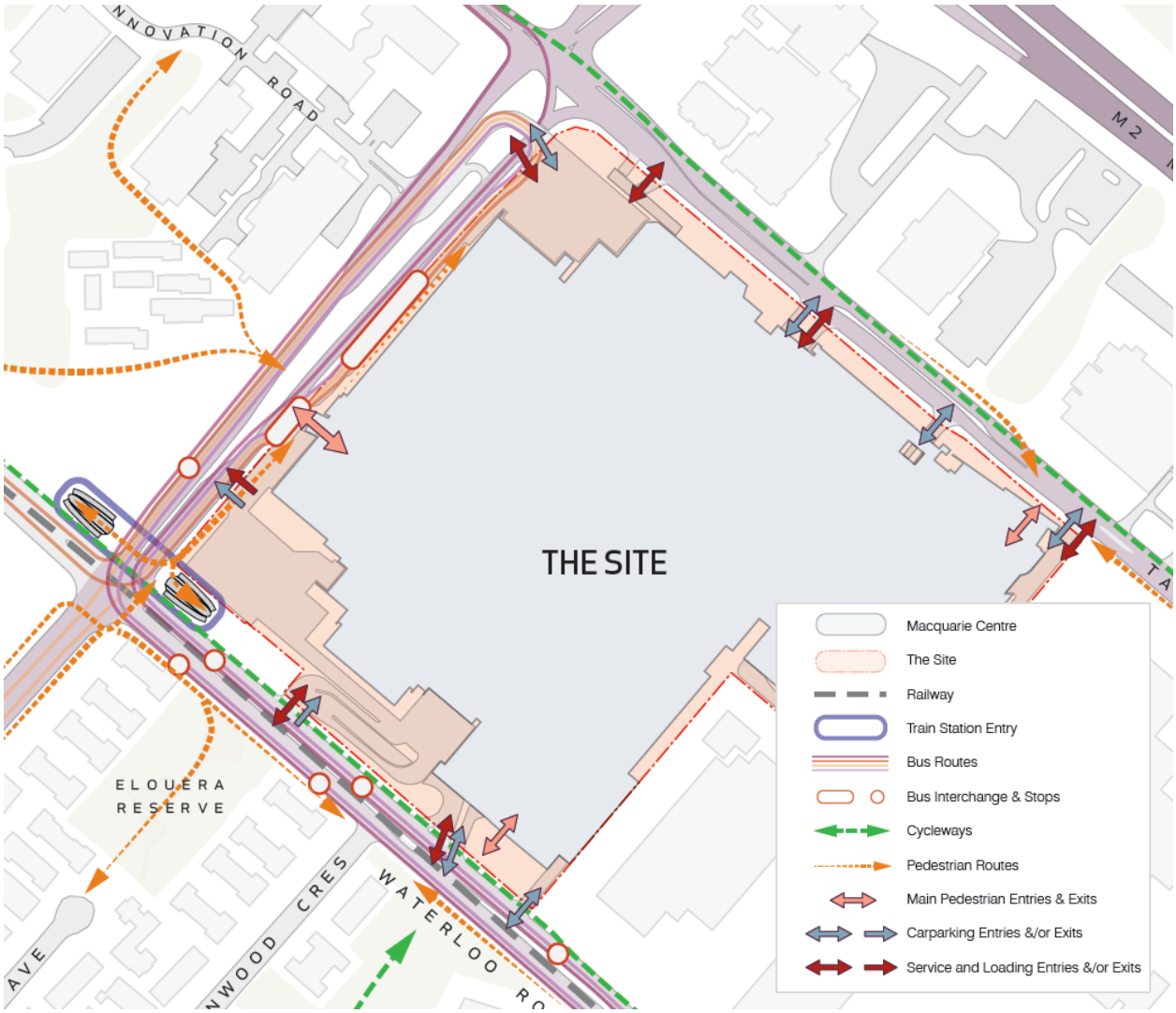
PICTURE 5 – THE MAIN ENTRANCE, AS VIEWED FROM HERRING ROAD

PICTURE 6 – VIEW OF THE SITE FROM CORNER OF HERRING ROAD AND TALAVERA ROAD

2.4.1 PEDESTRIAN ACCESS

Primary pedestrian access to the shopping centre is provided adjacent to the bus interchange on Herring Road which limits connectivity to the Macquarie University Railway Station. A signalled pedestrian crossing exists at this location and connects the centre to Macquarie University on the northern side of Herring Road. Pedestrian access to the centre is also provided from Talavera Road and Waterloo Road. These locations are indicated on the diagram at Figure 3**.**

FIGURE 3 – EXISTING PEDESTRIAN AND VEHICLE ACCESS (SOURCE: AJ+C)



2.4.2 VEHICULAR ACCESS AND PARKING

Vehicular access to the site is provided from all three frontages as described below and indicated at **Figure 4**.

Herring Road

- Access to rooftop parking for traffic entering the site is provided from a ramp at the northern end of the Herring Road frontage. This ramp also provides access for buses and taxis to accessing the bus interchange adjacent to Macquarie Centre on Herring Road.

Waterloo Road

- Vehicular access is provided approximately 100m south of the intersection of Herring Road and Waterloo Road. Ramps at this location provide access to rooftop and basement parking.

- Approximately 100m further south, a signalled intersection provides access to parking at the rear of the site.

Talavera Road

- Vehicular access to the site is provided at three locations from Talavera Road including the Link Road.

Link Road

- A link road through the site provides a connection between Waterloo Road and Talavera Road. Intersections at Waterloo Road and Talavera Road with the Link Road are signalised.

Parking

- The site currently accommodates 4,755 car spaces.
- Parking is providing on rooftops, at-grade and in 4 basement levels.

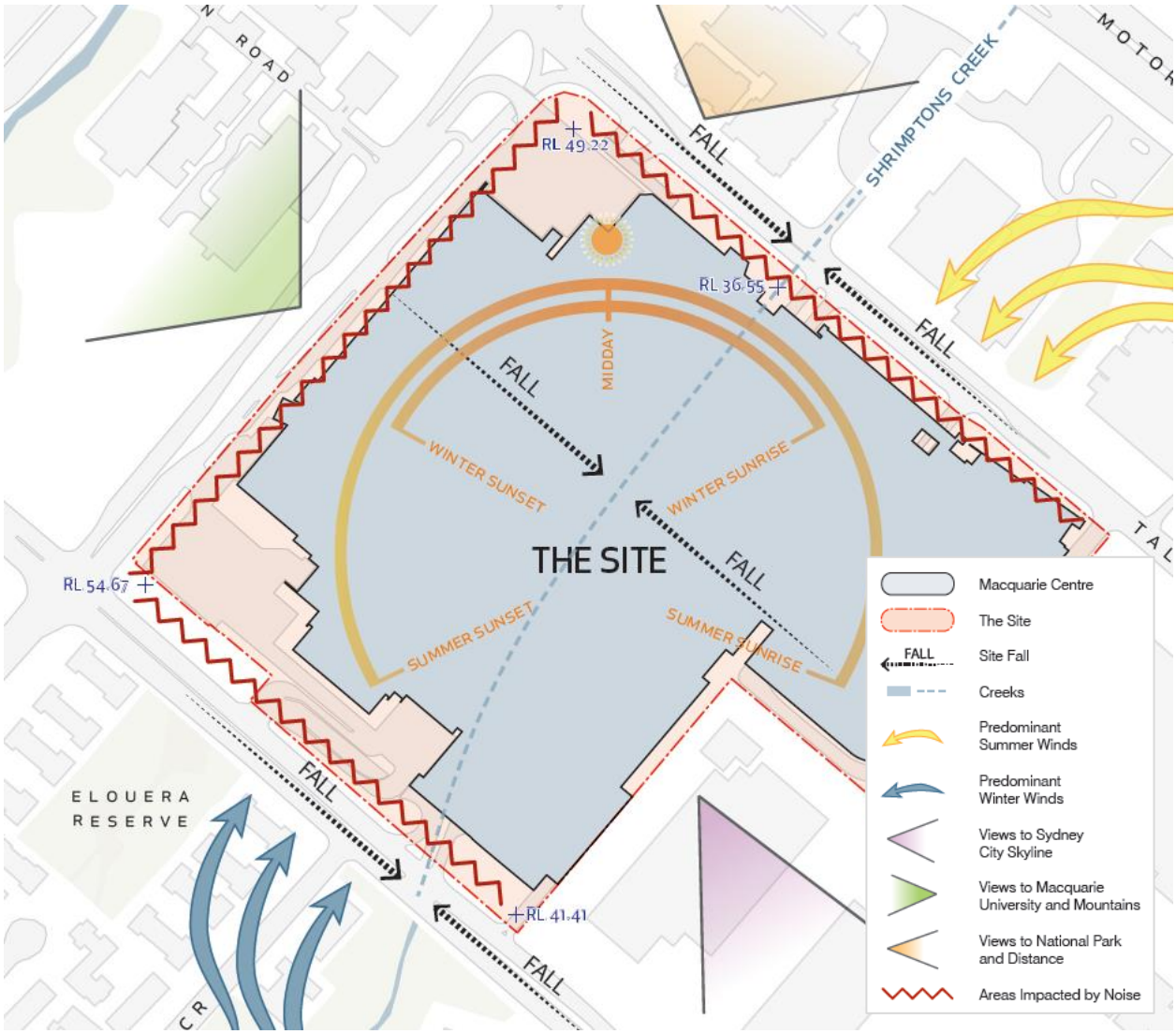
FIGURE 4 – EXISTING VEHICLE ACCESS ARRANGEMENTS

2.4.3 LAND FORM AND TOPOGRAPHY

The site slopes from the north-west to the south-east becoming steeper toward the creek catchment to the east of the site and further towards Lane Cove National Park. The topography is indicated in **Figure 5**. Herring Road follows a ridge line from Epping Road to the site, which then falls away towards Talavera Road. Waterloo and Talavera Roads present significant grade changes as they fall away from the ridge line towards Shrimptons Creek.

The course of Shrimptons Creek runs in an approximate north-easterly direction underneath the south east portion of Macquarie Centre leading into the receiving body of the Lane Cove River.

FIGURE 5 – SITE CONDITIONS (SOURCE: AJ+C)



2.5 GROUND CONDITIONS

A Preliminary Geotechnical Report has been prepared by Douglas Partners and is included at **Appendix L**. The 1:100,000 Series Geological Sheet indicates that the site is underlain by Hawkesbury Sandstone typically comprising medium to coarse grained quartz sandstone with very minor shale and laminate lenses. Previous geotechnical investigations during construction of the existing multi-storey car park detected the presence of a dyke running approximately north-south in the north-east area of Macquarie Centre.

Based on published 1:25,000 Acid Sulphate Soil Risk mapping data (1994-1998), the site is not located in an area with a probability of acid sulphate soil (ASS) occurrence.

A Preliminary Site Investigation has been prepared by Douglas Partners and is included at **Appendix M**. This suggests that the potential for significant or widespread contamination is low. However, potential sources of contamination include imported fill of unknown origin, the mechanical workshop and the dry cleaner onsite. This is addressed in detail at Section 5.2.1 of this SEE.

2.6 UTILITIES AND INFRASTRUCTURE

All essential infrastructure services for electrical supply, communication services, water services and gas supply are provided to the site and are capable of extension/augmentation as required.

A Preliminary Building Services Report has been prepared by Norman Disney and Young and is included at **Appendix O**. The report confirms that all essential infrastructure services for electricity supply, communication services, water services and gas supply are provided to the site and are capable of extension/augmentation as required.

2.7 SURROUNDING DEVELOPMENT

The existing area is characterised by a mix of land uses (significant land uses include Macquarie Centre, Macquarie University and large business parks such as Optus) and architectural styles. The predominant building form in the area is typically large, freestanding buildings setback from the street, with large at grade car parks. There is some redevelopment already occurring within the area, including mixed use, commercial and residential developments of a mid to high scale.

The site is surrounded by the following:

- To the north east of the site is Talavera Road. The opposite side of Talavera Road comprises a recently completed residential flat building/serviced apartment development in addition to large scale commercial developments.

- Adjacent to the south east of the site are commercial developments, with associated at grade car parking and landscaping.

- Immediately to the south west of the site is Macquarie University railway station. The Parramatta to Epping railway tunnels run below Waterloo Road adjacent to the southern site boundary. The railway station is setback approximately 7-8m from the site boundary and the nearest tunnel is set back approximately 30m from the site boundary. Further to the south west, on the opposite side of Waterloo Road, comprises medium density four storey residential flat buildings and public open space known as Elouera Reserve.

- To the north west of the site is the Herring Road Bus Station adjacent to Herring Road. On the opposite side of Herring Road is Macquarie University. It is currently characterised by low to medium scale buildings in a bushland setting. Macquarie University has concept plan approval for the redevelopment of their site. The future character of the University envisaged under the Macquarie University Station (Herring Road) Precinct Plan is a mixed use, medium to high density campus.

Surrounding developments are indicated below at **Figure 6**.

FIGURE 6 – SURROUNDING THE SITE

PICTURE 7 – MACQUARIE UNIVERSITY

– PICTURE 8 – ELOUERA RESERVE

PICTURE 9 – WATERLOO ROAD

PICTURE 10 – STATION ENTRANCE ADJACENT TO SITE

2.8 PUBLIC OPEN SPACE

Areas of public open space within the immediate locality include Elouera Reserve and Wilga Reserve to the south.

Elouera Reserve

Elouera Reserve is located opposite the site, on the south side of Waterloo Road. The reserve is currently in the second stage of a three stage redevelopment process. Elouera Reserve currently comprises a range of facilities, including a playground, BBQ and picnic areas.

Wilga Reserve

Wilga Reserve is located to the south of the site, on the opposite side of Waterloo Road. The reserve is both a park and a bushland reserve. The reserve features a cycle way, picnic areas and walking paths.

2.9 SURROUNDING ACCESS NETWORKS

Pedestrians

Existing pedestrian facilities around Macquarie Centre generally consist of pedestrian crossings at major road intersections in the precinct, with the exception of one midblock crossing which facilitates the movement of pedestrians between Macquarie Centre, bus stops, and the Macquarie University.

There are strong pedestrian desire lines between station entrances, Macquarie University and Macquarie Centre, which has been an important consideration for the placement of public and publicly accessible plazas in the Stage 1 DA. During commuter peaks, more pedestrian activity is to and from the train station entrances, whilst in the middle of the day there is strong demand for pedestrians to cross between Macquarie Centre and the Macquarie University, mostly utilising the mid-block crossing on Herring Road. This crossing is signalised on Herring Road but is a zebra crossing at the bus interchange.

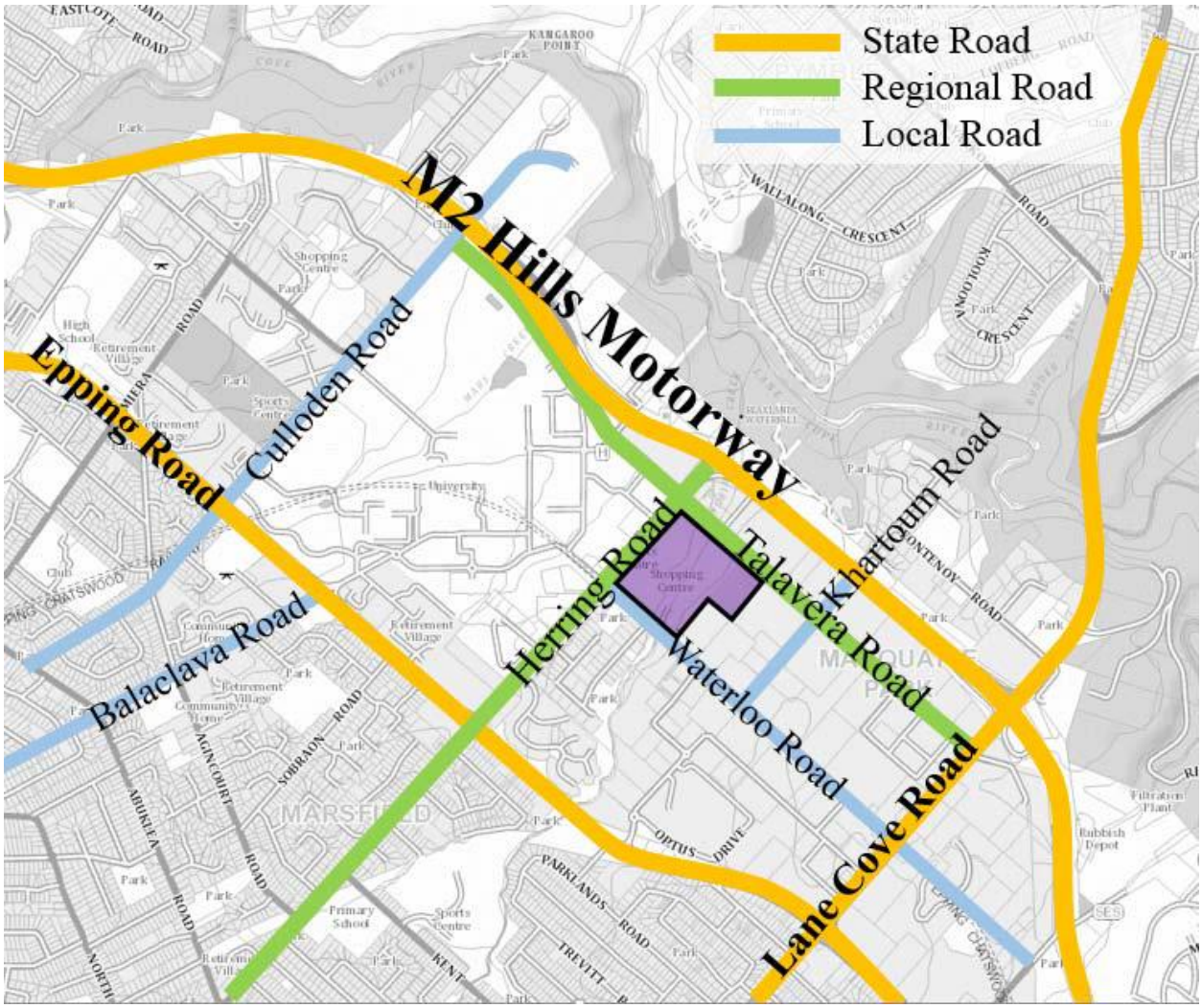
Surveys undertaken by ARUP indicate more than 1,700 pedestrian currently utilise the pedestrian mid-block crossing on Herring Road during the lunch time peak hour (12.30pm-1:30pm), travelling between Macquarie Centre and Macquarie University.

Vehicles

As shown in **Figure 7,** Macquarie Centre is surrounded by a number of major roads. These roads, including their administrative classification include:

- Epping Road (State road);
- M2 Motorway (State road);
- Herring Road (Regional road between Epping Road and Talavera Road);
- Talavera Road (Regional road between Lane Cove Road and Talavera Road);
- Waterloo Road (Local road);
- Balaclava Road (Local road); and
- Culloden Road (Local road).

FIGURE 7 – SURROUNDING ROAD NETWORK



Cyclists

The site is well served by bicycle facilities, with off-road bike paths provided along Talavera Road and adjacent to the site along Waterloo Road.

Public Transport

Macquarie University Railway Station provides Macquarie Centre with links to the lower North Shore, CBD, Epping and Hornsby. In peak periods, four services per hour operate in each direction on the T1 North Shore, Northern & Western Line.

The Herring Road Bus Interchange, located predominantly on Herring Road, is the hub for some 28 bus routes connecting Macquarie Park with the Sydney CBD, the North Shore, the North West and the West.

There are nine bus stops comprising the interchange, between Talavera Road and Waterloo Road, with 5 bus stands located on the southern side of Herring Road, adjacent to Macquarie Centre, plus 2 stops each on the northern side of Herring Road and the eastern side of Waterloo Road (south of Herring Road).

Taxis

The transport interchange at Macquarie Centre includes a 13 space taxi rank (west facing) on Herring Road, adjacent to the bus interchange.

2.10 EASEMENTS

As shown on the Site Survey (**Volume 2**) there are a number of existing easement and leases registered on the Certificate of Title, including an:

- Easement for drainage 2.44m wide;
- Easement for drainage 9m wide and variable width, associated with Shrimptons Creek that runs beneath the existing development;
- Easement for drainage 2.5m wide;
- Lease to AusGrid of substation Nos. 5325, 5326, 7271, 1870 & 6151 together with rights of way and an easement for electricity purposes; and
- Lease to AusGrid of substation Nos. 48540 & 48541, together with right of way and easement for electricity works.

Refer to the Site Survey Plan for full details.

3 Background

3.1 AMPC VISION FOR THE SITE

AMPC have been working in consultation with the Department of Planning and Environment and Ryde Council since early 2013 to investigate opportunities for a mixed use development on the Macquarie Centre site in accordance with their long term vision:

> *"Our vision is to transform Macquarie Centre into a world class centre of discovery and innovation where people shop, play, live and work. Macquarie Centre will incorporate quality retail, lifestyle and leisure offers, civil and community uses as well as other land uses including residential and commercial along with improved connection to transport infrastructure."*

AMPC are seeking to transform Macquarie Centre into an attractive mixed-use town centre that:

- Enhances the retail offerings of Macquarie Centre, a shopping centre of regional significance;
- Introduces office and residential uses onto the site, which will support the delivery of employment opportunities and housing in a mixed use precinct prioritised for growth;
- Transforms the area into a connected pedestrian friendly and vibrant precinct; and
- Provides the opportunities for civic and community uses for the precinct's growing population.

As detailed in this report, the Stage 1 DA will facilitate the realisation of this vision through establishing the building envelopes and mix of uses for the site in accordance with the vision and planning controls for the Priority Precinct.

3.2 MEMORANDUM OF UNDERSTANDING

On May 2010 a Memorandum of Understanding (MoU) was entered into between AMPC and Ryde Council.

Included in the submission of DA 1016/2007 for the first stage of the expansion of the centre was a preliminary master plan outlining the proposed stages of development for the shopping centre. The purpose of the master plan was to demonstrate consistency between the future development plans for the centre and Ryde Council's Local Environmental Plan and Development Control Plan, and the overall vision for the centre.

AMPC and Ryde Council agreed in the MoU to undertake a collaborative process for the next stage of expansion of the centre. A summary of how AMPC has satisfied the key elements of the MoU is outlined in **Table 4** below.

TABLE 4 – SUMMARY OF AMPC'S RESPONSE TO THE MOU

ELEMENT OF MOU TO BE DISCUSSED WITH RYDE COUNCIL PRIOR TO DA LODGEMENT OF THE NEXT STAGE OF EXPANSION OF MACQUARIE CENTRE	AMPC REPONSE	SATISFACTION OF MOU
a) *Workshop meetings similar to those held prior to the lodgement for DA 1016/2007 for the first stage of expansion of the shopping centre are to be held for the second stage of expansion of the centre (i.e. the Stage 1 DA) with AMPC,* Ryde *Council (and other Stakeholders as required).* ▪ *The new square between the railway station and shopping centre* ▪ *Bus interchange improvements* ▪ *Understanding the potential for community facilities such as Macquarie Park Learning, Leisure and Library Facility;* ▪ *The issues related the ownership and title, responsibility and liability, improved operation and potential future functions of Shrimptons Creek/Link Road.*	Meetings have been held for the Stage 1 DA (redevelopment of Macquarie Centre) on a regular basis with Ryde Council, including meetings with the General Manger and Ryde Council staff (this include meetings with Ryde Council's dedicated project team for the Stage 1 DA), Council's independent UDRP and briefings of Ryde Councillors. A summary of the 4 project meetings with Ryde Council's dedicated project team is provided in the SEE. These meetings have included discussions on all the items required to be discussed with Ryde Council under the MoU, prior to lodgement of a DA for the next stage of expansion of the Centre, including: ▪ Station Plaza; ▪ Bus interchange improvements; ▪ Community Facilities; ▪ Improved operations of the centre; and ▪ Shrimptons Creek, which has been addressed in detail in the Flooding and Stormwater Management prepared by Mott McDonald and included at **Appendix E**.	✓
b) *A master plan will be submitted together the DA for the next stage of expansion of the shopping centre.*	This Stage1 DA constitutes a master plan for the next stage of expansion of the shopping centre in accordance with Section 8.1 of Ryde Development Control Plan 2014 – Part 4.5 Macquarie Park Corridor.	✓

3.3 BUS INTERCHANGE UPGRADES

The proposed redevelopment provides the opportunity to improve the function and appearance of the existing Herring Road bus interchange. The Stage 1 DA seeks concept approval for improvements to the existing bus interchange including:

- Street upgrades and kerb realignment;
- Activation of street including landscaping; and
- Improved signage.

