PREFERRED PROJECT REPORT

Whiteside Street, North Ryde, Sydney

April 2012

urbis

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Associate Directors	Ian Cady
	Andrew Harvey
Consultant	Nicholas Dowman
Job Code	SA4341
Report Number	SA4341_revPPR_Final

URBIS
Australia Asia Middle East
urbis.com.au

TABLE OF CONTENTS

TABLE OF CONTENTS

FIGURES:

PICTURES:

TABLE OF CONTENTS

TABLES:

Statement of Validity

Submission of Environment Assessment:

Prepared under Part 3A of the Environmental Planning and Assessment Act 1979.

Environmental Assessment prepared by:

NAME:	ANDREW HARVEY (ASSOCIATE DIRECTOR)	IAN CADY (ASSOCIATE DIRECTOR)
Qualifications	Bachelor of Planning (UNSW)	BA Geography and Planning (UNE) Diploma of Urban and Regional Planning (UNE)
Address:	Urbis Pty Ltd. Level 21, 321 Kent Street Sydney NSW 2000	Urbis Pty Ltd. Level 21, 321 Kent Street Sydney NSW 2000
In respect of:	5 Whiteside Street and 14 & 16 David Avenue, North Ryde	5 Whiteside Street and 14 & 16 David Avenue, North Ryde

Applicant and Land Details

APPLICANT:	EGC CUSTODIAN SERVICES PTY LTD
Applicant Address:	Level 14, 345 George Street Sydney NSW 2000
Subject Site / Land to be developed:	5 Whiteside Street and 14 & 16 David Avenue, North Ryde
Lot and DP	Lot 6 DP 260000, Lot 3 DP25688 & Lot 4 DP25688
Project Summary:	Concept Plan for the demolition of the existing dwellings, excavation of two stepped basement car park levels, and the construction of 163 residential units in four buildings: ▪ 1 x 6 storey building (Building A) ▪ 1 x 2-3 storey building (Building B) ▪ 1 x 2 storey building (Building C) ▪ 1 x 2 storey building (Building D)

Preferred Project Report

Preferred Project Report is attached.

Declaration

We certify that the contents of the Preferred Project Report to the best of our knowledge, has been prepared as follows:

- In accordance with the requirements of the Environmental Planning and Assessment Act 1979 and Environmental Planning and Assessment Regulations 2000; and
- The information contained in this report is true in all material particulars and is not misleading.

SIGNATURE:	REVIEWED BY
Name: Nicholas Dowman – Consultant, Urbis Pty Ltd	Name: Ian Cady – Associate Director, Urbis Pty Ltd
Date: 4 April 2012	Date: 4 April 2012

Executive Summary

OVERVIEW

This application seeks Concept Plan approval for residential development at 5 Whiteside Street and 14 & 16 David Avenue, North Ryde. The Minister declared the project to be one to which Part 3A of the Act applies on 15 October 2010, with Director General Requirements (DGRs) issued on 27 January 2011.

An Environmental Assessment (EA) was submitted for 'Test of Adequacy' on 9 February 2011, with the review of adequacy issued by the Department of Planning and Infrastructure (DPI) on 4 March 2011.

Urbis Social Policy undertook consultation activities over a four week period in February and March 2011 including a community information and feedback session held on 16 March 2011. Matters raised at the consultation assisted in shaping the current Concept Plan layout, including a reduction in maximum building height adjacent to key residential interfaces, and vehicular access arrangements to minimise traffic generation and car parking impacts in the surrounding area.

Public exhibition of the EA was from 11 August to 9 September 2011. The DPI issued a letter following exhibition identifying their outstanding issues with the project. The Preferred Project has responded to these issues and provided the rationale in the Preferred Concept Plan.

The NSW Government has recently repealed Part 3A of the *Environmental Planning and Assessment Act 1979*. However, Schedule 6A of the EP&A Act provides transitional provisions for certain projects that were within the Part 3A process. Part 2(1) of Schedule 6A states that projects which have valid DGRs issued on or before 8 April 2011 (where the DGRs are less than two years old as of that date) will remain as Part 3A projects. Therefore, the transitional arrangements confirm that Part 3A still applies to the project

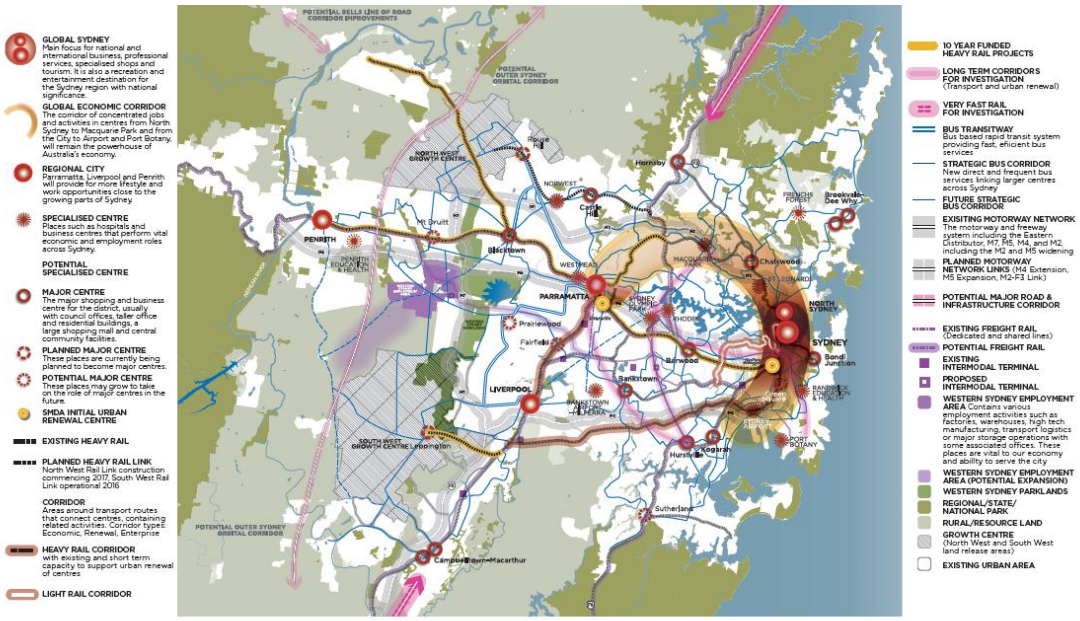
The original concept design comprised 213 dwellings within four buildings ranging from 2-8storeys and basement parking for 311 cars. In response to issues raised within submissions following public exhibition, the scheme has been amended to comprise 163 apartments, with building heights ranging from 2 to 6 storeys, and basement car parking for 225 cars.

Therefore, the Preferred Project includes significant modifications made in response to issues raised during the assessment process. These modifications significantly mitigate the perceived and actual environmental effects of the project and it is therefore recommended for approval subject to standard conditions.

STRATEGIC PLANNING CONTEXT

The Macquarie Park Corridor is the northern anchor of the "Global Economic Corridor" and will be a major focus of future employment growth, increasing by 19,000 jobs and 900,000sqm of commercial floorspace by 2036. To support this growth the recently completed Chatswood to Epping rail link provides three new rail stations within the corridor.

Global Economic Corridor



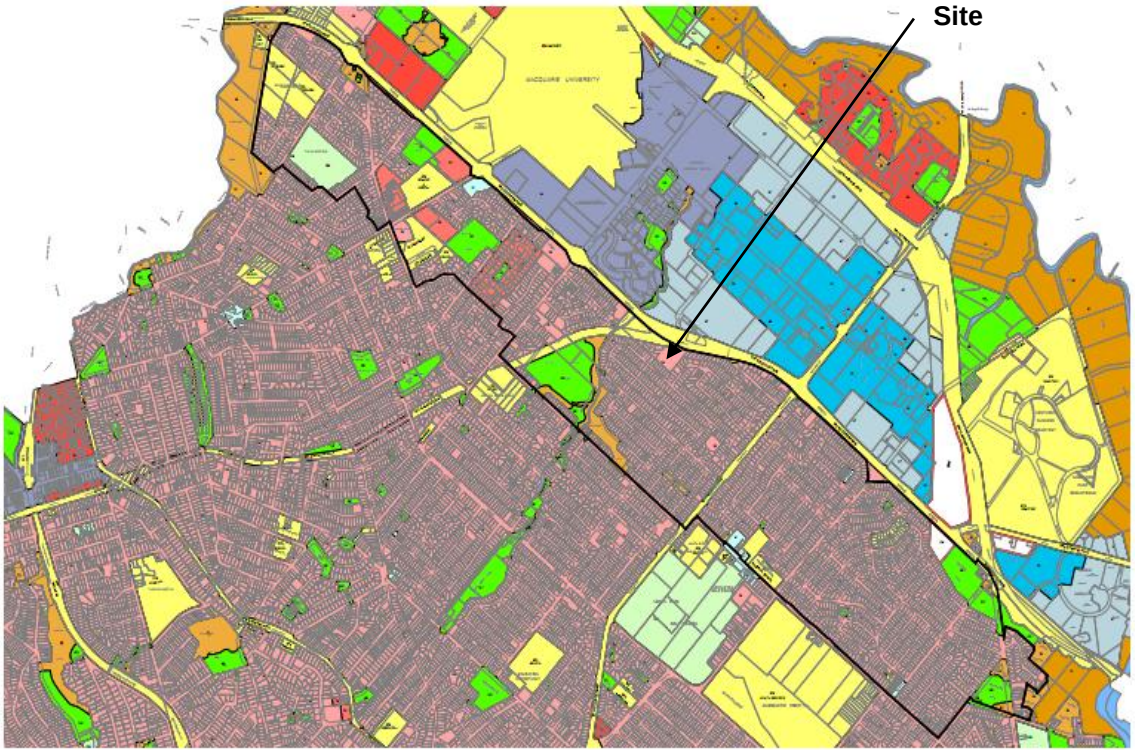
Source: Metropolitan Plan for Sydney 2036 (pg19)

