Environmental Assessment Report
Concept Plan

Macquarie Park Commerce Centre

396 Lane Cove Road, Macquarie Park

Submitted to
Department of Planning
On Behalf of Winten Property Group and Australand Holdings Limited

November 2010 ■ 09484

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JBA Urban Planning Consultants Pty Ltd operates under a Quality Management System. This report has been prepared and reviewed in accordance with that system. If the report is not signed below, it is a preliminary draft.

This report has been prepared by: Michael Rowe

Signature  Date 29/11/10

This report has been reviewed by: Oliver Klein

Signature  Date 29/11/10

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Statement of Validity

Prepared under Part 3A of the Environmental Planning and Assessment Act, 1979 (as amended)

Environmental Assessment prepared by	
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Qualifications	BA (Geography), MURP, MPIA
Address	Level 7, 77 Berry Street, North Sydney
In respect of	a Concept Plan Application
Concept Plan	
Applicant name	Australand Industrial No. 122 Pty Limited and Winten (No 35) Pty Limited
Applicant address	Level 10, 61 Lavender Street, Milsons Point NSW 2061
Land to be developed	396 Lane Cove Road and 1 Giffnock Avenue, Macquarie Park
Proposed development	Construction of four commercial office buildings.
Environmental Assessment	An Environmental Assessment (EA) is attached
Certificate	I certify that I have prepared the content of this Environmental Assessment and to the best of my knowledge: ▪ It is in accordance with the Environmental Planning and Assessment Act and Regulation. ▪ It is true in all material particulars and does not, by its presentation or omission of information, materially mislead.
Signature	
Name	Oliver Klein
Date	29/11/2010

Executive Summary

Purpose of this Report

This submission to the Department of Planning comprises an Environmental Assessment for a Concept Plan under Part 3A of the *Environmental Planning and Assessment Act 1979*. It relates to the future development of four commercial buildings at 396 Lane Cove Road, North Ryde.

This submission is in accordance with the Department's guidelines for Part 3A applications, and addresses the issues raised in the Director General's Requirements dated 26 May 2010.

Overview of Project

The Concept Plan represents a regionally significant development at a key, underdeveloped site within the Macquarie Park Corridor. It is the result of a long term planning and design process that will provide supply of next generation large floorplate high grade commercial floorspace which will have minimal environmental impacts. Amongst meeting a wide range of State and local planning objectives, it will also provide significant public benefit through the provision of a new publicly accessible civic plaza next to the Macquarie Park Railway Station and multiple through-site links.

The Concept Plan seeks approval for:

- demolition of the existing structures on the site;
- the building envelopes for four commercial buildings with a shared basement car park;
- up to a maximum Gross Floor Area (GFA) of 83,368m^2;
- up to a maximum height of RL127.9;
- a mix of permissible land uses;
- pedestrian and vehicle access arrangements; and
- 1,042 car parking spaces to service the tenants of the building.

The Site

The Macquarie Park Commerce Centre is located at the intersection of Lane Cove Road and Waterloo Road, Macquarie Park adjacent to the new Macquarie Park Railway Station within the City of Ryde Local Government Area. The Concept Plan site is a 16,289m^2 irregular-shaped area comprising two light industrial buildings with associated at-grade parking.

Planning Context

Ryde Local Environmental Plan 2010 is the principal Environmental Planning Instrument that applies to the site. The site is zoned B3 Commercial Core. The proposal is permissible with consent and meets the objectives of the subject zone.

Amongst other provisions, Ryde Local Environmental Plan 2010 provides height and massing controls for the site. These controls were a direct conversion of the controls contained in Ryde Local Environmental Plan 137 as part of the Standard LEP process. Separate to the conversion process, City of Ryde Council released Local Environmental Plan 2008 (Amendment 1), which proposed to increase the FSR and Height development standards around the Macquarie Park Station inline with their aspirations for the future of the Corridor consistent with State strategic planning direction.

However, due to certain issues relating to the implementation of a bonus FSR scheme Local Environmental Plan 2008 (Amendment 1) is yet to be gazetted and the height and FSR development standards remain inconsistent with Council and the State's vision for the Corridor.

Ryde Council Development Control Plan 2010 provides detailed design controls, such as setbacks, as well as providing height controls which exceed those in Ryde Local Environmental Plan 2010 consistent with Local Environmental Plan 2008 (Amendment 1).

Environmental Impacts

The environmental impacts of the Concept Plan are considered in Section 5.0. The assessment of the Concept Plan has demonstrated that the proposed development will have minimal adverse environmental effects. In terms of the bulk and scale, an assessment against Ryde Local Environmental Plan 2010 and Ryde Council Development Control Plan 2010 demonstrated that whilst the proposal does not comply with the height and massing controls in the Local Environmental Plan, the proposal is generally consistent with Ryde's Development Control Plan. Furthermore, where variations to the development standards are proposed, the variations are strongly supported by the strong merits of the project, substantial public benefit, and the absence of any adverse amenity impacts.

Other environmental impacts can be effectively managed through all stages of the development via mechanisms referred to in this report and the draft Statement of Commitments. The assessment of the proposal demonstrates that it will result in positive economic, environmental and public benefits consistent with all strategic planning objectives for the Macquarie Park Corridor and the wider Global Arc.

Conclusion

The development is considered to be in the public interest as State, regional and local planning and development objectives will be met by effectively increasing the quantum of large floorplate high-grade commercial space around the new Macquarie Park Railway Station. The development will also provide significant public benefits, namely through the provision of multiple through-site links to the Station and the new publicly accessible civic plaza. The proposed development will have minimal adverse environmental effects, all of which can be effectively managed. Therefore, given the environmental planning merits of the proposal, it is requested that the Minister approve the Concept Plan under Section 75O of the EP&A Act.

1.0 Introduction

This Concept Plan and Environmental Assessment Report (EAR) is submitted to the Minister for Planning pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This is to fulfil the Environmental Assessment Requirements issued by the Director General for the preparation of an Environmental Assessment of a Concept Plan for the redevelopment of 396 Lane Cove Road (also referred to as 32-46 Waterloo Road) and 1 Giffnock Avenue, Macquarie Park (herein referred to as the Macquarie Park Commerce Centre).

The Concept Plan addresses strategic project issues and establishes the key parameters of the development prior to more detailed design work being undertaken.

This report has been prepared by JBA Urban Planning Consultants Pty Ltd on behalf of the Winten Property Group and Australand Holdings Limited and is based on design information provided by architects, Bates Smart (see **Appendix A**), and supporting technical documents provided by the expert consultant team.

This EAR describes the site, its environs and the proposed development, and includes an assessment of the proposal in accordance with the Director-General's Environmental Assessment Requirements under Part 3A of the EP&A Act (see **Appendix B**). It should be read in conjunction with the information contained within and appended to this report.

1.1 Overview of Approval Sought

The Concept Plan seeks approval for:

- demolition of the existing structures on the site;
- the building envelopes for four commercial buildings with a shared basement car park;
- up to a maximum Gross Floor Area (GFA) of 83,368m^2;
- up to a maximum height of RL127.9;
- a mix of permissible land uses;
- pedestrian and vehicle access arrangements; and
- 1,042 car parking spaces to service the tenants of the building.

Detailed Project / Development Application(s) for demolition, construction, and detailed design of the buildings and internal layout of all facilities will be subsequently lodged should the Concept Plan be approved.

The subsequent buildings, subject of the Project / Development Application(s) will be designed in accordance with the approved Concept Plan. As Clause 75R(3) of the EPA & Act will apply to the future Project Application(s), no environmental planning instruments (other than State Environmental Planning Policies) will apply in respect to the approved project. However, should future applications be returned to Part 4 we request that the Minister direct under s.75P(2)(c1) that sub-clauses 4.3 and 4.4 of Ryde Local Environmental Plan 2010 not apply to future applications under the Concept Plan.

1.2 Approval Process

State Environmental Planning Policy (Major Development) 2005 (the Major Development SEPP) identifies development to which Part 3A of the EP&A Act applies, and for which the Minister is the consent authority.

Clause 6 of the SEPP states that development, which in the opinion of the Minister is development of a kind referred to in Schedule 1 (Classes of Development, Schedule 2 (Specified Sites) or Schedule 3 (State significant development) of the SEPP, is declared to be a project to which Part 3A applies.

Clause 13 of Schedule 1 of the Major Development SEPP identifies the following developments as being Part 3A Major Projects:

> ***13 Residential, commercial or retail projects***
>
> *(1) Development for the purpose of residential, commercial or retail projects with a capital investment of more than $100 million.*

The project's estimated Capital Investment Value is $263 million, as detailed in WT Partnership Quantity Surveyors Statement (**Appendix C**), and is well in excess of the $100 million threshold.

Therefore, in accordance with Section 75B of the EP&A Act, and Clause 6 of the Major Development SEPP, JBA Urban Planning Consultants on behalf of Winten Property Group and Australand Holdings Limited requested on the 9 December 2009 that the Minister:

- declare the Macquarie Park project to be a Major Development subject to Part 3A of the EP&A Act;
- authorise the preparation and lodgement of a Concept Plan for the site; and
- issue environmental assessment requirements for the Concept Plan.

On 5 March 2010, the Minister declared the Macquarie Park project to be a Major Development and in accordance with Section 75F of the EP&A Act, and on the 26 May 2010 the Director-General of the Department of Planning issued the requirements for the preparation of an Environmental Assessment to accompany a Concept Plan for the project.

A copy of the Director General's Environmental Assessment requirements and authorisation to lodge a Concept Plan is included in **Appendix B**.

1.3 Project Team

An expert project team has been formed to deliver the project and includes:

Proponent	Winten Property Group / Australand Holdings
Urban Planning	JBA Urban Planning Consultants
Architecture	Bates Smart
Quantity Surveyors	WT Partnership
Traffic and Transport	ARUP
Landscape Architecture	Aspect
Stormwater	Hyder
Geotechnical	Parsons Brinkerhoff
Rail Infrastructure	Parsons Brinkerhoff
Surveyor	Adam Clerke Surveyors
Contamination	HLA
Flora and Fauna	Anne Clements and Associates

2.0 Site Analysis

2.1 Site Location and Context

The Concept Plan site consists of land known as 396 Lane Cove Road (also referred to as 32-46 Waterloo Road) and 1 Giffnock Avenue, Macquarie Park. The site is located within the heart of the Macquarie Park Corridor (within the Ryde LGA) between the M2 Motorway and Epping Road. The site's locational context is shown at **Figure 1**.

The site is located adjacent to the western portal of the Macquarie Park Station in an area largely typified by a mixture of new business parks and older low density light industrial buildings. It is bounded by Waterloo Road and the Station Portal to the north, Coolinga Street to the west, and Giffnock Avenue to the south. The eastern boundary of the site partially fronts Lane Cove Road with the remainder abutting a new development occupied by Hyundai. A bird's eye view of the site is shown at **Figure 2**.

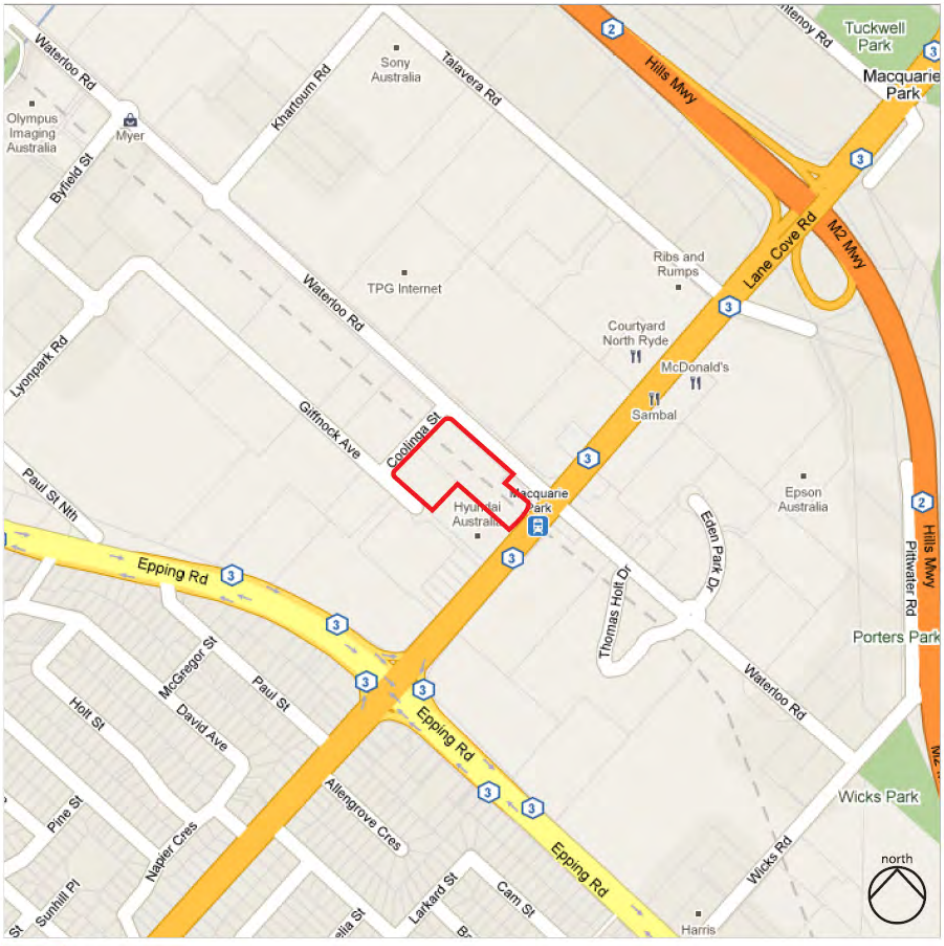

Figure 1 – Locality Plan

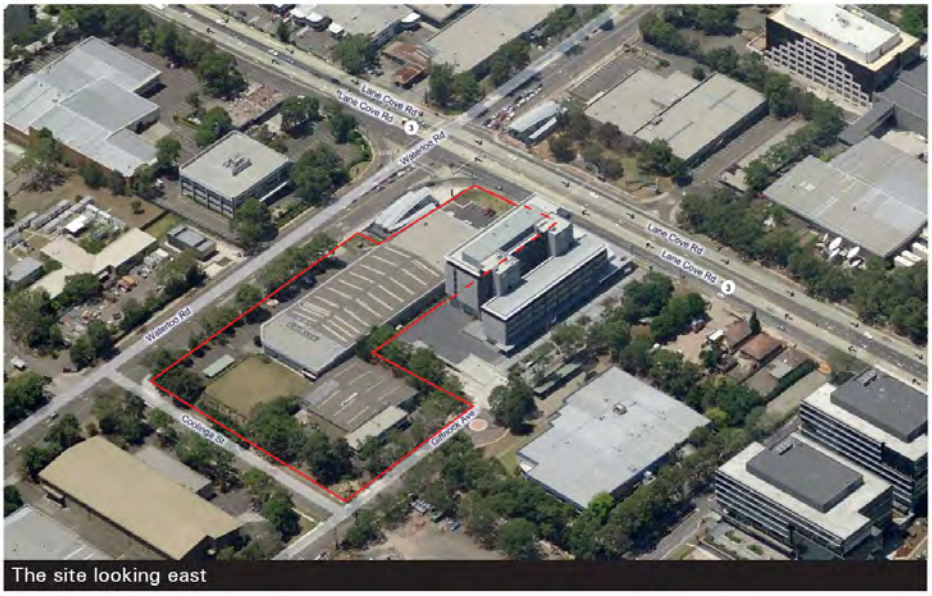

Figure 2 – Bird's eye view of the site

2.2 Site Description

Land Ownership and Legal Description

The site is legally described as Lot 5 in DP 1130105 and Lot 21 in DP 602327. The land is owned by the Australand Industrial No. 122 Pty Ltd in joint venture with Winten (No 35) Pty Ltd.