Approval for these bus interchange improvements will be sought via future Stage 2 detailed DAs. The Stage 1 DA also makes provision for a future connection to the train station through Macquarie Centre.

In addition to this, Transport for New South Wale (TfNSW) are studying the opportunities for a more significant upgrade to the capacity of the existing Herring Road bus interchange to accommodate the growing public transport demands within the north-west corridor of Sydney.

At this stage options for an increase in the capacity of the bus interchange and improved connectivity between Macquarie University and Macquarie Centre are being explored by TfNSW. **Figure 8** and **Figure 9** below show two different indicative designs which demonstrate how future Stage 2 detailed DAs can be adapted to a final outcome determined by TfNSW.

The potential for such a future upgraded bus interchange does not form part of this current DA but the design of the Stage 1 DA has taken this potential future interchange opportunity into account and is capable of being adapted as appropriate at the Stage 2 detailed DA phase. As shown in **Figure 8** and **Figure 9** two indicative concepts, which demonstrate how the Stage 2 DA might adapt to two possible bus interchange upgrade scenarios have been prepared by AJ+C.

FIGURE 8 – INDICATIVE CONCEPT WITH UPGRADED HERRING ROAD BUS INTERCHANGE (OPTION 1)

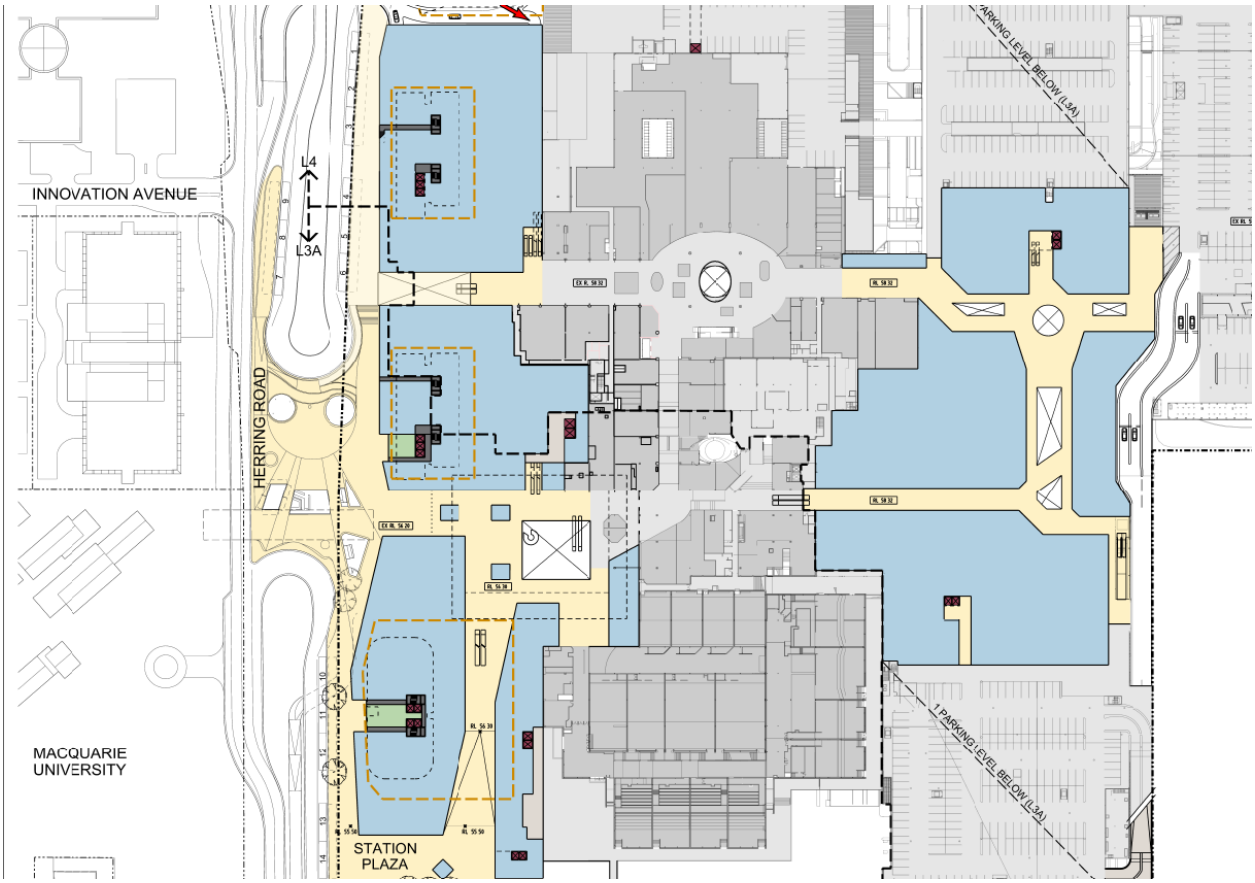
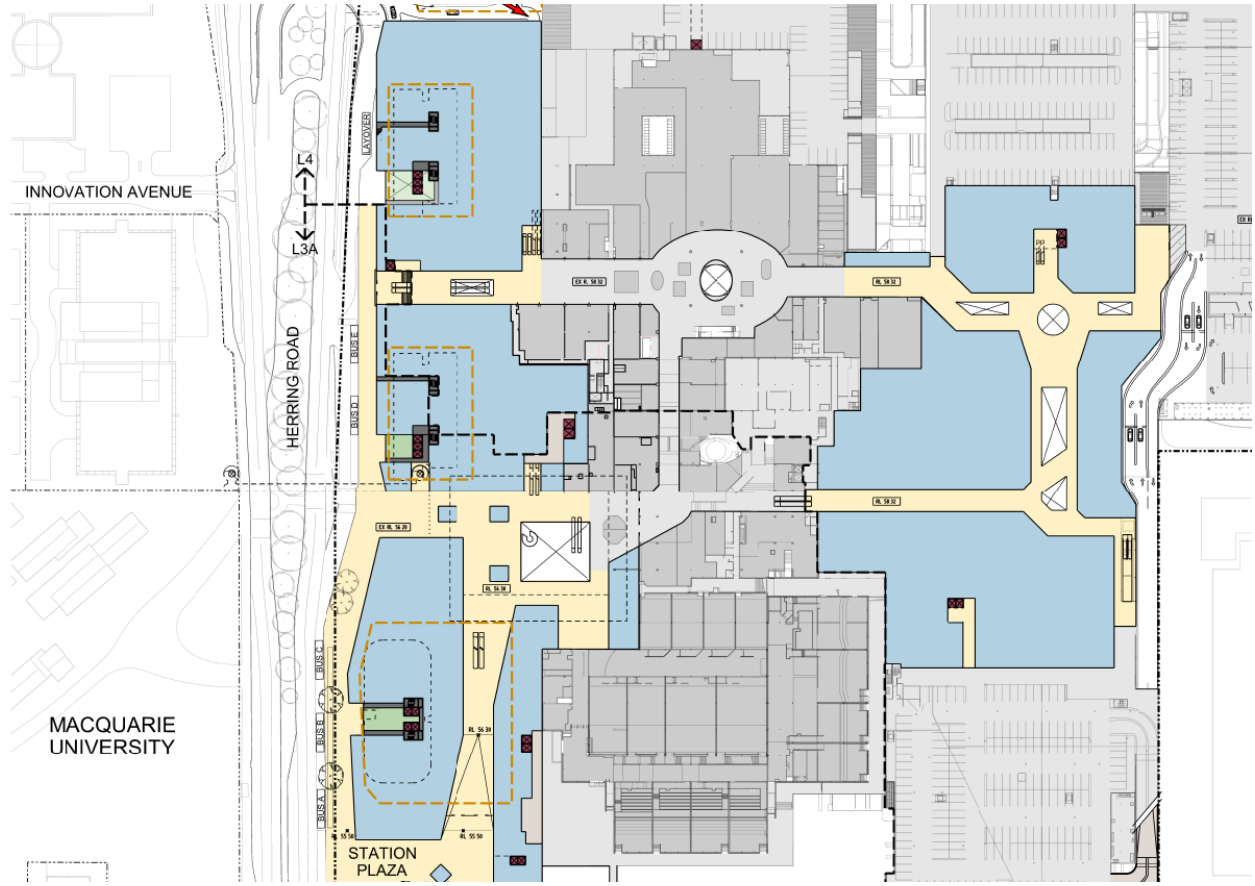


FIGURE 9 – INDICATIVE CONCEPT WITH UPGRADED HERRING ROAD BUS INTERCHANGE (OPTION 2)



3.4 PRE-LODGEMENT CONSULTATION

AMPC has engaged in significant consultation with Ryde Council, with a number of meetings being held over the past year to discuss the Stage 1 DA for the site.

Formal project meetings were held on 13 October, 27 October, 10 November and 24 November 2015. These meetings were attended by senior Ryde Council planning staff and technical officers, AMPC, Urbis and AJ+C. Certain technical consultants did attend selected meetings with Ryde Council.

The key items of discussion from the formal project meetings include:

- Documentation requirements for the Stage 1 DA;
- Traffic modelling;
- Requirements of the Construction Management Plan (CMP);
- Sustainability initiatives proposed as part of the redevelopment;
- North West Rail Link shutdown;
- Outcomes of the UDRP meeting; and
- Preparation of a Public Art Strategy for the site.

3.5 URBAN DESIGN REVIEW PANEL MEETINGS

Prior to lodgement of the Stage 1 DA, two meetings with Ryde Council's independent Urban Design Review Panel (UDRP) have been held. These meetings were held on 2 November and 26 November 2015 and were attended by the UDRP members, Ryde Council planning staff, AMPC, Urbis and AJ+C. A summary of the key matters is provided in **Table 5** (2 November 2015) and **Table 6** (26 November 2015).

TABLE 5 – UDRP MEETING SUMMARY (2 NOVEMBER 2015)

ISSUE / COMMENT	RESPONSE	SECTION
Proposed Uses and Community Facility	▪ AMPC note that the UDRP acknowledged the Stage 1 DA will facilitate the creation of a vibrant and diverse mixed use precinct. ▪ *Community facilities* are a permissible use with development consent on site. ▪ AMPC are currently investigating opportunities to provide a community facility within Macquarie Centre on behalf of Ryde Council. The provision of this use, its potential location within Macquarie Centre and future design are subject to future discussions with Ryde Council.	Noted and Section 4.6.4
Towers Form and Location	▪ As demonstrated in the Urban Design Report prepared by AJ+C and presented to Ryde Council on 1 December 2015 a number of tower arrangements and configurations have been investigated. ▪ Given the solar access, building separation, construction and environmental constraints, the proposed tower configurations are considered to be the optimal outcome for the site. The proposed configuration of towers ensures that building separation requirements are achieved and solar access is maintained to Elouera Reserve ▪ To address comments made by the UDRP, Tower 1 has been shifted towards the Herring Road frontage so it is setback a minimum of 4m from the retail podium. This was done to provide greater diversity in the built form along Herring Road by breaking up the linear configuration of towers and to provide a more legible street address at ground level to the commercial tower. Further detail of Tower 1 will be provided at the design and development stage associated with the Stage 2 DA. ▪ To address comments made by the UDRP, the envelopes associated with Tower 2 and 3 have been increased in size to the east. The larger tower zones permit greater flexibility for the future design of these towers and will support built form diversity. ▪ As demonstrated in Section 6.5 the bulk and scale of a future commercial building (Tower 1) will not have any adverse visual impacts. It is noted that the proposed towers are fully compliant with the permissible use, building height and FSR controls for the site under the RLEP 2014. The towers are also in accordance with the vision for the *Macquarie University (Herring Road) Priority Precinct*.	Sections 6.1 and 6.5
Connection between the Station Plaza and the Atrium	▪ The proposed roof over the proposed connection between Station Plaza and the Atrium is required to ameliorate wind impacts. However, the height, width and design of this laneway will ensure that it does not feel enclosed and will provide a positive pedestrian experience and is legible connection between the railway station and Macquarie Centre.	Section 6.5

ISSUE / COMMENT	RESPONSE	SECTION
Relationship Context and Connections to Macquarie University and Elouera Reserve	▪ AMPC has been meeting with Macquarie University regularly and has taken into consideration potential future pedestrian paths into the Stage 1 DA. ▪ Ryde Council has agreed that, whilst it may be desirable to improve connections across Waterloo Road to Elouera Reserve, it is too difficult to achieve a pedestrian tunnel under Waterloo Road.	N/A
Waterloo Road Improvements	▪ The Public Domain Design Report (**Volume 2**) indicates conceptual public domain improvements to Waterloo Road, including potential architectural treatments to the existing building façade. The Stage 1 DA does not seek consent for these works. The detail of these treatments would be resolved in stage 2 detailed DAs.	Section 4.6.5 and Plans at **Volume 2**
Station Plaza	▪ It is noted that the UDRP endorses the Station Plaza but questioned its location. ▪ Station Plaza is proposed to be located in the area nominated in the RDCP 2014 and is considered to be a significant community benefit of the Macquarie Centre redevelopment. The RDCP 2014 has specifically identified the location of Station Plaza as the most suitable location for a public plaza on the site. ▪ The location of the Station Plaza is considered an optimal outcome, given it will provides both a linkage and a meeting place for persons exiting the Macquarie University Railway Station. The intended character of this plaza reflects the anticipated environmental conditions. ▪ Pedestrian counts have also been previously prepared which indicate that a high volume of pedestrians utilise the station entrance. This figure will only increase after the North West Rail Link upgrades occur. This supports the need for a public plaza in this location	
Hierarchy of Publicly Accessible Plazas	▪ It is AMPC's intention to create a series of interconnected spaces that range in function and in size. ▪ As demonstrated in the Urban Design Report prepared by AJ+C, a clear hierarchy of public plazas and publicly accessible spaces is proposed. A character statement has been prepared for Station Plaza, the Herring Road Entry and the Atrium. Each publicly accessible space has been carefully designed to offer a distinct character. ▪ The potential for a more significant upgraded bus interchange and any associated open space within the Herring Road reserve does not form part of this Stage 1 DA.	Section 4.6
Bus Interchange Improvements.	▪ The proposed redevelopment will facilitate the opportunity to improve the function and appearance of the existing Herring Road bus interchange.	Section 3.3

ISSUE / COMMENT	RESPONSE	SECTION
	▪ The potential for a more significant upgraded bus interchange and any associated open space within the Herring Road reserve does not form part of the Stage1 DA. However, the design of the Stage 1 DA has taken the potential future interchange opportunity into account and is capable of being adapted as appropriate at the Stage 2 detailed DA stage.	
Environmental Considerations for Building Entries and Podium	▪ The Preliminary Wind Impact Assessment identifies that to achieve comfortable wind speeds; it is likely that this area will be required to be roofed. In the event that a roof is required, it will be designed in a manner that promotes transparency. This will be the subject of Future Stage 2 detailed DAs.	**Volume 2**
Location of Station Plaza	▪ Ryde Council via the RDCP 2014 have specifically identified the location of Station Plaza as the most suitable location for a public plaza on the site. Station Plaza is a proposed public plaza located in the area nominated in the RDCP 2014 and is considered to be a significant community benefit of the Macquarie Centre redevelopment. ▪ The location of the Station Plaza is considered an optimal outcome, given it will provides both a linkage and a meeting place for persons exiting the Macquarie University Railway Station. The intended character of this plaza reflects the anticipated environmental conditions. ▪ Pedestrian counts have been previously prepared which indicate that a high volume of pedestrians utilise the station entrance. This figure will only increase after the North West Rail Link upgrades occur.	Section 6.7.6
Potential Talavera Road Pedestrian Conflict at Tower 4	▪ The vehicle entry from Talavera Road will comprise two lanes. This will allow for the passing of vehicles utilising the drop/off-pick-up, ensuring that vehicles do not queue as a result of cars stopping. ▪ As detailed in **Appendix A** approximately 45 and 30 vehicles per hour in the AM and PM peak respectively will use this driveway. Accordingly, the traffic volume utilising this access is considered low and pedestrian and vehicle conflict is not anticipated.	**Appendix A**

TABLE 6 – UDRP MEETING SUMMARY (26 NOVEMBER 2015)

ISSUE / COMMENT	RESPONSE	SECTION
General Comments	▪ The potential for a more significant upgraded bus interchange and any associated open space within the Herring Road reserve does not form part of this Stage 1 DA. However, the design of the Stage 1 DA has taken the potential future interchange opportunity into account and can be appropriately adapted at the Stage 2 detailed DA stage	
Design Changes	▪ The key amendments since the previous UDRP meeting include*:* ▪ Shifting of the Tower 1 (T1) envelope towards the Herring Road frontage so that it setback a minimum of 4m from the retail podium; ▪ Increases in the size of Tower 2 (T2) and Tower 3 (T3) envelopes, in order to allow for building articulation, encourage architectural diversity and promote flexibility in future applications; and ▪ Increase in the envelope associated with the Shard building towards the southern (Waterloo Road) boundary.	
Proposed Uses and Community Facilities	▪ AMPC are currently investigating opportunities to provide a community facility within Macquarie Centre on behalf of Ryde Council. The provision of this use, its potential location within Macquarie Centre and future design are subject to future discussions with Ryde Council. AMPC does not agree that the location on any future community facility has to front Station Plaza. ▪ AMPC also note that whilst the final design will be subject to future discussions with Ryde Council, bridges can work if designed correctly and the uses are clear	
Relationship Context and Connections to Site	▪ AMPC has been meeting with Macquarie University regularly. This Stage 1 DA has taken into consideration potential future pedestrian paths. ▪ Furthermore, Herring Road is 355m long and the proposed entry is roughly the mid-point, a logical place for an entry and whereby pedestrians can access the centre safely.	

ISSUE / COMMENT	RESPONSE	SECTION
Waterloo Road Improvements	▪ The Public Domain Design Report (**Volume 2**) indicates conceptual public domain improvements to Waterloo Road, including potential architectural treatments to the existing building façade and public domain improvements from the corner to the loading dock (and continue paving in this area). However, there are practical realities that mean from a safety perspective this space remains open and visible so that trucks and cars can enter safely ▪ The Stage 1 DA does not seek consent for these works. The detail of these treatments would be resolved in stage 2 detailed DAs.	
Publicly Accessible Open Space	▪ Any associated open space within the Herring Road reserve with a potential significant upgraded bus interchange does not form part of the Stage1 DA. ▪ Careful consideration has been given to the hierarchy of the proposed plazas, with character statements prepared for each space. ▪ The Herring Road Entry is publicly accessible space that will have the character of an east street. It will have a width of 15.3m. This width sits between the width of the Queen Victoria Building (QVB) arcade at 12.5m and Pitt Street Mall at 17.5m and is significantly greater than the existing 7.5m wide entry. An alternative precedent is Top Ryde, which has a width of approximately 10m. ▪ The location of the Station Plaza is considered an optimal outcome, given it is identified as the most suitable location for a public plaza on the site, will provides both a linkage and a meeting place for persons exiting the Macquarie University Railway Station. The intended character of this plaza reflects the anticipated environmental conditions. Further, pedestrian counts have been previously prepared which indicate that a high volume of pedestrians utilise the station entrance. This figure will only increase after the North West Rail Link upgrades occur with pedestrians anticipated to move in a number of directions. A public plaza in this location, which will accessible to the public 24 hours, will therefore be a significant community benefit of the Macquarie Centre redevelopment.	

ISSUE / COMMENT	RESPONSE	SECTION
Tower 1	▪ To address previous comments made by the UDRP, Tower 1 has been shifted towards the Herring Road frontage so it is setback a minimum of 4m from the retail podium. This was done to provide greater diversity in the built form along Herring Road by breaking up the linear configuration of towers and to provide a more legible street address at ground level to the commercial tower. ▪ Further detail of Tower 1 (including any columns) will be provided at the design and development stage associated with the Stage 2 DA ▪ The proposed roof over the proposed connection between Station Plaza and the Atrium is required to ameliorate wind impacts. However, the height, width and design of this laneway will ensure that it does not feel enclosed and will provide a positive pedestrian experience and is legible connection between the railway station and Macquarie Centre.	
Recommendations	▪ TfNSW are currently studying opportunities for a more significant upgrade to the capacity of the existing Herring Road bus interchange to accommodate growing public transport demands within the north-west corridor. At this stage options for an increase in the capacity of the bus interchange and improved connectivity between Macquarie University and Macquarie Centre are being explored. The potential for such a future upgraded bus interchange does not form part of this DA, however, the design of the Stage 1 DA has taken this potential future interchange opportunity into account and is capable of being adapted as appropriate at the Stage 2 detailed DA phase. ▪ Notwithstanding, whilst not forming part of this Stage 1 DA, the design of the Stage 1 DA has taken the future interchange opportunity into account and is capable of being adapted as appropriate at the Stage 2 detailed design phase.	

3.6 KEY STAKEHOLDER CONSULTATION

The basis of the Macquarie Centre Stage 1 Concept Plan DA reflects the outcomes of the *Macquarie University Station (Herring Road) Priority Precinct* rezoning proposal which was gazetted in October 2015. This Priority Precinct process lead by State Government involved forums with key stakeholders and the community to develop ideas and the design principles for the precinct and for the community to provide input on local infrastructure priorities.

The finalisation of the Priority Precinct and the consequent amendment to planning controls within the RLEP 2014 gives AMPC the opportunity to further improve Macquarie Centre. Customer surveys and local groups are regularly undertaken at Macquarie Centre to better understand what the customers want, and to ensure the centre meets the requirements of the current and future community.

AMPC has worked closely with Ryde Council and key stakeholders throughout the development of the Stage 1 Concept Plan to ensure the plans were consistent with the vision and objectives of the Herring Road Precinct. AMPC will continue to work in conjunction with Ryde Council throughout the Stage 1 DA process to seek comments from the public, and will utilise the feedback when developing the detailed designs.

Consultation with the community, centre retailers, surrounding businesses and key government and non-government agencies will continue throughout the development process. AMPC will provide regular updates to its stakeholders via the Macquarie Centre website and through a series of newsletters, and will continue to undertake consultation throughout the various development stages.

4 Description of Proposed Development

4.1 OVERVIEW

Pursuant to Section 83B of the EP&A Act, the Stage 1 DA seeks concept approval for the mixed use redevelopment of Macquarie Centre. The first stage will seek concept approval only for:

- Mixed use development to enable a range of land uses. The final mix of land uses will be subject to and determined under the relevant Stage 2 detailed DAs.
- Building envelopes for the proposed basement, expanded podium and tower forms.
- The four tower envelopes fronting Herring Road will have maximum heights ranging from 90m and 120m above existing ground level. The building envelope for Tower 1 is of sufficient dimensions to accommodate alternate tower forms.
- Maximum additional gross floor area (GFA) of 148,000sqm.
- The new podium along Herring Road will replace the existing structure. This will provide an active frontage with separate pedestrian entries to Herring Road and the creation of a vibrant atrium space.
- The creation of 'Station Plaza' between the train station and shopping centre, framed by active uses and a landmark building known as the "Shard".
- The building envelopes for the proposed basement and upper levels of the expanded podium will accommodate a maximum of 2,175 additional car spaces.
- New vehicle and pedestrian access points.

The Stage 1 DA does not seek approval for:

- Any works, including demolition, excavation, construction and public domain improvements.
- The final arrangement of land uses.
- Layout, mix and number of residential units.
- A specific number of car spaces (as this will be determined having regard to the final mix of land uses).
- The design of the building exteriors including facades and roofs.
- Public domain and landscape design.

Such approvals will be sought via subsequent development applications following receipt of development consent for the Stage 1 DA.

The overview of the indicative mix of land uses within the proposed building envelopes is identified in **Table 7** below.