It is recognised that land within the corridor needs to be reserved for future employment purposes, but this limits the opportunity for centre-supporting housing that allows people to live and work in the same locality. It also compromises the potential vitality of the corridor, which tends to shut down outside business hours.

Whilst there are opportunities to provide housing within the Macquarie Park Corridor (i.e. adjacent to Macquarie University Station), Ryde LEP 2010 prohibits residential uses throughout much of the Corridor, and particularly in the vicinity of Macquarie Park Station. On 3 August 2010 Ryde City Council resolved to endorse the recommendations contained within the Draft Ryde Housing Study 2010 to inform the Draft Comprehensive LEP 2011 and Draft DCP 2011. Consistent with one of the key actions of the Metropolitan Plan for Sydney 2036 to *"locate 80% of all new housing within walking distance of centres of all sizes with good public transport"*, one of the key recommendations within the Housing Study was to undertake a study to:

> *"Explore the introduction of **transition areas fronting Epping Road** to allow for a mix of housing styles including medium density residential housing to cater for the increasing student and worker population from the University and within Macquarie Park Corridor. Epping Road acts as a barrier, separating Macquarie Park from the residential areas to the south. However the southern side of Epping Road still has relatively **good access to the employment, retail, entertainment and public transport opportunities** within Macquarie Park, as well as good access to the nearby Lane Cove National Park. The area south of Epping Road also has **good access to the regional road** network."*

The figure below indicates the area proposed for investigation for potential future residential growth.



Zoning map of the area south of Epping Road showing the outline of the area proposed for investigation of potential future transition areas

The Council's resolution to investigate the area to the south of Epping Road acknowledges the strategic role and function that areas adjacent to Macquarie Park Corridor can provide. The Whiteside Street site is part of a very limited supply of such land within the investigation area that has been consolidated into a viable site for higher density residential flat development, and therefore represents a strategic opportunity to:

- Contribute to the achievement of housing targets.
- Enliven the Macquarie Park Corridor.
- Provide opportunities to live near jobs within the corridor.
- Increase the supply of transit oriented housing to shift transport movements from cars to public transport, walking or cycling, thereby reducing congestion and $C0^2$ emissions.
- Utilise existing spare capacity within the recently completed Chatswood to Epping rail link.

WALKING DISTANCE AND ROUTE FROM SITE TO MACQUARIE PARK & MACQUARIE UNIVERSITY STATION

LOCAL CONTEXT

The site is within walking distance of a range of services and amenities, including local shops, doctors, schools, employment, public transport, a regional cycleway and numerous parks and open spaces. It is also accessible to the regional retail and entertainment facilities within the Macquarie Shopping Centre.

Whilst the site is currently zoned for, and surrounded by, low density, predominantly detached housing, it is of sufficient size to accommodate multi-level buildings with suitable setbacks and lower scale buildings at the interface to surrounding properties to prevent adverse impacts on surrounding properties.

THE ORIGINAL CONCEPT PLAN

The original Concept Plan comprised 213 dwellings within five buildings ranging from 2 to 8 storeys and basement parking for 311 cars. Lower scale 2-3 storey buildings were located adjacent to adjoining low density housing, with a maximum height of 8 storeys concentrated towards Epping Road.

RESPONSES TO DEPARTMENT OF PLANNING AND INFRASTRUCTURE & PUBLIC SUBMISSIONS

Key changes between the originally submitted Concept Plan and the Concept Plan the subject of this Preferred Project Report are:

Height, Built Form and Density

Density

The Preferred Concept Plan proposes 163 units compared to 213 units proposed under the original Environmental Assessment. The overall floor space has been reduced from 21,715m^2 (FSR 1.59:1) to 18,027m^2 (FSR 1.29:1). This represents a significant reduction in density, which is also reflected in the bulk and scale of the proposed built form.

Height

Height concerns were predominantly focussed on Building A, which has now been reduced from 8 storeys to 6 storeys (19.2 metres). This reduces the previous disparity with surrounding low scale forms.

Setbacks

The setback of building A to adjoining properties has been increased to mitigate the difference in scales. Additionally the upper two levels of the building have also been setback, to create a more transitional form.

Access

Traffic and Parking

Direct access to David Avenue was originally proposed by the applicant at the 'Test of Adequacy' stage. Following concerns raised during community consultation about 'rat-running' in local street network, the access was deleted from the EA scheme. However, the RMS has specifically supported the reintroduction of the provision of egress only access to David Avenue and such access is therefore again proposed.

This access will be restricted to exit for residents under boom gate control.

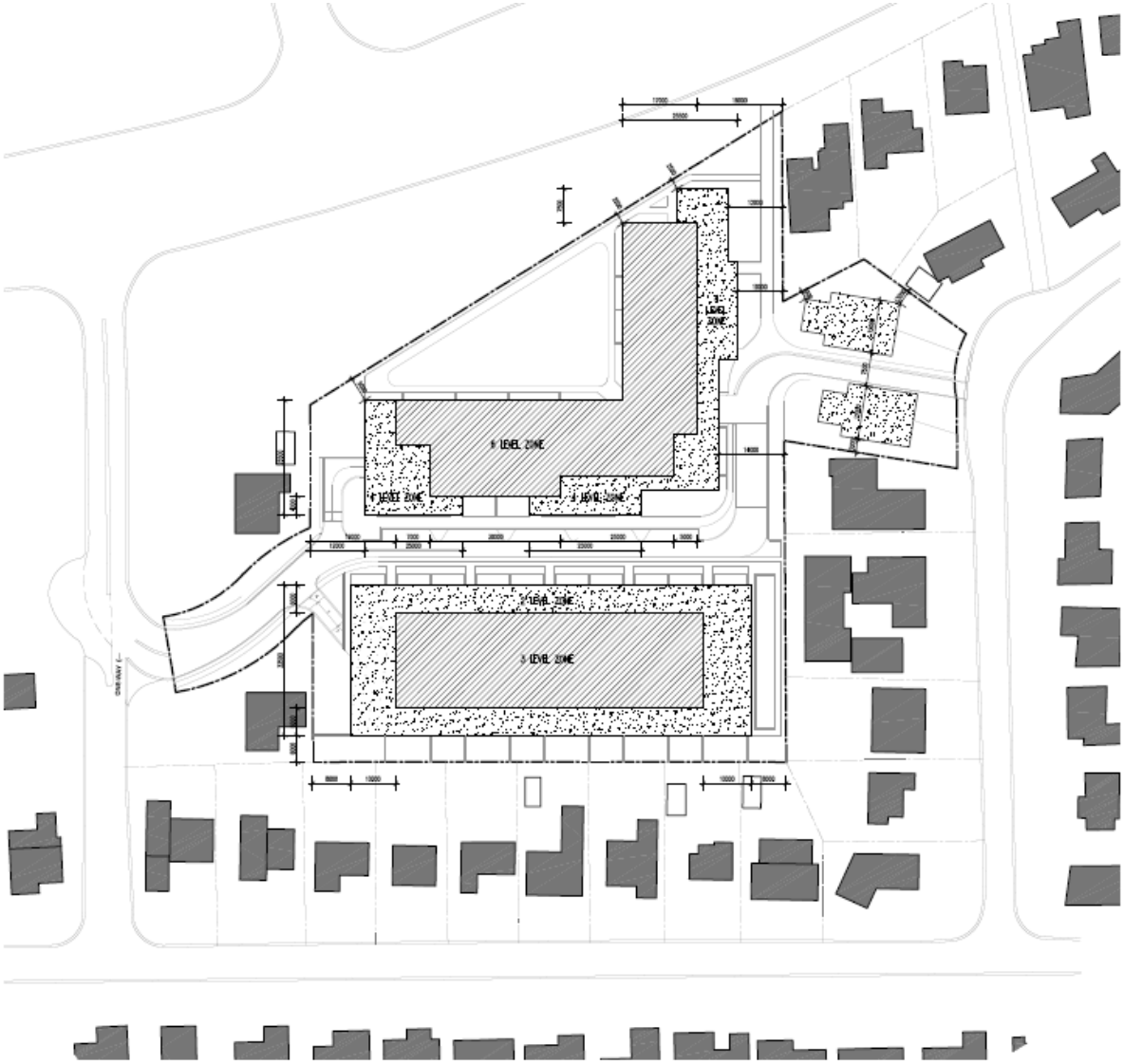
The additional bus bay proposed on Epping Road within the exhibited Environmental Assessment has been removed from the proposal as requested by the RMS.