As part of the commercial agreement for the resumption of land for the railway station, the Transport Infrastructure Development Corporation (TIDC) (owner of Lot 1 in DP 1130105) assigned to the proponent the FSR and GFA rights applicable under the parent LEP. Lot 1 (the Macquarie Park Station Portal) has therefore been included within the 'site area' for the purposes of calculating FSR but does not form part of the development site. A letter confirming the above matters, dated 14 August 2009 is included at **Appendix M**.

Existing Development

The site is a 16,289m^2 irregular-shaped area comprising two light industrial buildings. The buildings consist of:

- Building 1: a 6,069m^2 2-storey rectangular-shaped light industrial building which fronts Lane Cove Road and Waterloo Road (**Figures 4-5**); and
- Building 2: a 1,949m^2 2-storey square-shaped building which fronts Giffnock Avenue and Coolinga Street (**Figures 6-7**).

An at-grade car park associated with Building 1 is located in the Waterloo Road and Coolinga Road setbacks. Vehicular access to the car park is located via left-in / left-out driveways onto/off Waterloo Road and Coolinga Street.

A second at-grade car park associated with Building 2 is located in the Giffnock Avenue and part of the Coolinga Road setbacks. Vehicular access to the car park is located via a single driveway on Coolinga Street and via two separate driveways on Giffnock Avenue. In total there are 153 existing car spaces across the site.

The grass lawn area in the northern part of the site is an approved private and currently licensed and operable helicopter landing site associated with the existing and previous uses of the site.

A survey plan showing the location and height of the existing development on the site is located **Appendix D**.

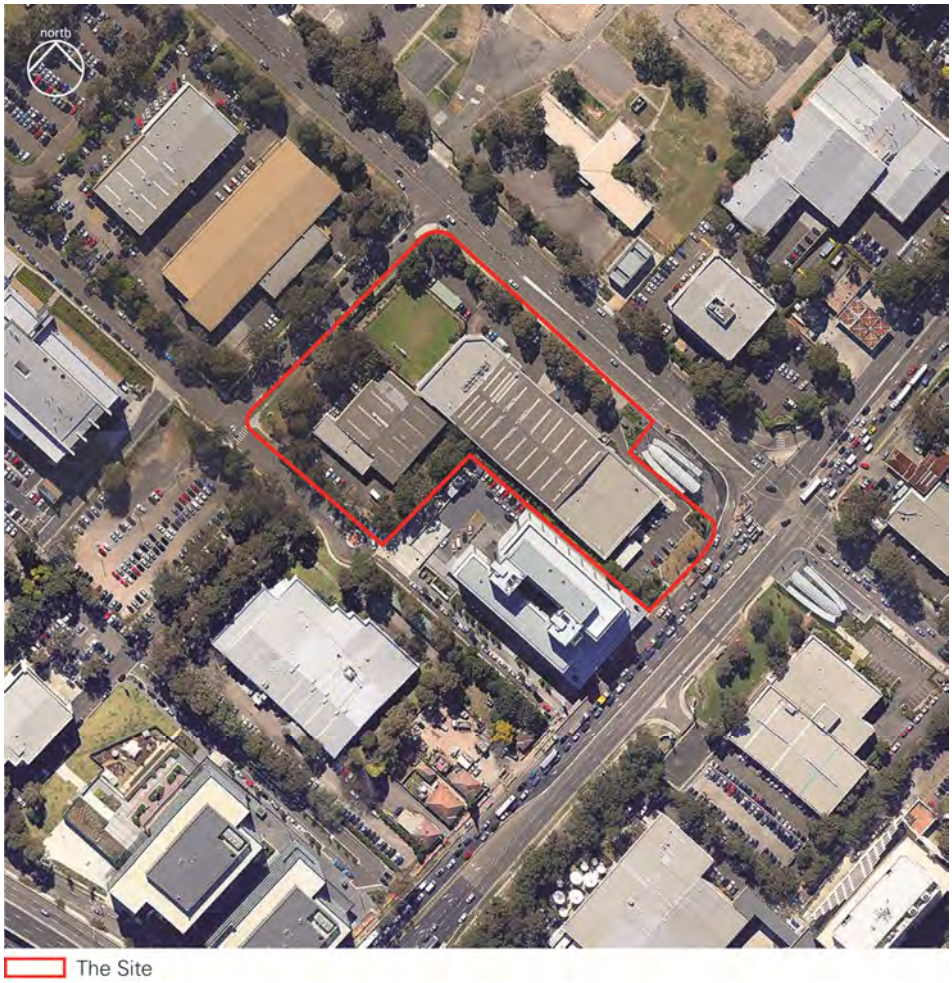

Figure 3 – Site Plan

Figure 4 – Building 1 viewed from Lane Cove Road

Figure 5 – Building 1 viewed from Waterloo Road

Figure 6 – Building 2 viewed from Coolinga Street

Figure 7 – Building 2 viewed from Giffnock Avenue

Landform and Vegetation

The site has a fall of 6m from its highest parts along the Lane Cove Road frontage to the Coolinga Street frontage. The slope becomes more dramatic in northern part of the site. A survey plan is included at **Appendix D**.

An open lawn area (approximately 1500m^2) is located at the northern end of the site. The lawn does not follow the natural gradient of the land and terminates as a landscaped retaining wall at Coolinga Street (see **Figure 8**).

80 trees of varying species, size and health were identified on the site. The trees are predominantly located along the Waterloo Road frontage (see **Figure 9**), and the northern corner of the site around Building 2 (see **Figure 10**).

A Vegetation Assessment was undertaken by Anne Clements and Associates (see **Appendix E**) to determine the ecological value of the vegetation on the site. The assessment found:

- no remnant native vegetation;
- no Commonwealth-listed species or endangered ecological communities of conservation significance (under the *Environmental Protection Biodiversity and Conservation Act 1999*) were recorded;
- no State-listed species or endangered ecological communities of conservation significance (under the *Threatened Species and Conservation Act 1995*); and
- no trees identified on the City of Ryde Significant Tree Register.

Figure 8 – View of the retaining wall with lawn area (and Helicopter Pad) above from Coolinga Street

Figure 9 – View of some of the trees along Waterloo Road

Figure 10 – View of some of the trees around Building 2

2.3 Surrounding Development

The locality is generally undergoing a transformation from low density storage, light industrial and manufacturing uses to higher density commercial and related high-tech type uses to take advantage of the new transport infrastructure, co-location opportunities, and clustering of like industries and commercial activities. Older uses have now generally relocated and / or are being priced out of the local market.

The site shares its northern frontage to Waterloo Road with the western entrance to the Macquarie Park Railway Station (see **Figure 11**). The station concourse and railway line are located underground and run parallel to Waterloo Road. To the north of Waterloo Road is 61 Waterloo Road, which is occupied by a range of light industrial buildings (**Figure 12**). To the north-east of the site is the emergency exit stairs for Macquarie Park Railway Station and 35 Waterloo Road, a 3-storey commercial building (**Figure 13**).

The southern boundary of the site partially fronts Lane Cove Road (see **Figure 14** and **15** for adjacent development) with the remainder abutting a new 8-storey development occupied by Hyundai (**Figure 16**). To the south-west of the site, located off Giffnock Avenue, is the Rexel Australia building, a 2 storey light industrial development (**Figure 17**).

To the west of the site is 8 Giffnock Avenue. The site is currently used as an at-grade car park but has an approved development application for a new commercial development. Further north is 14 Giffnock Avenue, the recently completed 7-storey Douglas Mayne Pathology headquarters (**Figure 18**).

To the north of the site is 44 Coolinga Road, a 2 storey light industrial development (**Figure 19**).

Figure 11 – View of the shrubs and low scale planting near the Macquarie Park Railway Station Portal

Figure 12 – View of 61 Waterloo Road to the north

Figure 13 – View of 35 Waterloo Road to the north east

Figure 14 – View of development to the east

Figure 15 – View of the development to the south of Waterloo Road

Figure 16 – View of the Hyundai building to the south from Giffnock Avenue

Figure 17 – View of the Rexel Australia building to the south west from Giffnock Avenue

Figure 18 – View of the Douglas Mayne Pathology building to the west

Figure 19 – View of 44 Coolinga Street to the north west

2.4 Existing Transport and Access

Surrounding Road Network

Lane Cove Road (**Figure 20**) is an arterial road which connects Macquarie Park with Epping Road and the Hills M2 Motorway and carries a significant amount of traffic.

Waterloo Road (**Figure 21**) is a collector road which runs through the middle of Macquarie Park Corridor before terminating at Macquarie University.

Giffnock Avenue (**Figure 22**) is local road which runs parallel with Waterloo Road before terminating as a cul-de-sac shortly after its intersection with Coolinga Street. A round-a-bout at the end of the cul-de-sac provides direct access to the site as well as the Rexel Australia and Hyundai sites.

Coolinga Street (**Figure 23**) is a local road that connects Waterloo Road to Giffnock Avenue. On-street parking is available on both sides of the Street.

Figure 20 – Lane Cove Road

Figure 21 – Waterloo Road

Figure 22 – Giffnock Avenue

Figure 23 – Coolinga Street

Rail

The site is directly above Macquarie Park Railway Station which is located on the Epping to Chatswood rail link. Since the integration of the station with the wider CityRail network in October 2009, eight train services every hour (four in either direction at 15 minute intervals) service the station between 5am and 11pm.

Pedestrian

Pedestrian and cycle access in the vicinity of the site is generally limited due to priority being given, in general, to vehicular travel over pedestrian/cycle travel. An example of this is the Lane Cove Road/Waterloo Road intersection where pedestrian crossings only exist on three of the four approaches with no crossing on the Lane Cove Road southern approach. Signalised crossings exist at major intersections, but are located at long distances as a result of the large block sizes in the Macquarie Park area.

The main pedestrian route to the site comes from within the Macquarie Park Railway Station Portal which is located on to the corner of Lane Cove Road and Waterloo Road.

Bicycle

There are presently few dedicated cycling facilities (i.e. on road bike lanes, shared paths) in the vicinity of the site. End of trip facilities are provided in some commercial developments, such as parking, showers and lockers. Two blocks of public bike lockers/bike rails exist on the northern side of Waterloo Road on either side of Lane Cove Road.

Bus

The Macquarie Park area is served by a number of different bus routes to destinations including the City, Chatswood, Gordon, Ryde, Epping and Parramatta. These services use Lane Cove Road, Epping Road and Talavera Road. Bus services run at high frequencies in both the morning and evening peak periods with lower frequencies at off-peak times including weekends. Only one service, 197 Mona Vale to Macquarie Park, is routed along Waterloo Road adjacent to the site with a bus stop situated on the southern side of the road between Lane Cove Road and Coolinga Street.

3.0 Concept Plan

The Concept Plan establishes the vision and the planning and development framework which will be used by the approval/consent authority to assess future development proposals within the site. It articulates the proponent's desired future development outcome for the site and sets the broad parameters for the development of the site.

3.1 Project Objectives

The following objectives have been established for the project.

Economic

- To provide high quality office space in the heart of Macquarie Park Corridor;
- To provide large commercial floor plates in the Macquarie Park Corridor commensurate with market demand and proximity to infrastructure and services;
- To deliver a significant number of new jobs in the Macquarie Park Corridor consistent with strategic planning objectives; and
- To provide complementary retail uses around the Station Portal for the proposed and surrounding commercial developments.

Community

- To provide through-site links and a new civic plaza around the Macquarie Park Station;
- To create a safer pedestrian environment within the heart of the Macquarie Park Corridor; and
- To provide service and speciality retail facilities for use by the local business community.

Environment / Sustainability

- To provide buildings which rely heavily on passive environmental design elements;
- To provide buildings which incorporate ESD features that will reduce the use of water and energy; and
- To encourage the use of public transport and other sustainable means of transport.

Urban Design

- To design a project which will have a significant urban renewal effect on the heart of the Macquarie Park Corridor;
- To provide complimentary retail uses at ground level to activate the street;
- To create a high level of pedestrian amenity and permeability at ground level with high quality public domain and landscaping treatments; and
- To create building envelopes capable of achieving design excellence with minimum impact on the adjoining land uses.

3.2 Concept Approval

The Concept Plan seeks approval for:

- demolition of the existing structures on the site;
- the building envelopes for four commercial buildings with a shared basement car park;
- up to a maximum Gross Floor Area (GFA) of 83,368m^2;
- up to a maximum height of RL127.9;
- a mix of permissible land uses;
- pedestrian and vehicle access arrangements; and
- 1,042 car parking spaces to service the tenants of the building.

A massing model and typical level plan are shown at **Figures 24** and **25**.

Figure 24 – View of the proposal looking south

Source: Bates Smart

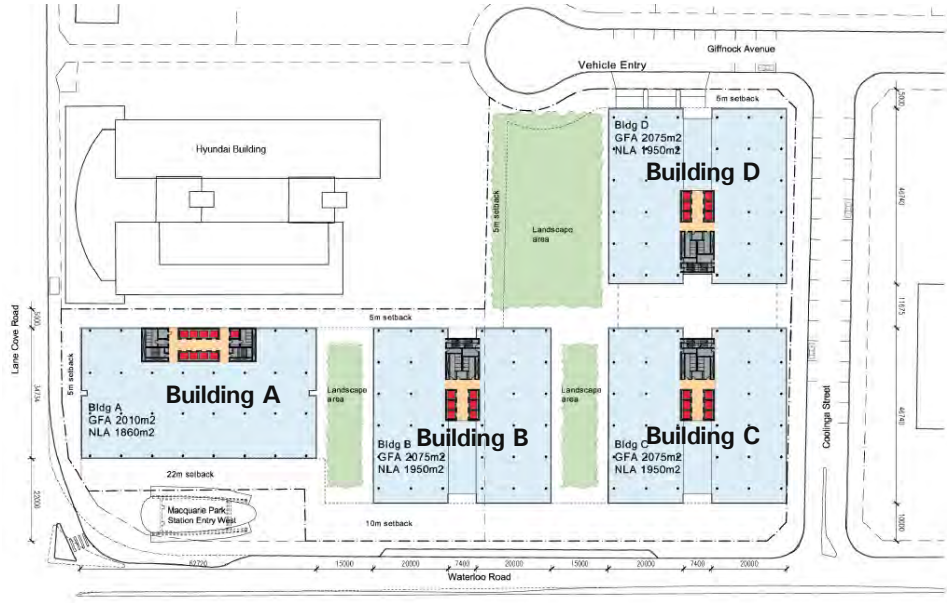

Figure 25 – Typical level plan

Source: Bates Smart

3.3 Demolition

To accommodate the proposed development the existing structures on the site, including the two light industrial buildings, will be demolished as part of a future project/development application.

3.4 Land Use and GFA

The Concept Plan seeks approval for four commercial building envelopes with an overall GFA of 83,368m^2 and a maximum FSR of 5.1:1. Retail or business premises will be located at the ground level to support activation of the street and through-site links. **Table 1** provides a summary of the proposed land uses on a building by building basis.