TABLE 7 – OVERVIEW OF INDICATIVE MIX OF LAND USES

COMPONENT	PROPOSED
Basement	▪ Loading docks, car parking and associated vehicle circulation, waste rooms, utilities, future connection to existing train station and retail premises.
Podium	▪ Retail premises, commercial premises, food and drink premises, entertainment facilities, recreation facilities (indoor), recreation area, car parking and associated vehicle circulation, community uses (subject to further discussions with Council) and communal open space associated with the towers.
Tower 1	▪ Mixed use development comprising commercial premises and/or residential accommodation and/or serviced apartments above a retail podium.
Towers 2, 3 and 4	▪ Mixed use development comprising residential accommodation and/or serviced apartments above a retail podium.

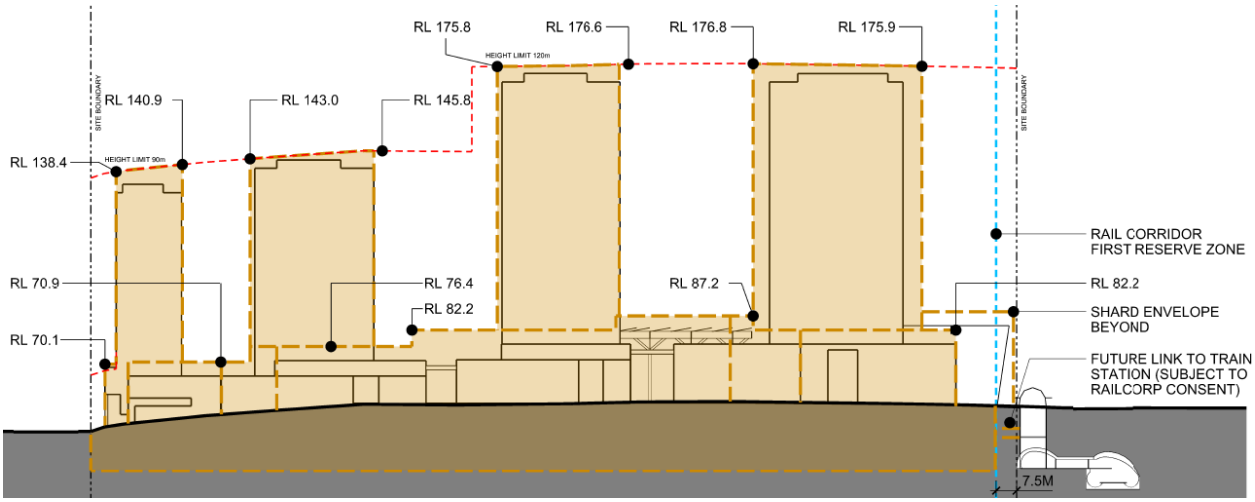
The proposed building envelopes are demonstrated in **Figure 10** below and an overview of the existing and proposed is provided in **Table 8**.

TABLE 8 – EXISTING AND PROPOSED

	GFA	FSR	PARKING*
Existing	170.850sqm	1.54:1	4,755
Proposed	318,850sqm	2.83:1	6,930*

*As stated above the Stage 1 DA does not seek approval for car parking numbers as this will be determined having regard to the final mix of land uses.

FIGURE 10 – HERRING ROAD ELEVATION BUILDING ENVELOPES (SOURCE: AJ+C)



4.2 DEVELOPMENT AND DESIGN PRINCIPLES

The Stage 1 DA concept for the redevelopment of Macquarie Centre has been informed by key design principles. These design principles have been established to create a strong identity for Macquarie Centre at the heart of the *Macquarie University (Herring Road) Priority Precinct*. The four design principles have been discussed in greater detail in the Urban Design Report prepared by AJ+C **(Volume 2)** and include:

1. Sense of Place;

2. Approach and Movement;

3. Diversity and Adaptability; and

4. Legibility.

These principles are important in creating a strong identity for not only Macquarie Centre but the whole of the *Macquarie University (Herring Road) Priority Precinct* and more broadly Macquarie Park. The design principles will assist in transforming Macquarie Centre into a town centre that is vibrant, connected and more responsive to the surrounding context.

4.3 BUILDING ENVELOPES

Built form envelope drawings (ref: Control Drawings No. DA1500, Issue 1, dated 14 December 2015) are the primary control drawings that consent is sought for in the Stage 1 DA. These drawings define the parameters for the building envelopes across the site. The aspects of the building envelopes are discussed in detail below.

The control drawings have been developed to accommodate the overall permitted building heights and Floor Space Ratio (FSR) across the site. Approval for the actual quantum of car parking is not being sought as part of the Stage 1 DA. The envelopes set the framework within which a detailed building design can be established.

The building envelopes are larger than what is required for typical residential and commercial floor plates in accordance with the guidance on building envelopes provided in the Apartment Design Guidelines (ADG). This is to allow for architectural detailing and articulation, as well as multiple design solutions, ensuring that design excellence can be achieved. It is also noted that the proposal is significantly below the allowable FSR for the site.

4.3.1 BASEMENT AND PODIUM ENVELOPES

The building envelopes for the proposed basement and upper levels of the expanded podium will accommodate a maximum of 2,175 additional car spaces. The building envelope for the basement will primarily involve extending the existing basement to the Herring Road site boundary. The new basement car park will accommodate 1086 cars, with the remaining car parking provided on the roof top towards the east of the centre. This will result on a total maximum of 6,930 car spaces on the site.

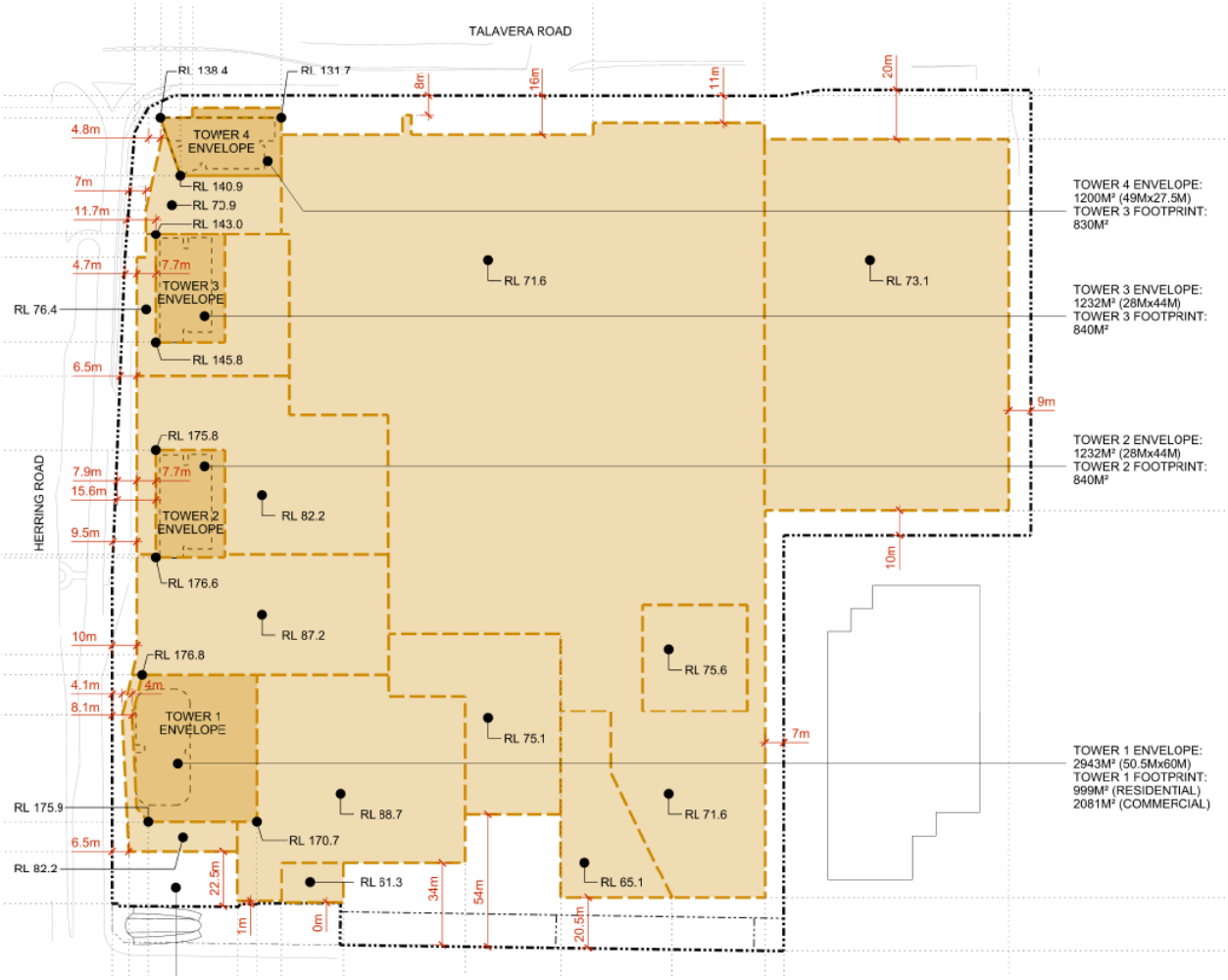
4.3.2 PODIUM ENVELOPE

The building envelope for a new expanded podium is indicated in blue in **Figure 11**. It will largely replace and increase the height of the existing structure along Herring Road with additional retail space provided across the remainder of the site. The expanded podium will accommodate an additional 49,000sqm of floor space across four levels. The detailed design of the podium will be the subject of a future Stage 2 DA.

The height of the podium ranges from RL 91.32 and RL 87.18 adjacent to Herring Road. When viewed from Waterloo Road the height of the podium envelope ranges from RL 91.32 to RL 65.02 and RL 71.58 to RL 73.09 along Talavera Road.

To maintain future flexibility and encourage innovative design and articulation in the roof form, as well allowing for the ability to accommodate future landscaping structures and plant equipment, the building envelope associated with the podium is taller than typically required. However, the height of the proposed podium will still be well below the maximum height controls for the site.

FIGURE 11 – SITE PLAN CONTROL DRAWING (SOURCE: AJ+C)



Notwithstanding that the future internal design and configuration of the basement areas, podium and tower areas will be subject to the Stage 2 detailed design phase, the following overview of the conceptual floor levels is provided as a demonstration that the proposed building envelopes can efficiently and viably support the future mix of land uses and car parking. This table is supported by the illustrated architectural plans included at **Volume 2.**

The overview of the indicative concept for the basement levels and retail/commercial levels is identified in Table 9 below.

TABLE 9 – OVERVIEW OF INDICATIVE MIX OF LAND USES

COMPONENT	PROPOSED
Basement	▪ Loading docks, car parking and associated vehicle circulation, waste rooms, utilities, future connection to existing train station and retail premises.
– Podium	▪ Retail premises, commercial premises, food and drink premises, entertainment facilities, recreation facilities (indoor), recreation area, car parking and associated vehicle circulation, community uses (subject to further discussions with Council) and communal open space associated with the towers.
– Tower 1	▪ Mixed use development comprising commercial premises and/or residential accommodation and/or serviced apartments above a retail podium.
– Towers 2, 3 and 4	▪ Mixed use development comprising residential accommodation and/or serviced apartments above a retail podium.

4.3.3 TOWERS

As shown in **Figure 10** the building envelopes for the four towers above the podium fronting Herring Road will have maximum heights ranging from 90m and 120m above ground level.

The proposed building envelopes for the towers have been informed by concept layout planning for the proposed future intended uses as discussed at Section 4.3 of this SEE. The proposed building envelopes are slightly larger in footprint (not height) than the concept typical floor layouts in order to allow articulation, balconies and potential design changes over the life of the project.

Four building envelopes for the purposes of mixed use development are proposed. Towers 2, 3 and 4 are likely to accommodate residential accommodation and/or serviced apartments. Tower 1 is likely to accommodate commercial premises and/or residential accommodation and/or serviced apartments. The building envelopes have been designed to comply with ADG, which provides the most stringent requirements in terms of internal amenity, building separation, building bulk etc.

To allow for future flexibility, a larger building envelope is proposed for Tower 1 so that it is capable of accommodating either a smaller floor plate for residential accommodation and/or serviced apartments, or a larger floor plate for the commercial premises.

This approach maximises flexibility and permits a diversity of uses to be accommodated on the site. This will ensure that a project of such a scale and complexity that will need to be delivered in multiple stages over a potential 10 – 15 year time frame will have a development consent flexible enough to enable the optimal planning outcome to be delivered in the future and respond to market conditions as they exist at that time.

A numeric overview of each tower envelope is provided in **Table 10** below.

TABLE 10 – TOWER HEIGHTS

OVERVIEW	TOWER 1	TOWER 2	TOWER 3	TOWER 4
Maximum Height (m)	120m (RL 176.72)	120m (RL176.56)	90m (RL 145.79)	90m (RL140.92)
Height (approx. storeys)	37 storeys	37 storeys	27 storeys	25 storeys
Building Envelope	2,943sqm	1,232sqm	1,232sqm	1,200sqm
Anticipated Footprint GFA (sqm)	Residential: 999sqm Commercial: 2,081sqm	840sqm	840sqm	830qm

4.4 LAND USE MIX

Given, the long term nature of this development the final usages for the proposed towers are still to be determined. As discussed AMPC is therefore proposing to submit a concept approval that can be reasonably adapted to respond to changing circumstances over the life of the project.

To this extent, the proposed uses for each of the four towers (Towers, 1, 2, 3 and 4) will allow some degree of flexibility in usage. As agreed with Ryde Council there is no legal impediment to such an approach, noting further that the relevant mandatory matters (both amenity impacts and statutory and DCP considerations) have been satisfactorily assessed in this SEE and accompanying technical reports.

The uses in each tower will constitute *"mixed use development"*[1]. Details of the proposed mixed uses within each envelope is summarised in Section 4.3.3. . Additional permissible uses maybe proposed on the site at later detailed design stages, such as a child care centre in the podium or kiosks in Station Plaza. This would be subject to future DAs.

4.4.1 OPPORTUNITY FOR COMMUNITY USE

AMPC are discussing with Council the opportunities for the introduction of community facility and a bike hub into Macquarie Centre redevelopment. Community facilities and a bike hub are permissible uses on the site. Detailed design and location of these facilities will be the subject of future Stage 2 DAs and informed by ongoing discussions with Ryde Council.

[1] Mixed use development is a separate land use described in the RLEP 2014 dictionary as:

*"**mixed use development** means a building or place comprising 2 or more different land uses". Mixed Use Development is a permitted use with consent in the B4 Zone not being a listed prohibited use in the table to the zone*"

4.5 NUMERIC OVERVIEW

As detailed in Section 4.4, the final uses of the towers are yet to be determined. The likely future scenarios are outlined below. **Table 11** provides a summary of the numeric information relating to the Stage 1 DA. The two likely future scenarios outlined in the table include:

- **Scenario 1 -** 4 x residential accommodation and/or serviced apartment towers above a podium; and
- **Scenario 2 -** 3 x residential accommodation and/or serviced apartment and/or commercial tower (Tower 1) above a podium.

TABLE 11 – NUMERIC OVERVIEW

COMPONENT	PROPOSAL				
	PODIUM	TOWER 1	TOWER 2	TOWER 3	TOWER 4
Existing GFA	170,850sqm				
Existing FSR	1.54:1				
Additional GFA	49,000sqm	Scenario 1: 75,000sqm			
	Total (including existing): 294,850sqm				
		Scenario 2: 99,000sqm			
	Maximum total (including existing): 318,850sqm				
Proposed FSR	**Total: 2.83:1**				
Additional GFA	49,000sqm	48,000sqm	19,900sqm	14,700sqm	16,400sqm
Minimum setbacks					
North (Talavera Road)	N/A	N/A	N/A	N/A	4m – 5m
East (Rear)	7m	N/A	N/A	N/A	N/A
South (Waterloo Road)	1m	33.5m	N/A	N/A	N/A
West (Herring Road)	4m - 10m	8.1m	15.6m	11.7m	7.1m
No. of residential apartments (indicative)	Scenario 1: 915 across four towers Scenario 2: 615 across three towers				
Existing Parking	4,755 retail spaces				
Proposed Additional Parking	2,175 non retail spaces				

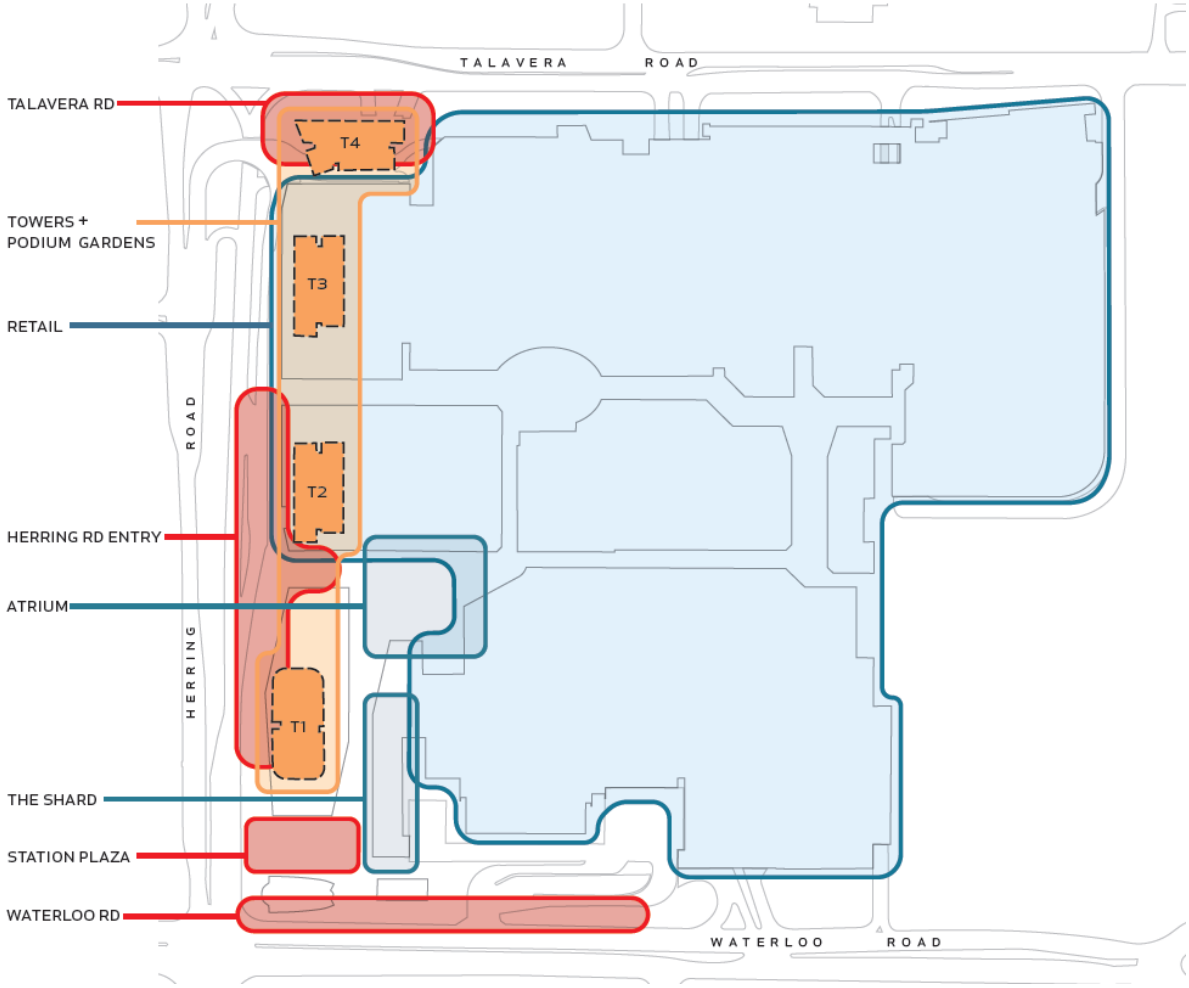
COMPONENT	PROPOSAL				
	PODIUM	TOWER 1	TOWER 2	TOWER 3	TOWER 4
Addition Parking Allocation	1,390 spaces	785 spaces			
Total Car Spaces(including existing)	**6,930 spaces**				

4.6 PLAZAS

The Stage 1 DA proposes a network of interconnected public open space and publicly accessible spaces that range in function and in size, including Station Plaza, the Herring Road Entry and the Atrium. The location of these spaces is identified in the Urban Design Report (**Volume 2**). Careful consideration has been given to the hierarchy of the proposed plazas. A character statement has been prepared for each space and included in the Urban Design Report prepared by AJ+C and discussed below. The location of the public open space and publicly accessible spaces identified above is included in **Figure 12**.

Station Plaza will be accessible 24/7. Whilst the times that the Herring Road Entry and The Atrium have yet to be determined, it is likely that these will be publically accessible during the day and into the evening.

FIGURE 12 – LOCATION OF PUBLIC OPEN SPACE AND PUBLICALLY ACCESSIBLE SPACE (SOURCE: AJ+C)



4.6.1 STATION PLAZA

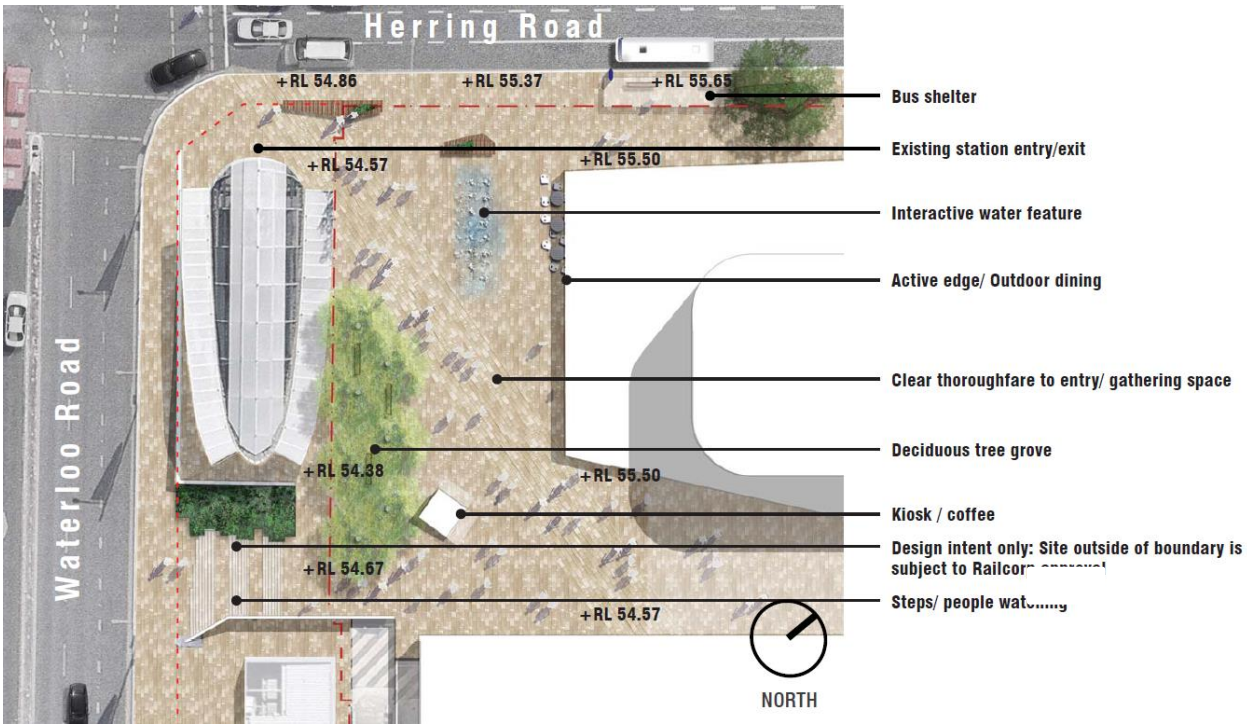
The proposal seeks concept approval for the creation of Station Plaza at the corner of Herring Road and Waterloo Road. The Station Plaza will have a size of approximately 1,500sqm and will be activated by a variety of uses fronting the plaza from the retail podium. Station Plaza will connect the existing railway station on the corner of Herring Road and Waterloo Road to the redeveloped Macquarie Centre and will provide much improved access to Macquarie University. Whilst Station Plaza will be public open space, the land will not be dedicated to Ryde Council in accordance with Part 4.5 of the RDCP 2014. It will be both a transitional space for pedestrian movements, as well as a place that people can meet and gather. It will also be flexible space that can be used for community events. It will provide landscaping, opportunities for public art and outdoor seating associated with the ground floor retail and landmark "Shard" building.