All supplementary documents, such as the Traffic Report and SEPP 65 Documentation, have been amended to reflect the above modifications.

PREFERRED PROJECT CONCEPT PLAN

This PPR Concept Plan represents an evolution of the original scheme proposed in the submitted and exhibited Environmental Assessment Report. Design evolution has occurred in direct response to issues raised in consultations undertaken by both the applicant and the Department of Planning. It also responds to technical assessments undertaken by the Department of Planning and Infrastructure, Ryde City Council and various public authorities to which the Department of Planning and Infrastructure referred the original application.

FIGURE 1 – PREFERRED PROJECT CONCEPT PLAN



Picture 1 – Preferred Project Concept Plan

Picture 2 – Indicative Ground Floor Plan

PART 3A OF THE EP&A ACT

The project was declared one to which Part 3A of the *Environmental Planning and Assessment Act* (the Act) applies on 15 October 2010. DGRs were subsequently issued on 27 January 2011. The Minister has also authorised the submission of a Concept Plan that outlines key development parameters, such as land use, building envelopes, landscape concept, car parking numbers and vehicular access arrangements for the proposal. Subject to approval of the Concept Plan, separate Project Approval will be sought for the detailed design of the project.

The Director-General (DG) of Planning has also issued Environmental Assessment Requirements (EARs) for the preparation of the Environmental Assessment (EA) of the project. The Concept Plan and EA have been prepared in accordance with these requirements.

The NSW Government recently announced that it will introduce a Bill to repeal Part 3A of the EP&A Act. The Minister for Planning and Infrastructure has put in place a number of interim arrangements pending that repeal. It is proposed to amend the State Environmental Planning Policy (Major Development) 2005 to remove the following class of development:

> *"Development for the purpose of residential, commercial or retail projects with a capital investment of more than $100 million."*

However, Schedule 6A of the EP&A Act has clarified that projects which have valid DGRs issued on or before 8 April 2011 (where the DGRs are less than two years old as of that date) will remain as Part 3A projects.

Therefore, while the project does fall within the above class of development, the transitional arrangements confirm that Part 3A still applies to the project. The Minister will delegate his Part 3A determination role for applications made on behalf of private proponents to the Planning Assessment Commission (PAC) or senior officers of the Department of Planning and Infrastructure.

PLANNING CONTROLS AND POLICIES

While the project exceeds the height and density provisions of the R2 Low Density Residential zone under Ryde Local Environmental Plan 2010, the proposed intensification of the site is directly consistent with the principles of a range of broader strategic planning considerations, such as the NSW State Plan 2010, Metropolitan Plan for Sydney 2036, the Draft Inner North Subregional Strategy, the Metropolitan Transport Plan 2010 and Integrating Land Use and Transport – A Planning Policy Package 2001.

Aside from the LEP controls, the project is consistent with all other relevant guidelines and controls, including the Residential Flat Design Code.

The outcomes of the Ryde Housing Study 2010 and recommendations within it to explore additional housing opportunities (such as south of Epping Road) will inform the future evolution of the Ryde LEP and DCPs.

BUILT FORM & URBAN DESIGN

The project has been designed to reconcile various competing design considerations and provides a high quality built form outcome that integrates with the surrounding environment.

The bulk, height and scale of the project have been carefully considered to address the surrounding properties and the scale of the street. In particular, lower scale 2-3 storey buildings are located adjacent to adjoining low density housing, with a maximum height of 6 storeys concentrated towards Epping Road. This ensures that solar access, privacy and boundary treatments are sympathetic to neighbouring properties.

ENVIRONMENTAL AND RESIDENTIAL AMENITY

The Concept Plan provides amenity for the proposed dwellings in accordance with the SEPP 65 - Design Quality of Residential Flat Development and the Residential Flat Design Code (RFDC).

The project has also been designed in accordance with the Department of Planning and Infrastructure Interim Guidelines for Development near Rail Corridors and Busy Roads, and incorporates a range of measures to mitigate the effects of noise from traffic on Epping Road.

TRANSPORT AND ACCESSIBILITY

One of the fundamental principles of the recently published Draft Centres Design Guidelines is to:

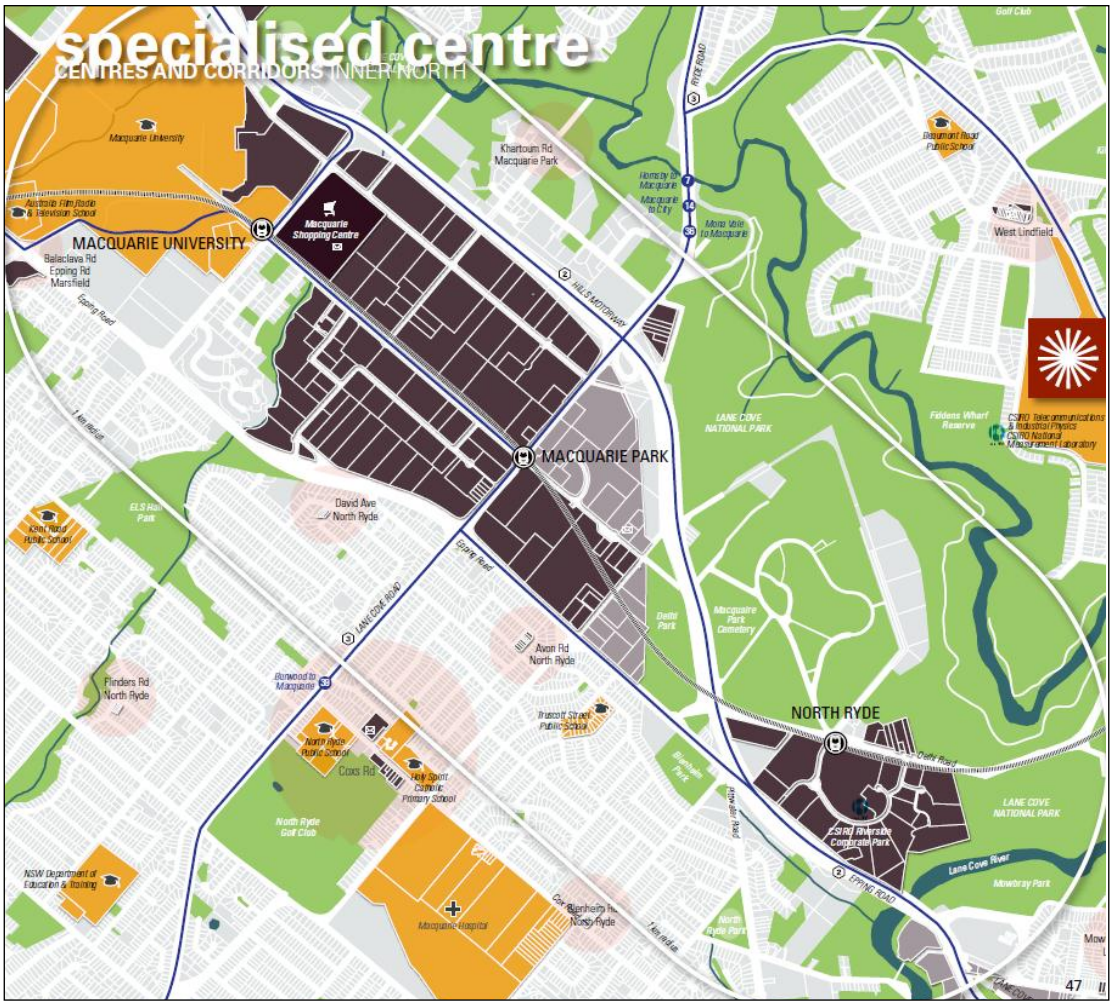
> *"Concentrate the **highest appropriate densities** of housing with jobs, services and public facilities in integrated, mixed use centres **within an acceptable walking distance** of major public transport nodes, such as rail stations and high-frequency bus routes" (our emphasis)*

The site is ideally located to benefit from a range of transport options including train, bus, cycling and walking and therefore embodies the principles of transit oriented development. In addition to being located well within 1km walking distance of both Macquarie Park and Macquarie University Railway Stations (consistent with the recent Metropolitan Plan for Sydney 2036 and the Draft Centres Design Guidance), the site is serviced by a range of local and regional bus routes. A wide range of parks, shopping services and schools are located within walking distance and the site has immediate connectivity to the regional bicycle path network.