Table 1 – Land use and GFA

Building	Land Use	Land use GFA (m^2)	Total GFA (m^2)
Shared Basement	1042 tenant parking spaces 538 bicycle spaces 24 service/loading spaces 7 truck spaces	-	-
Building A	Retail / Business Premises Commercial	747 31,188	**33,688**
Building B	Retail / Business Premises Commercial	276 15,809	**16,085**
Building C	Retail / Business Premises Commercial	390 16,225	**16,615**
Building D	Retail / Business Premises Commercial	439 16,514	**16,980**
			83,368

3.5 Building Height and Setbacks

The proposed maximum height is RL 129.3 (Building A). An overview of the maximum building envelope heights for the four buildings is outlined in **Table 2** below. The basement level will have a maximum depth of RL 42.4. An elevation of the indicative building envelopes as shown viewed from Waterloo Road is shown at **Figure 26.**

Table 2 – Proposed Building Heights

Level	Maximum Height RL	Storeys
Building A	129.3	17
Building B	96	8
Building C	96	8
Building D	96	8

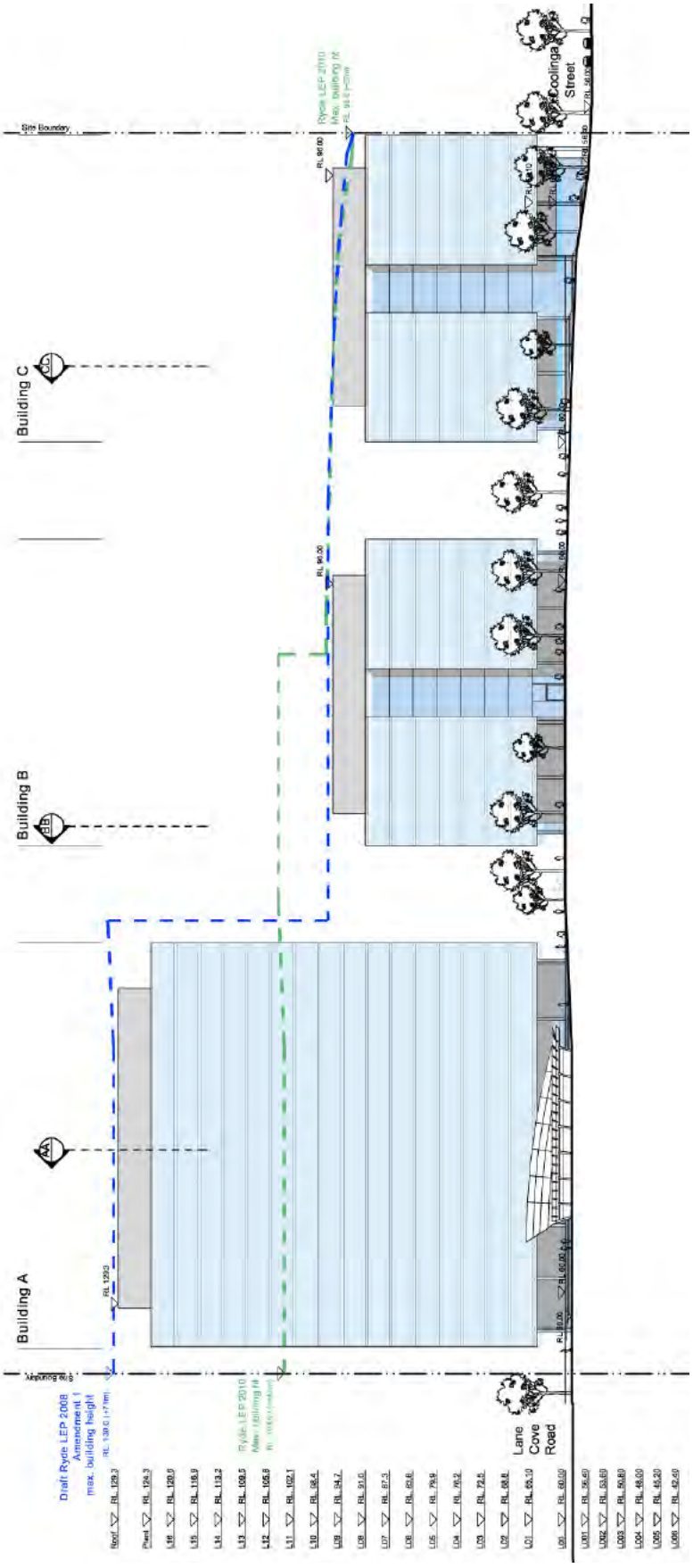

Figure 26 – Waterloo Road Elevation

Source: Bates Smart

Table 3 outlines the proposed setbacks of building envelopes to its respective boundaries (see also **Figure 25**).

Table 3 – Proposed building setbacks

Boundary	Building Setback
North Eastern	
- Waterloo Road	10m
- Station Portal	22m
South Eastern	
- Lane Cove Road	5m
- Hyundai Site	34m
South Western	
- Giffnock Avenue	5m
- Hyundai Site	5m
North Western (Coolinga Street)	0m

3.6 Pedestrian and Vehicular Access

Pedestrian access

Access will be provided throughout the development in accordance with the relevant Australian Standards. Each building will have its own separate commercial lobby. The final location of the lobbies will be developed during the detailed design stage.

Publicly accessible through-site links will be provided between the buildings. The through-site links will allow more direct access for pedestrians travelling between the Station and existing and future development to the north and west.

Vehicular Access

All vehicular access, including service vehicles to the site will be via the new basement entrance off the eastern side of Giffnock Avenue.

The Concept Plan makes provision for a indented taxi on Waterloo Road adjacent to the site.

3.7 Parking

1,042 car spaces and 538 bike spaces will be provided across six basement levels to service the proposed office and retail uses.

9 truck bays and 24 courier bays will be provided on the first basement level. The design of loading dock areas and the number of servicing bays will be finalised during the detailed design stage in accordance with Ryde DCP 2010 and the relevant Australian Standards.

The concept design provides for two entry and two exit lanes to accommodate peak flows. The car park, which is accessed from Giffnock Ave, will be subject to access control to prevent access by the general public. Access by visitors will be subject to concierge control.

No temporary / transitional car spaces are proposed.

3.8 Landscaping and Public Domain

A Landscape Statement and Landscape Plan illustrating the landscape and public domain concept are located at **Appendix F**.

The proposed landscape areas, as shown in **Figure 27**, include:

- the civic frontage and streetscape upgrades to Waterloo Road and adjacent to the train station;
- the streetscape upgrades to Lane Cove Road, Coolinga Street and Giffnock Avenue;
- the courtyard 'links' between the buildings; and
- the central courtyard to the rear of the site.

Approximately 2,443m^2 of deep soil landscaping will be provided, with a further 1,835m^2 of landscaping with a soil depth deep enough to support medium to large tree planting.

Under the Landscape Concept Plan 28 trees will be retained and 52 trees will be removed.

The final design will be the subject of the future Project/Development Application(s) for the site.

Figure 27 – Landscape Concept Plan

3.9 Helipad

The Concept Plan seeks approval for the relocation of the existing Helipad located near Coolinga Street to be relocated to the roof of Building A.

3.10 Environmental Sustainable Development

ESD principles are a key driver of the project. The Proponent is targeting a 5 Star Green Star Office Design (v3) rating and a 5 Star NABERS Office Energy Rating for the commercial building.

Some of the measures that will be considered for incorporation into the project as part of any future design include:

- natural light and ventilation;
- orientation specific sun shading to minimise heat gain;
- low temperature VAV or chilled beams;
- rainwater harvesting;
- filtration and recycling;
- solar water heating; and
- low embodied energy in materials.

3.11 Stormwater

A Stormwater Management and Water Recycling Report has been prepared for the proposed development and is located at **Appendix G**. The proposed stormwater connections to Coolinga Road and Waterloo Road will be completed in accordance with Council's specifications.

A number of stormwater quality measures are proposed to be implemented as part of the proposed development to ensure that the set treatment targets are met. These include:

- Rainwater Tanks: which are proposed to collect roof water for use in non-potable water applications such as toilet flushing, cooling tower, car washing and for outdoor irrigation use. All rainwater tanks will have a first-flush device to capture gross pollutants and sediments accumulating on the roof during storms events. Rainwater tanks also provide stormwater treatment through settling and harvesting in addition to their main purpose of providing alternative source of water for non-potable water uses.
- Bio-Retention Systems: Rain gardens are proposed to treat runoff from the majority of the site. When stormwater flow exceeds the filtration capacity of the rain gardens, a high level overflow system is provided to bypass excess runoff to the On-Site Detention system.

3.12 Infrastructure and Utilities

As part of the detailed design during the Project/Development Application stage, an investigation into the existing capacity and required infrastructure works, including water, gas, electricity and telecommunications, will be undertaken for the proposed buildings.

3.13 Indicative Project Staging

It is anticipated that the planning and construction of the four buildings will be staged. At this point in time it is envisaged that a Project/Development Application(s) will be lodged in the following order:

- Buildings C and D;
- Building B; and
- Building A.

Indicative staging diagrams are located at **Appendix A**.

3.14 Contributions

In order to provide certainty of the outcomes and costs to both the Council and the Proponent it is proposed that a Voluntary Planning Agreement (VPA) be executed between the Proponent and the Council. The VPA will be resolved as part of the detailed design of the proposal during the Project/Development Application stage.

The VPA will outline the process for, and timing of, the payment of the Section 94 Contribution. Part of the contribution may be made in the form of works in kind or dedication of land.

Winten / Australand has assessed the potential Section 94 Contribution as having the following four components:

- Monetary contribution in accordance with the Ryde Council Section 94 Contributions Plan - September 2010;
- Land dedication consistent with Council's identified "Key Public Domain";
- Provision of through-site links and public footpaths in accordance with Council's Public Domain Plan; and
- Works-in-kind for the improvement of the area around the Macquarie Park Station site portal, being works to the East Plaza and Civic Streetscape.

The monetary contribution is indicatively set out as follows:

Table 4 – Indicative Section 94 Contributions

Use	GFA	S94 rate/m2	Total contribution applicable
Proposal			
Commercial Office	81,516m2	$115.34	$9,402,055.44
Retail	1,852m2	$77.74	$143,974.48
Less existing improvements (net increase)			
Commercial Office	4,376m2	$115.34	$504,727.84
Industrial	3,652m2	$70.23	$256,479.96
TOTAL	**+75,340m2**		**$8,784,822.12**

Winten / Australand proposes the dedication of land to the City of Ryde Council for approx. 1,950m2 comprising the Macquarie Park Station - East Plaza and Civic Streetscape.

In addition to the above, the proponent will also provide pedestrian through-site links and public footpaths in accordance with Council's Public Domain Plan. This contribution will total approx. 3,560m2 of land.

Further, the proponent also proposes to offset the cost of agreed public domain works to the total contribution amount for works-in-kind for the public domain.

The scope of these works will be identified and determined at the Project / Development Application stage.

The final contribution framework will be subject to refinement and review, but these basic principles will inform the approach taken.

4.0 Director General's Environmental Assessment Requirements

On 26 May 2010, in accordance with Section 75F of the EP&A Act, the Director-General of the Department of Planning issued the requirements for the preparation of an Environmental Assessment to accompany a Concept Plan for the project. A copy of the DGRs is included in **Appendix B**.

Table 5 provides a detailed summary of the individual matters listed in the DGRs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 5 – Director General's Requirements

Requirement	Location in Environmental Assessment	
General		
Executive Summary	Page i	
Statement of Validity	Page ii	
Quantity Surveyor's Certificate	Appendix C	
Site Analysis	Section 2.0	
Description of the Proposed Development	Section 3.0	
Assessment of the Key Issues	Section 5.0	
Draft Statement of Commitments	Section 6.0	
Conclusion and Justification	Section 7.0	
Key Issues	**Report**	**Technical Study**
Relevant EPIs policies and guidelines to be addressed	Section 5.1	N/A
Land Uses	Section 5.2	-
Built Form / Urban Design / Public Domain ▪ Height, bulk and scale ▪ Impact on Macquarie Park Station ▪ Street frontages and activation ▪ Comparative Height Study ▪ View analysis ▪ Consideration of alternative design options	Section 5.3 Section 5.3.1 Section 5.4 Section 5.3.2 Section 5.3.1 Section 5.3.1 Section 5.3.3	Appendix A
Environmental Amenity	Section 5.4	-
Transport Impacts and Car Parking	Section 5.5	Appendix H
Staging	Section 3.13	Appendix A
Ecologically Sustainable Development	Section 3.10	-
Contributions	Section 3.14	-
Consultation	Section 5.12	-
Drainage / Stormwater / Groundwater Management	Section 5.7 & 5.9	Appendix G, J, K & L
Statement of Commitments	Section 6.0	-

Requirement	Location in Environmental Assessment
Plans and Documents	
Existing Site Survey Plan	Appendix D
Site Analysis Plan	Appendix A
A Locality/Context Plan	Appendix A
Architectural Drawings	Appendix A
Shadow Diagrams	Appendix A
Visual and View Analysis	Appendix A
Landscape / Public Domain Concept Plan	Appendix F
Digital Massing Model	Appendix A
Stormwater / Drainage / Groundwater Management Concept Plan	Appendix G & K
Geotechnical Report	Appendix K
Integrated Water Management Plan and Assessment of Infrastructure	Appendix G

5.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the Concept Plan proposal. It addresses the matters for consideration set out in the DGRs (see Section 4.0).

The draft Statement of Commitments complements the findings of this section (see Section 6.0).

5.1 Consistency with Relevant Strategic and Statutory Plans and Policies

The DGRs require the following strategies, legislation, and planning instruments, which are relevant to the proposed development, to be addressed:

- NSW State Plan;
- Metropolitan Transport Plan 2010;
- Draft Inner North Subregional Strategy;
- Ryde Bicycle Strategy and Masterplan 2007;
- Macquarie Park Pedestrian Movement Study;
- State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55);
- State Environmental Planning Policy (BASIX) 2004;
- State Environmental Planning Policy (Infrastructure) 2007;
- Ryde Planning Scheme Ordinance 1979 (RPSO);
- Ryde Local Environmental Plan 137 – Macquarie Park (LEP 137); and
- Ryde Development Control Plan 2006 (DCP 2006).

After the time the DGRs were issued in May 2010, RPSO, LEP 137 and DCP 2006 were superseded by Ryde Local Environmental Plan 2010 (LEP 2010) and Ryde Development Control Plan 2010 (DCP 2010). Consequently, the EAR has been prepared to address the current planning instrument and development control plan which apply to the site.

The Concept Plan's consistency with the relevant strategic and statutory plans and policies is located in **Table 6** below. Variations to, and non-compliance with, the key standards and guidelines highlighted in the table are discussed in detail in the following sections of this environmental assessment.

Table 6 – Summary of consistency with key strategic and statutory plans and policies

Instrument/Strategy	Comments
Strategic Plans	
NSW State Plan	The NSW State Plan 2010 is a long-term plan to deliver services in NSW and sets clear priorities to guide Government decision-making and resource allocation. The 2010 State Plan sets out ten priorities including a new priority to speed up planning decisions to support business investment in NSW and a new approach to integrated transport and land use planning and delivery. The State Plan also aims to focus growth around existing transport hubs.