Some of the indicative public domain works for Station Plaza are located on Rail Corp land and accordingly, landowners consent has been sought by AMPC. The detailed design of Station Plaza will be also subject to consultation with Rail Corp and will be the subject of a future Stage 2 detailed DA. The indicative design of the Station Plaza is provided at **Figure 13**.

The character statement for Station Plaza is:

> *"The station plaza is an active public place of arrival that acts as a bold identifiable local destination and meeting point. It will be a landmark which contains public art and playful landscaping."*

FIGURE 13 – STATION PLAZA ILLUSTRATIVE DESIGN (SOURCE: OCULUS)



4.6.2 HERRING ROAD ENTRY

As shown in **Figure 14** Herring Road Entry will be publicly accessible space, which will provide the primary pedestrian access to the redeveloped Macquarie Centre. The Herring Road Entry will form an 'eat street' and will be activated by a variety of entertainment and dining facilities, as well as three levels of visible retail providing a sense of scale and which will have connection to the natural environment. The Herring Road Entry will have a width of 15.3m metres, creating a generous entryway to Macquarie Centre. This will significantly improve the amenity and legibility to Macquarie Centre, which currently has one 7.5m wide entry along its 355m long frontage. The Herring Road Entry will create much needed vibrancy and visual interest along Herring Road though a variety of active uses and façade articulation. It will also provide pedestrian access to the Atrium.

The character statement for Herring Road Entry is:

> *"This has the character of a wide pedestrian street. The entry way is framed by informal spaces where the divisions between the outdoor and indoor, natural and built environments are blurred creating opportunities for dining and entertainment."*

FIGURE 14 – HERRING ROAD ENTRY ILLUSTRATIVE CONCEPT (SOURCE: AJ+C)

4.6.3 THE ATRIUM

The Atrium is publicly accessible space, which will be accessed from the Herring Road Entry and a secondary 'laneway' connection from the Macquarie University Railway Station, Station Plaza and the 'Shard' building. The Atrium will be a vibrant gathering place, which will connect all levels of the podium. The space will provide a central entrance core and will improve legibility through the site. The open plan design and glass roof will provide an abundance of natural light and will significantly enhance the amenity of Macquarie Centre.

The indicative design of The Atrium is provided in Figure 15 below and the character statement for this space:

> *"The atrium is characterised by a grand space with contemporary and impressive architecture. The atrium connects all levels of the building which is home to a variety of uses. Art and retail activate the heart and soul of this space giving it a unique character. The town square is the focus of the place connecting transport, retail, community, leisure and entertainment."*

FIGURE 15 – THE ATRIUM ILLUSTRATIVE CONCEPT (SOURCE: AJ+C)

4.6.4 THE SHARD BUILDING

As shown in **Figure 16**, the 'Shard' building forms part of the podium and is located towards the south of the site, adjacent to Station Plaza. The building envelope proposed as part of this Stage 1 DA, would permit a four storey "landmark" building. Following feedback from the UDRP meeting on 2 November 2015, the envelope for the Shard has been re-configured to allow the building to extend further towards the southern boundary, thereby better addressing Waterloo Road and actively framing Station Plaza.

Whilst the future use of the Shard building has not been confirmed, it is anticipated that it may comprise a diverse mix of retail or civic uses, with an active ground floor addressing Station Plaza. The detailed design of this building will be the subject of Stage 2 detailed DAs.

FIGURE 16 – THE SHARD CONCEPT (SOURCE: AJ+C)

PICTURE 11 – AS VIEWED FROM THE WEST

PICTURE 12 – AS VIEWED FROM THE NORTH WEST, ON THE OPPOSITE SIDE OF HERRING ROAD

4.6.5 STREETSCAPE IMPROVEMENTS

As illustrated in the Public Domain Design Report (**Volume 2**) the Stage1 DA seeks concept approval for future improvements to the Waterloo Road, Talavera Road and Herring Road frontages as detailed below. The detailed design of all the public domain improvement works will be the subject of Stage 2 detailed DAs.

Waterloo Road

Waterloo Road forms the main east west vehicular and pedestrian route through Macquarie Park. As part of the Macquarie Centre redevelopment it is proposed to re-orientate the existing stairs adjacent the eastern side of the rail station to improve pedestrian access to Station Plaza and Waterloo Road. Additional soft landscaping treatments including additional street trees and screen planting to supplement the existing planting in front of the ramps is also indicated.

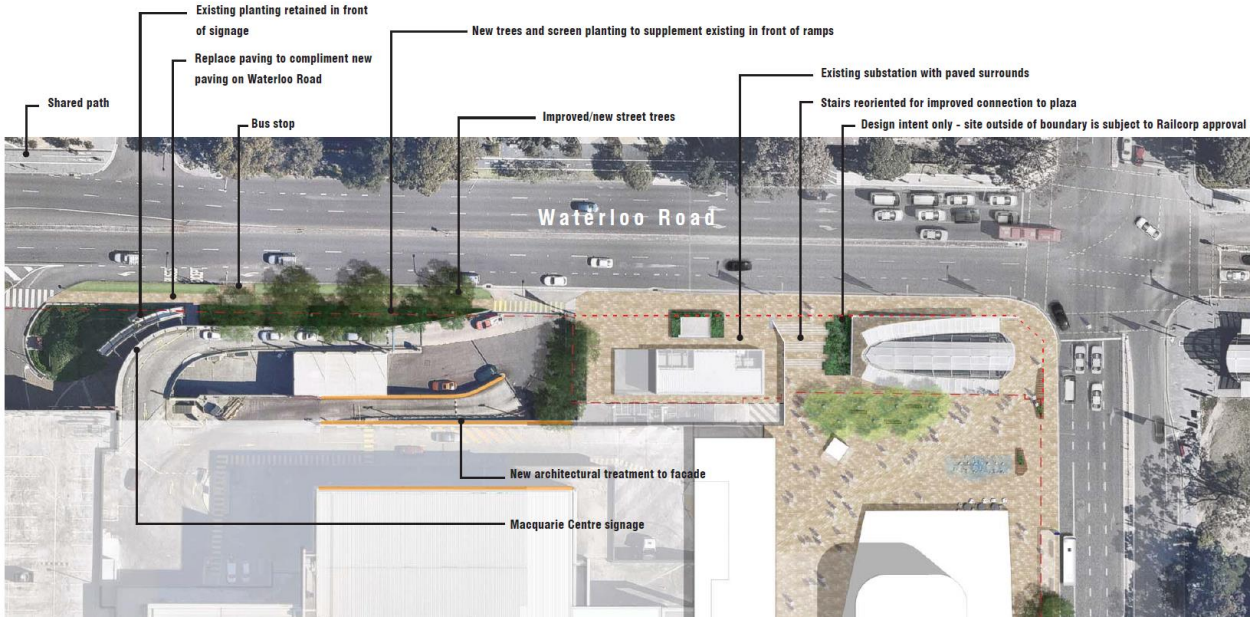
As shown in **Figure 17** proposed improvements include:

- New trees and screen planting to supplement existing in front of the vehicular ramps;

- Potential architectural treatments to the existing building façade. The detail of these treatments would be subject of a future detailed DA;
- Widening of the existing footpath from 1.2m to 2m and replacement of paving to complement new paving on Waterloo Road;
- Re-orientation of the stairs to provide access to the future Station Plaza; and
- New paving around the existing electricity substation.

Some of the conceptual public domain works are located on Rail Corp land and accordingly, landowners consent has been sought by AMPC.

FIGURE 17 – WATERLOO ROAD LANDSCAPE CONCEPT (SOURCE: OCULUS)

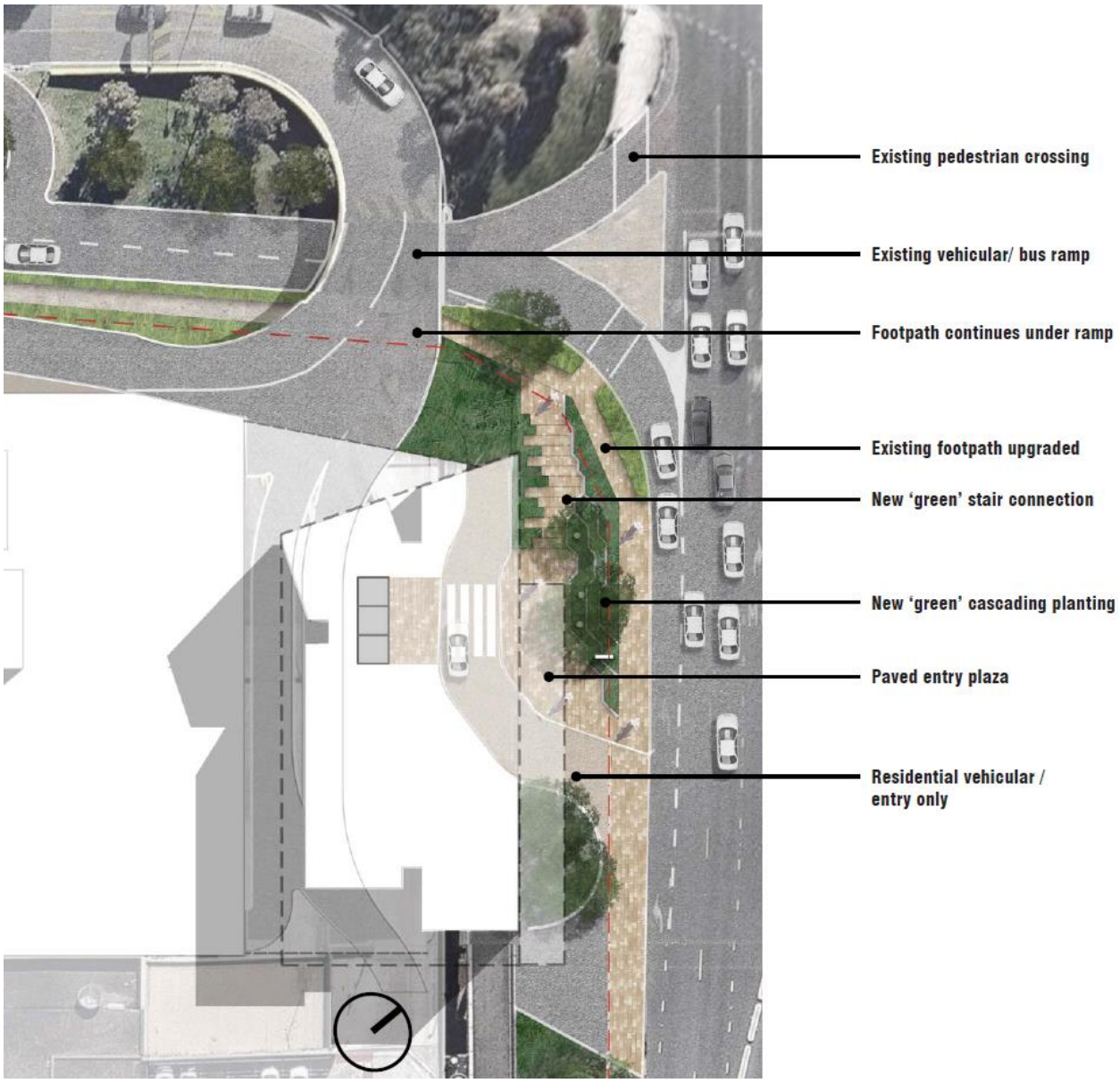


Talavera Road

As indicated in **Figure 18** the Talavera Road corner near Herring Road will be landscaped to provide a new paved entry plaza to the Tower 4 lobby. The new landscape will include a 'green' stairs to provide improved pedestrian access, as well as cascading 'soft' landscaping to accommodate the level change around the corner. Specifically, the improvements indicated include:

- Landscaping to provide a buffer between the development and Talavera Road;
- Landscaped entry plaza to Tower 4 to be located at the corner of Herring Road and Talavera Road; and
- The existing footpath will be upgraded.

FIGURE 18 – TALAVERA ROAD LANDSCAPE CONCEPT (SOURCE: OCULUS)



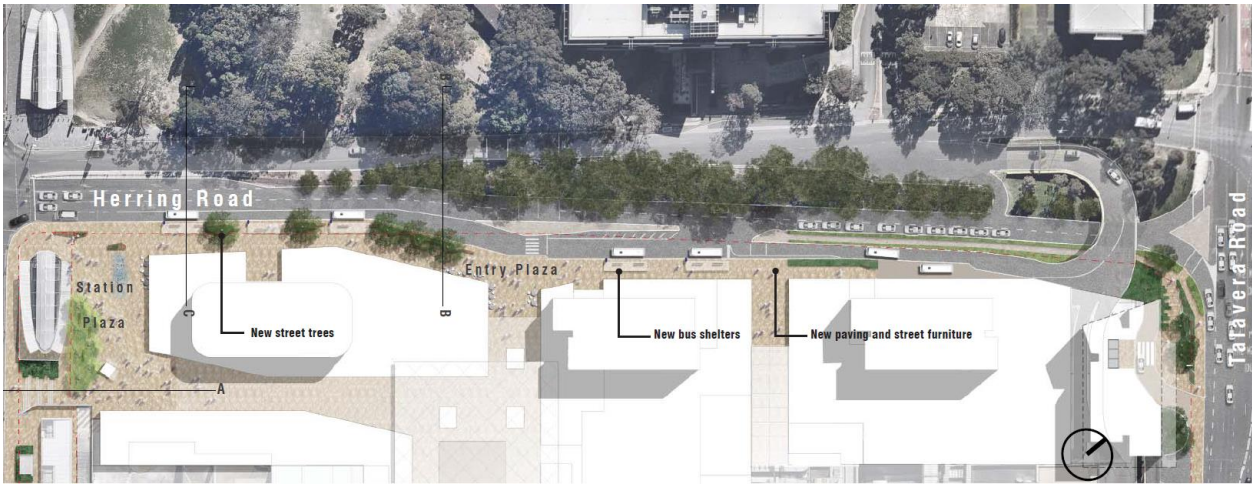
Herring Road

Herring Road is the main transport connection for buses into and out of Macquarie Park and the redevelopment provides opportunity to improve the existing streetscape.

As indicated in **Figure 19** proposed public domain improvements along Herring Road include street tree planting, widened footpath, activated retail frontages with outdoor eating and entertainment. This includes a generous entry into Macquarie Centre and allows for ground level lobby entries to all towers that will have a legible address from the street.

The redevelopment also proposes upgrades to the existing bus stop with new bus shelters, new paving treatment as well as street furniture and outdoor seating associated with cafes and restaurants.

FIGURE 19 – HERRING ROAD LANDSCAPE CONCEPT (SOURCE: OCULUS)



4.7 ACCESS AND PARKING

4.7.1 PEDESTRIAN ACCESS

Integral to the scheme is enhancing pedestrian access and connection across the site. Pedestrian access to the retail podium and public domain, in addition to tower access is described below. Access arrangements are indicated in **Figure 20** below.

Retail Podium and Public Domain

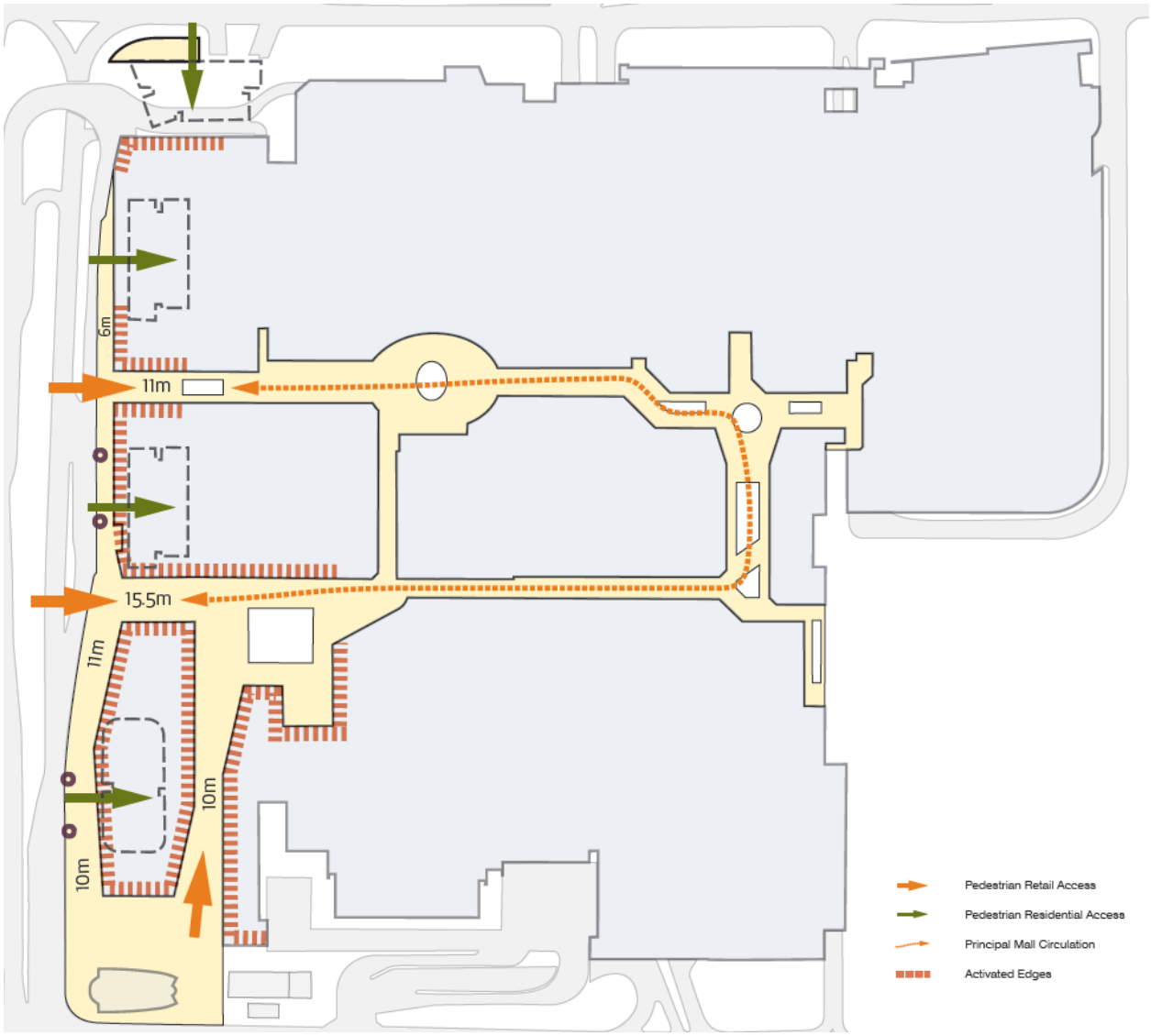
The proposal seeks to improve access arrangement on the site and connectivity with surrounding sites. Primary pedestrian access to Macquarie Centre will be provided from the Herring Road Entry, which will replace the existing narrow entry to the centre and an additional entry is proposed north along Herring Road connecting the fashion mall to Herring Road.

Clear pedestrian access is provided from the Station Plaza and the Shard through to the Atrium via a 10-15m wide undercover walkway with a high ceiling which will provide required weather protection. Access to the Station Plaza is provided from Herring Road and a set of stairs from Waterloo Road.

Towers

Each tower will have direct street access. Towers 1, 2 and 3 will have direct access from Herring Road and Tower 4 will have direct access from Talavera Road. The location of tower envelopes allow for the creation of direct street addresses.

FIGURE 20 – PROPOSED PEDESTRIAN ACCESS (SOURCE: AJ+C)



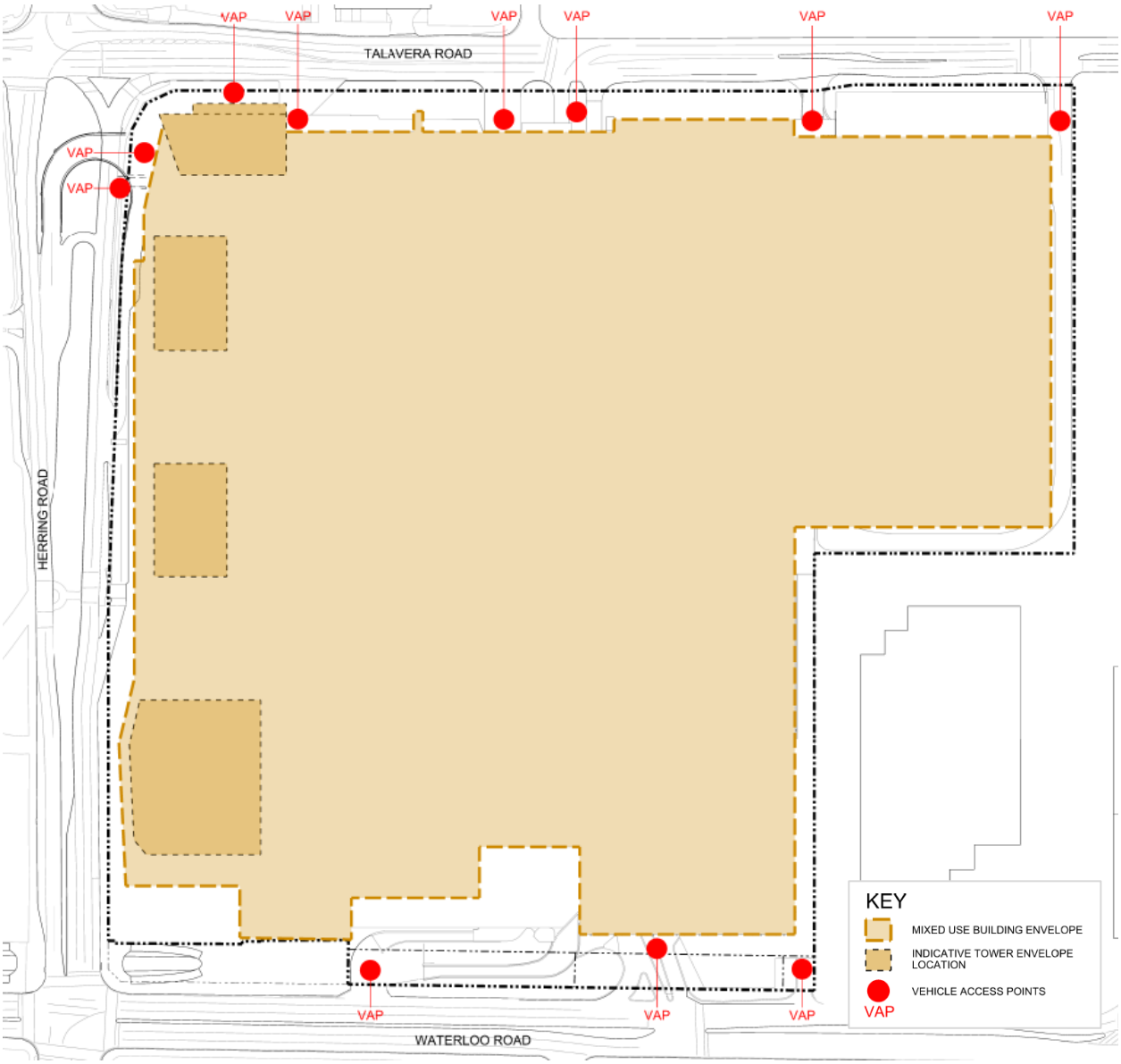
4.7.2 VEHICLE ACCESS

Access to Macquarie Centre will be maintained via the existing driveways onto Herring Road, Talavera Road and Waterloo Road. The following changes to vehicular access are proposed:

- A new entry driveway off Talavera Road accessing the tower parking accommodated in the expanded basement envelopes. The driveway will also provide access to set-down only area for the northern tower (T4)
- A new loading dock access driveway and reconfigured existing loading dock access driveways off Talavera Road. These driveways will cater for service vehicles.
- Removal of the existing car park exit driveway onto Herring Road, located to the north of Waterloo Road. This driveway is required to be removed to accommodate the proposed Station Plaza. Traffic currently exiting Macquarie Centre via this driveway will be redistributed to other existing and proposed driveways.
- Potential for additional exit lanes on the Link Road to Waterloo Road and Talavera Road. This will be further investigated for the Stage 2 DA.