Located adjacent to Epping Road, the site is also easily accessible by private vehicle.

The proposal is seeking vehicle connection to Epping Road. This will allow egress onto Epping Road, but restrict ingress and egress to the site via Whiteside Street. Restricted access via David Avenue to allow access to Lane Cove Road is also proposed (using controlled exits for residents under boom gate control). The proposal will therefore restrict additional impacts on the surrounding local road network.

FIGURE 2 – MACQUARIE PARK SPECIALISED CENTRE (NOTE: 1KM WALKABLE CATCHMENT BOUNDARY RELATIVE TO SITE)



ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD)

The underlying principle of concentrating new development around major transport nodes in existing areas is one of the most important sustainability objectives for the future development of Sydney, and significantly contributes to:

- Containment of the urban footprint of Sydney.
- Better utilisation of existing infrastructure.
- Reduced private car use and associated congestion and $C0^2$ emissions.

ESD principles will be incorporated into the design, construction and operation of the project including measures to minimise water, energy use, and the discharge of pollution. To optimise the social sustainability of the project, a range of housing options is proposed, and the landscape concept has been designed to provide a range of communal spaces that positively encourage gardening and other social activities for residents, including a communal market garden to:

- Reflect the market gardening and orcharding history of the locality.
- Mitigate the environmental costs of food transport by allowing on-site food production.
- Increasing opportunities for community engagement, and reducing potential for social isolation in high density living.
- Create opportunities to positively engage the cultural diversity of the locality through productive gardening.

DRAINAGE AND STORMWATER MANAGEMENT

Water quality is to be managed on site with the implementation of Water Sensitive Urban Design best practice principles including rainwater tanks, litter baskets, onsite detention tanks and bio-retention basins.

SUMMARY

While the project will have a transformational effect on the local area and departs from the underlying low density zoning, it represents an opportunity to provide transit oriented housing to complement future employment growth and significant existing transport infrastructure within the Macquarie Park Corridor.

While different in scale and form from its immediate neighbours, the design and massing of the project ameliorates potential boundary impacts, such that it will not result in any unreasonable environmental effects upon its neighbours.

We therefore have no hesitation in recommending that the Minister Approve the proposed Concept Plan, subject to the Statement of Commitments contained therein.

1 Introduction

This Preferred Project Report (PPR) comprises part of an application for approval of a Preferred Concept Plan pursuant to Section 75M of the Environmental Planning and Assessment Act 1979 (the Act) and responds to the Director General's (DG) Environmental Assessment Requirements (EARs) issued on 27 January 2011 under Section 75F of the Act (included at Appendix A)

The project was publicly exhibited by the Department of Planning and Infrastructure (DPI) from 11 August to 9 September 2011. Submissions received were provided to the proponent and have been addressed in the design evolution of the Concept Plan.

The Preferred Project Concept Plan facilitates residential development at 5 Whiteside Street and 14 & 16 David Avenue, North Ryde (the site) and was determined by the Minister to be a project to which Part 3A of the Act applies on 15 October 2010. Specifically, the Concept Plan proposes the demolition of the existing structure on the site, excavation of two stepped basement levels and the construction of 163 residential units in buildings of 2-6 storeys.

This PPR details:

- The site and context
- Background
- Stakeholder Consultation
- Strategic Context
- Response to Submissions
- The Concept Plan
- Response to the DGs EARs.

2 Site and Surrounding Development

2.1 THE SITE

The site is known as No. 5 Whiteside Street and 14 & 16 David Avenue, North Ryde, and is legally described as Lot 6 DP 260000, Lot 3 DP 25688 and Lot 4 DP 25688. A site survey plan of the site is included at Appendix B. It has an overall site area of 1.39 Ha, comprising:

SITE ADDRESS	LEGAL DESCRIPTION	AREA
5 Whiteside Street, North Ryde	Lot 6 DP 260000	12,500m^2
14 David Avenue, North Ryde	Lot 4 DP 25688	735m^2
16 David Avenue, North Ryde	Lot 3 DP 25688	702m^2

The site is located on the southern side of Epping Road, with a set back up to 20m due to a road widening reserve (owned and controlled by the RMS). Vehicular access to the property is from Whiteside Street, a local road which can be accessed via left in only from Epping Road.

The site is currently zoned R2 Low Density Residential but currently accommodates a horse riding school known as 'Galloping Grapes', in addition to two detached houses at 14 and 16 David Avenue.

FIGURE 3 – AERIAL PHOTOGRAPH OF THE SITE (SOURCE: GOOGLE MAPS)

FIGURE 4 – LOCAL CADASTRE (SOURCE: RP DATA)

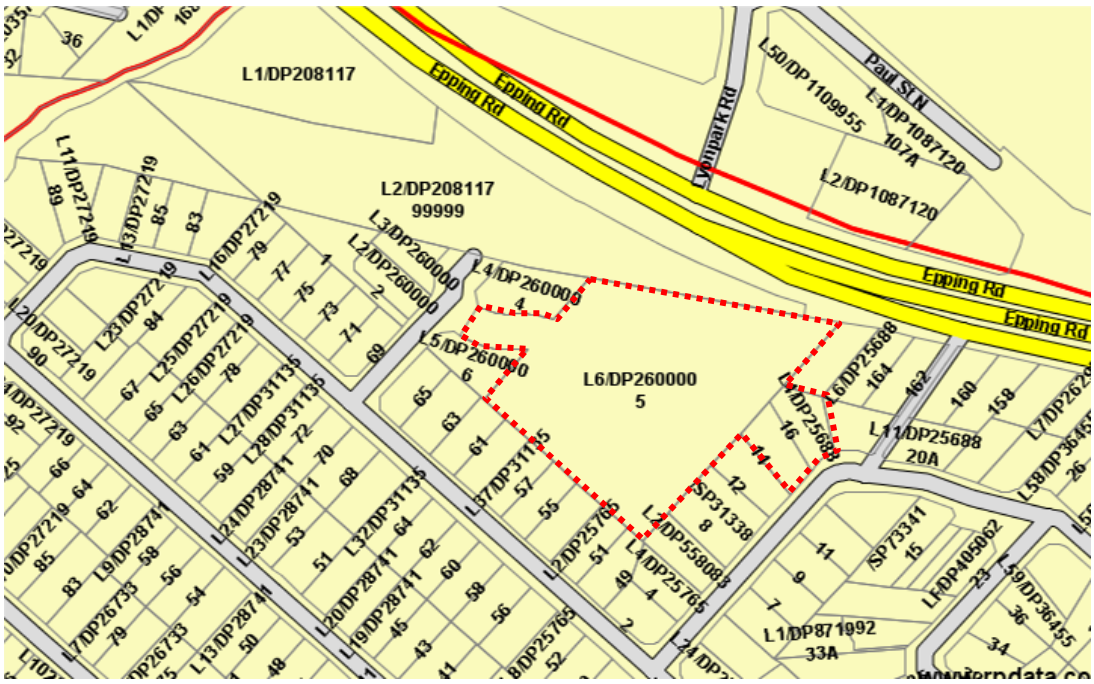


FIGURE 5 – EXISTING DEVELOPMENT ON THE SITE (SOURCE: NEARMAP)

2.2 VEGETATION

The site contains numerous trees consistent with a typical suburban environment. An Arboricultural Impact Assessment (Appendix C) has been prepared by Garry Clubley to assess the condition and significance of existing vegetation. The report identifies several trees to be removed to facilitate the development, as well as several trees to be retained adjacent to interfaces with adjacent properties. A discussion of the significance of these trees is included in the report.