Instrument/Strategy	Comments
	The proposed Concept Plan is consistent with the following priorities: ▪ Better Transport and More Liveable Cities – By providing a suitable quantum and quality of commercial floor space next to the Macquarie Park Railway Station the Concept Plan will seek to increase the share of peak hour public transport journeys. ▪ Supporting Business and Jobs – By providing a high quality office development in the Macquarie Park Strategy Centre the Concept Plan will increase business investment in NSW.
Draft Inner North Subregional Strategy	This Concept Plan is consistent with the Strategy in that it will: ▪ create approximately 2,138 jobs which will contribute to the Subregion's employment target of 60,000 additional jobs and the Macquarie Park Corridor target of 23,100 additional jobs; and ▪ strengthen Macquarie Park's role as a "Strategic Centre" by providing increased economic activity and employment which will generate metropolitan-wide benefits.
Metropolitan Transport Plan	The NSW Metropolitan Transport Plan is a strategy to effectively link Sydney's land use planning with its transport network. The proposed Concept Plan is consistent with the Transport Plan vision as it locates (a higher level of) employment near existing (and at present underutilised) transport infrastructure.
State Planning Legislation	
EP&A Act	The following objects of the EP&A Act are relevant to the proposal: *(ii) the promotion and co-ordination of the orderly and economic use and development of land,* *(iv) the provision of land for public purposes, and* *(vii) ecologically sustainable development.* The proposed development is consistent with the objects of the EP&A Act as it will: ▪ promote the orderly and economic use of land by locating a commercial development on an underutilised site near regional transport infrastructure; ▪ provide a new civic plaza and multiple through-site links for public purposes; and ▪ target a high level of ESD including a 5 Star Green Star office rating and 5 Star NABERS Energy rating.
SEPP 55	The Phase I & II Environmental Site Assessment prepared for the site (see **Appendix J**) demonstrates the site is suitable for the proposed development.
SEPP (BASIX)	SEPP (BASIX) only applies to residential development and is therefore not relevant to the proposed development.
SEPP (Infrastructure)	As the development involves the penetration of ground to a depth of at least 2m below ground level (existing) on land within 25m (measured horizontally) of the ground directly above an underground rail corridor the development will be referred to RailCorp under clause 86 for concurrence. The Proponent and expert consultant team also met with

Instrument/Strategy	Comments	
	RailCorp and have incorporated advice received into the Concept Plan design. A preliminary assessment of the Concept Plan's impact on the rail corridor is located at Section 5.6.2. The project is a commercial premises with an area greater than 2,500m^2 and will therefore be referred to the RTA under clause 104 of the SEPP.	
Local Planning Instruments and Plans		
LEP 2010	Clause 2.2 – Zone B3 Commercial Core	The proposed 'office premises', 'business premises' and 'retail premises' are consistent with the B3 Commercial Core land use zone objectives and are permissible with consent.
	Clause 4.3 Height of Buildings – Maximum height 30m - 44.5m	The Concept Plan proposes a maximum height of 69.3m (RL 129.3) and does not comply with clause 4.3. An assessment of the proposal's non-compliance is located at Section 5.3.1.
	Clause 4.4 Floor Space Ratio – Maximum FSR 2:1 – 3:1	The concept plan proposes a maximum FSR of 5.1:1 over the site, which contains multiple FSRs (see **Table 7**) and therefore does not comply with clause 4.4. An assessment of the proposal's bulk and massing is located at Section 5.3.1.
	Clause 4.5E(1) and (2) – Off-street parking controls – 1 car space per 80m^2 GFA	The concept plan proposes 1,042 car spaces and therefore complies with clause 4.5E (1) and (2).
	Clause 4.5E(6) – Retail activities in Zone B3 Commercial Core – Maximum 2,000m^2 of Retail	The proposed development contains a total of 1,852m^2 of ground floor retail floorspace to support the activation of the area around the station as envisaged in the DCP. The proposal therefore complies with clause 4.5E(6).
Macquarie Park Development Control Plan 2010	4.2.2 Public Domain	See Section 5.3.2
	4.2.3 Site and Building Design	See Section 5.3.1
	4.2.4 Public Domain Interface	See Section 5.3.2
	6.1.1 Height Controls	See Section 5.3.1
	6.1.2 FSR Controls	See Section 5.3.1
	6.1.4 Street Setbacks and Build-to Lines	See Section 5.3.1
	6.1.6 Building Separation	See Section 5.3.1
	6.1.7 Building Bulk	See Section 5.3.1
	6.1.8 Site Coverage and Deep Soil Areas	See Section 5.3.2
	6.2.1 Landscaping and Communal Courtyards	See Section 5.3.2
	6.2.2 Pedestrian Through Site Links	See Section 5.3.2

Instrument/Strategy	Comments
Ryde Bicycle Strategy and Masterplan 2007	The Ryde Bicycle Strategy and Masterplan proposes off-road regional shared paths on both Waterloo Road and Lane Cove Road. The development provides the potential for the Waterloo Road regional bike route to be constructed adjacent or within the site.
Macquarie Park Pedestrian Movement Study	The Study combines pedestrian modelling with spatial analysis and urban design. The results of the study were then fed into the Structure Plan within Ryde DCP. The Concept Plan has been designed in accordance with the Structure Plan in the DCP (see Section 5.3.2).

Whilst the following assessment has considered the proposal's consistency with the development standards contained within LEP 2010, it should be noted that under clause 75R(3) of the EP&A Act, environmental planning instruments, such as LEP 2010, do not apply to Concept Plans. In deciding whether or not to give approval for the Concept Plan, the Minister may (but is not required to) take into account the provisions of any environmental planning instrument that would not (because of section 75R) apply to the project.

5.2 Land Uses

The DGRs request that the proponent provide a justification for the additional commercial floor space being sought, including a rationale for allowing bonus GFA in accordance with Council's controls, and to demonstrate that additional commercial GFA is appropriate having regard to metropolitan and regional planning objectives.

Rationale for Bonus GFA

Whilst the proposal does not seek to formally utilise Council's unendorsed system for bonus GFA, the proponent has reviewed the criteria set out in Council's DCP to demonstrate that the provision of the bonus GFA is in accordance with Council's policy.

Section 5.3.7 of Council's DCP states that Council may consider granting development consent to a development where the building height and the floor space ratio are in excess of the controls if:

i. The development provides a community benefit by way of one or more of the following mechanisms: works in kind, monetary contribution, developer agreement, voluntary planning agreement or other form acceptable to Council.

The proposed development will provide the following works-in-kind consistent with Council's public domain plan:

- the public plaza along Waterloo Road;
- multiple through-site links;
- active frontages along Waterloo Road and Coolinga Street; and
- upgrade /completion of the public domain around the Station portal.

The proposed works will have significant community benefits, in that they will:

- greatly enhance pedestrian amenity around the Station;
- increase connectivity and access to and from the Station which will encourage public transport usage and reduce car dependency;
- provide activity at ground level, thereby increasing the vitality of the centre and public safety; and
- raise the corporate profile of the Macquarie Park Corridor which will attract further commercial investment and generate employment.

In addition to the above community benefits as a result of the public domain works, the proposal will also have the following benefits in that it will:

- provide high grade commercial buildings with large floor-plates in the heart of the Macquarie Park Corridor;
- provide a landmark development which will be the catalyst for further development around the Station;
- amalgamate and redevelop two underdeveloped sites next to a new railway station; and
- provide employment next to the Macquarie Park Railway Station and support the long-term viability of the Epping to Chatswood Rail Link.

In light of the proposed community benefits, the additional GFA being sought on the site is considered to be consistent with Council's intention for bonus FSR.

The appropriateness of the quantum of GFA

The proposed quantum of commercial GFA is appropriate on the site in regards to metropolitan and regional planning objectives as it will provide approximately 2,138 jobs within a Strategic Centre at a site well supported by transport infrastructure.

Macquarie Park is nominated as a Specialised Centre under the State Government's Metropolitan Strategy and is the northern anchor of the Global Economic Corridor (Global Arc). By 2031 an increase of over 23,100 jobs is expected within Macquarie Park. Under current State Government targets the Macquarie Park Corridor is expected to provide 5% of all job growth in Metropolitan Sydney and 15.4% of job growth in the Global Economic Corridor.

The proposed GFA equates to about 9% of the target for new floorspace and 9% of the target for new jobs in Macquarie Park (note: the strategy is based on 1 job per 39m^2 GFA). The proposed GFA will therefore be a significant contribution and catalyst to achieve the target growth envisaged in the Metropolitan Strategy.

Whilst the proposed GFA will represent a significant portion of the envisaged growth in the Centre, the site's location next to Macquarie Park railway station is considered to be the best possible location for such growth to occur, particularly early in the target timeframe. This sentiment is entirely consistent with both the NSW Transport Plan and Metropolitan Strategy, which seek to locate employment next to transport infrastructure. In particular, the proposed GFA will achieve Metropolitan Strategy's 'Centres and Corridors Strategy':

- B2 Increase Densities in Centres Whilst Improving Liveability
- B3 Cluster Business and Knowledge – Based Activities in Strategic Centres
- B4 Concentrate Activities near Public Transport
- B5 Protect and Strengthen The Primary Role of Economic Corridors

The proposal will therefore contribute to encouraging a high public transport modal share by rail. The provision of the GFA will also be critical in ensuring the ongoing viability of the Epping to Chatswood Rail line which was the result of significant recent State government investment.

Furthermore, the proposed GFA is consistent with clause 6.6 of Ryde LEP which sets out the objectives for the Macquarie Park Corridor, notably:

(b) to implement the State Government's strategic objectives of integrating land use and transport, reducing car dependency and creating opportunities for employment in areas supported by public transport,

and

(d) to ensure that the corridor is characterised by a high-quality, well-designed and safe environment that reflects the natural setting, with three accessible and vibrant railway station areas providing focal points,

In light of the project's consistency with State and local planning strategies demonstrated above, the proposed GFA is considered appropriate on the site.

5.3 Built Form / Urban Design / Public Domain

The proposed built form and urban design is the result of four years of ongoing discussions between the proponent and Council, including a competitive design competition, regarding the best built form and urban design outcome on the site. The development has been informed by comprehensive site and contextual analysis, including a competitive design competition, and will provide a building form and architectural response appropriate to its location within the Macquarie Park Corridor, by proposing the best urban design and environmental outcome for the site.

5.3.1 Height, Bulk and Scale

The height, bulk and scale of the proposed building envelope has been assessed in terms of the development standards set out in LEP 2010 and development controls in DCP 2010.

Consistency with the built form provisions of Ryde LEP 2010

Clause 4.3 of LEP 2010 sets a range of maximum building heights and FSRs (see **Figures 28** and **29**).

Figure 28 – Extract from the LEP 2010 Height of Buildings Map

Source: Ryde Council

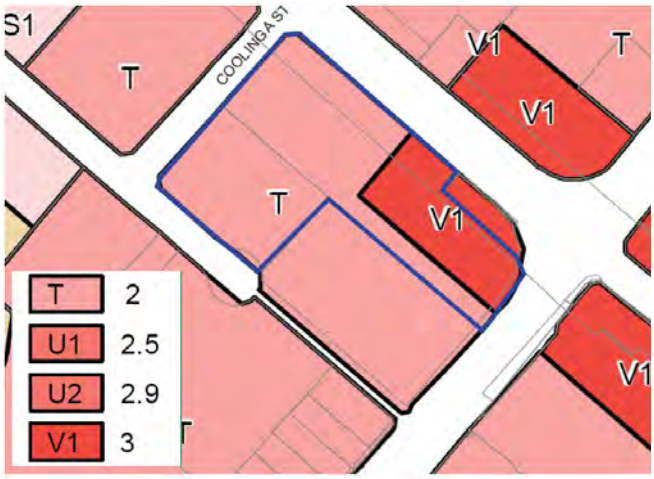

Figure 29 - Extract from the LEP 2010 Floor Space Ratio Map

Source: Ryde Council

As shown in **Table 7**, the proposed Concept Plan does not comply with the maximum building heights or FSRs in Council's LEP.

Table 7 – Comparison of the Concept Plan against LEP 2010

Location	LEP Height (m)	Proposed Height (m)	LEP FSR	Proposed FSR
Corner of Lane Cove Road and Waterloo Road	44.5	69.3	3:1	7.22:1
Corner of Waterloo Road and Coolinga Street	37	40	2:1	3.96
Corner of Coolinga Street and Giffnock Avenue	30	38.8	2:1	

As previously discussed, the Concept Plan is not required to comply with LEP 2010. However, in demonstrating that the contravention of the development standards is an acceptable outcome, the proposed height has been assessed under the merit tests used to assess exceptions to development standards set out under clause 4.6 of LEP 2010.

Clause 4.6(3)(a) Compliance with the development standard is unreasonable or unnecessary in the circumstances of the case.

Compliance with the LEP height and FSR development standards are both unreasonable and unnecessary in the circumstances of the Concept Plan. In order to understand why these development standards are inappropriate it is important to understand the history of the planning process that has occurred within the Macquarie Park Corridor.

The recently gazetted environmental planning instrument, Ryde LEP 2010 (formerly known as Draft LEP 2008) is a direct conversion of Ryde LEP 137. Consequently the LEP was not the result of a detailed planning analysis nor did it review the appropriateness of the existing planning controls which were prepared and gazetted at a time when the vision for Macquarie Park was largely for consolidation of pre-existing business park development and not a higher order strategic commercial centre. Like its predecessor, LEP 2010 results in a development that greatly underutilises it potential next to Macquarie Park Station and achieves a site coverage of approximately 31%.

Concurrent to this process Ryde Council, aware of the need to revise its current controls to allow for development to match strategic planning objectives, also released Draft LEP 2008 (Amendment 1) (herein after known as Amendment 1). Amendment 1 which specifically dealt with the Macquarie Park Corridor, sought to amend the then existing draft LEP by significantly increasing the development potential of the subject site consistent with the State and Council's vision for the future of the Macquarie Park Corridor.

In anticipation of the future gazettal of Amendment 1, Council pre-emptively released an amendment to its DCP 2006 which reflected its desire for much higher density development around the recently opened Macquarie Park Railway Station. However, due to various issues which could not be easily resolved between Ryde Council and the Department of Planning, the changes envisaged in Amendment 1 were put on hold and Council instead proceeded/ continued with its required direct conversion of LEP 137. As a result Council was left with a DCP which referred to the development standards contained in Amendment 1 and was thus inconsistent with the then current LEP 137.

Concurrent to the gazettal of LEP 2010 in June 2010, Council released its new DCP 2010. The DCP contains a specific section (Section 4.2.3 of the DCP) with controls for building heights within special precincts (which includes the subject site). The building heights shown in the DCP reflect similar heights to those contained within Amendment 1 and are therefore again inconsistent with the LEP 2010 height development standard.

Whilst it is acknowledged that the LEP has statutory weight over the DCP, the history detailed above demonstrates Council's clear desire and intent to have significantly higher development next to and around the Macquarie Park Railway Station and other Station sites in the Corridor. Compliance with the existing development standards would not only fail to reasonably utilise and maximise opportunity at one of the key sites in the Macquarie Park Corridor in a timely manner, it would also be significantly inconsistent with State's Metropolitan Strategy and Metropolitan Transport Plan.

To further demonstrate the unreasonableness of the development standard, Bates Smart has modelled a LEP and DCP compliant scheme (see **Figure 30**) as well as all the various potential iterations of development under the multitude of planning controls which are discussed above. The modelling, which is located at **Appendix A**, demonstrates a number key points:

- There is currently (and has recently been) a significant disparity between the maximum building height controls and maximum FSR controls on the site. Thereby demonstrating that compliance with the FSR controls under the LEP as unreasonable.
- Due to changes in the definition of height and DCP standards, both a taller building and greater quantum of GFA could have been achieved under LEP 137 than LEP 2010. Thereby demonstrating that the recently gazetted LEP 2010 reduces the development potential of the site and is unreasonable.
- Council's planning controls have consistently envisaged taller development at the corner of Lane Cove Road and Waterloo Road, most recently proposing a maximum of 17 storeys under DCP 2010). Thereby demonstrating support for a commercial tower at the Station head.
- Studies 3, 4, 6 (see **Appendix A**), which complied with the height development standards and relevant DCP controls at the time, but not the FSR development standard, produced approximately 80,000 m^2 of GFA. Thereby demonstrating that the proposed Concept Plan's GFA is consistent with what could have been achieved under the former planning regimes if only the LEP height and DCP's built form controls were applied.