The proposed vehicle access arrangements are detailed in TMAP at **Appendix A** and indicated in **Figure 21**.

FIGURE 21 – VEHICLE ACCESS CONTROL DRAWING (SOURCE: AJ+C)



4.7.3 SERVICE VEHICLE ACCESS AND LOADING

Whist the configuration of loading docks, car parking space and circulation space does not form part of the Stage 1 DA, it has been assessed to demonstrate that the envelopes for car parking do work and can provide an appropriate level of parking/loading, etc. to support the development. The basement building envelopes will result in reconfiguration of the existing loading areas and additional loading areas will be provided to service the additional retail, commercial and residential floor space. New loading areas proposed include:

- A north eastern loading area to service the existing department store and existing retail area. This loading area would have left in/left out access from Talavera Road.
- Northern loading areas to service new retail areas and towers located adjacent to Herring Road. This is proposed to be extended over three levels with separate loading docks located on each of the levels. Access to these loading areas would be via the reconfigured existing loading dock access driveway off Talavera Road; and
- The existing south eastern loading area would be reconfigured to service the new speciality retail. Access to this loading area would be maintained via the existing service road from Talavera Road.

4.8 PUBLIC ART STRATEGY

A Preliminary Public Art Strategy has been commissioned for the subject site. The purpose of the public art strategy is to establish a framework for the development of a more detailed public art strategy. Key considerations in the early phase of development are the understanding of the context, including first analysis of the site and early ideas of possible locations for art, cultural initiatives, artwork types and artists.

The Preliminary Public Art Strategy prepared by Jess Scully is included at **Appendix D.**

4.9 DEVELOPMENT STAGING

This is a significant project in Macquarie Park Corridor and for Ryde Council. As confirmed in the Quantity Surveyor Report at **Appendix K,** the estimated Capital Investment Value of the project is $941,100,000.

The development is likely to occur over a 10-15 year period and will deliver between 615 – 915 apartments, providing additional jobs from the proposed retail/commercial components and during construction of the development. An indicative staging plan has been prepared by AJ+C (refer **Volume 2**). This indicates that AMPC intend to deliver the project over four stages. A summary of the staging plan is as follows:

- Stage 1: Additional parking and relocation of the Myer loading dock;
- Stage 2: Retail podium, which will be staged to maintain retail operations and access along Herring Road;
- Stage 3: Towers, which could be individual stages; and
- Stage 4: Retail and car park expansion above level 3 south eastern retail including Coles.

An illustrative staging plan is provided in the Urban Design Report.

4.10 VOLUNTARY PLANNING AGREEMENT

A Letter of Intent will be prepared in early 2016 outlining the applicant's intention to enter to into Voluntary Planning Agreement (VPA) with Ryde Council to fund local infrastructure. The future VPA will outline the contributions to be made by the Developer towards local infrastructure costs arising from the development of the land.

5 Planning Assessment

Under Section 79C(1) of the EP&A Act, in determining a development application the consent authority must take into account a range of matters relevant to the development including the provisions of environmental planning instruments; likely impacts of the built environment, the social and economic impacts of the development; the suitability of the site; and whether the public interest would be served by the development. This assessment includes only those matters under Section 79C(1) that are relevant to the proposed redevelopment of Macquarie Centre.

This chapter provides an assessment of the proposal against matters for consideration under Section 79(C)(1)(a) of the EP&A Act including the following plans and legislation: As this is a staged DA, the provisions of Section 83 (Division 2A) of the EP&A Act are also applicable in the assessment of this and any subsequent DA(s) for the site.

Strategic Planning Policy

- *A Plan for Growing Sydney*
- *North Subregional Plan* (yet to be released)
- *Macquarie University Station (Herring Road) Priority Precinct*
- *NSW State Plan 'Making it Happen'*
- *NSW Long Term Transport Master Plan*
- *NSW State Infrastructure Strategy*

Environmental Planning Instruments

- *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55)
- *State Environmental Planning Policy (Infrastructure) 2007* (SEPP Infrastructure)
- *State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development* (SEPP 65)
- *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004* (SEPP BASIX)
- *Ryde Local Environmental Plan 2014* (RLEP 2014)

Draft Environmental Planning Instruments

- Non relevant

Development Control Plans

- Ryde Development Control Plan 2014 (RDCP 2014)

An assessment of the DA's consistency and compliance with the relevant strategic and statutory plans and policies is provided below. Variations to the key standards and guidelines highlighted in the table are discussed in detail in the following sections of this SEE.

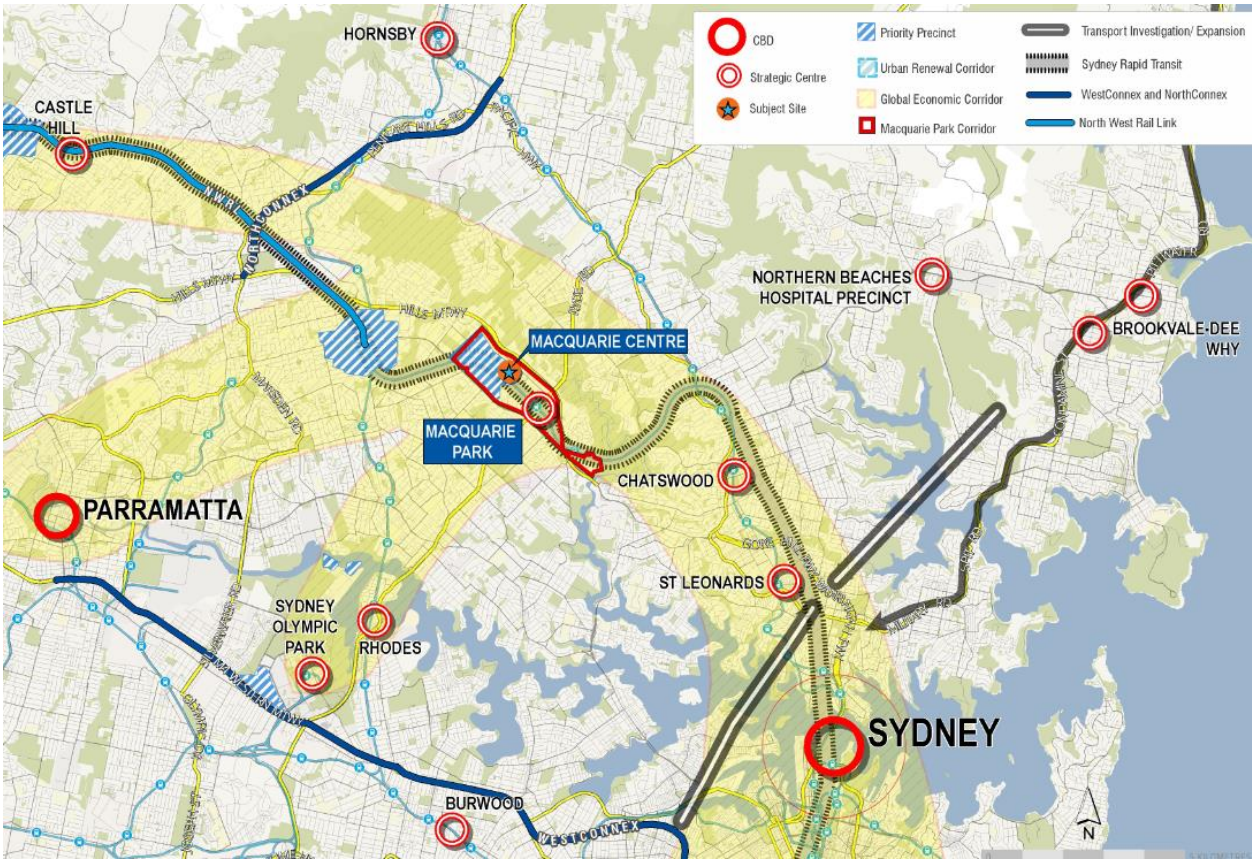
5.1 STRATEGIC PLANNING POLICY

5.1.1 A PLAN FOR GROWING SYDNEY

A Plan for Growing Sydney was released by the Department of Planning and Environment on 14 December 2014. The Strategy outlines the Government's strategic framework for managing and delivering growth in Sydney over the next 18 years.

The Strategy identifies that an additional 664,000 new dwelling will be required in Sydney over the next 20 years. Under the Plan Macquarie Park is featured significantly, being at the northern end of the "Global Economic Corridor" (as illustrated in **Figure 22**) and a major generator of economic growth and one of the main destinations for employment.

FIGURE 22 – A PLAN FOR GROWING SYDNEY



The following directions are applicable to the site and Stage 1 proposal:

- **Direction 1.6: Expand the Global Economic Corridor**

The proposal will support the growth and success of Macquarie Park Corridor as a major business and knowledge hub, whilst respecting the retention of the corridor's commercial core. This will be achieved through the delivery of a mixed use transit orientated development that provides much needed new housing and jobs and will help transform Herring Road into a vibrant area, with a mix of residential, retail, commercial, and potentially community uses.

- **Direction 2.1: Accelerate housing supply across Sydney**

The proposal will satisfy actions such as accelerating housing supply and local housing choice and providing housing in a designated infill area, as the proposal will provide 615 to 915 residential apartments in an area prioritised for growth.

- **Direction 2.2: Accelerate urban renewal across Sydney – providing homes closer to jobs**

The site is highly accessible by public transport and the proposal will co-locate residential accommodation, jobs, services and amenities. Further, the proposal will result in the transformation of Macquarie Centre into an attractive, vibrant mixed-use town centre.

- **Direction 3.1: Revitalise existing suburbs**

The proposal will revitalise the existing site and increase and improve legible connections to public transport, Macquarie University and other surrounding sites.

5.1.2 NORTH SUBREGIONAL PLAN

Macquarie Park Corridor is located within the north subregion. The North Sub-Regional Plan is yet to be released. It is estimated that an additional 105,350 new homes are needed to meet population growth in the north subregion to 2031. There is not currently updated data available on job targets for the north subregion or Macquarie Park. However, Macquarie Park is expected to have an extra 15,000 jobs by 2031 (Source: ABS, BTS and Urbis).

Whilst the North Subregional Plan is yet to be released, priorities for the subregion are outlined in A Plan for Growing Sydney The Strategy includes specific priorities for Macquarie Park. Those applicable to the site and Stage 1 proposal include:

- *Work with council to concentrate capacity for additional mixed-use development around train stations, including retail, services and housing.*

- *Facilitate delivery of Herring Road, Macquarie Park Priority Precinct, and North Ryde Station Priority Precinct.*

- *Investigate potential future opportunities for housing in areas within walking distance of train stations.*

- *Investigate opportunities to deliver a finer-grain road network in Macquarie Park. Investigate opportunities to improve bus interchange arrangements at train stations.*

The Stage 1 concept proposal and subsequent detailed 2 DAs will introduce commercial, residential and additional retail components onto a site, which has excellent access to public transport. This will support the delivery of the vision *for Macquarie University Station (Herring Road) Priority Precinct* of being a transit-oriented mixed use precinct.

5.1.3 MACQUARIE UNIVERSITY STATION (HERRING ROAD) PRIORITY PRECINCT

The *Macquarie University Station (Herring Road) Priority Precinct* was nominated by Ryde Council and endorsed by the Department of Planning and Environment in November 2012. Identified on the basis of the precinct's accessibility to employment, education and retail, an addition to opportunities for renewal, a precinct plan was developed to revitalise the area surrounding Macquarie University Station. The precinct plan informed the rezoning of the priority precinct and amendments to planning controls which were gazetted on 2 October 2015 and incorporated into RLEP 2014. The planning controls are discussed in detail in Section 5.2 of this SEE.

As discussed, it is expected that the Priority Precinct will accommodate an additional 5,800 new dwellings by 2031.The vision for the precinct includes the following:

> *"By 2031, the Herring Road precinct will transform into a vibrant and walkable transit-oriented centre, vital to the evolution of Macquarie Park. Herring Road will increase the supply and mix of housing to ensure more people can benefit from the diversity of Macquarie Park's local job market and world-class education opportunities. Building on its existing business, retailing and educational success Herring Road will attract more people to live, study and work in the area".*

The Stage 1 DA is entirely consistent with the vision of the precinct. The Stage 1 DA will enable Macquarie Centre to contribute to increasing the supply and mix of housing within the precinct.

5.1.4 NSW STATE PLAN 'MAKING IT HAPPEN'

NSW '*Making it Happen'* is the Stage Government's plan, which in conjunction with the NSW Budget, guides policy and budget decisions for delivering community priorities. The plan contains nine key areas of focus including: transport, health, education, environment, police and justice, infrastructure, family and community services, economy and accountability.

The proposal is entirely consistent with the broad strategic aims under this plan. The site is already well served by public transport, including buses and trains. The proposal will also enhance the offering of the largest shopping centre in NSW, which will contribute to the growth of the NSW economy, in addition to investigating opportunities for community facilities on site (this is subject to future discussions with Ryde Council).

5.1.5 NSW LONG TERM TRANSPORT MASTER PLAN

The NSW Government's *Long Term Transport Master Plan 2012* (LTTMP 2012) identifies objectives which focus on improving liveability and supporting economic growth and productivity. These objectives are to be facilitated by the provision of a transport network which reduces journey times, improves connectivity, increases efficiency and provides services that support job growth in centres close to where people live. There is an emphasis on the delivery of more transit-orientated development both as part of urban renewal projects and in new developments.

The integration of the North West Rail Link (NWRL) with the Epping to Chatswood service is expected to occur in 2019. Following station works along the Epping to Chatswood line, a train will run every four minutes in both directions between Epping and Chatswood during peak hours, with these upgrades will significantly benefit future residents and workers on the site. Furthermore, as discussed at Section 3.3 of this report the design of the Stage 1 DA has taken a potential future interchange opportunity into account and is capable of being adapted as appropriate at the Stage 2 detailed DA phase. The proposal is consistent with the NSW Long Term Transport Master Plan 2012

5.1.6 NSW STATE INFRASTRUCTURE STRATEGY

The NSW State Infrastructure Strategy aims to increase the NSW economy by $50 billion and add over 100,000 jobs. The State Infrastructure Strategy focuses on the need for infill development within local and strategic centres to mitigate and manage infrastructure costs associated with greenfield residential growth. The proposal is entirely consistent with the broad strategic aims under this plan.

5.2 STATUTORY PLANNING ASSESSMENT

A summary assessment of the DA's consistency and compliance with the relevant Environmental Planning Instruments is provided in the following tables and sections further below.

5.2.1 STATE ENVIRONMENTAL PLANNING POLICIES

TABLE 12 – SUMMARY OF COMPLIANCE WITH THE RELEVANT SEPPS

POLICY	COMMENTS
SEPP 65	SEPP 65 contains nine design principles aimed to ensure a high quality of residential apartment development. In addition the Apartment Design Guidelines (ADG) that accompanies SEPP 65 provides more detailed guidelines and 'rules of thumb' that require consideration. An assessment against the nine design principles will be undertaken as part of the relevant future development applications. However, consideration has been given to the objectives and design criteria in the accompanying ADG in formulating the building envelopes for the residential and mixed use towers as follows:

POLICY	COMMENTS
	▪ The documentation provided demonstrates that the building envelopes can accommodate apartment configurations that are compliant with the minimum size, maximum depth and minimum building separation criteria. ▪ Approximately 70 - 80% of apartments across all four towers can be designed to receive a minimum of two hours solar access on June 21. ▪ Approximately 60 - 67% of apartments across all four towers below the tenth storey can be designed to be naturally cross ventilated. Apartments above this height are deemed to be naturally cross ventilated. ▪ Each residential floor plate provides a maximum of 7-9 units off each core. The Urban Design Report at **Volume 2** and the ADG compliance table at **Volume 2** address this in further detail. Compliance with SEPP 65 and the ADG will be further addressed in detail at the Stage 2 DA phase.
SEPP 55	Clause 7 of SEPP 55 specifies that a consent authority must not consent to the carrying out of any development on land unless it has considered whether land is contaminated and if the land is contaminated, it is satisfied that the land is/can be suitable for the proposed development. A Preliminary Site Assessment (Contamination) has been undertaken by Douglas Partners and is included at **Appendix M**. The Macquarie Centre site was previously semi-rural land prior to becoming a commercial allotment. A number of contamination assessments have been undertaken across the site throughout the development history of the centre. These are drawn upon in the Preliminary Site Assessment. **Previous Findings** Records indicated that pharmaceutical/cosmetic manufacturing operations have occurred on the north eastern portion of the site, including the instalment of two underground storage tanks. One of these tanks was located and identified as an underground petroleum storage system, considered to be a distillate tank, however the other tank has remained unidentified throughout a number of site assessments undertaken on the site. A Phase 2 assessment for the site was undertaken in 2011 prior to the north eastern expansion of the centre requiring significant excavation works. The assessment identified the potential for contamination arising from the previous filling of the site, use of the site for pharmaceuticals, cosmetics and computer electronics. These activities included the use of chemicals on site, including two, possibly three underground storage tanks. Filling depths were found to be variable across the site. Soil and groundwater contamination levels were determined to be generally low and the site was rendered suitable for the north eastern expansion of the centre. The assessment assumes that previous recommendation were followed prior to and during the construction and excavation works for the north eastern expansion. These recommendations included the preparation of a Remediation Action Plan (RAP) to be followed and the disposal of material in accordance with the requirement of the Protection of the Environment Operations Act 1997 (PEO Act). In accordance with the previous recommendation, a RAP for the site was prepared and the materials disposed of in accordance with the requirements of the PEO Act 1997.

POLICY	COMMENTS
	Current Investigation The current investigation details the following potential sources of contamination and contaminants: ▪ Imported fill of unknown origin: Fill material across the site likely to be shallow and for levelling purposes in building and trafficked areas. There could also be potential asbestos contamination from historical uncontrolled demolition of previous structures. ▪ Ultratune mechanical workshop: Possible oil and fuel leaks and spills, and use of degreasers containing volatile components. ▪ Dry Cleaner: Possible discharge of dry cleaning chemicals to sewer (either historical or current) and potential leaks from sewer to soil and groundwater. The Preliminary Site Investigation considers that, in general, the potential for significant or widespread contamination is low. The Preliminary Site Investigation concludes that the site can be made suitable for the proposed development subject to the following key considerations and recommendations to be carried out at the detailed design phase to mitigate potential impacts on human health during construction and future operational phases of the development: ▪ An intrusive investigation is recommended to assess possible contamination and aesthetic issues including chemical testing of the soils and groundwater targeting the potential sources of contamination, as identified in the CSM. ▪ The investigations should form part of future detailed development applications, with the investigations designed around the details of the proposed development. If the site soils and/or groundwater are contaminated, further investigation may be required to inform mitigation / remediation measures to manage the risk to the identified receptors. ▪ A review of sewer plans and locations of previous dry cleaning facilities within the shopping complex may be necessary during further detailed investigations due to the historical potential for discharge of dry cleaning chemicals to the sewer system. ▪ Hazardous materials inspection should any parts of the existing building be demolished (although it is noted that this is not part of the Stage 1 DA process) as part of the proposed development.
SEPP BASIX	SEPP (BASIX) 2004 applies to the residential development of the site. The SEPP ensures that residential apartment buildings comply with the water and energy savings targets for new developments within NSW. The residential component of the redevelopment will be required to comply with BASIX. A certificate will be prepared and submitted with the future detailed DAs.
SEPP Infrastructure	State Environmental Planning Policy (Infrastructure 2007) aims to facilitate the effective delivery of infrastructure across the State, including consultation with public authorities during the assessment process. The following matters are relevant to the proposal: ▪ The proposed development may require existing utility services to be upgraded and/or augmented to enable the future residential population to be accommodated. These future works will need to be undertaken in accordance with the provisions of the Infrastructure SEPP.

POLICY	COMMENTS
	As the future excavation at least 2m below ground may protrude within 25m (measured horizontally) of the adjacent rail corridor, future development applications on the site must receive concurrence of the chief executive officer of the rail authority for the relevant rail corridor. The Geotechnical Report at **Appendix L** provides details of the subsurface condition and future detailed DAs seeking consent for excavation adjacent to the rail corridor will provide mitigation measures and recommendations to ensure the future development on the site will not adversely impact the structural stability of surrounding properties including the adjacent rail corridor. ▪ Clause 87 relates to the impact of rail noise or vibration on adjacent residential uses. As the proposal includes residential uses, the Council must take into consideration "*Development Near Rail Corridor and Busy Roads – Interim Guidelines"*. This document and the impact of rail noise or vibration on adjacent residential uses is addressed within the Acoustic Report prepared by Acoustic Logic at **Appendix P.** ▪ The Stage 1 DA will be referred to Transport for NSW and RMS for comment in accordance with the referral requirements for development within/adjacent to rail corridors (Division 15 Railways) and traffic generating development (Schedule 3).
Development Near Rail Corridors and Busy Roads – Interim Guideline	The provisions of the interim guideline will be considered in the assessment of the potential future acoustic impacts associated with the railway line as outlined at Section 6.11 and in the Acoustic Report at **Appendix P.** Mitigation and management measures will be required so that a satisfactory level of residential amenity can be achieved through the future detailed DA stages.

5.2.2 RYDE LOCAL ENVIRONMENTAL PLAN 2014

The RLEP 2014 is the principal environmental planning instrument governing development on the site. The key provisions applicable to the subject land and the proposed development are addressed in **Table 13** below.

TABLE 13 – RYDE LOCAL ENVIRONMENTAL PLAN 2014 – KEY DEVELOPMENT CONSIDERATIONS

CONSIDERATION	CONTROL	PROPOSAL	COMPLIANCE
Land Use	B4 Mixed Use Zone	The proposed mixed use development will comprise a range of land uses, with the final mix of uses to be determined under future Stage 2 DAs. The Indicative mix of land uses are permissible and defined as, "*retail", "commercial premises", "residential flat buildings", "tourist and visitor accommodation"* (serviced apartments), "*boarding house"* (student accommodation), "*shop top housing*", "*recreation areas*", "*recreation facilities (indoor*)", *"entertainment facilities*" and "*community facilities"* (amongst others). All of these uses that are permitted with consent in the mixed use zone. In summary, the proposed mixed use development is permissible with development consent.	Yes

CONSIDERATION	CONTROL	PROPOSAL	COMPLIANCE
Objectives of the B4 Mixed Use zone	▪ To provide a mixture of compatible land uses. ▪ To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling. ▪ To ensure employment and educational activities within the Macquarie University campus are integrated with other businesses and activities.	The Stage 1 DA is consistent with the objectives as follows: ▪ The proposal will provide a genuine mixed use development ▪ All land uses are compatible, with separate entries for the residential component proposed. ▪ Public transport patronage, walking and cycling will be encouraged through the provision of housing adjacent to the Macquarie University Railway Station and improved connections though the precinct.	Yes
Height	The site is subject to varied building heights ▪ 120m at the corner of Herring Road and Waterloo Road ▪ 90m at the corner of Herring Road and Talavera Road ▪ 65m across remainder of site	The proposed maximum heights of the building envelopes proposed are as follows: ▪ Tower 1: 120m. ▪ Tower 2: 120m ▪ Tower 3: 90m ▪ Tower 4: 90m ▪ Retail podium: 16.8m – 28.5m	Yes
Floor Space	3.5:1.	2.83:1	Yes
Exceptions to Floor Space Ratio	For land shown in Macquarie Park Corridor, the consent authority may consent to development that results in a FSR greater than that shown on the FSR provided that some land has been dedicated to Council for a public purpose and the excess floor space does not exceed the equivalent of the site area provided for the portion of the land dedicated to the Council in relation to the land.	For the Stage 1 DA no exceptions are sought to the Floor Space Ratio.	Noted

CONSIDERATION	CONTROL	PROPOSAL	COMPLIANCE
Macquarie Park Corridor	The maximum number of off-street parking spaces for commercial development on the site is as follows: ▪ Majority of the site (Precinct C): 1 space per 80sqm of usable floor space ▪ South east portion of the site (Precinct A): 1 space per 46sqm of usable floor space	▪ The Stage 1 DA does not seek consent for car parking numbers. The car parking for the commercial component will be at a rate of 1 space per 160sqm. ▪ The parking provision for the commercial component will represent an appropriate balance between managing traffic impacts, encouraging public transport patronage in transit orientated development and providing a sufficient level of car parking for the site.	Yes
Heritage Conservation	The site is not classified as a heritage item nor is it within a heritage conservation area. The site is adjacent to the Macquarie University Grounds which contain ruins classified as a local heritage item.	The Macquarie University ruins contain the remnants of a sandstone farmer's cottage constructed in the 1800s. The ruins are located to the north of Mars Creek, at the northern end of the Macquarie University site. The ruins are approximately 800m north west of Macquarie Centre. Given the significant separation distance, the proposal will not impact on the heritage significance of the ruins.	Yes
Arrangements for contributions to designated State public infrastructure	Development for residential accommodation on the site must contribute to the provision of State Significant Infrastructure. Satisfactory arrangements must be certified in writing from the Secretary to the consent authority.	▪ A contribution to the provision of State Significant Infrastructure will be negotiated with the NSW Department of Planning and Environment during the assessment process of the DA.	Yes

5.2.3 RYDE DEVELOPMENT CONTROL PLAN 2014

The *Ryde Development Control Plan* (RDCP 2014) 2014 provides controls and design criteria to achieve desirable development outcomes in line with Ryde Council's vision for the Macquarie Park Corridor and the wider Ryde local government area.