2.3 SOIL & GROUNDWATER CONDITIONS

2.3.1 Soil

The site is underlain by Ashfield Shales with underlying Hawkesbury Sandstone to the east. Investigations have revealed a generalised subsurface profile comprising surficial topsoil and fill over residential silty clay, with shale and sandstone bedrock at moderate depth.

A Phase 1 Preliminary Environmental Site Assessment undertaken by Environmental Investigation Services (Appendix D) was prepared to assess the soil and groundwater conditions at the site in relation to these past uses and comment on the suitability of the site for the proposed land use. As part of this assessment a site inspection, review of historical site use, examination of regional aerial photographs and a review of geology and groundwater conditions were undertaken.

The report's conclusions and recommendations are summarised below:

- *The area has formerly been used as semi-rural land with cultivated sections. Potentially contaminating activities/facilities at the site include the use of chemicals associated with agricultural and farming practices.*
- *The results of the laboratory tests on selected soil samples covered a range of contaminants commonly encountered in the Sydney region. Elevated levels of contaminants were not detected in the samples analysed. All results were less than Ecological Investigation Levels and the appropriate Health Investigation Levels.*
- *The site can be made suitable for the proposed development provided that:*
  - *An additional investigation is undertaken to increase the borehole density to the minimum sampling density recommended by the DECC;*
  - *A hazardous building materials survey is undertaken on all site structures;*
  - *The surface of the site is thoroughly inspected for the presence of asbestos cement fragments;*
  - *All fill material that will be disposed off site is assigned an appropriate waste classification; and*
  - *Any additional contamination issues that are discovered during subsequent investigation are addressed in an appropriate manner.*

2.3.2 Groundwater

A Geotechnical Investigation report has been prepared by Jeffery & Katauskas (Appendix E) to obtain geotechnical information on subsurface conditions as a basis for preliminary comments and recommendations on excavation conditions, excavation support, retaining walls, footings and on-grade floor slabs.

Further, an addendum to the Phase 1 Preliminary Environmental Site Assessment was also undertaken to respond to groundwater matters on the site (DGR 13), and with the Geotechnical report collectively make recommendations in relation to groundwater resources. The reports consider that there is a moderate probability that the proposed development will intercept the water table at the site given that the proposed basement car parking envelope levels extends below the water table (i.e. 7.5 metres below). Dewatering may be required in response to this during excavation works at the Project Application stage of development, which could be addressed by modelling the impacts of any dewatering and providing further seeking geotechnical analysis on how these effects should be managed.

2.4 SURROUNDING DEVELOPMENT

The site is located adjacent to Epping Road, which forms a distinct boundary between low density housing to the south, and multi-level industrial and commercial development to the north. Surrounding development is described in Table 1 below and is illustrated in Figures 6 and 7:

TABLE 1 – SURROUNDING DEVELOPMENT

TYPE	
Land Use – South	Land to the south consists primarily of low rise detached houses interspersed, and is primarily zoned R2 Low Density Residential under the Ryde Local Environmental Plan 2010 (the LEP). A number of these houses have had recent additional stories and extensions more recently which reflect the changing character of the North Ryde area.
Land Use – North	Immediately to the north of the site is a vacant RMS road reservation, which currently accommodates a range of containers and construction materials. Land to the north of Epping Road is primarily zoned for business and technology purposes, and accommodates large scale, employment generating development.
Land Use – East	To the east of the site is a range of single and double storey detached dwellings which have sole frontage and access to Epping Road and similar styles of dwellings fronting David Avenue.
Land Use – West	Land to the west of the site comprises low rise detached houses adjacent to the RMS road reservation and further to the west to Booth Reserve and Shrimptons Creek.
Parks	The site is located in close proximity to numerous parkland reserves including ELS Hall Reserve, Wilga Park and the Shrimptons Creek Bikeway which connects these parks. In addition the North Ryde Golf Course and the Lane Cove National Park are nearby.
Shopping	The site is close to local convenience retailing, including a Franklins Supermarket on Cox's Road. The regional Macquarie Shopping Centre is approximately 800m from the site.
Education	There are a number of schools in the local area including North Ryde Public School and Holy Spirit School, both located within 800m of the. In addition Macquarie University is also located less than 800m to the north west.
Medical	A Medical Centre is located 550m to the east of the site (on the western corner of the Lane Cove Road and Epping Road intersection). The medical centre offers a comprehensive range of medical services including: ▪ General Practice ▪ Pharmacy ▪ Physiotherapist ▪ Psychologist ▪ Pathologist ▪ Skin Cancer Clinic ▪ Dentist ▪ Podiatrist ▪ Chinese medicine ▪ Chiropractor In addition, the Macquarie Hospital is situated approximately 1.8km to the south-east of the site. While Macquarie Hospital specialises in mental illness and disorder, Royal North Shore Hospital together with Ryde Hospital form the Royal North Shore and Ryde Health Service, which provide comprehensive

TYPE	
	hospital services, including emergency and inpatient care. Ryde Hospital is located 3 km south-west of the site and Royal North Shore Hospital is 8km to the south-east.

FIGURE 6 – LOCAL FACILITIES

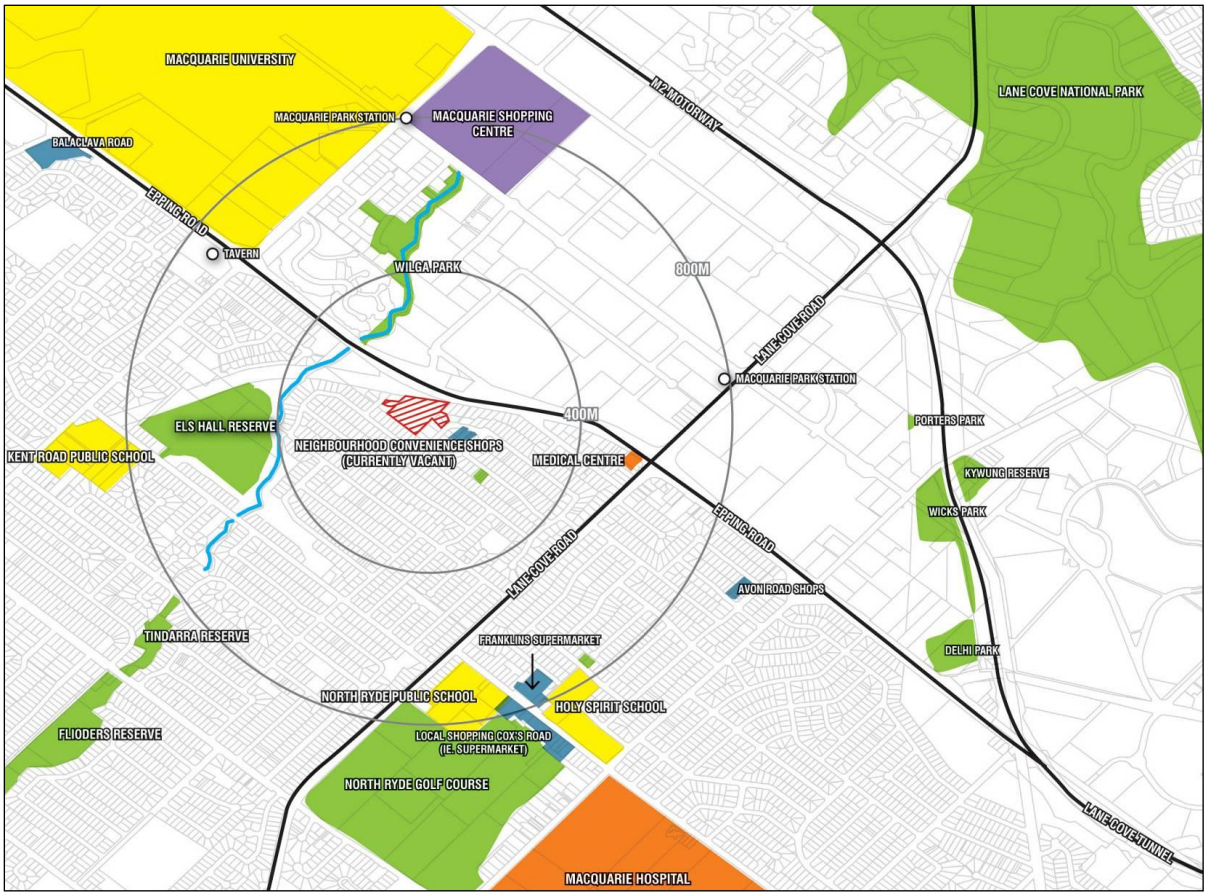


FIGURE 7 – SURROUNDING DEVELOPMENT CONTEXT

PICTURE 3 – THE AVAYA BUILDING DIRECTLY TO THE NORTH-EAST OF THE SITE

PICTURE 4 – LOOKING TOWARDS THE SITE'S WESTERN FRONTAGE FROM THE RMS ROAD RESERVATION.