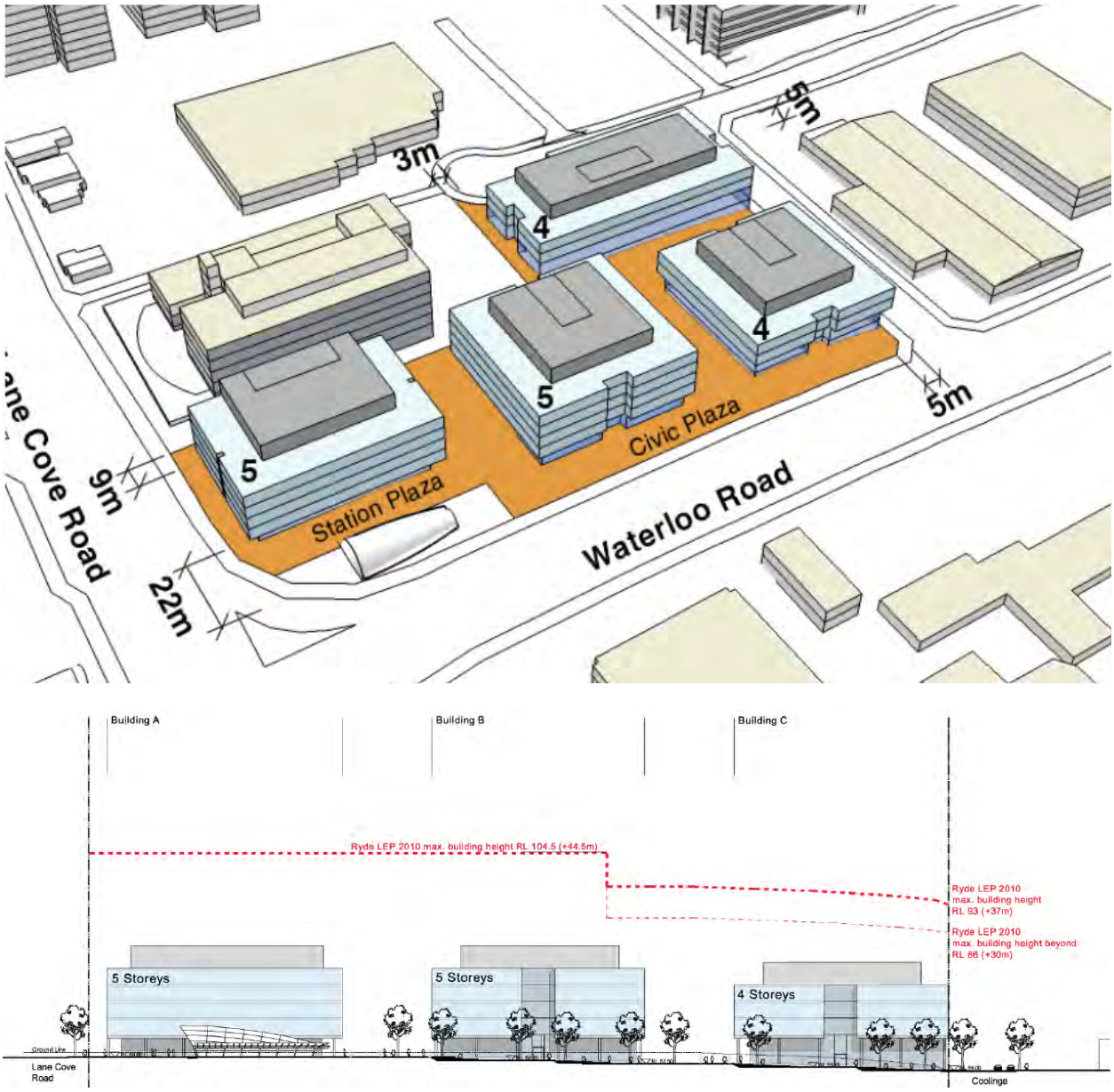

Figure 30 – Full utilisation of FSR under LEP 2010 to test resultant height

Source: Bates Smart

Therefore, a development that complies with both the height and FSR development standards under LEP 2010 (see **Figure 30**) is unreasonable and unnecessary because:

- The LEP sets a maximum FSR around the Station 2:1-3:1. These FSRs are significantly less than most comparable train stations in similar sized centres, such as St Leonards (10-14:1), Parramatta (6:1-10:1), Liverpool (8:1), Penrith (4:1), Wollongong (9.5:1), and Gosford (5:1). Consequently, compliance will result in an under provision of GFA and employment around key rail infrastructure which is inconsistent with the State's general strategic direction for Centre's, and specifically Macquarie Park.
- It will not result in a building that reflects the scale or built-form character envisaged by Council or the State Government (in employment and public transport utilisation terms), particularly one at a key corner next to a station.

- It would represent a gross underutilisation of land suitable for providing a significant contribution to GFA employment in a most desirable and suitable location to do so.
- It would be economically unfeasible under current conditions, where land values adjoining a railway station generate a premium price, and would therefore be inconsistent with one of the key Objects of the Environmental Planning and Assessment Act 1979 which is to promote the orderly and economic use and development of land.

It is also noted that in April 2008 Council approved a 7 storey building with an FSR of 3.11:1 at 78 Waterloo Road, Macquarie Park. Under LEP 2010 the site, which is located 1km from the Station, has a maximum FSR of 1.5:1, whilst under Amendment 1 it has a maximum FSR of 3.5:1. The approval indicates that even at sites not located around the Station, the built form envisaged under Amendment 1 is already occurring within the Macquarie Park Corridor and that Council are supportive of it.

Clause 4.6(3)(b) There are sufficient environmental planning grounds to justify contravening the development standard.

As demonstrated above, there are strong environmental planning grounds supporting the proposed provision of GFA around transport infrastructure. Further to these broader strategic goals, the contravention of the development standard will not result in any adverse additional impacts.

The two key potential environmental impacts of the proposed contraventions would be additional overshadowing and an inappropriate built form which affects the amenity of the adjoining area.

As shown in **Figure 31**, even at its greatest impact on the Winter solstice, the envelope will not result in any overshadowing of the key areas including; the new civic station plaza on Waterloo Road, the Macquarie Park Station portals, or the proposed park on the western side of Coolinga Street.

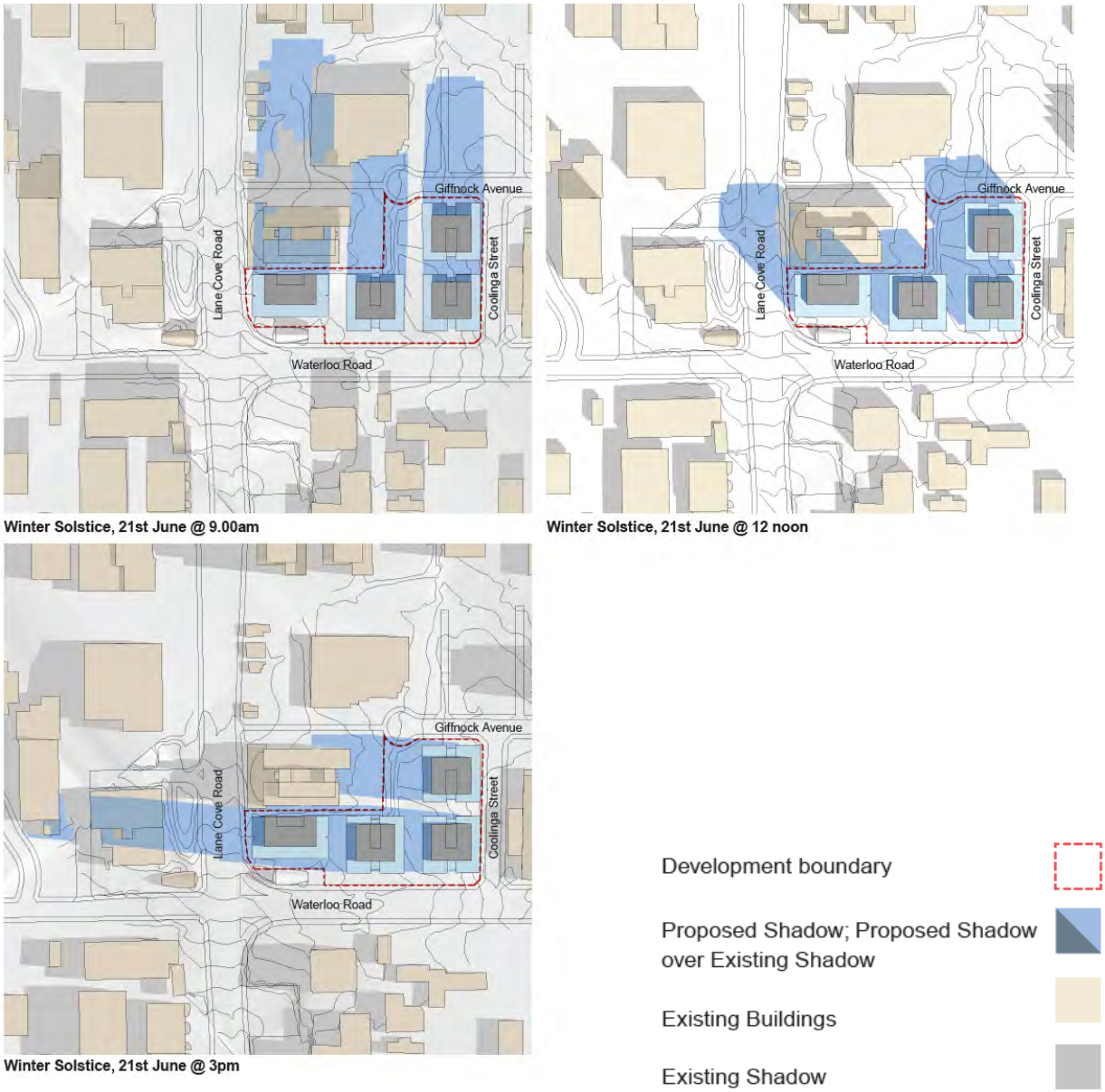

Figure 31 – Shadow impact on the Winter Solstice
Source: Bates Smart

The proposed development reinforces the desired urban character around the railway hub which is necessary to provide the activation and vitality needed to promote a safe environment around the transport node.

A comparative height study demonstrating how the proposed height relates to the height of the existing/approved development surrounding the subject site and in the location is shown at **Figure 32**. The study shows the contrast between the newer medium-rise commercial development in the area and the now older and largely redundant low-rise light industrial / commercial buildings which are being replaced over time.

The study also demonstrates that the height of the proposed building is generally consistent with the envisaged building height character of the area, and whilst being slightly taller than other buildings, it will create the gateway / landmark building appropriate to its location at the corner of the key intersection in the heart of the Macquarie Park Corridor. It should be noted similar landmark envelopes and taller heights of up to 108m (40m higher than the proposed maximum height) have already been approved at the nearby Macquarie University Railway Station site inside Macquarie University.

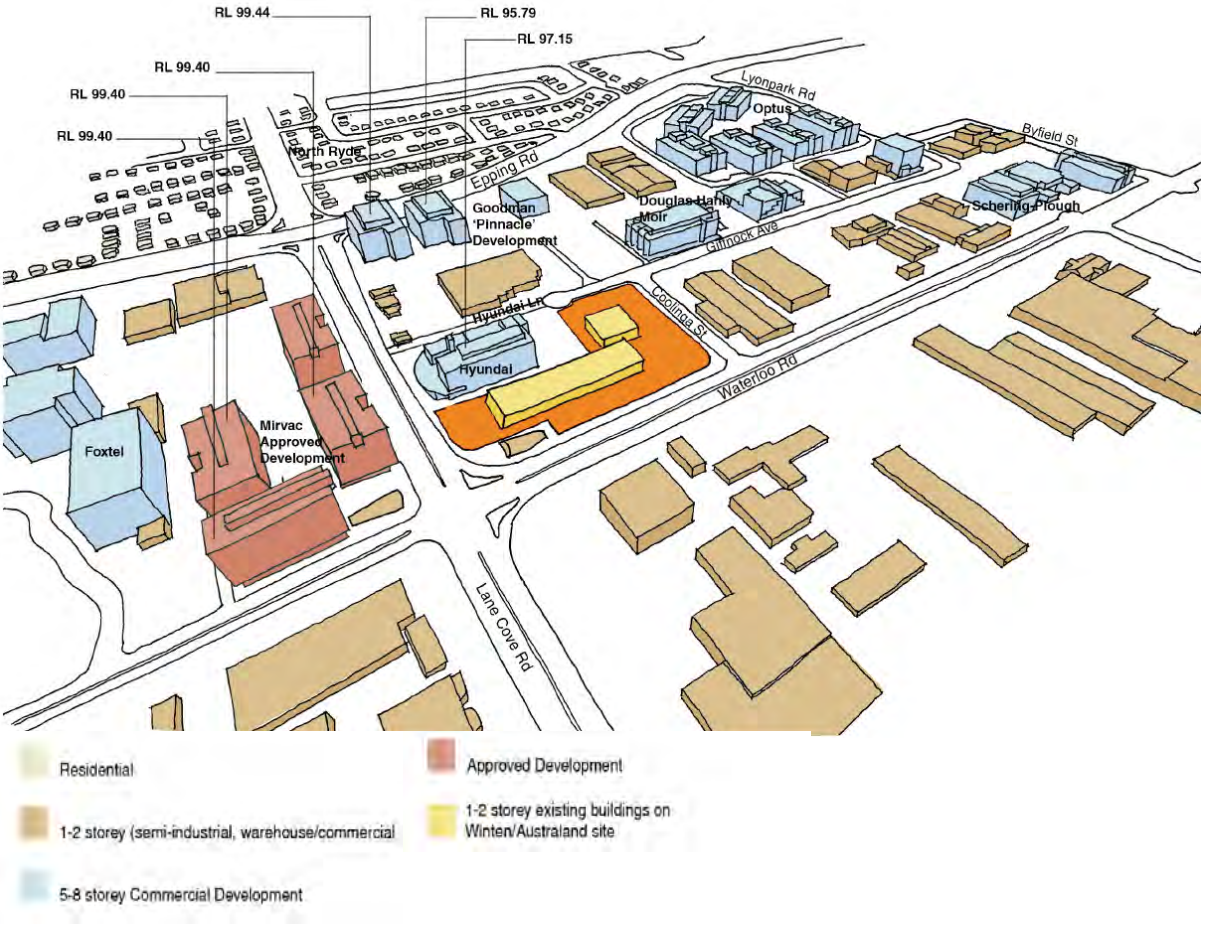

Figure 32 – Comparative area height study

Source: Bates Smart

The assessment of the impact of the built form on the amenity of the key areas around the site at Section 5.4 demonstrates that the proposed development will not have any adverse amenity impacts and thus there are sufficient environmental planning grounds to support the contravention of the height and FSR development standards.

Clause 4.6(4)(a)(ii) The proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out.

Despite not complying with the LEP height and FSR development standards, **Table 8** below unequivocally demonstrates that the proposed development is in the public interest as it is consistent with both the zone, height and FSR objectives of the LEP and reflects the built form envisaged under Amendment 1.

Table 8 – Assessment against relevant LEP objectives

Criteria	Proposal
Zone B3 Commercial Core 1 Objectives of zone *(as relevant)*	
To provide a wide range of retail, business, office, entertainment, community and other suitable land uses that serve the needs of the local and wider community.	The proposed Concept Plan will provide commercial office uses and therefore employment at a railway station to serve the needs of the wider community. In addition to this the Concept Plan will provide ground floor retail, through-site links, and public domain upgrades around the station to serve the needs of the local community.
To encourage appropriate employment opportunities in accessible locations.	The proposed Concept Plan will locate a large quantum of commercial floor space on an underutilised site next to a railway station, thereby providing the maximum number of employment opportunities in one of the most accessible locations in the Ryde LGA.
To maximise public transport patronage and encourage walking and cycling.	The additional floor space gained through exceeding the height and FSR development standards will support this objective to maximise public transport patronage by locating additional employment near the new Macquarie Park Station.
To ensure the zone is characterised by high-quality well-designed buildings that enhance and encourage a safe environment.	The proposed Concept Plan provides a well considered and holistic approach prepared by an internationally renowned architect. The proposed envelopes are capable of delivering high-quality well designed buildings which will enhance and encourage a safe environment, specifically around Macquarie Park Station.
To encourage industries involved in scientific research and development.	The proposed large commercial floor plates are likely to be highly attractive to industries involved in scientific research and development.
Clause 4.3 Height of buildings (1) The objectives of this clause are as follows:	
(a) to maintain desired character and proportions of a street within areas,	As demonstrated above, the maximum height and FSR development standards of the LEP do not reflect Council's desired character or street proportions. As a result the Proponent resolved to design the proposed Concept Plan in accordance with Council's DCP (and Amendment 1), which contains Precinct Specific built form controls, to develop a viable development that meets Council's desired character for the site.
(b) to minimise overshadowing and ensure a desired level of solar access to all properties,	As demonstrated in the shadow diagrams at **Appendix A**, the proposed height exceedance will not result in any adverse overshadowing impacts and will ensure a desired level of solar access to all properties at critical times of the year.
(c) to enable the built form in denser areas to create spatial systems that relate to human scale and topography,	The proposed exceedance in the height and FSR development standards will assist with creating a denser built form around the Station which will create a spatial system that relates to the human scale and topography and provides a landmark to emphasise the transport nodes.
(d) to enable focal points to be created that relate to infrastructure such as train stations or large vehicular intersections,	The proposed exceedance in the height development standard will specifically achieve Objective (d) by creating a focal point at a train station and large vehicular intersection. Compliance with the height control would fail to achieve this objective.
(e) to reinforce important road frontages in specific centres.	The proposed Concept Plan will specifically provide the frontages envisaged in Council's DCP and will therefore reinforce the road frontages within the centre.
Clause 4.3 Height of buildings (1A) In addition to the objectives specified in subclause (1), the objectives for the control of the height of buildings on land within the Macquarie Park Corridor are as follows:	
(a) to provide effective control over the scale and bulk of future	As detailed in the planning chronology, the LEP height development standard is not appropriate to control the scale of the development on the subject site.