Table 14 provides an overview of the assessment of the proposal against the key provisions of the RDCP 2014 and specifically where there are areas of variation to the RDCP 2014. It is noted that RDCP 2014 states that Stage 1 DAs approved by Ryde Council may guide variations to the general and specific RDCP 2014 provisions. Further assessment is provided in the technical reports accompanying this DA and the Table of Compliance prepared by Urbis at **Appendix R.**

TABLE 14 – RYDE DEVELOPMENT CONTROL PLAN 2014 – KEY DEVELOPMENT CONSIDERATIONS

CONSIDERATION	CONTROL	PROPOSAL
Retail Car Parking	Retail premises: ▪ 1 space per 25m2 GFA	Ryde Council have previously accepted a rate of 1 per 35m^2 GFA for retail activities on the site. This equates to a car parking requirement of 1,390 spaces for the additional retail GFA proposed. Whilst the Stage 1 DA does not seek consent for car parking numbers, 1,390 car spaces are proposed for the retail component, which is considered acceptable in this instance.
Residential Car Parking	The following maximum residential car parking requirements apply: ▪ 0.6 space / one bedroom dwelling ▪ 0.9 spaces / two bedroom dwelling ▪ 1.4 spaces / three bedroom dwelling ▪ 1 visitor space / 10 dwellings ▪ 1 car share space per 50 proposed parking spaces.	▪ The Stage 1 DA does not seek consent for specific car parking numbers as this will have to be determined having regard to the final mix of land uses. ▪ The car parking for the future residential component will not exceed the maximum residential car parking requirements in Ryde Council's DCP. ▪ The parking provision for the residential component (615 – 915 units) will represent an appropriate balance between managing traffic impacts, encouraging public transport patronage in transit orientated development and providing a sufficient level of car parking for the site.
Rail Station Plazas	Figure 5.1.1 Proposed Open Space Network requires 2 x Urban Plazas on the site. The following is to be provided for Station Plaza (Macquarie University Station Plaza – East): ▪ Area: Min. 0.67 ha ▪ Min. dimensions: 80 x80 m as shown in Figure 5.6.3 ▪ Install minimum 10 park benches and 10 bicycle parking spaces. Refer to Macquarie Park Public Domain Technical Manual for detail requirements ▪ Station plazas are to be privately owned public spaces and accessible at all times ▪ Provide active frontages to plazas ▪ Provide infrastructure subject to consent	The quality of the public domain is fundamental to the success of the future development. The proposal seeks approval for an Indicative Concept for a public plaza (known as Station Plaza) located at the corner of Herring Road and Waterloo Road between the train station and Macquarie Centre. It will have an area of approximately 1,500 sqm (0.15 ha). This includes some land owned by Rail Corp, which consent has been sought for. The proposed variation to the size and dimensions of Station Plaza size is considered acceptable for the following reasons: ▪ The Stage 1 DA proposes a network of interconnected public spaces and publicly accessible spaces that range in function and in size. This assists in drawing pedestrians through the site, provides an appropriate human scale and promotes activation at the edges and along the entire frontage of Herring Road. ▪ Careful consideration has been given to the hierarchy of the proposed plazas. As discussed, a character statement has been prepared for Station Plaza, Herring Road Entry and the Atrium and included in the Urban Design Report prepared by AJ+C. The character statements clearly articulate the hierarchy of publically accessible spaces on the site.

CONSIDERATION	CONTROL	PROPOSAL
	A second urban plaza is required in the centre of the site adjacent to the interchange on Herring Road. The RDCP 2014 does not provide any specific controls for this plaza.	▪ The station plaza will be an active public place of arrival that acts as a bold identifiable local destination and meeting point. It will be a landmark which contains public art and playful landscaping. ▪ The size of the plaza is similar to the plaza in front of Custom House at Circular Quay. ▪ The location and size of this high quality plaza will complement the entry plaza statement proposed on the opposite side of Herring Road at Macquarie University. ▪ In accordance with the RDCP 2014 Station Plaza will accommodate street furniture including benches and bicycling parking. These will be detailed in subsequent DAs. Active frontages are provided to the Plaza from the retail podium and the Shard building. ▪ A second plaza (Herring Road Entry) is 15.3m wide. The width of this plaza sits between the width of the Queen Victoria Building (QVB) arcade at 12.5m and Pitt Street Mall at 17.5m and is significantly greater than the existing 7.5m entry. An alternative precedent is Top Ryde that has a width of approximately 10m. ▪ Herring Road Entry will have the character of a wide pedestrian street like Pitt Street Mall, but more like an eat street. The divisions between the outdoor and indoor, natural and built environments are blurred creating opportunities for dining and entertainment. ▪ A third internal plaza (Atrium) is 48m wide and 37m deep. ▪ The atrium is characterised by a grand space with contemporary and impressive architecture. The atrium connects all levels of the building which is home to a variety of uses. Art and retail will activate the heart and soul of this space giving it a unique character. Detailed landscape and public domain plans will be provided as part of future detailed DAs.

CONSIDERATION	CONTROL	PROPOSAL
New Open Space	▪ At least 50% of new public space is to receive 3 hours direct sunlight between 9am and 3pm on June 21.	The publically accessible areas fronting Herring Road, including the Herring Road Piazza will receive a minimum of three hours solar access on June 21. Whilst Station Plaza will not receive three hours solar access, it is located in the area nominated in the RDCP 2014. As discussed throughout this SEE the environmental conditions of Station Plaza have informed the character and function of this space.
Setbacks	Section 7.3 of the RDCP 2014 prescribes the following setbacks: ▪ 0m setback to Herring Road ▪ 10m Setbacks to Waterloo Road and Talavera Road ▪ 2m setback to pedestrian pathways ▪ Underground Parking is not permitted to encroach into the front setback areas unless it can be demonstrated that the basement is designed to support mature trees	The proposal includes the following setbacks: ▪ **Herring Road:** The podium envelope is proposed to be set back from the boundary by between 4 - 10m. The towers are proposed to be setback from the boundary by 7.1m – 15.6m. ▪ **Waterloo Road:** The podium envelope is to be setback from the boundary by between 0m – 1m. ▪ **Talavera Road:** The podium and Tower 4 envelopes are to be setback form the boundary by between 4m – 5m. ▪ **Basement front setback:** The basement levels are built to the Herring Road site boundary. The proposed setback are considered appropriate for the following reasons: ▪ Larger setbacks to Herring Road are required to accommodate more generous footpaths (6- 11.4m wide). This will result in a much improved pedestrian environment along Herring Road. ▪ The zero basement setback to Herring Road is considered entirely acceptable, as street trees will still be able to be planted along Herring Road.
Landscaping and Deep soil	▪ A minimum 20% of a site must be provided as deep soil area. ▪ Deep soil areas must be at least 2 m deep. ▪ For the purpose of calculating deep soil areas, only areas with a minimum dimension of 20 m x 10 m may be included. ▪ A minimum 20% of the site area is to be provided as Landscaped Area[2].	The final landscaping and deep soil areas will be subject to future detailed DAs. The Stage1 DA concept represents a significant opportunity to increase landscaped area on the site, at Station Plaza and along Waterloo Road and Talavera Road. Furthermore communal open space servicing the residential towers will include landscaped areas on the rooftop of the retail podium. The rooftop spaces will be terraced across three separate roof forms, providing a variety of landscaped, open space areas for residents.

[2] "***Landscaped Area*** *is defined as: area on the site not occupied by any buildings, except for swimming pools or open air recreation facilities, which is landscaped by way of gardens, lawns, shrubs or trees and is available for use and enjoyment by the occupants of the building, excluding areas used for driveways, parking areas or drying yards"*.

CONSIDERATION	CONTROL	PROPOSAL
Building Bulk	Floor plates of buildings above 8 storeys is not to exceed 2,000m^2	The building envelopes for the towers have been established using the minimum standards set out in the ADG as a base to ensure that compliance can be achieved in future detailed DAs. These building envelopes are oversized (in response to comments from Ryde Council's independent UDRP) to allow for architectural detailing and articulation, as well as multiple design solutions, ensuring that a high level of design excellence can be achieved. Notwithstanding, the proposed building envelopes will be able to accommodate slender tower forms. Future residential towers will have floor plates less than 1,000m2. Tower 1 has a floor plate of 2,081sqm, which is considered to be acceptable for an A Grade commercial tower. Further the tower will not have any adverse shadow impacts and is appropriately scaled and proportioned.

6 Key Planning Considerations

This chapter contains an assessment of the environmental implications of the proposed development as described in the preceding chapters of this report.

Under Section 79C(1) of the EP&A Act, in determining a DA the consent authority must take into account a range of matters relevant to the development including the provisions of environmental planning instruments; likely impacts of the built environment; the social and economic impacts of the development; the suitability of the site; and whether the public interest would be served by the development.

This assessment includes only those matters under Section 79C(1) that are relevant to Stage 1 DA. The planning matters associated with the proposed development are listed in **Table 15** below.

TABLE 15 – PLANNER MATTERS

PLANNING ISSUES	ASSESSMENT	
	SEE	TECHNICAL STUDY
Compliance with relevant strategic and statutory plans and policies	Section 5	N/A
Built Form Scale and Design	Section 6.1	Volume 2
Streetscape and Public Domain	Section 6.2	Volume 2
Overshadowing	Section 0	Volume 2
Visual Impact	Section 6.5	Volume 2
Wind Assessment	Section 6.6	Appendix G
Traffic, Parking and Access	Section 6.7	Appendix A
Social Impacts	Section 6.8	Appendix B
Economic Impacts	Section 6.9	Appendix C
Environmental Sustainability	Section 6.10	Appendix F
Acoustic	Section 6.11	Appendix P
Geotechnical	Section 6.12	Appendix L
Preliminary Site Investigation	Section 6.13	Appendix M
Flooding and Stormwater Management	Section 6.14	Appendix E
Accessibility	Section 6.15	Appendix J
Building Code of Australia	Section 6.16	Appendix H
Utility Services	Section 2.6	Appendix O
Waste Management	Section 6.17	Appendix N
Construction Management	Section 6.18	Appendix Q
Suitability of the Site	Section 6.19	N/A
Public Interest	Section 6.20	N/A

6.1 BUILT FORM SCALE AND DESIGN

6.1.1 HEIGHT AND FSR

As demonstrated in this SEE, the proposed building envelopes for the podium and the four towers are compliant with the building height and FSR provisions of the RLEP 2014. In fact the proposal provides less FSR (equivalent to 318,850sqm of gross floor area) than is permitted under RLEP 2014.

The proposed height and massing set by this Stage 1 DA are considered to be contextually appropriate, in particular to the desired future character for the area as lively and vibrant mixed use precinct within a highly accessible location, as detailed in the *Macquarie University Station (Herring Road) Priority Precinct*. It is noted that the planning controls for the Macquarie University under RLEP 2014 permit building heights ranging from 45m, 90m and 120m and the future character of the University site is envisaged as a high density mixed use campus incorporating educational, research and residential uses.

As noted, the future detailed Stage 2 DAs will explore opportunities to how best design the architectural form within the tower envelopes.

6.1.2 BUILDING BULK

The 'maximum' permitted floor plate size under the RDCP 2014 for floors above eight storeys is not to exceed 2,000sqm, unless it can be demonstrated that slender building forms are achieved through courtyards, atria, articulation or architectural devices. The objective of this control is to minimise overshadowing, contribute to energy efficiency and provide appropriately scaled and proportioned towers.

To address the comments of Ryde Council's Independent UDRP dated 2 November 2015, the tower building envelopes for the towers are oversized to allow for architectural detailing, articulation, and multiple design solutions. This will ensure a high level of design excellence can be achieved and compliance can be achieved in future DAs.

However, the proposed floor plates are much smaller than the building envelopes. The Stage 1 DA indicates footprints of 840sqm, 840sqm and 830sqm for Towers 2, 3 and 4 respectively. These are well within the RDCP 2014 floor plate control and demonstrate that the tower envelopes proposed by the Stage 1 DA will accommodate slender tower forms that are capable of compliance with the RDCP 2014 control.

The building envelope associated with mixed use Tower 1 is intentionally greater than that of Towers 2, 3 and 4. This is to provide flexibility for residential accommodation or commercial offices, either individually or in a combination above the podium. The different land uses will result in different built forms that is, a slender tower form for a residential use and a larger floor plate for a commercial use. This is considered an appropriate approach and will contribute to the diversity of built form in the locality.

Furthermore, the Stage 1 DA indicates that with a footprint of 999sqm, a residential tower form will easily comply with the floor plate control. The indicative commercial tower floor plate of 2,081sqm is also appropriate for an A Grade Commercial tower. This will be demonstrated at the detailed design stage.

As demonstrated in the shadow diagrams the building envelopes proposed will maintain a compliant level of solar access to existing residential properties. Solar impacts to reserve and public open space is mitigated, with solar access available to the majority of Elouera Reserve from 12 noon onwards mid-winter.

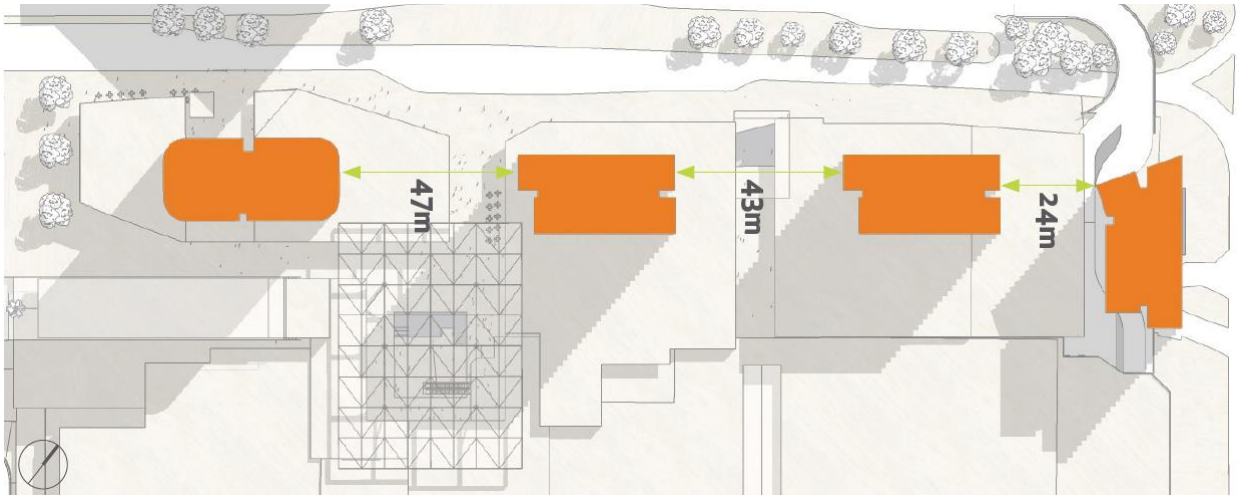
6.1.3 SETBACKS AND BUILDING SEPARATION

Whilst the RDCP 2014 requires a zero setback to the site boundaries, the setback of the podium level to Herring Road varies between 10.5m towards Talavera Road and 6.5m towards Waterloo Road. The additional setback has been provided to ensure there is sufficient space provided to provide generous footpaths adjacent to Herring Road. This will ensure a high quality public domain along Herring Road. The varied setback will also assist in providing an articulated built form, which breaks down the scale of development to a more human scale.

The towers are setback further above the podium. The UDRP expressed that if wind testing permitted, Tower T1 should be brought to the ground. To address the comments of the UDRP, the proposed envelope for Tower 1 provides a lesser (4m) podium setback to the retail podium fronting Herring Road. Wind testing has confirmed that a podium arrangement is required and this tower cannot be brought to the ground plane.

Figure 23 demonstrates the separation distances between the building envelopes proposed. The building envelopes can readily achieve compliance with the visual privacy separation design criteria stipulated in the ADG. In fact, the separation between all the proposed towers on the site (except the separation between Towers 3 and 4, which complies with the ADG) will exceed the ADG separation requirements, ensuring high amenity for future residents. Furthermore, building envelopes are generously separated from neighbouring sites, with Macquarie Centre being surrounded by Talavera Road, Herring Road and Waterloo Road.

FIGURE 23 – BUILDING SEPARATION DISTANCES



6.1.4 RESIDENTIAL AND COMMERCIAL FLOORS

Residential

The envelopes are capable of accommodating residential configurations that will achieve high levels of amenity. As detailed in the SEPP 65 Report prepared by AJ+C the depth and number of apartment per core are capable of compliance with the design guidance in the ADG. Furthermore, the orientation of the envelopes will afford units with an outlook of the city skyline to the east, Lane Cove National Park to the north and Macquarie University to the west.

Commercial

The envelope associated with Tower 1 is capable of accommodating a large flexible commercial floor area that is well suited to the modern work environment of future desired tenants. Large contiguous floors provide highly sought after flexibility, function and amenity for large tenants as they enable co-location of business units, flexible workplace layouts to meet ever changing workplace environment and accommodation of trading spaces.

6.1.5 TOWER CONFIGURATION

The UDRP recommended that the applicant explore opportunities to re-orientate and re-locate the positions of T1, T2 and T3 to provide some diversity in the built form along Herring Road. If their position and orientation could not be changed, justification should be provided as part of the Stage 1 DA.

As demonstrated in the Urban Design Report, a number of tower arrangements and configurations have been investigated. Given the proposed solar access, building separation, construction and environmental constraints, the proposed configuration is considered the optimal outcome for the site. The proposed configuration ensures that building separation requirements are achieved and solar access is maintained to Elouera Reserve.

A lesser (4m) podium setback to the retail podium fronting Herring Road for Tower 1, resulting in a varied alignment between T1 and T2 will support built form diversity. Furthermore, the envelopes associated with T2 and T3 have been increased in size to the east. This permits greater flexibility for the future design of these towers and will provide greater built form diversity. It is the intent of Macquarie Centre to provide quality amenity on the ground plane that positively impacts the retail podium and its users.

6.1.6 ACTIVE FRONTAGES

The proposal meets the intent of the site specific provisions in the RDCP 2014 in relation to the provision of active frontages to Herring Road and Waterloo Road. This RDCP 2014 also encourages the creation of a distinctive civic character around train stations.

As shown in **Figure 24**, an active frontage is proposed to Herring Road. This is achieved through the use of multiple entries, active shopfronts with individual entries and publicly accessible spaces including Station Plaza and the Herring Road Entry. Activity will also extend beyond the ground level and over multiple floors within the podium. Individual tower entries, directly accessible from the street also serve to promote activity and casual surveillance of these spaces. Collectively, these components of the Stage 1 DA will create a vibrant and lively public domain at and above the street level.

Activity and permeability will be enhanced at the intersection of Herring Road and Talavera Road through the incorporation of the porte-cochere and the Tower 4 ground level pedestrian entrance. Public domain improvements at this location (such as landscaping and footpath upgrades) will also enhance the amenity of this space for pedestrians. The response on the ground plane is a significant improvement to similar surrounding uses in Macquarie Park.

Located at the corner of Herring Road and Waterloo Road, Station Plaza will significantly enhance the site's presentation to both Waterloo Road and Herring Road and promote activation at the ground plane. Acting as both a transitory and meeting point, Station Plaza will promote activity around the station and serve as a key linkage between the station, Macquarie Centre and Macquarie University. The plaza has the potential to be framed by active retail, food and beverage uses and potentially civic uses over multiple levels.

FIGURE 24 – ACTIVE FRONTAGES TO HERRING ROAD

6.1.7 PEDESTRIAN ACTIVITY

Pedestrian surveys have been carried out previously by ARUP to understand the nature of pedestrian activity around the site. These have informed the planning of the publicly accessible spaces and guided the location of the main pedestrian entries.

The result of the survey, prepared by Arup is included at **Appendix S**. The pedestrian surveys were conducted for the AM peak (7:45am – 8:45am), the lunch peak (12:30pm – 1:30pm) and the PM peak (4:45pm – 5:45pm) and indicate:

- During the AM peak 175 people exited and 160 people entered the Macquarie University Railway Station eastern entry. This increased to 351 (existing) and 396 (entering) persons during the lunch peak. During the PM peak 601 persons exited and 143 entered the station at this location;
- A total of 1,824 people utilised the Herring Road pedestrian crossing between the Macquarie University and Macquarie Centre; and
- Whilst pedestrian counts were not undertaken at the Herring Road and Talavera Road intersection, it is evident from the Herring Road and Khartoum Road intersection that pedestrian activity along Talavera Road is relatively low.

The counts suggest that Station Plaza, the Herring Road Entry and the widened footpath of Herring Road will be well frequented by pedestrians. Pedestrian numbers around the train station are anticipated to increase with the construction of Sydney Metro, whereby train services will operate every four minutes in both directions. Accordingly, the location of the Station Plaza and the entrances proposed to the retail podium from Herring Road are considered an optimal outcome for this site.

The counts demonstrate that pedestrian activity along Talavera Road is limited. Further pedestrians cannot cross Talavera Road at the intersection directly adjacent to Tower 4. Accordingly, there is unlikely to be any significant pedestrian/vehicular conflict associated with the porte-cochere servicing Tower 4.

6.2 PUBLIC BENEFITS

The proposed development will also encompass a number of public domain improvements and benefits that would be best described as works ordinarily associated with the development project, but which still deliver a public benefit. These include:

- Widened footpaths along Herring Road;
- Creation of a new ‘Station Plaza’ which will integrate the ground plane between the station portal and the shopping centre and create an important publicly accessible space;
- Underground connection linking the station with the shopping centre; and
- Improvements to the Waterloo Road public domain further to the east of the railway station entry.

6.3 RESIDENTIAL AMENITY

The indicative designs prepared by AJ+C demonstrate potential apartment organisation and layout with the building envelope for which approval is sought. An assessment against the key design guidance provided in the ADG is included at Section 5.2.1 this SEE. This demonstrates that the building envelopes proposed as part of this Stage 1 DA are capable of achieving compliance with the unit mix and size, solar access and natural ventilation requirements of the ADG. Compliance with SEPP 65 and the ADG will be further addressed in detail at the detailed design phase.

6.4 OVERSHADOWING

A shadow analysis of the indicative design has been undertaken by AJ+C and is included with the Architectural Design Report under a separate cover (**Volume 2**).

The location and orientation of the building envelopes has been carefully considered to mitigate adverse solar impacts. Following extensive investigative work to determine the location of the tower envelopes, it is considered that the proposed envelopes achieve the optimum solar outcome.

The placement of the tower envelopes towards Herring Road ensures that the majority of the additional shadow cast will fall onto the roof of Macquarie Centre. The Centre roof area comprises plant equipment; car parking or services. Accordingly, these uses are not sensitive and would not be adversely impacted by shadow generated.