PICTURE 5 – LOOKING EAST ALONG EPPING ROAD (SITE IS LOCATED ON THE FAR RIGHT)

PICTURE 6 – LOOKING EAST ALONG PARKLANDS ROAD WHICH COMPRISES OF MAINLY SINGLE AND TWO STOREY DETACHED HOUSING

PICTURE 7 – TWO STOREY DETACHED DWELLING IN PARKLANDS ROAD (TO THE SOUTH OF THE SITE)

PICTURE 8 – LOOKING NORTH TOWARDS MACQUARIE PARK FROM DAVID AVENUE.

PICTURE 9 – LOOKING NORTH TOWARDS MACQUARIE PARK FROM DAVID AVENUE.

PICTURE 10 – LOOKING NORTH TOWARDS MACQUARIE PARK FROM DAVID AVENUE.

2.5 DEMOGRAPHICS

There are 10,195 residents in the suburb of North Ryde based on data derived from the 2001 and 2006 ABS Census statistics. The following provides a brief discussion of the demographic characteristics of North Ryde in comparison with both the Ryde LGA and the Sydney Statistical Division (SD).

2.5.1 Age

The suburb has an older population and an above average median age of 40 years and a significantly higher proportion of residents aged 65 years and over (17.8%) than both Ryde LGA (14.5%) and Sydney Statistical Division (SD) (12.3%). In addition, the suburb represents a slightly lower than average percentage of persons that fall into the working age group of 25-54 years (41.8%) compared to the Sydney SD (44.1%).

2.5.2 Income and Affluence

The median household income of North Ryde is $1,238 per week, which is higher than the average for Sydney.

2.5.3 Housing and Housing Tenure

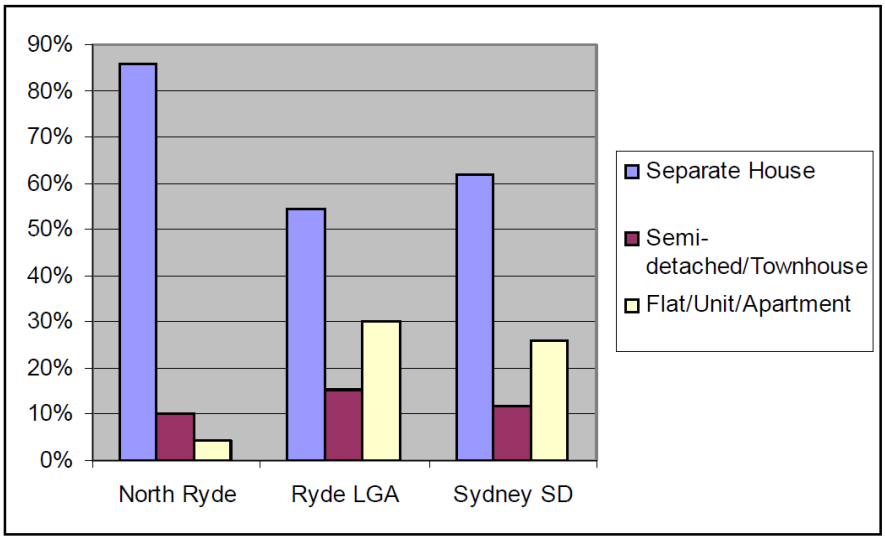
The majority (85.6%) of dwellings in Ryde LGA are separate houses. This proportion is, significantly higher than the rest of the Ryde LGA (54.5%). Flats, units or apartments only make up 4.2% of the dwelling stock in North Ryde, compared to 30% across the LGA and 25.7% in the Sydney SD as illustrated in Figure 8).

Rates of home ownership are high in North Ryde with 70.4% of residents either owning their homes or being in the process of purchasing their home compared to only 60.4% across the Ryde LGA and 61.2% in the Sydney SD.

Housing densities in North Ryde reflect the national average, with an average of 1.1 persons per bedroom, although the average household size is slightly greater at 2.8 persons per household compared to 2.6 persons nationwide.

The majority of families in North Ryde are couples with children (51.1%), slightly higher than Sydney at 49.3%, while 33% of families in both North Ryde and across Sydney are couple families without children.

FIGURE 8 – HOUSING STOCK IN NORTH RYDE



2.5.4 Employment

Unemployment in North Ryde is low at 3.5% compared to 5.3% in the Sydney SD. Employment profiles for the region reflects the prominence of Macquarie University, Ryde and Macquarie Hospitals, Macquarie Technology Centre and Riverside Corporate Park. 29.3% of Ryde LGA residents are employed as professionals, 17.7% as clerical and administrative workers and 13.7% as managers. The top three industries for these employment types are professional, scientific and technical services, education and training, and health care and social assistance. There is a lower than average number of persons employed in blue collar industries who reside in the LGA, possibly related to housing affordability in the area.

2.5.5 Implications

Given the low rate of multi-unit housing currently provided in North Ryde, combined with the increase in employment in Macquarie Park and the opening of the Epping-Chatswood rail link, demand exists for a greater range of housing options.

2.6 HISTORY OF THE AREA

The area from Sydney Cove to Parramatta, on the northern side of the Parramatta River, was originally known as Wallumetta and belonged to the aboriginal Wallumede people.

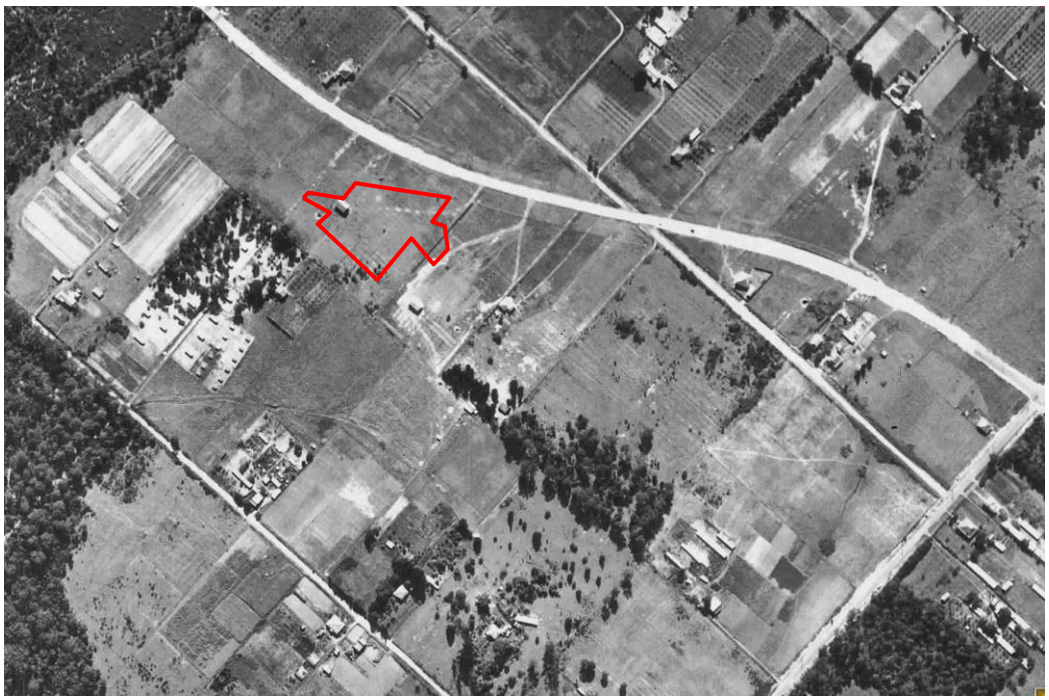
White settlement first occurred in the area, then named 'Field of Mars,' around 1792 as a result of grants given to eight marines.

Significant urbanisation of the area began in the late 1940s with the Ryde Housing Scheme. Throughout the 1950s the area continued to become more urbanised and the establishment of Macquarie University in the 1960s set the scene for the development of the Macquarie Park technology precinct.

The road reservation adjacent to the site was acquired to facilitate the Eastwood County Road which is a 55 year old unbuilt road proposal, stretching from Kissing Point Road at Dundas to Epping Road at North Ryde , via Eastwood. The reservation, wide enough to permit construction of a six-lane highway-standard road, was gazetted in July 1951 as part of the County of Cumberland Planning Scheme and is known as either "County Road No. 5012" or "Eastwood County Road".