Criteria	Proposal
development,	Consequently the proposed Concept Plan has been designed to be generally in accordance with DCP which sets more appropriate built form controls for the site.
(b) to concentrate building heights around railway stations,	The proposed development is located at and above railway station and is therefore entirely consistent with this objective of the LEP.
(c) to provide focal nodes that clearly highlight the role of railway stations,	The proposed exceedance in the height development standard will specifically achieve Objective (c) by creating a focal point at the Macquarie Park railway station. Compliance with the height control would fail to achieve this objective.
(d) to reinforce the important road frontages of Waterloo Road and Lane Cove Road.	The site is located at the corner of these two roads which have been identified as 'important frontages'. The proposed height exceedance will assist with reinforcing these frontages consistent with the objective of the LEP.
Clause 4.4 Floor space ratio (1) The objectives of this clause are as follows:	
(a) to provide effective control over the bulk of future development,	As detailed in the planning chronology, the LEP FSR development standard is not appropriate to control the scale of the development on the subject site. Consequently the proposed Concept Plan has been designed to be generally in accordance with DCP which sets more appropriate built form controls for the site.
(b) to allow appropriate levels of development for specific areas,	The exceedance of the FSR development standard will allow for an appropriate level of development to occur around the Station. Compliance with the FSR control would fail to achieve this objective.
(c) to enable the consent authority to assess and respond appropriately to future infrastructure needs.	The proposed exceedance of the FSR development standard will provide a greater number of jobs next to the Macquarie Park Station, thereby reducing future infrastructure demands.
Clause 4.4 Floor space ratio (1A) In addition to the objectives specified in subclause (1), the objectives for the control of floor space ratios on land within the Macquarie Park Corridor are as follows:	
(a) to achieve a consolidation of development around railway stations, with the highest floor space ratios at the station nodes,	The proposed development, which consolidates two sites, is located at the station node and is therefore an appropriate location to have an increased FSR.
(b) to allow feasible development of the sites around railway stations and facilitate focal points at the station areas,	The exceedance of the FSR control will allow an otherwise unfeasible development to occur, thereby achieving the objective of creating a focal point at the station.
(c) to ensure that the peripheral locations of the corridor reflect the landscape needs and building setting requirements of the corporate building,	N/A
(d) to reinforce the importance and function of the central spine (Waterloo Rd and Riverside Main St) with suitable built form,	The proposed development will reinforce the central spine of Waterloo Road with a suitable built-form.
(e) to encourage the provision of a new street network,	N/A
(f) to provide incentives for redevelopment in return for the provision of the proposed access network as a public benefit.	Whilst no FSR incentives are included in the LEP, the proposed development will provide through-site access in accordance with the Access Network Map in the LEP. In addition to this access the development will also provide further access through the site (currently not available) which will allow for greater access to the Station from the surrounding developments to the north and west.

Consistency with the built form controls of Ryde DCP 2010

Due to the general inappropriateness of the applicable LEP development standards (demonstrated above) the proposal has been designed in accordance with the DCP which contains precinct specific controls. As shown in **Table 9** below and throughout the other sections in this assessment, the proposed Concept Plan generally complies with the DCP and will ultimately deliver a viable development that reflects Council's intended vision for the site within the Macquarie Park Station Special Precinct.

Table 9 – Consistency with the built form controls of Ryde DCP 2010

Control	Proposal
4.2.3 Site and Building Design	*Building Heights* Despite being inconsistent with LEP 2010, Section 4.2.3 requires development to comply with the Special Precinct Height Plan. The proposed Concept Plan is generally consistent with this plan as shown in **Figure 33**.
	Setbacks + Building Zone The Concept Plan will provide the required setbacks including: ▪ 22m to street around the station portal; ▪ 5m to Lane Cove Road and Giffnock Avenue; ▪ 10m Waterloo Road; and ▪ 0m to Coolinga Street.
6.1.6 Building Separation	The DCP states that where sites fall within a 'Special Precinct', refer to the precinct controls. However, no building separation controls exist for the subject Precinct. The DCP generally requires a 20m separation between buildings. However, a 15m building separation has been adopted for the subject site as this more accurately reflects the desired urban character around the Station Precinct without detrimentally affecting satisfaction of other planning and design objectives including public domain, landscaping, access or legibility. It is also noted that a 15m building separation was recently supported by Council at the nearby Aristocrat development.
6.1.7 Building Bulk	The DCP requires that buildings above eight storeys not have floorplates in excess of 2000m^2. Building 1 has a GFA of 2010m^2, whilst this exceeds the maximum floorplate control by 10m^2. The noncompliance is relatively minor and inconsequential and is considered appropriate considering the buildings prominent location at the corner of Lane Cover Road and Waterloo Road.

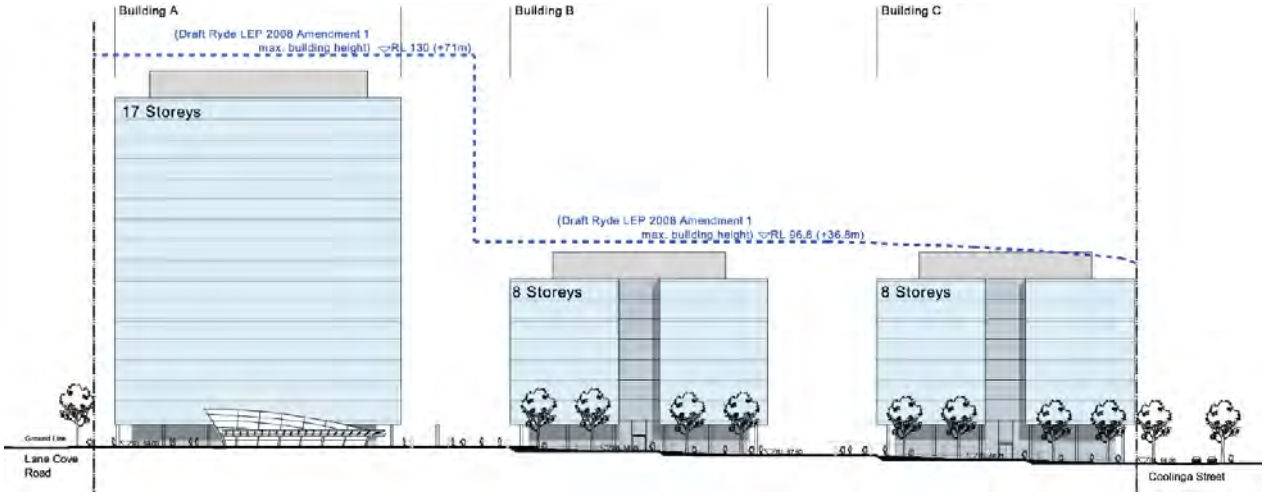

Figure 33 – Consistency with DCP 2010 Special Precinct Height Plan

Source: Bates Smart

View Analysis

The view analysis diagrams at **Figure 34** below demonstrate that the proposed building mass and scale are appropriate on the site and within the context of the Macquarie Park Corridor and the wider objective of creating a commercial hub around the Station portal.

View from Lane Cove Road

View from Epping Road

View from Waterloo Road

Figure 34 – View Analysis

Source: Bates Smart

5.3.2 Public Domain and Landscaping

In order to achieve a high quality public domain, the Concept Plan has been designed in accordance with the DCP, including controls specifically relating to street activation and through-site links. By providing a Concept Plan consistent with the DCP's vision for the Precinct, the development will ensure that areas around the Station and major pedestrian thoroughfares are vibrant, active and safe places. It noted that the approval is for the concept only, and the detailed design and use of the ground level will be subject to future applications on the site.

Table 10 below provides an assessment against the relevant public domain and landscaping controls contained in the DCP.

Table 10 – Assessment against the Public Domain and Landscaping sections of the DCP

Control	Proposal
4.2.2 Public Domain	Consistent with Section 4.2.2, the Concept Plan will provide all the required public domain elements, including: ▪ active frontages along Coolinga and Waterloo Road; ▪ pedestrian through-site link; ▪ a civic streetscape along Waterloo Road; and ▪ plaza around the Station.
4.2.4 Public Domain Interface	The proposed development provides the vehicular access in accordance with the preferred access location. The proposed Concept Plan will provide the Colonnade / Active Retail along Waterloo Road and an awning and active retail frontage along Coolinga Street as stipulated in the DCP.
6.1.3 Site Planning and Staging	In accordance with the DCP, no vehicular access is proposed off Lane Cove Road or Waterloo Road.
6.1.8 Site Coverage and Deep Soil Areas	The proposed development will provide approximately 14% of the site as deep soil planting. Whilst this does not comply with the 15% requirement by 1%, a further 1,835m^2 of landscaping (an additional 11%) has been provided with a soil depth ranging between 0.5-1.3m, which is capable of supporting medium to large tree planting. The proposal will therefore achieve the objective of providing for substantial tree sizes on the site.
6.2.1 Landscaping and Communal Courtyards	The proposed development will provide 25% of the site as landscaped area. Whilst this does not comply with the 30% requirement in the DCP, the landscape concept responds to the site's location next to the Station as an urban precinct. As a result, areas of the development which might have been provided for landscaping at other sites are proposed in the form of the civic plaza and through-site links in the Concept Plan. The DCP also requires that communal courtyards receive a minimum of 3 hours direct sunlight between 9am and 3pm on 21st June. Due to the shape and orientation of the site it is not possible to provide direct sunlight to all the communal courtyards between 9am and 3pm on 21st June. However, different areas within the site with access to direct sunlight are available at all times throughout the year including on the 21st June for the use of workers. As a result, the development will meet the objective of the control which is to "provide occupants with passive recreational opportunities".
6.2.2 Pedestrian Through Site Links	Through-site links have been provided in accordance with the plan in Section 4 of the DCP. The links will be a minimum of 5m wide and therefore satisfy the minimum 3m wide control.

5.3.3 Station Portal Interface

The proposed development is comprised of buildings setback along Waterloo Road to create a continuous 10m wide civic plaza to give the station entry presence and maintain lines of sight for pedestrians.

Building A, adjacent to the station is setback a further 12m to create a large 22m wide open public plaza around the station portal. The building's scale and ground plan concept has been designed to reflect the major urban intersection at Lane Cove and Waterloo Roads and respect the size, location and access to the existing station.

The facades at the ground level of Buildings A and B have been setback 15.3m and 35.5m, respectively, from the station portal and a 5.5m wide colonnade introduced to give a sense of human scale as well as provide a covered pedestrian thoroughfare along the Waterloo Road frontage.

Careful consideration to finished ground floor levels create at-grade transitions at entrances to buildings and link these with the existing station to maintain equitable access for people with accessibility concerns. A combination of hard and soft landscaping around the station help to soften the visual impact of the proposed development as well as provide shading and amenity to users.

5.3.4 Consideration of Alternative Design Options

A competitive Design Competition was held in August-September 2006 as part of the initial concept design process. The architectural firms that participated in the competition were Scott Carver, Nettleton Tribe, Bates Smart, and Allen Jack + Cottier.

As part of the design process a range of alternative design options were put forward by the participating firms and duly considered by the proponent. The Bates Smart design was awarded the wining scheme on 2 October 2006 and was subsequently developed into the proposed Concept Plan.

5.4 Environmental Amenity

The DGRs require that the proponent assess the impact of the development on the residential amenity and areas of public open space, including shadowing and acoustic impacts.

5.4.1 Residential Amenity

There are no residential dwellings in the immediate proximity of the site. As a result it is not anticipated that the Concept Plan development will have any impacts on residential amenity.

5.4.2 Public Open Space

There are no areas of public open space in the immediate proximity of the site. However, under the Ryde DCP 2010 Structure Plan an area of public open space is proposed opposite the site along the western side of Coolinga Street, and a new park is proposed on the northern side of Waterloo Road to the west. The development will also create an area of publicly accessible open space in the form of the civic plaza along Waterloo Road.

An overshadowing analysis is located at **Appendix A**. The analysis demonstrates that on the Winter Solstice (see **Figure 31**) the development will not create any additional overshadowing on the proposed or future public open space areas.

The analysis also shows that the development will create minor additional overshadowing on the future Coolinga Street public open space at 9:00am on the Summer Solstice, and parts of the proposed civic plaza in the afternoon on the Spring and Autumn Equinoxes. As the affectation occurs for short periods of time, during non-critical periods of the year, the shadowing is not considered to have any adverse impacts on the amenity of these future / proposed areas of public open space.

5.4.3 Macquarie Park Station

The proposed development will significantly enhance pedestrian amenity around the Station. An extract of the Landscape Concept Plan (see **Appendix F**) which illustrates the proposed interface around the Station is shown at **Figure 35**.

The proposed interface will increase pedestrian amenity around the Station and its curtilage by replacing the existing at grade car parking with a new publicly accessible 10m – 22m wide civic plaza along the entire frontage with Waterloo Road. The Plaza will be landscaped to enable pedestrian movements through the plaza whilst creating the desired landscape setting. The plaza will also provide public seating as well as an overflow of café areas for the enjoyment of workers and visitors to the area.

Figure 35 – Proposed interface with the Macquarie Park Station Portal

Source: Aspect

The proposed works will facilitate pedestrian circulation around the Station and its curtilage through the provision of the Civic Plaza and numerous through-site links which provide more direct pedestrian routes to the significant developments to the south and west of the Railway Station, such as Optus.

The massing and siting of the buildings was designed to reinforce the significant location of the development at the corner of Lane Cove Road and Waterloo Road and next to and above Macquarie Park Station, and will assist with way finding for pedestrians in the Centre/Corridor trying to locate the Station.

Building A's 22m setback to Waterloo Road near the Railway Station portal (as required in the DCP) will ensure that the building will not be overbearing on pedestrians exiting or entering the Station. A colonnade has also been provided at ground level of Building A to reinforce the pedestrian scale of the development.

The overshadowing analysis at **Appendix A** demonstrates that the proposed development will preserve solar access to the Station portal and its curtilage throughout the majority of the year, including on the Winter Solstice. Some minor overshadowing will occur over parts of the Station portal on the Summer Solstice and Autumn and Spring Equinoxes during the late afternoon periods. As the affectation occurs for short periods of time, during non critical periods of the year, the shadowing is not considered to have any adverse impacts on the amenity of the Railway Station and its surroundings.

The Wind Impact Assessment (see Section 5.11 and **Appendix I**) demonstrated that the proposed building envelopes will not have any adverse amenity impacts around the Station.

The development will have no adverse impacts on the operation of the station below ground level. See also Section 5.6.2

5.5 Transport and Accessibility

A Transport & Accessibility Impact and Parking Report has been prepared by ARUP in accordance with the DGRs and RTA's Guide to Traffic Generating Developments (see **Appendix H**). The findings of the Report are summarised below.

5.5.1 Parking Provision

The Concept Plan has adopted the LEP parking rate of 1 space per 80m^2 GFA and it therefore complies with the LEP. The rates in the LEP have been adopted on the basis of consultation by City of Ryde with Department of Planning, the Roads and Traffic Authority and the Ministry of Transport. The LEP contains three different rates (1:80m2,1:70m2,and 1:46m2) for the Macquarie Park Corridor which take into account proximity to public transport.

The subject site falls within the zone with the lowest parking rate, due to its location adjacent to and above the Macquarie Park Railway Station and Lane Cove Road bus routes. The rate is also considerably lower than the RTA Guide to Traffic Generating Developments rate of 1 space per 40m^2 GFA for sites with no designated parking rate. In addition to the proposed car parking 538 bicycle spaces are proposed to be provided in the basement parking levels in accordance with the DCP.