Elouera Reserve

Given the height standard that applies to the site, additional shadowing of Elouera Reserve is inevitable. Notwithstanding this, between 9am and 3pm on June 21, solar access is available to different parts of Elouera Reserve. Specifically solar access will be available to the majority of the reserve from 12 noon onwards.

Other Publicly Accessible Spaces

There are no solar impacts arising from the Stage 1 DA on the pedestrian footpaths adjacent the Herring Road frontage, given the orientation of the site. Further, the Stage 1 DA does not adversely impact solar access to the proposed Herring Road Piazza entry, given it is located to the north west of the podium and tower forms.

Overshadowing of Station Plaza is inevitable, being located towards the south of the site in the area identified in the RDCP 2014. The climatic conditions of Station Plaza have informed the character statement, with it intended to be a meeting point and a space that forms part of a pedestrian journey. The range of plazas on site provides different opportunities for publicly accessible plazas to receive sunlight at different times during the day and throughout the seasons.

Proposed Common Open Space

The communal open space areas located above the podium have been designed to ensure solar access will be available throughout the year. These areas will receive solar access from 10am onwards on June 21. Solar access to these spaces will progressively increase from 12 noon.

Surrounding Residential Development

As indicated in the shadow diagrams, the proposed envelopes will maintain a minimum of two hours of solar access to the existing residential properties located to the south, on the opposite side of Waterloo Road. The shadow generated by the tower envelopes moves progressively across the existing residential developments throughout the morning. From 1pm, it is not likely that any existing residential properties would be affected by the envelopes proposed as part of this Stage 1 DA.

6.5 VISUAL IMPACT

A view analysis has been undertaken by AJ+C (refer to **Volume 2**) to assess the potential visual impact of the Stage 1 DA massing concept from key public locations around the site. The view analysis has been based on the proposed massing for both the commercial/non-commercial option for Tower 1.

6.5.1 KEY PUBLIC VIEWS

The locations are identified in **Figure 25** and include:

- Herring Road, looking north (1);
- Elouera Reserve, looking north (2);
- The corner of Herring Road and Waterloo Road, looking north east (3);
- Herring Road, looking south east (4); and
- The corner of Herring Road and Talavera Road, looking south (5).

FIGURE 25 – LOCATION OF VIEW POINTS

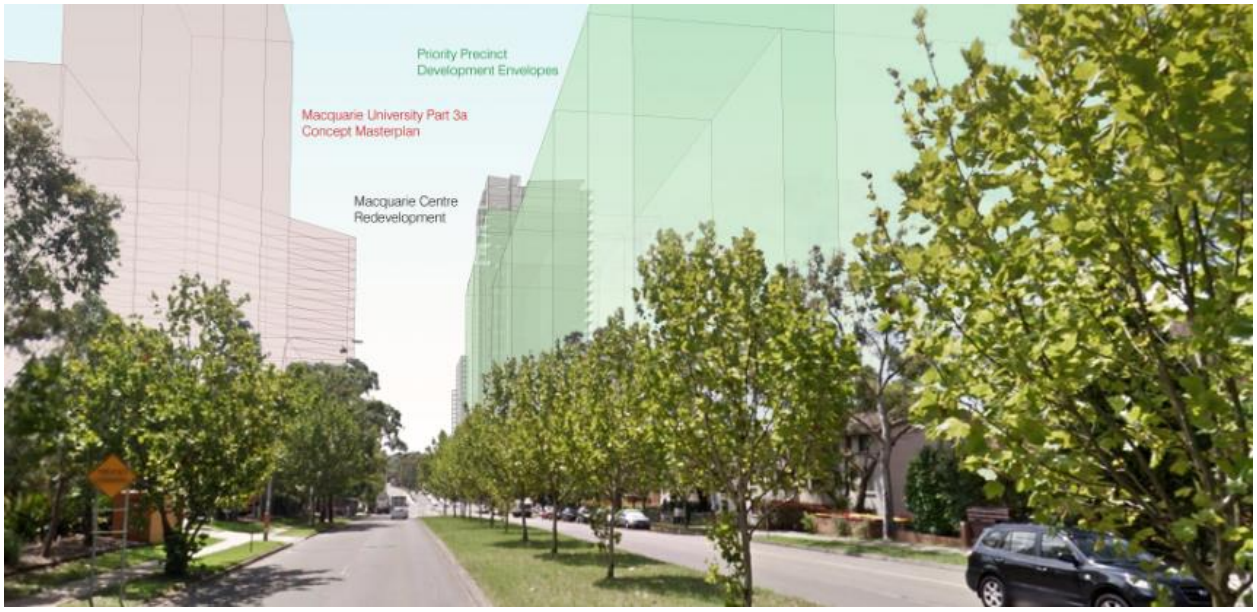
Herring Road (1)

As illustrated in **Figure 26** the proposed building envelopes will be visible but are comparable to the scale envisaged on the Macquarie University site. Furthermore, the scale is an appropriate transition from the height permitted on the residential lots fronting Herring Road, which are anticipated to be redeveloped in future with taller building forms.

FIGURE 26 – HERRING ROAD LOOKING NORTH

PICTURE 13 – VIEW FROM HERRING ROAD: **EXISTING** VIEW (SOURCE: AJ+C)

PICTURE 14 – VIEW FROM HERRING ROAD: **TOWER 1 RESIDENTIAL SCENARIO** (SOURCE: AJ+C)



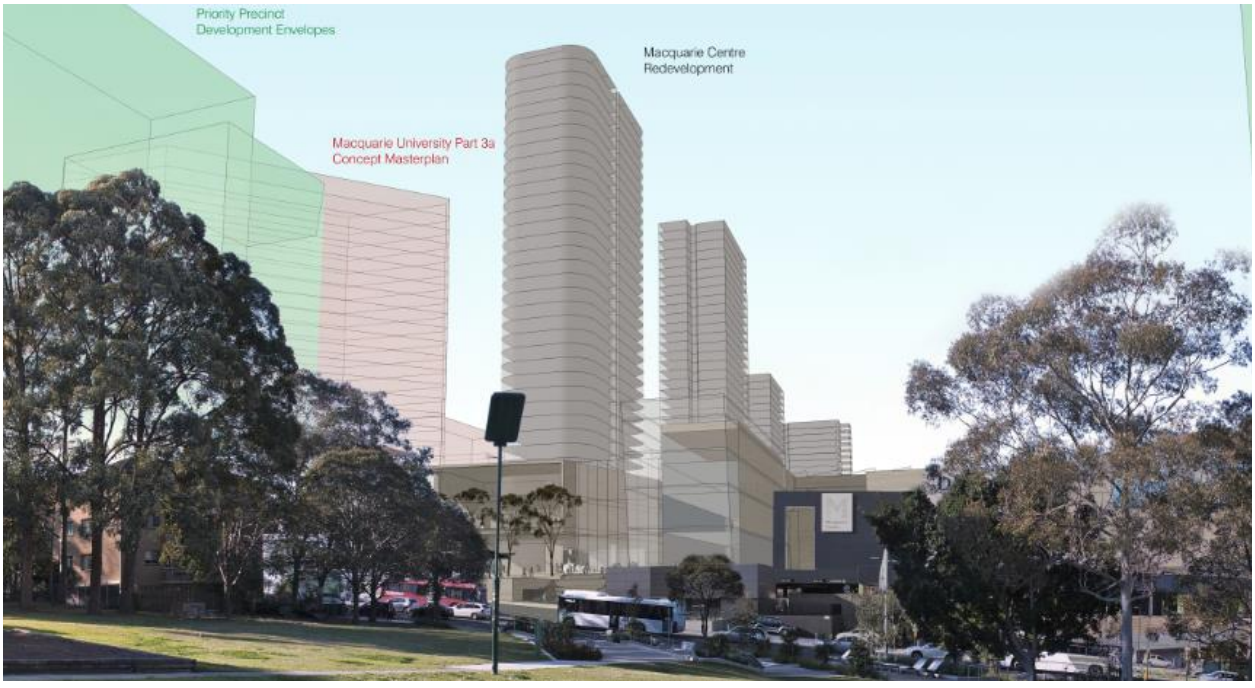
PICTURE 15 – VIEW FROM HERRING ROAD: **TOWER 1 COMMERCIAL SCENARIO** (SOURCE: AJ+C)

Elouera Reserve (2)

As illustrated in **Figure 27** the proposed building envelopes will feature prominently but again sits within the form and scale anticipated on the Macquarie University site. Both the residential and commercial Tower 1 building envelopes provide a strong urban form to the intersection of Herring Road and Waterloo Road.

FIGURE 27 – ELOUERA RESERVE LOOKING NORTH

PICTURE 16 – VIEW FROM ELOUERA RESERVE: **EXISTING** (SOURCE: AJ+C)



PICTURE 17 – VIEW FROM ELOUERA RESERVE: **TOWER 1 RESIDENTIAL SCENARIO** (SOURCE: AJ+C)

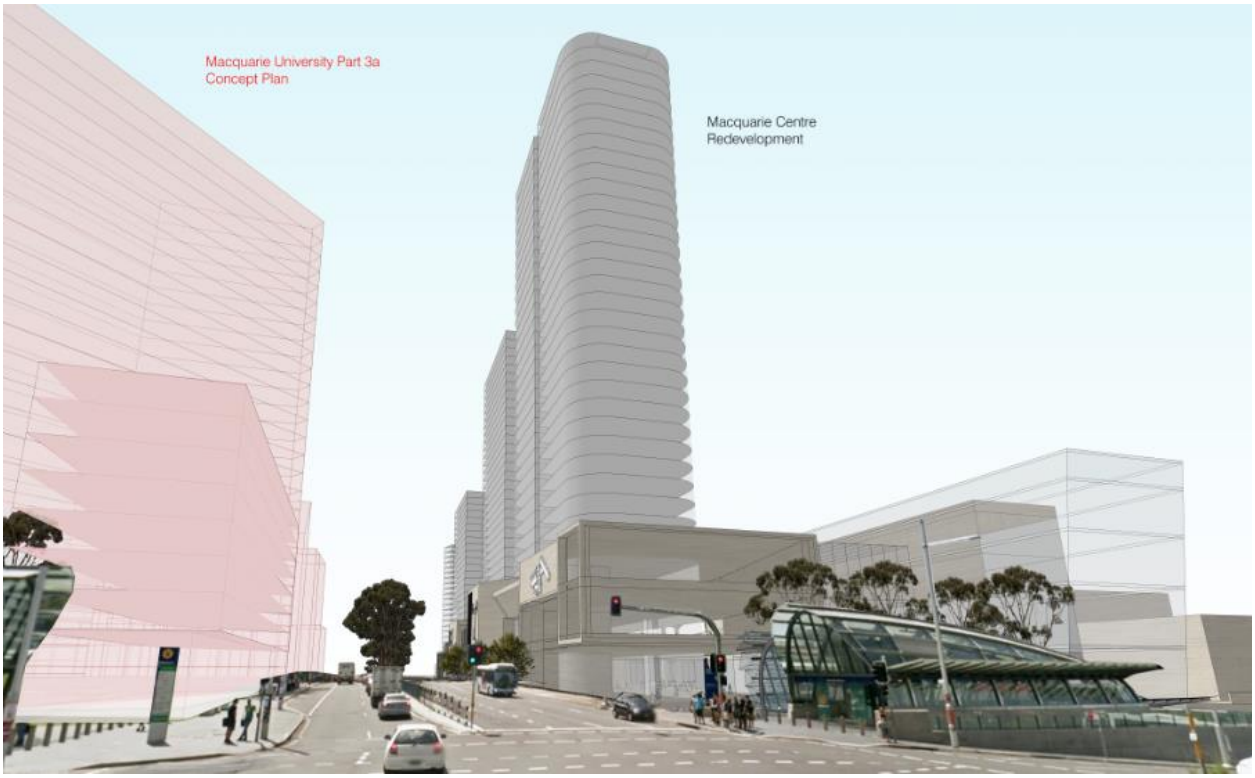
PICTURE 18 – VIEW FROM ELOUERA RESERVE: **TOWER 1 COMMERCIAL SCENARIO** VIEW (SOURCE: AJ+C)

Waterloo Road and Herring Road Intersection (3)

As indicated in **Figure 28** whilst the proposed tower concepts will feature prominently, they have been setback from podium to provide for a human scale at the lower levels. The 'Shard' building 'bookends' Macquarie Centre and provides for activation of Station Plaza and Waterloo Road. Furthermore, the alignment of the podium and tower concepts appropriately address Herring Road.

FIGURE 28 – WATERLOO ROAD AND HERRING ROAD INTERSECTION LOOKING NORTH EAST

PICTURE 19 – VIEW FROM WATERLOO ROAD AND HERRING ROAD: **EXISTING** (SOURCE: AJ+C)



PICTURE 20 – VIEW FROM WATERLOO ROAD AND HERRING ROAD: **TOWER 1 RESIDENTIAL SCENARIO** (SOURCE: AJ+C)

PICTURE 21 – VIEW FROM WATERLOO ROAD AND HERRING ROAD: **TOWER 1 COMMERCIAL SCENARIO** (SOURCE: AJ+C)

Herring Road (4)

As illustrated in **Figure 29**, when Station Plaza is viewed from the opposite of Herring Road, the podium and the Shard building actively frame the Plaza and are of a complementary scale. This is a substantial improvement on the existing view, which is of perimeter landscaping and car parking.

FIGURE 29 – HERRING ROAD LOOKING SOUTH EAST

PICTURE 22 – VIEW FROM HERRING ROAD: **EXISTING** (SOURCE: AJ+C)

PICTURE 23 – VIEW FROM HERRING ROAD: **PROPOSED** (SOURCE: AJ+C)

Herring Road and Talavera Road (5)

As indicated in **Figure 30** the proposed tower concepts significantly enhances the presentation of Macquarie Centre and announces the entrance to Macquarie Park and *Macquarie University Station (Herring Road) Priority Precinct* through a strong built form.

FIGURE 30 – CORNER OF HERRING ROAD AND TALAVERA ROAD LOOKING SOUTH

PICTURE 24 – VIEW FROM CORNER OF HERRING ROAD AND TALAVERA ROAD: **EXISTING** (SOURCE: AJ+C)

PICTURE 25 – VIEW FROM CORNER OF HERRING ROAD AND TALAVERA ROAD: **PROPOSED** (SOURCE: AJ+C)

6.5.2 PRIVATE VIEWS

There are views to the north east to the Lane Cove National Park, south east towards Sydney CBD and north west towards the Macquarie University campus and beyond. Given the scale of the surrounding development (including the existing Macquarie Centre) and the topography it is not anticipated that there would be any significant adverse view impacts from existing private properties as a result of the concept.

It is acknowledged that as the precinct develops with more intense built forms there will be greater potential for view impacts. The proposal has considered this and encourages view sharing through the separation of the tower envelopes. The separation distances range from 47m, 43m and 24m which will allow for opportunities for Sydney CBD views to be obtained across the site above the podium level. Furthermore, these separation distances are a minimum and it is likely that the actual separation between final tower forms will be greater. This will be determined during the assessment of the Stage 2 DAs.

6.6 WIND

A Wind Impact Assessment has been prepared by Cermak Peterka Petersen to qualitatively assess the proposal with regards to pedestrian wind comfort at ground level, and is included at **Appendix G**. The report provides an opinion based on a qualitative assessment and looks at the acceptability of the pedestrian level wind environment as part of this Stage 1 DA to inform the future detailed design. The report provides a description of the wind impacts resulting from different possible wind conditions.

The assessment provides the following conclusions:

- Towers 1, 3 and 4 have sufficient podium setbacks to minimise wind impacts on ground level pedestrian areas when winds reach the site from the south east. It is recommended that the atrium roof is extended over the Herring Road Entry in order to reduce potential wind impacts resulting from downwash of wind from the Tower 2 façade.

- The impact of Tower 1 design would be expected to be slight for winds, with the commercial design directing more flow under the roof and through the link from Station Plaza to the Atrium. The inclusion of a glass roof above this link is expected to improve wind conditions, however, without any mitigation measures the south-west entrance is expected to classified as a suitable pedestrian access way.

The Wind Impact Assessment concludes that without any wind mitigation measures, wind speeds for the commercial tower design are expected to be higher around and inside the south-west entrance than for the residential tower design and a roof would be required over the laneway to the Atrium space. However, by adopting these wind mitigation measures, wind conditions around the development are expected to be suitable for pedestrian walking activities.

The report concludes that a wind-tunnel test at the Stage 2 DA stage will be required to provide a quantitative wind assessment of the proposal and determine the wind mitigation measures that will be required.

6.7 TRAFFIC, TRANSPORT, PARKING AND ACCESS

A Transport Management and Access Plan (TMAP) has been prepared by Arup and is included at **Appendix A**. The assessment examines the existing traffic, parking and transport conditions, undertakes an operational traffic assessment, as well as an assessment of various aspects of the indicative concept, including the access, parking and loading arrangements. The report also provides an assessment of the public transport implications.

6.7.1 VEHICULAR SITE ACCESS

The proposed amendments to vehicular access, described in Section 4.7 of this SEE will help reduce existing conflict between pedestrians and vehicles.

6.7.2 PARKING PROVISION

A maximum of 2,175 additional car parking spaces are proposed to be accommodated within the Stage 1 DA envelopes, increasing the parking provision on site from 4,755 to 6,930 spaces.

The car parking mix will be dependent on the final uses within the towers. However, for the purpose of the assessing the concept, two options have been considered and include:

- **Option 1:** Provision of four residential towers, comprising a total of 915 units.
- **Option 2**: Provision of three residential towers (Towers 2, 3 & 4) and one commercial tower (Tower 1), comprising a total of 615 units and 10,200sqm commercial GFA.

For the purpose of estimated car parking requirements the following unit mix has been assumed.

- 50% one-bedroom units;
- 40% two-bedroom units; and
- 10% three-bedroom units.

The indicative unit mix has been determined having regard to the demographics of the area and is consistent with the advice that has been received regarding the market conditions.

A car parking assessment based on the concept scheme has been undertaken and is summarised in **Table 16** and **Table 17**.

TABLE 16 – PRELIMINARY BREAKDOWN OF PARKING REQUIREMENTS (OPTION 1)

COMPONENT	CAR PARKING REQUIREMENT	CONCEPT SCHEME	DCP RECOMMENDED MAXIMUM
Non-Residential			
Retail	1 space per 25sqm GFA	49,000sqm GFA	1,960
Residential			
One Bedroom	0.6 per dwelling	458 dwellings	275
Two Bedroom	0.9 per dwelling	366 dwellings	329
Three Bedroom	1.4 per dwelling	92 dwellings	128
Visitor	1 space per 10 dwellings	915 dwellings	91
TOTAL MAXIMUM PERMITTED			**2,783**
			2,175

TABLE 17 – PRELIMINARY BREAKDOWN OF PARKING REQUIREMENTS (OPTION 2)

COMPONENT	CAR PARKING REQUIREMENT	CONCEPT SCHEME	DCP RECOMMENDED MAXIMUM
Non-Residential			
Retail	1 space per 25sqm GFA	49,000sqm GFA	1,960
Commercial (Tower 1)	1 space per 80sqm GFA (RLEP 2014)*	48,000sqm 1 space per 160sqm GFA	594 (RLEP 2014)
Residential Indicative Mix			
One Bedroom	0.6 per dwelling	– 308 dwellings	185
Two Bedroom	0.9 per dwelling	246 dwellings	221
Three Bedroom	1.4 per dwelling	61 dwellings	86
Visitor	1 space per 10 dwellings	615 dwellings	61
TOTAL MAXIMUM PERMITTED			**3,107**
PROPOSED BY INDICATIVE PLANS			**2,175**

*It is noted that Ryde Council has resolved to prepare a Planning Proposal to amend the commercial car parking rates in Macquarie Park Corridor. The proposal would apply a commercial rate of 1 space per 100sqm of commercial GFA for the proposed commercial tower on the site.

The Stage 1 DA does seek approval for the number of car spaces on the site, however, for the purposes of traffic modelling 1,390 car spaces have been allocated to the retail component and 785 spaces to the tower components. Further detail and justification for the provision of car parking is provided at **Appendix A**. The final provision of car parking and the allocation of spaces will be the subject of future detailed DAs.

6.7.3 TRAFFIC GENERATION

The TMAP provides an assessment of the traffic that is likely to be generated by redevelopment of Macquarie Centre. The traffic generation for the residential component were based on RMS Guidelines and surveys were used for the retail and commercial components.

The results of the traffic generation are dependent on the development option, Option 1 being the four residential towers and Option 2 being the three residential towers and a commercial tower. The results indicate that Option 2 will generate slightly more traffic in the critical AM and PM commuter peaks and therefore was adopted as a 'worse case' scenario for the purposes of the traffic modelling.

The results indicate that Option 2 will result in additional 630 and 1,440 trips in the AM and PM peak respectively. The traffic distribution is discussed under Section 4.7 of the attached TMAP.

6.7.4 ROAD NETWORK IMPACTS

In consultation with RMS and Ryde Council, intersection traffic modelling has been undertaken at various key intersection surrounding and within proximity to the site. The traffic modelling considers the future land use development envisaged under the Priority Precinct and considers two scenarios, being:

- **Scenario 1:** Background traffic growth (including the Priority Precinct) without the Macquarie Centre redevelopment.

- **Scenario 2:** Background traffic growth (including the Priority Precinct) with the Macquarie Centre redevelopment proposed as part of this Stage 1 DA.

Following the results of the modelling and the intersection analysis, Arup conclude:

> *"The traffic modelling indicates a number of intersections are forecast to function above their operational capacity in the forecast year 2026. At many intersections, even without an expansion of the Macquarie Centre, intersections were found to operate at Level of Service F. Therefore upgrades are required irrespective of any future development at the Macquarie Centre.*
>
> *With the proposed development of Macquarie Centre, it is expected that average delays at these intersections would increase. It should be noted however that changes in delay as a result of the proposal are relatively minor and generally in the order of 10% or less. The exception to this is at already saturated intersections such as Epping Road / Herring Road and Lane Cove Road / Talavera Road where minor increases in traffic can result in significant increases in vehicle delays.*
>
> *Importantly, the modelling indicates that the proposal does not result in any change to intersection level of service compared with the base scenario. For the Saturday peak hour, the intersections along Herring Road were found to continue to operate satisfactorily following the completion of the proposed expansion."*

Potential improvements works have been identified at a number of intersections where modelling forecasts that these will operate above capacity in future years. At many intersections, even without an expansion of Macquarie Centre, intersections were found to operate at level of service F. Therefore upgrades are required irrespective of future development. Investigations into improvement works of intersections will continue as the project progresses in consultation with the relevant stakeholders, with the detail of the upgrade to be agreed at the future detailed design stage.

6.7.5 PUBLIC TRANSPORT

Macquarie University Railway Station

The Stage 1 DA proposal at the ground plane is structured around the principles of improving the pedestrian environment, as well as supporting the increased use of public transport.

The TMAP provides an overview of the Transport for NSW forecasts of the AM peak period train entries and exits for 2016, 2021 and 2031. It is anticipated that the number of destination customers to Macquarie University Station will grow by 180% and the number of outbound customers will increase by 75% through to 2036. Furthermore, when Sydney Metro services commence in the first half of 2019, 15 trains per an hour will run in both directions.

The Stage 1 DA accommodates this increase in arrivals and departures through the provision of Station Plaza at the ground level. The provision of the plaza in this location will significantly enhance connectivity in and around the site and provide a meeting point for station users. Furthermore, the concept identifies a potential underground pedestrian link from the retail to the train station concourse at Level 1A.

Herring Road Bus Interchange

As detailed in the TMAP to facilitate the Macquarie Centre redevelopment, five bus stops within the Herring Road Bus Interchange will be reconfigured to improve bus-rail transfer distances and customer access.

6.7.6 WALKING AND CYCLING

The Stage 1 DA concept indicates a number of improvements to the pedestrian environment, including the widening of the footpaths adjacent Herring Road and Waterloo Road.

The proposed redevelopment will include facilities for cyclists, with the quantum of bike spaces to be detailed in the subsequent DAs following the Stage 1 DA.