The original land release of housing in the area has created a large amount of housing stock which is over 50 years old. Many of the original single storey dwellings in the immediate area have had additional stories and extensions more recently which reflects the more built up nature of the North Ryde area proximate to nearby transport options.

FIGURE 9 – NORTH RYDE 1943



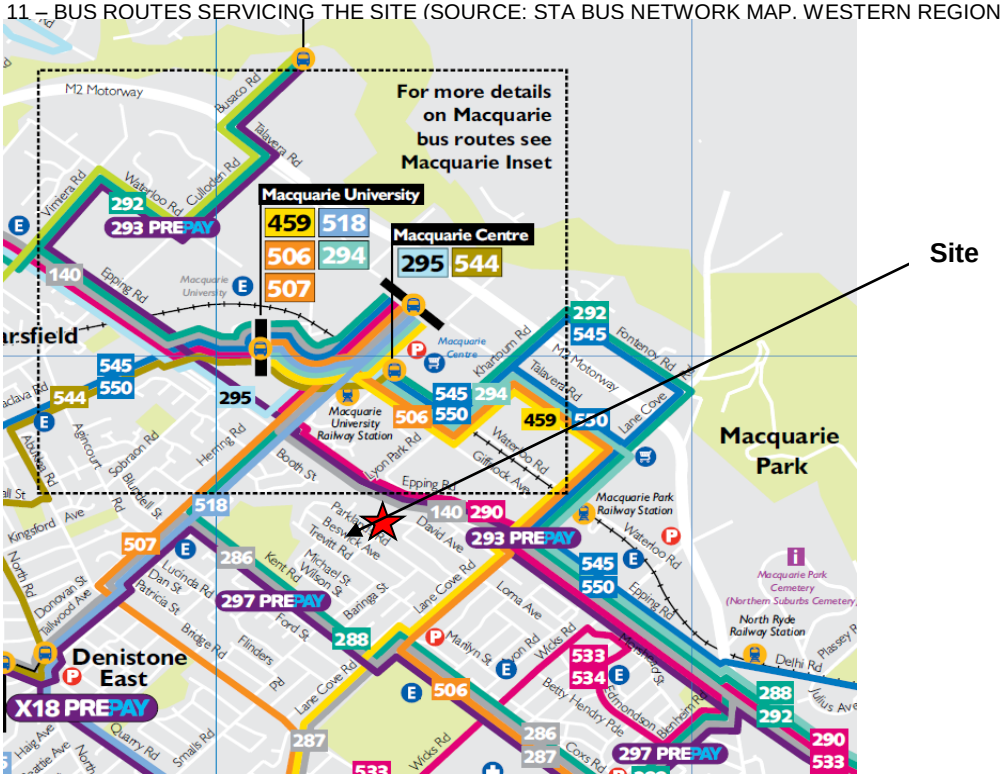
2.7 TRANSPORT

The project will be well serviced by a range of transport options.

The site benefits from excellent access to public transport and is serviced by both rail and bus. As shown in Figures 10 and 11, both the Macquarie University and Macquarie Park train stations are located within 1km of the site, and a number of regional bus routes have stops adjacent to the site.

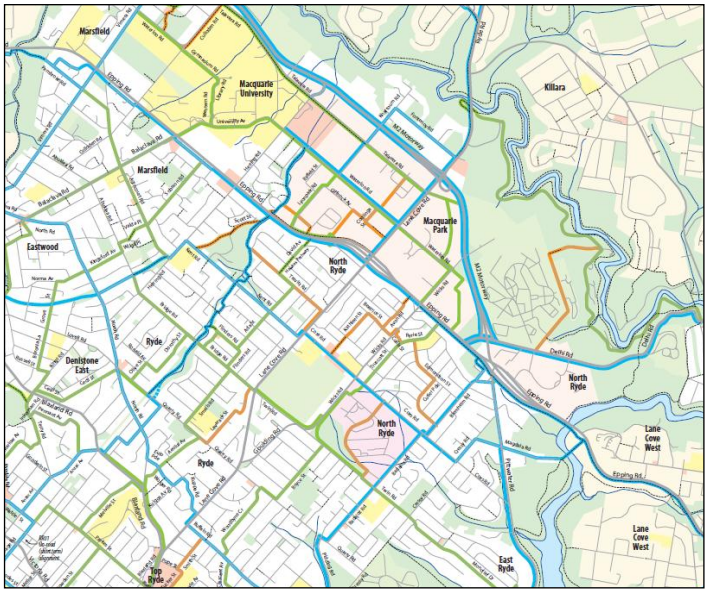
FIGURE 10 – WALKING DISTANCE TO MACQUARIE PARK STATION

FIGURE 11 – BUS ROUTES SERVICING THE SITE (SOURCE: STA BUS NETWORK MAP. WESTERN REGION GUIDE)



The project is also well located to benefit from active transport opportunities with a network of bike paths passing the site on Epping Road which provides access to a number of locations across the wider region (refer to Figure 12).

FIGURE 12 – BIKE PATH NETWORK



Source: Ryde Bicycle Strategy and Masterplan 2007 (Map 2, Page 14)

As previously discussed in Section 2.4 and illustrated in Figure 4, a range of facilities are located within walking distance of the site including park and recreation opportunities, schools and shopping.

An existing established road network also services the site including direct access to arterial roads (Lane Cove Road and Epping Road).

3 Strategic Context

3.1 METROPOLITAN PLAN FOR SYDNEY 2036

The Metropolitan Plan for Sydney 2036 ("The Metro Strategy") is the first comprehensive update of the 2005 Metro Strategy which was made available to the public on 16 December 2010. It is an integrated, long-term planning framework that will seek to sustainably manage Sydney's growth and strengthen its economic development to 2036 while enhancing its unique lifestyle, heritage and environment.

The updated Plan seeks to respond to the key challenges facing Sydney such as a growing and changing population, the need to locate more jobs closer to home, more efficient transport, tackling climate change and enabling a more sustainable city. Central to achieving these challenges is a focus on developing a 'City of Cities' structure which is defined by a compact, multi-centred and connected city structure enabling people to spend less time travelling to access work, services, markets or regional facilities.

One of the key underlying directions to achieve the envisaged centres structure is stipulated in Strategic Direction D of the Metro Strategy:

> *"A key action of this plan is the aim to **locate 80 per cent of all new housing within walking distance[1] of centres** of all sizes with good public transport. This will reduce car dependency and make walking, cycling and public transport more viable to more residents."* (our emphasis)

This is also coupled with the aim to build at least 70 per cent of new homes in the existing urban areas, increasing the proportion of homes within 30 minutes by public transport of jobs in a major centre, and enabling residential and employment growth in areas where there is available or planned public transport capacity.

As a broad policy approach the Metro Strategy encourages higher density housing (i.e. more than 60 net dwellings per hectare) in larger centres and Action D2.1 clarifies that "*new apartment blocks in larger centres will also be a significant component of future housing".*

The Metro Strategy therefore positively encourages well designed, higher density housing in walking distance of centres.

3.1.1 Sydney's Global Economic Corridor

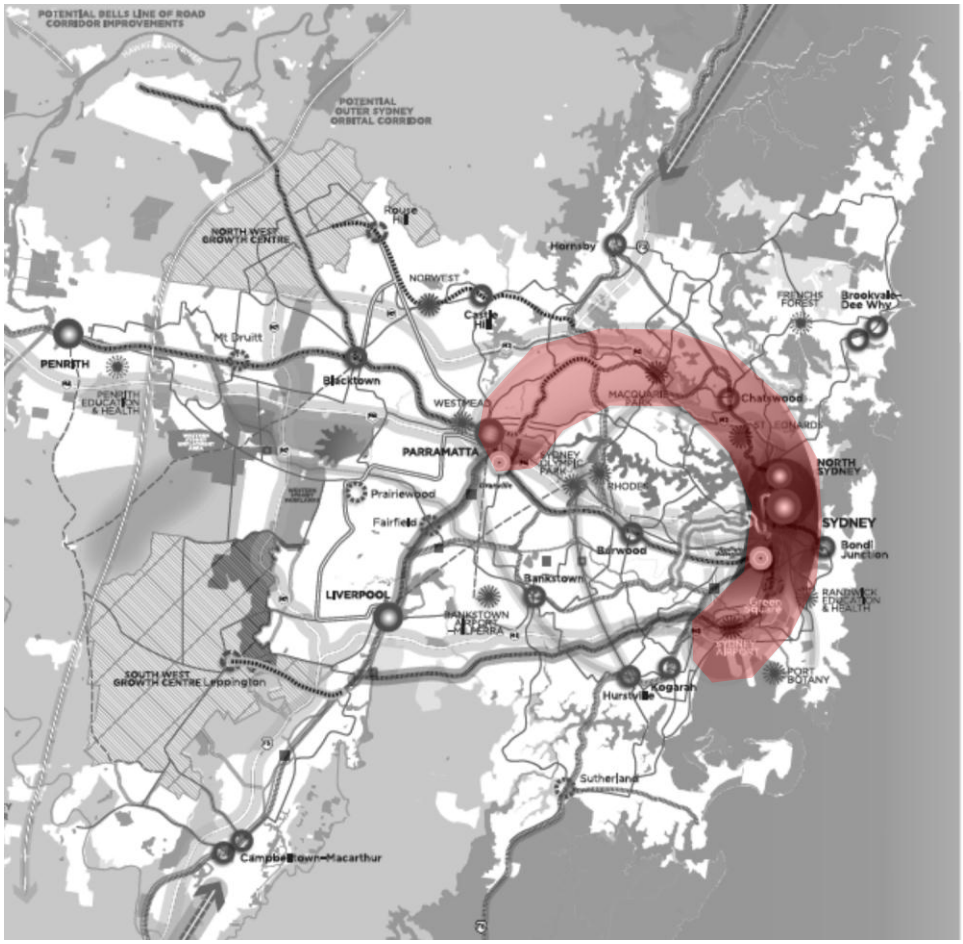
The site is located across Epping Road from the Macquarie Park Industrial / Technology Park. Macquarie Park is defined as a 'Specialised Centre' that performs "*vital economic and employment roles across Sydney*".