Notably, the Department's own assessment and the Minister's approval of the Macquarie University Concept Plan has permitted a car parking rate at 1:80m^2 at and around the Macquarie University Station within the Mixed Use zone where up to 330,000m^2 of commercial development is envisaged. Recently, the NSW Government has released the following mode share split targets from the 2010 State Plan.

> NSW Transport Mode Share Split target: Improve the public transport system (State Plan 2010). Increase the share of commute trips made by public transport:
>
> - *To and from Sydney CBD during peak hours to 80% by 2016*
> - *To and from Parramatta CBD during peak hours to 50% by 2016*
> - *To and from Newcastle CBD during peak hours to 20% by 2016*
> - *To and from Wollongong CBD during peak hours to 15% by 2016*
> - *To and from Liverpool CBD during peak hours to 20% by 2016*
> - *To and from Penrith CBD during peak hours to 25% by 2016*
>
> *Increase the proportion of total journeys to work by public transport in the Sydney Metropolitan Region to 28% by 2016*

It should be noted that the 1:80m^2 car parking rate being applied in Ryde LGA / Macquarie Park Corridor (and within Macquarie University) has also been translated as the achievement of a 40% mode share to public transport.

The effective mode share split of the current proposal if an occupancy rate of 1 FTE / worker per 25m^2 is applied is in the order of (and at worst) 69% in favour of public transport and other non-car based trips on the basis that 1,042 spaces are taken up by single employees (ie no car pooling).

This is comparable to and far exceeds the above rates under the State Plan, and that for the new rail infrastructure through the Macquarie Park Corridor (40% mode share split to public transport). Based on the applicable rate and the high degree of potential public transport usage (relative to the relevant targets) it is our view that a minimalist approach to car parking has been applied and achieved.

Furthermore, under Council's relevant DCP controls for the Macquarie Park Corridor there is the potential to provide temporary or transitional car parking that is able to be removed and used for other permitted land uses at a future date. Transitional parking for a further 234 cars was provided for in the scheme submitted in the preliminary Environmental Assessment. This temporary / transitional parking allocation has been removed since the preliminary Environmental Assessment was submitted, further reinforcing a minimalist approach to parking.

To ensure marketability and viability of the commercial floorspace, and to that end assist in achieving the Government's Strategic planning objectives with respect to premium commercial office space with large floorplates and a suitable mode share split, a car parking rate that fosters growth balanced with sustainable transit needs to be applied. It is our understanding that the rate of 1:80m2 has been adopted by both Council and the Department of Planning as there is recognition that this rate can achieve these objectives, including a 40% mode share split to public transport.

5.5.2 Traffic Generation

An assessment of the proposed development's impact on the road network has been undertaken using Ryde City Council's Macquarie Park 2007. Base Paramics Model.

The Report notes that the Paramics Model analysis is based on conservative traffic generation forecasts and these forecasts are unlikely to be realised due to the proximity of the site to good public transport. It is also noted that Council's website states in relation to the Paramics Model that "The Paramics model will be actively maintained and continuously updated as developments are approved." Based on recent advice from various traffic consultants, it is our understanding that this has not actually occurred in practice and the original 2007 version of the model is still Council's current version of the model. In particular, the model has not been updated to reflect any changes in traffic patterns that may have occurred as a result of the opening of the Epping to Chatswood Rail Line. The forecast operation of the road network in the vicinity of key intersections, based on the results of the Paramics modelling are summarised in **Table 11**.

Table 11 – Impact on key intersection

Intersection	Impact on Intersection Performance
Lane Cove Road/Epping Road	In both the AM and PM peaks the Lane Cove Road/Epping Road intersection is forecast to perform at an acceptable level of service.
Lane Cove Road/Waterloo Road	The development will contribute to only a small increase in traffic through the Lane Cove Road/Waterloo Road intersection in the PM peak.
Lane Cove Road/Talavera Road	In the AM peak there will be an increase in southbound traffic on Lane Cove Road for traffic coming from the north. This is an already congested movement in the peak direction and the development will contribute to an increase in delays. In the PM peak there is unlikely to be a significantly impact at this intersection due to the traffic management measures of the local road network and the alternative routes available for traffic bound for the M2 or Lane Cove Road to the north.
Lane Cove Road/M2 Motorway	The M2 off-ramps have high capacity with two left and two right turn lanes and the development is unlikely to result in a significant change in performance in the AM peak, apart from existing congestion on Lane Cove Road southbound.

Intersection	Impact on Intersection Performance
	In the PM peak, impacts are likely to be relatively minor as per the discussion for Lane Cove Road/Talavera Road.
Epping Road/Lyon Park Road	The Epping Road/Lyon Park Road intersection is a critical intersection serving the development. Although there will be a significant increase in left-in and left-out traffic in both the AM and PM peaks, the intersection has capacity to accommodate this increase.
Waterloo Road/Khartoum Road	In the AM peak there will be a slight increase in traffic through the intersection but this will have no significant impact on delays. In the PM peak there will be a significant increase in westbound traffic on Waterloo Road. This will result in increased delays but the roundabout will still perform at an acceptable level of service.

The results of the Q-Paramics modelling show that, as a result of the various ways traffic generated by the development will be dispersed across a number of different routes (see **Figures 36** and **37**), the development will result in an increase in delays at only a small number of movements.

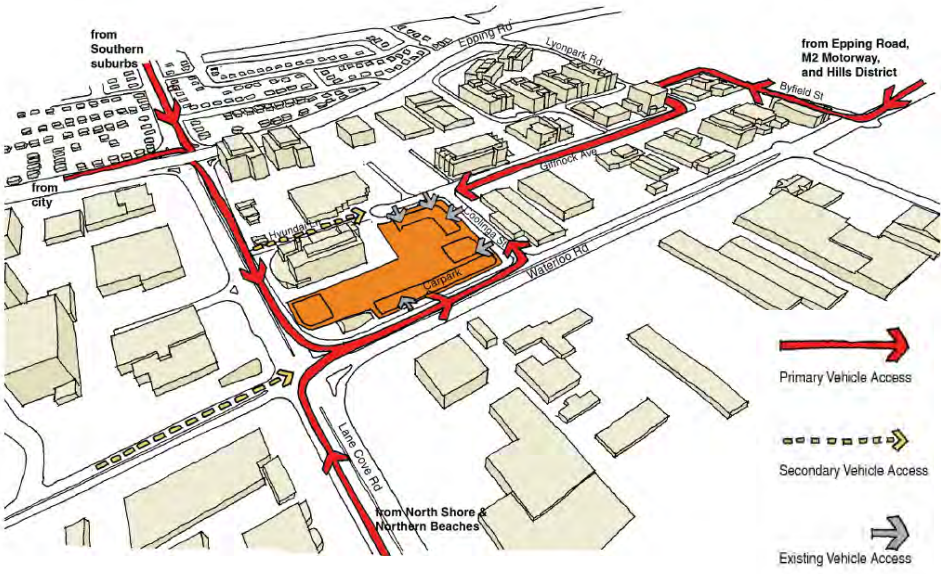

Figure 36 – AM Traffic Flows

Source: Bates Smart

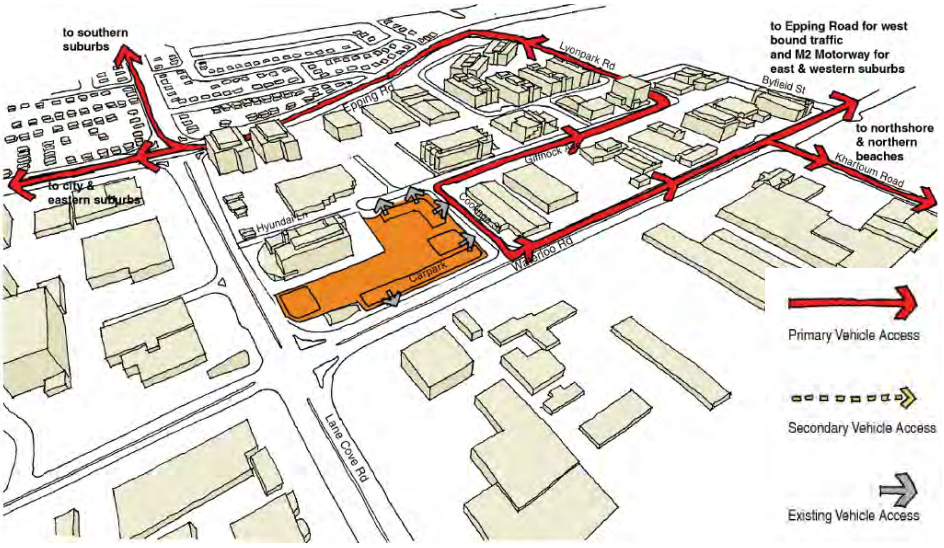

Figure 37 – PM Traffic Flows

Source: Bates Smart

Although Q-Paramics does not output level of service parameters, it is unlikely that the overall level of service at any of the key intersections would change as a result of the development. This is because generated traffic, which would be quite dispersed, is a relatively small proportion of existing background traffic at most locations. As a result, the findings of the traffic impact assessment demonstrate that the development does not warrant the need for any improvement works.

5.5.3 Implications on Non-Car Travel Modes

The Ryde Bicycle Strategy and Masterplan proposes off-road regional shared paths on both Waterloo Road and Lane Cove Road. The 2010 NSW Bikeplan identifies North Ryde to Macquarie University as a major missing link in the Metro Sydney Bike Network. The Bikeplan states that "the NSW Government will fully fund construction of an average of 10 kilometres of new connections in the Metro Sydney Bike Network each year, focusing first on the identified priority metro links".

A shared path currently exists on Waterloo Road between Shrimptons Creek and Herring Road and the extension of this path to Lane Cove Road will improve integration with the Ryde bicycle network. The development provides the potential for the Waterloo Road regional bike route to be constructed within/adjacent to the site.

The site is strategically located above Macquarie Park Station and the most critical pedestrian linkage is between the development and the Station. The development will be totally integrated with the Station and will activate the ground level around the Station. The development contains four separate buildings which will enable east-west and north-south through site links to be created which is consistent with an aim of the LEP to increase pedestrian permeability throughout the Macquarie Park Corridor. These links will improve access to the Station from other major developments such as the Optus campus.

5.5.4 Travel Demand

The NSW State Plan 2010 includes the following transport targets:

- Increase the proportion of total journeys to work by public transport in the Sydney Metropolitan Region to 28% by 2016 (2009 value: 24%)
- Increase the mode share of bicycle trips made in the Greater Sydney region, at a local and district level, to 5% by 2016 (2009 value: 1%)

To encourage travel modes other than private vehicle, it is proposed to adopt a travel demand management approach through a workplace travel plan (WTP) in accordance with the requirements of DCP 2010.

Is noted that public transport usage to the Macquarie Park area will continue to increase as public transport services improve. Higher employment densities in the Macquarie Park area, including the proposed development, will help to stimulate the provision of improved public transport services. Other measures that could be introduced to increase the non-car mode share to the site include:

- Integration of the site into a broader Macquarie Park car pooling scheme. The scheme would allow drivers and participants to be matched based on origin and general travel times.
- Promotion of flexible working practices for the various tenants within the development.
- Investigation of a travel pass scheme to provide for reduced cost annual public transport tickets.

- Provision of visitors to the site with public transport and cycling transport information.

It is noted that the level of cycling has the potential to increase significantly, in percentage terms, if key cycling routes are constructed within the region.

The above matters are reflected in the Draft Statement of Commitments.

5.5.5 Access

The car park layout will be designed in accordance with the following Australian Standards:

- AS 2890.1 Parking Facilities, Part 1: Off-street Car Parking
- AS 2890.2 Parking Facilities, Part 2: Off-street Commercial Vehicle Facilities
- AS 2890.3 Parking Facilities, Part 3: Bicycle Parking Facilities
- AS 2890.6 Parking Facilities, Part 6: Off-street Parking for People with Disabilities

5.5.6 Service Vehicle Movements

The design of the development includes a loading dock on Basement Level 1. It will be separate from the car park and will have a separate access from Giffnock Avenue. Security will manage the movement of all service vehicles to the facility. An east-west service corridor will provide access to the lifts serving the four buildings. The development is primarily commercial in nature and most of the service vehicle movements will relate to waste, small deliveries and general maintenance of the building.

Tenant deliveries and service vehicle access for maintenance would generally occur within working hours using small vans or small rigid vehicles. The retail component of the development would generate daily deliveries, e.g. fresh food, newspapers etc including some truck movements. These movements would generally occur outside of typical office hours.

The loading dock has been designed to accommodate approximately 2 heavy rigid vehicles (HRV), 3 medium rigid vehicles (MRV) and 4 small rigid vehicles (SRV). The adequacy of the loading dock vehicle manoeuvring area is demonstrated by a number of swept paths for an HRV. Capacity for approximately 24 courier vehicles will be provided on Basement Level 1 within the main car park.

5.5.7 Construction Traffic

An assessment of the construction traffic will be undertaken at the Project / Development Application stage once the methodology, process and staging of construction can be determined.

The builder will be responsible for the preparation of a construction traffic management plan, which will be prepared prior to the commencement of work following approval of the subsequent Project/Development Application for the site.

The above recommendations are reflected in the draft Statement of Commitments.

5.6 Geotechnical

5.6.1 Geotechnical Study

A Geotechnical Desktop Study has been prepared by Parsons Brinckerhoff and is located at **Appendix K**.

The geological sequence at the site is expected to be the Ashfield Shale and Mittagong Formation, underlain by Hawkesbury Sandstone. No major geological structures such as dykes or faults were reported in the proposed site. The North Ryde Fault Zone, is approximately 150m from the proposed development and is unlikely to have an impact on the proposed development.

The Study identifies a number of potential geotechnical risks, but concludes that the site is generally suitable for the proposed development, provided that the risks identified and managed as part of the detailed design stage and monitoring during the construction stage.

The Study recommends that a detailed geotechnical site investigation to assess the geotechnical parameters for numerical analysis be undertaken at the Project / Development Application stage.

The above matter is reflected in the draft Statement of Commitments.

5.6.2 Impact on Rail Infrastructure

A Preliminary Geotechnical and Structural Impact Assessment on Epping to Chatswood Rail Link (ECRL) Infrastructure has been prepared by Parsons Brinckerhoff (see **Appendix L**).

The Assessment reviews the possible geotechnical and structural impacts of the proposed development on the existing ECRL infrastructure in accordance with Transport Infrastructure Delivery Corporation (TIDC) 2006 Guidelines for Assessing Impact of Proposed Developments on the Underground Infrastructure of the Epping to Chatswood Rail Line – 11 May 2006. It is noted that at the time of the submission of the Concept Plan no new specific guidelines had been provided by RailCorp to the Proponent, and as a result Parsons Brinckerhoff has referred to the previously issued guidelines by TIDC.

The proposal has been designed to minimise impacts on ECRL infrastructure by ensuring that all basement works have the maximum clearance possible and by limiting the depth of the excavation.

The Proponent and expert consultant team also met with RailCorp and have incorporated advice received into the Concept Plan design. As result of this process, the development has been designed to ensure that it does not encroach into the RailCorp stratum boundary. The basement wall and the edge foundations will be located outside the protection zone of the ECRL structures. It noted that the proposed pile foundations for Building A traverses the influence zone, however the piles are sleeved and founded below this zone and as a result will have no adverse impact on the RailCorp ECRL zone.

Based on the separation distance of the basement and ECRL infrastructure, it is anticipated that the horizontal load transfer to the proposed tunnels will be low. Temporary anchors will be utilised for support works during the excavation and this anchors will be de-stressed on completion. No anchors will encroach the protection zone.

Whilst the above construction approach will have to be studied in more detail during the next stage of design development, based on the preliminary review of the Station drawings and preliminary numerical modelling, it is anticipated that the construction of the proposed development is unlikely to have an adverse impact on the existing ECRL infrastructure.

The geotechnical and structural issues identified in the Report will have to be studied in detail during the design stage.

The above matters are reflected in the draft Statement of Commitments.