6.7.7 CONSTRUCTION TRAFFIC

As discussed at Section 6.17 of this SEE, a Preliminary Construction Management Plan (CMP) has been prepared by Lend Lease and forms part of this Stage 1 DA (refer **Appendix Q**). The CMP states that the Construction Manager will prepare a *Detailed Traffic Management Plan* prior to the issue of a Construction Certificate.

The CMP notes that traffic will generally be managed in the following way:

- All customer & operational vehicles will use the entry and exit points (where possible) currently located on Herring Road, Waterloo Road & Talavera Road.
- All construction vehicles accessing the site during the construction will conform to the RMS requirements – Traffic control will be supplied to ensure compliance with approved and only certified traffic controllers shall be used.
- Construction vehicles will be encouraged to use the M2 motorway to access Macquarie Park to avoid increased traffic on the local network.
- The introduction of construction zones on the immediate road network adjacent to the construction works of the existing Macquarie Centre will be necessary for materials handling. These will be temporarily located according the following stages:
  - Stage 1 - Construction Zones within Macquarie Centre road network and Talavera Road.
  - Stage 2 – Construction Zones on Herring Rd and Talavera Rd for extent of construction works adjacent. (operating hours to be confirmed). It is not envisaged that construction zones will be available on Waterloo Road adjacent to the station.
  - Stage 3 - Construction Zones on Herring Rd and Talavera Rd for extent of construction works adjacent. (operating hours to be confirmed). It is not envisaged that construction zones will be available on Waterloo Road adjacent to the station.
  - Stage 4 – Construction Zones within Macquarie Centre road network for extent of construction works adjacent. (operating hours to be confirmed).

A site specific *Detailed Traffic Management Plan* will be produced for each stage of the proposed redevelopment to ensure vehicle movements to, around and from the site do not affect traffic arterials within the vicinity of the project or pedestrian movements around it.

6.7.8 TRAVEL PLAN

As required by the RDCP 2014, a Travel Plan has been included at **Appendix A.** The Travel Plan provided recommended measures in order to achieve the desired 40:60 public/private modal split for journey to work trips.

6.8 SOCIAL IMPACTS

A Social Impact Assessment (SIA) has been undertaken by Urbis and is attached at **Appendix B**. The SIA has been undertaken to identify and analyse the key social impact associated with the redevelopment of Macquarie Centre. As detailed in the SIA, the key social benefits potentially arising from the development include:

- Development of new retailing, commercial, food and services on site. AMPC are also investigating opportunities to provide a community facility (which is likely to provide a valuable community meeting and service function) and/or bike hub. These uses are subject to future discussions with Ryde Council. The diversity of uses, in close proximity to public transport will improve and support the amenity of Macquarie Centre for existing and future residents;

- Improved street activation and pedestrian permeability and accessibility on and around the site. New public domain and plaza works will provide additional publicly accessible spaces and places for social interaction as well as support active and passive surveillance across the site and surrounding land uses;

- Additional supply of accommodation options within the precinct, in close proximity to public transport options, existing and future services and facilities;

- The proposal is anticipated to generate approximately 1,717 additional jobs and provide increased job opportunities during and after construction through retailing and commercial floor space and AMPC are investigating opportunities to provide a community facility. This is subject to future discussions with Ryde Council; and

- The proposed development aligns with the State Government's vision for the *Macquarie University Station (Herring Road) Priority Precinct*.

The key social impacts potentially arising from the development, identified in the SIA includes:

- Potential increased demand for existing public transport services, particularly with regards to bus services and capacity of the existing bus interchange;

- Potential increased private vehicle traffic which could impact existing residents, workers and students on and around the subject site. However overall the proximity of the bus and train stations is likely to minimise traffic impacts to and from the site;

- The ability of community facilities and services including schools, open space and sports and recreation facilities, to meet any increased demand associated with the increasing population; and

- Disruptions to service provision, existing access routes, existing workers, shoppers and local residents caused during construction processes.

It is considered that all likely social impacts are capable of mitigation.

6.9 ECONOMIC IMPACTS

An Economic Impact Assessment (EIA) has been undertaken by MarcoPlan Dimasi and is included at **Appendix C**. This Report provides an independent assessment of the need and demand for the proposed expansion of Macquarie Centre that will be facilitated by this Stage 1 DA.

The EIA also provides an assessment on the likely impact on regional centres including Chatswood CBD, Westfield Parramatta and Castle Towers. Sub-regional centres, including Top Ryde City, Rhodes Waterside SC, Carlingford Court and North Rocks Shopping Centre.

The key findings of the EIA are as follows:

- The total trade area retail expenditure market is estimated to grow by around 47% to 2031, from $11.02 billion to $16.21 billion, at an annual average growth rate of 2.4%;
- The worker population of Macquarie Park is expected to increase by around 700 – 800 jobs per annum, resulting in a worker population of 57,000 by 2031;
- As at 2014, Macquarie University had 38,747 student enrolments, including around 27,370 domestic students and 11,377 international students. MacroPlan Dimasi estimate that the total student enrolments at Macquarie University has potential to grow at around 2.0% per annum over the next 15 years or so;
- There is potential for the creation of some 1,717 additional jobs, in addition to employment generated during the construction stages;
- The trading impacts resulting from the proposed expansion will be less than 6% on any individual centre, with impacts on the four identified regional centres in the network ranging between 2.0 – 5.8%. Indeed, because both Westfield Parramatta and Castle Towers are both planned to expand in the future, their trading levels are likely to be significantly greater than their current trading volumes. Estimated impacts on the Chatswood CBD and Westfield Hornsby are expected to be comfortably absorbed;
- Estimated impacts on the surrounding sub-regional centres are all estimated to be less than 5%, given the expected composition of the proposed expansion, given Macquarie Centre already contains all three major supermarkets, and the different role these centres play in the retail hierarchy (i.e. localised/sub-regional catchments with strong convenience focus).

The EIA concludes that the proposed expansion of Macquarie Centre represents a relatively minor addition to the retail network, particularly in the context of some of the other proposed expansions at Castle Hill and Westfield Parramatta.

6.10 ENVIRONMENTAL SUSTAINABILITY

An Ecologically Sustainable Development (ESD) Strategy has been prepared by Cundall and is attached at **Appendix F**. The report identifies Green Star targets for the proposal and outlines the proposed strategies that will be investigated to achieve these targets.

The ESD Strategy proposes the following targets for the proposed uses and elements of the development:

Office

- A 5 Star Green Star – Design and As-Built rating for the office; and
- A 5 Star base building NABERS Office Energy rating.

Retail

- A Green Star – Retail v1 – 4 Star design equivalency rating with an aspiration to 5 stars.

Residential

- A Green Star – Multi-Unit Residential v1 – 4 Star design equivalency rating with an aspiration to 5 stars.

The strategy outlines a number of measure and design elements for consideration at the detailed design phase in order to achieve the above sustainability targets. These measures include:

- Motivating visitors, residents and workers to embrace the surrounding environment through the establishment of holistic architectural design that considers street activation, pedestrian comfort and safety;
- Minimising recourse consumption during construction and operation through measures such as the development of a comprehensive Waste and Recycling Management Plan for both construction and operation and the provision of metering for energy and water;
- Minimising greenhouse gas emissions through the use of efficient car park ventilation systems, efficient hot water and lighting systems, efficient air conditioning systems and the provision of PV systems;
- Reducing potable water consumption through the use of high performance flush toilets, rainwater capture and reticulation for non-potable uses and the reduction in cooling tower potable water consumption;
- Selection of building materials and internal fixtures that reduce environmental impact; and
- Improving indoor environmental quality for building occupants through the consideration of thermal comfort, provision of natural light and acoustic treatment measures.

6.11 ACOUSTIC IMPACTS

A Preliminary Acoustic Assessment of the proposed development has been prepared by Acoustic Logic and is attached at **Appendix P**. In preparation of the report an 'unattended' and 'attended' noise survey was undertaken by Acoustic Logic. The report addresses acoustic considerations relating to:

- The existing noise environment;
- Potential impacts to surround properties; and
- Potential impacts to the proposed future development.

The report highlights a number of key findings as summarised below:

- The existing noise environment is dominated by plant and mechanical noise originating from the plant equipment near Herring Road (behind the Macquarie Centre sign), the plant equipment above the Cinemas, the chillers and cooling towers located towards the centre of the roof and the fans located towards Talavera Road.
- Traffic noise originates from Herring Road, Talavera Road, Waterloo Road and the M2 Motorway;
- The report makes recommendation for the construction of glazing, external doors, roofs and ceilings and external walls; and
- Management measures of any road or rail noise/vibration will be required to be considered so that a satisfactory level of residential amenity can be achieved through the future detailed design phases.

The report demonstrates that future developments are capable of compliance with the requirements set out in the RDCP 2014, the NSW EPA Industrial Noise Policy and the *Protection of the Environment Operation Act Regulation.* A full assessment of compliance will be undertaken for the Stage 2 DAs, with the recommendations implemented into the detailed design.

6.12 GEOTECHNICAL

A preliminary Geotechnical Report has been prepared by Douglas Partners and is included at **Appendix L**. The Report presents the findings of a geotechnical desktop study to support the Stage 1 DA. The information contained within the report is provided to inform the preliminary design efforts and highlight any foreseen issues. The Report also presents the findings of previous borehole investigations that have been undertaken.

The results of the previous investigations on the site confirmed the regional mapping with sandstone bedrock intersected at a shallow depth. Previous investigations associated with the existing multi-storey car park on the north eastern part of the site also encountered an igneous dyke about 0.5m wide, running approximately north – south.

The Report also notes that concept drawings indicate that the Macquarie University railway station is approximately 20m below the surface of Waterloo Road and setback approximately 7-8m from the site boundary. Accordingly, given the concept indicates excavation greater than a depth of 2m and within 25m of a rail corridor, the Stage 1 DA will be referred to Rail Corp for concurrence.

Groundwater was not generally encountered during the auger drilling of previous boreholes. Whilst water has been measured in some wells at depths between about 5m and 10m, this is likely to be associated with perched seepage.

A detailed geotechnical investigation will be prepared for the detailed design guided by the recommendations set out in the preliminary Geotechnical Report. This detailed report will be submitted with the future detailed DAs. At this stage, it is understood that numerical modelling of the proposed excavation adjacent the rail station and tunnels will be required to assess the potential ground movements and to facilitate design of excavation support in this area.

6.13 CONTAMINATION

A Preliminary Site Assessment (Contamination) has been undertaken by Douglas Partners and is included at **Appendix M**. Contamination has been addressed in Section 5.2.1 of this report.

6.14 FLOODING AND STORMWATER MANAGEMENT

A Flooding and Stormwater Management Report has been prepared by Mott MacDonald and is included at **Appendix E**. This provides an overview of the existing site condition and identifies the likely proposed stormwater measures that may need to be implemented as part of the redevelopment. The findings are summarised below:

- The existing piped drainage system in the road reserve surrounding the site is generally in accordance with Ryde Council's major/minor approach to drainage of urban areas. Depending on the existing condition of the piped stormwater infrastructure, some upgrades/replacement of Ryde Council drainage will be required.

- The proposal does not impact significantly on any major flow paths, and flood risk to people and vehicles across the site and surrounds is not worsened. In the event of major flooding, flood storage is not adversely affected by the proposal.

- With the changes in previous areas associated with the provision of landscaped areas, water quality improvement devices are not needed to improve water quality of site runoff.

- The opportunity to re-use clean runoff from the roof structures on site provides better sustainability outcomes for the site. The management of water quality is also boosted with the incorporation of rainwater tanks as the clean water is separated from flows which transport pollutants.

6.15 ACCESSIBILITY

A preliminary Accessibility Report has been prepared by Morris Goding Accessibility Consulting and is included at **Appendix J**. The report presents a 'statement of commitments' that considers operational modes and user groups in relation to the proposal.

The report acknowledges that the redevelopment will be designed to comply with the requirements of the Disability Discrimination Act (DDA) Access to Premises Standards, whilst including requirements for accessible buildings and linkages considering all user groups, who include members of the public, visitors, residents and workers.

The various elements of the proposal are considered capable of achieving the following key accessibility provisions:

Public Domain and Retail Podium

- Increasing connectivity across the site through the creation of legible paths linking plaza areas.
- Accessible paths of travel from Herring Road and Waterloo Road through the new Station Plaza.
- Appropriate continuous accessible paths of travel, circulation areas, way finding signage, lighting, seating, handrails, stair, ramps, accessible services and amenities, and accessible pedestrian linkages.

Towers

- All towers will have access provided from respective street frontages.
- The developed design of the building will provide a consistent accessible environment through detailed design and planning of a new integrated accessible network of paths of travel.
- The provision of lift access will provide continuous accessible paths of travel from the ground floor foyers to all upper levels of commercial uses and / or residential apartments to car parking levels below.
- Appropriate continuous accessible paths of travel, circulation areas, way finding signage, lighting, seating, handrails, stair, ramps, accessible services and amenities, and accessible pedestrian linkages.

The report concludes that accessibility requirements pertaining to site access and common areas can be readily achieved. Morris Goding Accessibility Consulting will work with the project team as the scheme progresses to ensure appropriate outcomes are achieved in building design and external domain design. A detailed Accessibly Assessment will be undertaken at the detailed design phase and accompany the Stage 2 DAs.

6.16 BUILDING CODE OF AUSTRALIA

A preliminary Building Code of Australia (BCA) Report has been prepared by Steve Watson and Partners and is included at **Appendix B**. The report finds that the proposed scheme is capable of achieving compliance with the requirements of the BCA subject to further detail at the design development phase.

The report identifies a number of items will need to be addressed by an Accredited C10 Fire Engineer and verified by the PCA prior to the issue of a Construction Certificate. These include fire resistance levels, large isolated building requirements for open spaces and vehicular access, horizontal exits, exit travel distances, dimensions of exits, travel via fire-isolated exits, horizontal exits, swinging doors, fire hose reels, fire hydrants, fire control room, smoke exhaust, fire and smoke control systems and atrium provisions.

Furthermore, a Preliminary Fire Safety Report has been prepared by Defire and is included at **Appendix I** and concludes:

- Compliance with the BCA provisions will be achieved through a combination of meeting the 'deemed to satisfy' provisions, as well as developing alternative solutions to meet performance requirements during the ongoing design development process.

- The current fire safety provisions of the existing development are to be reviewed to ensure compliance of the entire centre.

The above BCA Report and Fire Engineering Report confirm that the Macquarie Centre development is able to satisfactorily meet the relevant provisions and standards. A detailed BCA and Fire Engineering Assessment will be undertaken at the detailed design phase and accompany the subsequent Stage 2 DAs.

6.17 WASTE MANAGEMENT

A preliminary Waste Management Report has been prepared by Foresight Environmental and is included at **Appendix N**. The Report provides the likely waste that would be generated by the various components of the redevelopment and undertakes an assessment against the capacity of the waste rooms provided in the indicative concept. The key findings of the Report include:

- Tower 1 (residential) will generate approximately 36,000L of general waste, 22,500L of paper/cardboard and 13,500L of mixed recycling per week, requiring the provision of 36 bins. The indicated waste area, adjacent the loading facilities can accommodate this requirement, in addition to providing a 50sqm bulky waste store.

- Tower 1 (commercial) will generate approximately 18,354L of general waste, 105,720L of paper/cardboard and 8,365L of mixed recycling per week, requiring the provision of 16 bins. The indicated waste area, adjacent the loading facilities can accommodate this requirement.

- Tower 2 (residential) will generate approximately 30,240L of general waste, 18,900L of paper/cardboard and 11,340L of mixed recycling per week, requiring the provision of 32 bins. The indicated waste area, adjacent the loading facilities can accommodate this requirement, in addition to providing a 50sqm bulky waste store.

- Tower 3 (residential) will generate approximately 22,200L of general waste, 13,875L of paper/cardboard and 8,325L of mixed recycling per week, requiring the provision of 25 bins. The indicated waste area, adjacent the loading facilities can accommodate this requirement, in addition to providing a 50sqm bulky waste store.

- Tower 4 (residential) will generate approximately 21,360L of general waste, 13,350L of paper/cardboard and 8,010L of mixed recycling per week, requiring the provision of 23 bins. The indicated waste area, adjacent the loading facilities can accommodate this requirement, in addition to providing a 50sqm bulky waste store.

- The retail component within the podium will generate a total of 399,162L of waste per week. The indicative plans illustrate that a general waste compactor, a paper/cardboard compactor, recycling bins, an organics unit and a soft plastics baler unit will be required.

As demonstrated in the Waste Report, the indicative concept can accommodate these requirements. A refined Waste Management Report specific to the detailed design will be submitted with the subsequent detailed DAs.

6.18 CONSTRUCTION MANAGEMENT

A preliminary Construction Management Plan (CMP) has been prepared by Lend Lease Building and is included at **Appendix Q**. The CMP outlines the preliminary measures that are likely to be undertaken to minimise disturbance and impact on the surrounding environment during the construction phase. The CMP has been prepared with regard to the management of the following:

- Staging;
- Waste generated during the construction phase;
- Stormwater and erosion;
- Noise and vibration;
- Air quality;
- Site access and traffic; and
- Community and stakeholder engagement.

For a project of this scale, the potential for disruption to surrounding areas during the construction phase needs to be carefully managed. Subsequently, AMPC and their contractor seek to work closely with the Ryde Council, neighbours, existing tenants, occupants, stakeholders and transport authorities to devise appropriate plans of management that will ensure minimal impact and disruption to the surrounding area.

Consultation will remain a key priority throughout the construction process to ensure the community and stakeholders receive regular updates and have the opportunity to provide feedback accordingly.

As discussed in Section 4.9 of the SEE, the proposed redevelopment of Macquarie Centre is anticipated to occur across four stages. Subsequently, it is intended that further detailed CMPs and works plans, for each construction phase of the project, as outlined in the Preliminary CMP, will be prepared and accompany the relevant succeeding DA.

A refined CMP specific to the detailed design will be submitted prior to the issue of a construction certificate for the detailed design. The CMP will also be refined over time to mitigate cumulative construction impacts from other developments in the area, the closure of the Station and any potential future upgrades of the bus interchange.

6.19 SUITABILITY OF THE SITE

The site is suitable for the proposed development for the following reasons:

- The site is zoned B4 Mixed Use under the RLEP 2014, which permits a broad range of uses including the uses proposed;
- The site is located within *the Macquarie University Station (Herring Road) Priority Precinct*. The Stage 1 DA is entirely consistent with the vision to transform the Herring Road precinct into a vibrant and walkable transit orientated centre, with an increased supply of housing;
- The site has excellent public transport connections, being located adjacent the Macquarie University Railway Station and Herring Road Bus Interchange. The Stage 1 DA makes efficient use of land by co-locating retail, residential, commercial and publicly accessible plazas adjacent these services; and
- The site provides excellent access to the local and regional road network, which subject to the recommendations in the Transport Management and Access Plan, will be able to cater for the anticipated additional traffic likely to be generated.

6.20 THE PUBLIC INTEREST

It is in the public interest to approve the Stage 1 DA as the redevelopment of Macquarie Centre will have a number of important economic, social, cultural, political and environmental outcomes. These are briefly listed below:

Economic

The redevelopment presents a unique opportunity to contribute economically to the Macquarie Park Corridor. The project will contribute to:

- The EIS estimates that the redevelopment of Macquarie Centre, as facilitated by Stage 1 DA will provide approximately 1,717 additional jobs. These jobs will be located within the strategically important Macquarie Park Corridor and within the defined boundary of the Priority Precinct;
- The construction phase of the project will support temporary construction related employment, and additional temporary jobs through the broader economic supply chain;
- The facilitation of approximately 49,000sqm GFA for retail and 48,000sqm GFA for commercial office floor space contributing to the economic growth and prosperity of Macquarie Park, which is featured significantly in '*A Plan for Growing Sydney'* as a major destination for employment; and
- The mix of uses on the site will support planned infrastructure for the area and the existing commercial core in Macquarie Park.

Social, Cultural and Community

The key social and community benefits that will be facilitated by the Stage 1 DA include but are not limited to:

- AMPC are investigating opportunities to provide a community facility on site that is both accessible and visible from the public domain. The community facility is subject to future discussions with Ryde Council;
- Improved street activation and pedestrian permeability in and around the site. The new hierarchy of plazas and public domain improvement works will provide additional publicly accessible spaces for social interaction;
- Provision of new retail, food and beverage, fresh food and entertainment and leisure opportunities in a more legible and pedestrian friendly podium, with excellent access to natural light and generously proportioned dimensions;
- Greater safety, permeability and activation (into the extended hours) of Macquarie Centre;
- Improved integration with Macquarie University Railway Station and Herring Road Bus Station through future underground pedestrian links to the station and a design along Herring Road that encourages the use of public transport; and
- Increase housing opportunities, including the potential for serviced apartments and/or student accommodation on the site.

Political

The key political benefits that will be associated with the Stage 1 DA include:

- Support for key State policies including A Plan for Growing Sydney and the *Macquarie University Station (Herring Road) Priority Precinct*;
- Collaboration with Ryde Council in shaping the *Macquarie University Station (Herring Road) Priority Precinct* into a vibrant mixed use transit orientate precinct;
- Investigations into providing a community facility on the site (this is subject to future discussions with Ryde Council); and
- Support for NSW Government aspirations for bus interchange improvements and NSW Government's commitment to upgrades to the rail network associated with Sydney Metro.

Environmental

- Provision of sustainability targets for future detailed design stages of the project;
- Improved accessibility and integration with public transport;
- Creation of a genuine mixed use transit orientated development, whereby public transport patronage, cycling and walking are viable alternates to private vehicles; and
- Upgrades to the public domain and increased opportunities for landscaping, including the provision of roof gardens above the podium.

7 Conclusion

The purpose of this Statement of Environmental Effects has been to:

- Present the proposed concept development for Macquarie Centre; and
- Provide a detailed assessment of relevant matters of consideration having regard to the provisions of section 79C of the *Environmental Planning & Assessment Act 1979.*

The proposed Stage 1 DA will facilitate the shaping of Macquarie Centre into a world class centre of discovery and innovation, where people shop, play, live and work. The mixed use development will contribute to the economic growth and prosperity of Macquarie Park and will act as a catalyst for the transformation of the *Macquarie University Station (Herring Road) Priority Precinct* into a vibrant, walkable transit orientated precinct.

As a result, Macquarie Centre presents a unique opportunity for a major place-making and regeneration project which will:

- Create a series of interconnected and publically accessible spaces that each offer a unique experience and sense of place;
- Provide new quality retail, food and beverage, entertainment, leisure, and a network of publically accessible spaces on site, which will improve and support the amenity of Macquarie Centre for existing and future residents;
- Introduces commercial and residential components onto the site, which will support the delivery of the vision for *Macquarie University Station (Herring Road) Priority Precinct* of being a transit-oriented mixed use precinct;
- Improves pedestrian permeability through the site to the wider surrounding precinct and Macquarie University;
- Provides much needed improved public domain and activation along Herring Road, with up new envisaged entries to Macquarie Centre;
- Accommodate streetscape improvements to the existing bus interchange;
- Improves integration with public transport, with improved connections to the Herring Road Bus Interchange and the Macquarie University Railway Station;
- Will create a night time destination for Macquarie Park, with increased dining and entertainment options; and
- Reduces pedestrian and vehicle conflict.

Having considered all the relevant matters under Section 79C of the EP&A Act, it is concluded that the Stage 1 proposal represents a sound development outcome.

Disclaimer

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

Appendix A Transport Access and Management Plan

Appendix B Social Impact Assessment

Appendix C Economic Impact Assessment

Appendix D Preliminary Public Art Strategy

Appendix E Flooding and Stormwater Management Report

Appendix F Ecologically Sustainable Development Strategy

Appendix G Wind Impact Assessment

Appendix H Preliminary Building Code of Australia Report

Appendix I Preliminary Fire Engineering Report

Appendix J Accessibility Report

Appendix K QS Report

Appendix L Preliminary Geotechnical Report

Appendix M Contamination Report

Appendix N Preliminary Waste Management Report

Appendix O Services and Infrastructure Assessment

Appendix P Preliminary Acoustic Report

Appendix Q Preliminary Construction Management Plan

Appendix R RDCP 2014 Compliance Assessment

Appendix S Pedestrian Counts

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