5.7 Contamination and Groundwater

A Stage I and II Environmental Site Assessment (ESA) was undertaken by HLA (see **Appendix J**).

The sub-surface conditions were identified to be fill extending to an approximate average depth of 0.45m below ground, overlying clay soils derived from the underlying shale bedrock.

The ESA included drilling 22 soil bores across the site and undertaking soil sampling in accordance with NSW EPA requirements. Four groundwater monitoring wells were also installed. However, no groundwater was encountered during the assessment.

The groundwater table was recorded in a borehole at a depth of 6.4m on an adjacent site prior to the construction of the Macquarie Park Station. However it is anticipated that the groundwater table has lowered to below 8-10m post construction of the Station.

Analysis of soil samples indicated that the soil generally contained 'contaminants of potential concern' below the site assessment criteria, with the exception of:

- concentrations of toluene, ethylbenzene and xylenes in soil marginally above NSW EPA assessment criteria, adjacent to an underground storage tank (UST) on the 396 Lane Cove Road property; and
- asbestos fibres within cement sheeting fragments and underlying soil material on the south west boundary of the 396 Lane Cover Road property.

The ESA concludes that the site is suitable for commercial uses and any soils excavated from the site would be classified as 'Inert Waste' with the exception of the contaminated soils identified above. Accordingly the ESA recommends that:

- The UST be decommissioned (by removal) which will allow for the exaction of impacted soils (if any), and appropriate sampling of the UST pit excavation to validate removal of contaminated soil.
- The asbestos and associated impacted soils located on the south west boundary of the 396 Lane Cove Road property be removed from the site by an appropriately licensed asbestos removal contractor.

The above recommendations are reflected in the Statement of Commitments

5.8 Crime Prevention Through Environmental Design

The proposed development has been assessed against the key principles of Crime Prevention Through Environmental Design (CPTED). A detailed CPTED assessment will be undertaken at the Project / Development Application stage.

Natural Surveillance

By providing commercial lobbies and retail at the ground level of the four buildings the development will activate the street and provide a high degree of passive surveillance over the Macquarie Park Station Portal, the new through-site links and public domain areas on Waterloo Road and Coolinga Street.

During the detailed design stage consideration will be given to:

- the choice of material, façade construction, barriers, plants, foliage and similar design elements; and
- lighting design.

Territoriality

Territoriality and a delineation of public and private space has been achieved through activating the ground level which aim to promote use of the through-site link and plaza as public spaces while deterring would-be criminals from conducting unfavourable acts in the space.

Ownership

Effective ownership of the space aids in promoting to the public, a well used and maintained facility, which in turn encourages legitimate activity. The enforcement of ownership aims to deter criminals and vandals from opportunistic crime and vandalism when the space is clean, well lit, and filled with people.

Management

Management of the Macquarie Park Commerce Centre will develop efficient mechanisms for reporting and rectifying maintenance, cleanliness and property damage issues, particularly the prompt removal of graffiti and similar vandalism.

5.9 Water

A Stormwater Management and Water Recycling Report has been prepared for the proposed development and is located at **Appendix G**.

5.9.1 Recycled Water Scheme

Rainwater reuse and water conservation measures to meet the building sustainability requirements including rainwater collection for non-potable purposes are proposed. Hyder have consulted with Sydney Water regarding the Macquarie Park Recycled Water Scheme. As Sydney Water progress their feasibility analysis of the proposed recycled scheme for Macquarie Park further, there is still an opportunity to supply the proposed development with recycled water from this scheme.

5.9.2 Water Quantity

The DRAINS software has been used to develop a rainfall runoff model to assess the performance of the proposed On Site Detention (OSD) stormwater system with respect to mitigating potential flow impacts on neighbouring downstream areas.

The modelling demonstrated that a detention volume of 750m^3 was required to reduce peak flows from the site to pre-development (natural) levels. The DCP provides an offset for OSD systems where developments provide rainwater tanks. As the internal non-potable water demand for the project is estimated to be approximately 124m^3, the minimum OSD volume required to be provided is 750 – 124 = 626m^3.

As a result the project has been designed to provide 700m^3 OSD volume to cater for any design changes and allowance for headroom and overflow from the OSD tank.

5.9.3 Water Quality

The water quality treatment performance has been benchmarked against the water sensitive urban design (WSUD) targets set out in Ryde DCP 2010. Based on the proposed stormwater quality measures (outlined in Section 3.11) the treatment performance for the whole site will exceed the treatment targets (see **Table 12**).

Table 12 – Water Quality

	Gross pollutants (%)	Total Suspended Soils (%)	Total Phosphorus (%)	Total Nitrogen (%)
Treatment Target	90	85	60	45
Site Performance	97	86	83	78
Target Achievement	✓	✓	✓	✓

5.10 Tree Removal

A Vegetation Assessment was undertaken by Anne Clements and Associates (see **Appendix E**). As detailed in Section 2.2, no significant tree species or communities were identified on the site. As a result the Vegetation Assessment recommends:

- that the planted trees on the perimeter be retained, where practicable, with the exception of the trees identified in the Assessment; and
- future landscaping incorporate dense perimeter planting, with replacement planting of local native tree, shrub and understorey species.

Under the proposed Landscape Concept 28 trees are proposed to be retained and 52 trees are proposed to be removed. The trees proposed to be retained are generally located along the perimeter of the site as identified in the assessment.

The above recommendations have been incorporated in to the proposed design and landscape concept.

5.11 Wind Impact

A Pedestrian Wind Environmental Assessment has been prepared by WindTech (see **Appendix I**). The assessment reviews the existing wind environment, assesses the potential impacts of the proposed buildings and makes recommendations to be incorporated at the detailed design stage. A summary of the assessment is located below.

Three principal wind directions, from the north east, south and west, were identified as potentially affecting the development.

Due to the wind mitigation provided by the proposed and existing densely foliating trees the wind conditions for the pedestrian thoroughfares along the perimeter of the proposed development are expected to be quite similar to the existing conditions and thus acceptable for their intended uses.

The pedestrian thoroughfares between the proposed buildings have potential to be affected by wind funnelling between these buildings. As a result the report recommends that these potential wind conditions be mitigated with densely foliating trees. **Figure 38** highlights the key landscape areas which will need to densely foliating trees and densely foliating evergreen trees as part of the detailed design. The above recommendations have been Incorporated in to the Landscape Concept Design (see **Appendix F**).

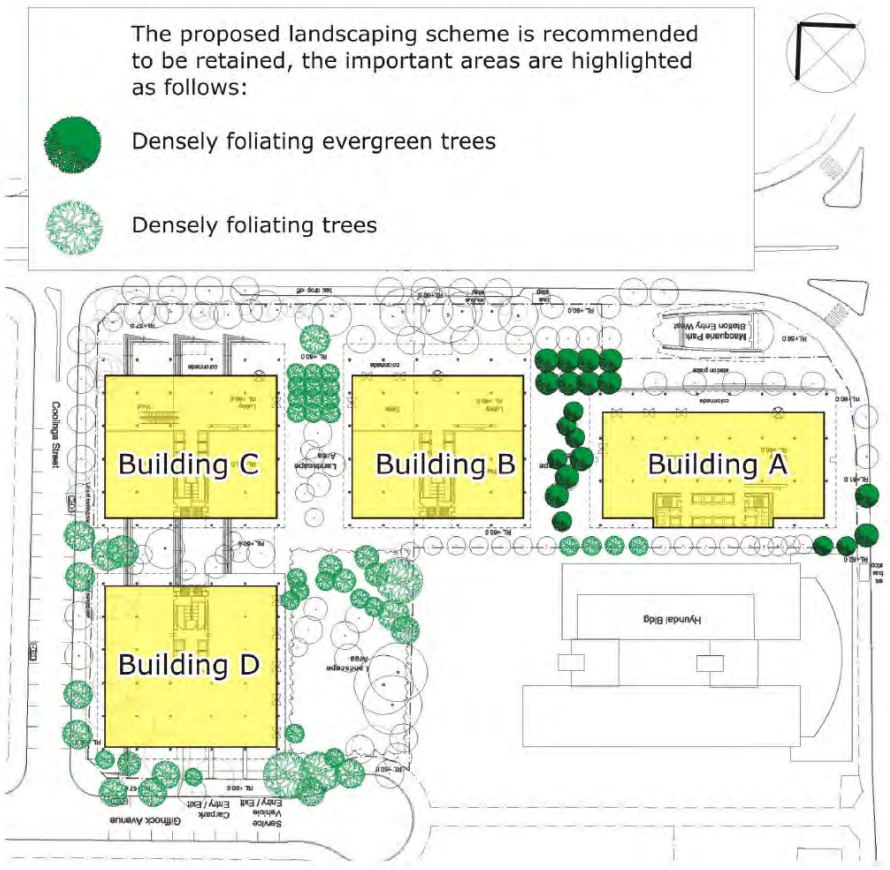

Figure 38 – Important trees within the proposed landscaping scheme

Source: Wind Tech

The assessment also found that the helipad on the rooftop of Building A is exposed to adverse winds due to an up-wash effect along the façade of the building. It is expected this wind effect can be mitigated if the north eastern and south western external walls of the plant room below the helipad are made porous, thereby diffusing the up-washed wind. An example of this design is shown at **Figure 39**.

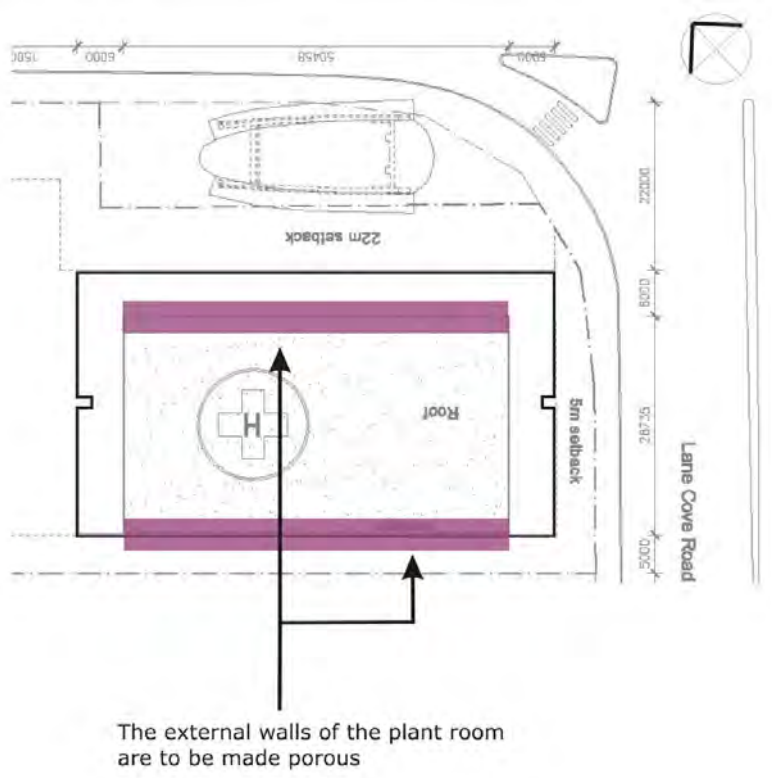

Figure 39 – Recommended treatment to the plant room of Building 1

The above recommendations are reflected in the Statement of Commitments.

5.12 Consultation

In accordance with the Environmental Assessment Requirements issued by the Director-General for this project, consultation was undertaken with relevant Local and State government authorities, and other stakeholders. This sub-section summarises the consultation processes undertaken during the preparation of the proposal.

The proponent will undertake further consultation with the key stakeholders during the future Project/Development Application stage.

City of Ryde Council

The proponent has been working closely with Ryde Council over the past 4 years in regards to their land holdings in the Macquarie Park Corridor. As part of this ongoing consultation process Council has been heavily involved in shaping the proposed built form on the site, including the Design Competition held for the initial concept design.

Rail Corp

The proponent met with RailCorp asset management engineers on the 28th of July 2010 to discuss the impacts of the proposed Concept Plan on the rail corridor beneath the site. The comments and concerns of RailCorp were then factored into the design of the rail corridor. RailCorp confirmed that they have not further developed specific guidelines for the ECRL project.

6.0 Draft Statement of Commitments

6.1 Urban Design

The proponent commits to the civic plaza along Waterloo Road and through-site links generally in accordance with proposed Concept Plan.

6.2 Macquarie Park Station

An assessment of the pedestrian and amenity impacts of the development will be undertaken during the Project / Development Application stage to ensure that the development will have no adverse impacts on pedestrian movements or amenity around Station.

6.3 Transport and Accessibility

A Workplace Travel Plan (WTP) will be prepared in accordance with the requirements of DCP 2010.

An assessment of the construction traffic will be undertaken at the Project / Development Application stage.

6.4 Geotech

Further detailed Geotechnical Analysis will be undertaken during the detailed design stage.

The proponent commits to ensuring that all necessary measures will be undertaken to ensure that future development on the site will have no adverse impacts on the existing ECRL infrastructure.

6.5 Contamination

The proponent commits to undertake the following actions during site preparation:

- The UST be decommissioned (by removal) which will allow for the exaction of impacted soils (if any), and appropriate sampling of the UST pit excavation to validate removal of contaminated soil.
- The asbestos and associated impacted soils located on the south west boundary of the 396 Lane Cove Road property be removed from the site by an appropriately licensed asbestos removal contractor.

6.6 CPTED

A detailed CPTED assessment will be undertaken at the project/development application stage.

6.7 Wind

All future Project / Development Applications will provide landscaping at the ground level generally in accordance with the Landscape Concept Plan to mitigate potential wind effects generated by the proposed buildings.

6.8 ESD

The propose development will target a 5 Star Green Start Office Design (v3) rating and a 5 Star NABERS Office Energy Rating.

The proponent also commits to exploring the following environmental interviews:

- natural light and ventilation;
- orientation specific sun shading to minimise heat gain;
- low temperature VAV or chilled beams;
- rainwater harvesting;
- filtration and recycling;
- solar water heating; and
- low embodied energy in materials.

6.9 Tree Removal

The landscaping scheme in all future Project / Development Applications will adopt the following principles:

- that the planted trees on the perimeter be retained, where practicable, with the exception of the trees identified in the Vegetation Assessment; and
- future landscaping incorporate dense perimeter planting, with replacement planting of local native tree, shrub and understorey species.

7.0 Conclusion

This Concept Plan seeks approval for the redevelopment of 396 Lane Cove Road into four commercial buildings known as the Macquarie Park Commerce Centre.

The proposal represents a significant opportunity to redevelop a dated light industrial building next to the Macquarie Park Station and will provide a series of building envelopes capable of delivering a landmark development on the corner of Waterloo Road and Lane Cove Road at the heart of the Macquarie Park Corridor.

The assessment of the Concept Plan has demonstrated that the proposed development will have minimal adverse environmental effects. In terms of the bulk and scale, an assessment against LEP 2010 and DCP 2010 demonstrated that whilst the proposal does not comply with the height and massing controls in the LEP, the proposal is generally consistent with the DCP and design intent of Amendment 1. Furthermore, where variations to the development standards are proposed, the variations are strongly supported by the strong merits of the project, substantial public benefit, and the absence of any adverse amenity impacts.

The proposal will result in the following positive economic, environmental and public benefits by:

- creating a new publicly accessible civic plaza adjoining the Station along Waterloo Road;
- providing multiple through-site links between the Station and other developments to the south and west;
- generating activation at ground level around the Station and adjacent streets;
- providing a new strip of retail along Coolinga Street inline with Council's vision for the Street;
- amalgamating and redeveloping two low density light industrial developments located directly adjacent to the Macquarie Park Station;
- providing high grade commercial building with large floor-plates;
- providing a landmark building at a key site in the Macquarie Park Corridor which will be a catalyst for further commercial development to occur near the Station portals;
- consolidating 5 existing vehicle access points into to 1; and
- providing various other urban design and public domain improvements.

Given the environmental planning merits described above, and significant public benefits proposed, it is requested that the Minister approve the Concept Plan under Section 75O of the EP&A Act.