This area is recognised at all levels of government as a critical component of the Global Economic Corridor, which extends from Parramatta through Macquarie Park and the Sydney CBD to the airport and Port Botany (refer to Figure 13). The strategic economic importance of Macquarie Park has been reinforced by the completion of the Epping to Chatswood rail link, including three new railway stations in the Macquarie Park locality. The Metro Strategy describes the Global Economic Corridor as:

> *"It is a substantial corridor, clustering jobs and economic activity in finance and business services, information intensive industries, global and national transport and multimedia. Already near high income residential areas, access to the corridor was boosted by the Chatswood to Epping Rail Link which connects Macquarie Park and Macquarie University with further residential areas and Major Centres such as Chatswood and Hornsby" (pg. 129).*

[1] *The Metro Strategy discusses that the 'walking catchment' of a centre is the area from which people can be expected to walk to the centre's shops, services, and public transport. For Specialised Centres (i.e. Macquarie Park) the Strategy defines an approximate walking catchment of 1 kilometre.*

FIGURE 13 – GLOBAL ECONOMIC CORRIDOR



3.2 DRAFT INNER NORTH SUBREGIONAL STRATEGY

The site falls within the Inner North Subregion of the Metro Strategy. The Draft Inner North Subregional Strategy (the Subregional Strategy) provides the intended outcomes and specific parameters for the development of the subregion.

3.2.1 Centres and Corridors

The Subregional Strategy identifies the site within both the Macquarie Park Specialised Centre and the North Sydney to Macquarie Park Economic Corridor (the northern portion of the Global Economic Corridor).

The Macquarie Park Specialised Centre represents one of two specialised centres in the Inner North Subregion. The future intent of the Macquarie Park Specialised Centre is for:

> *"Macquarie Park to continue to evolve as Australia's leading technology park, with jobs growth, further investment and improved public transport accessibility."*

It is anticipated that the Macquarie Park Specialised Centre will provide a total of 58,000 jobs by 2036 and the Epping to Chatswood rail line and its associated stations is hoped to:

> *"… aid in furthering the economic role of Macquarie Park and improve accessibility to a broad labour market and suppliers."*

As illustrated in Figure 14, most land in the corridor has been reserved for the achievement of this intent with employment lands taking up most of the land along Epping to Chatswood railway. The principal objective of the Macquarie Park area is to promote employment, however in doing this the potential for housing development is limited. In order to ensure the full utilisation of the train line, and optimise

opportunities to live and work in the same locality, surrounding residential opportunities should be optimised.

Figure 14 also shows the network of smaller centres located around the site, providing local services and facilities within walking distance. Specifically, the Cox's Road shopping centre is identified as a Small Village and the Avon Road and David Avenue shops are both identified as Neighbourhood Centres. However, the David Avenue shops are currently mostly vacant. The establishment of increased residential development within the area will improve the viability of struggling smaller centres.

It is noted that Figure 14 also recognises the parkland, medical services and education facilities within the area.

FIGURE 14 – MACQUARIE PARK SPECIALISED CENTRE (NOTE: 1KM WALKABLE CATCHMENT BOUNDARY RELATIVE TO SITE) SOURCE: DRAFT INNER NORTH SUBREGIONAL STRATEGY (FIGURE 17, PAGE 47)

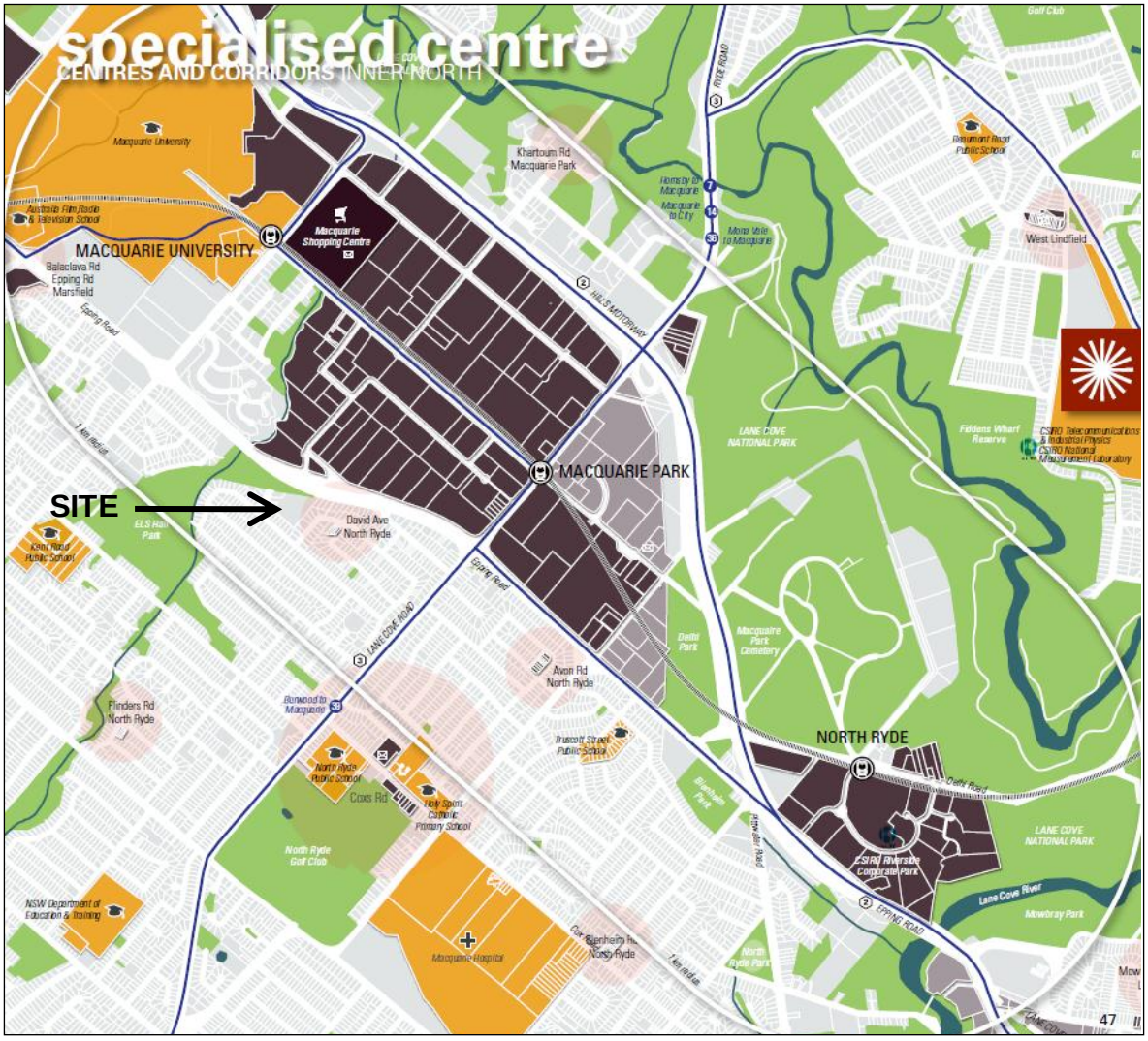
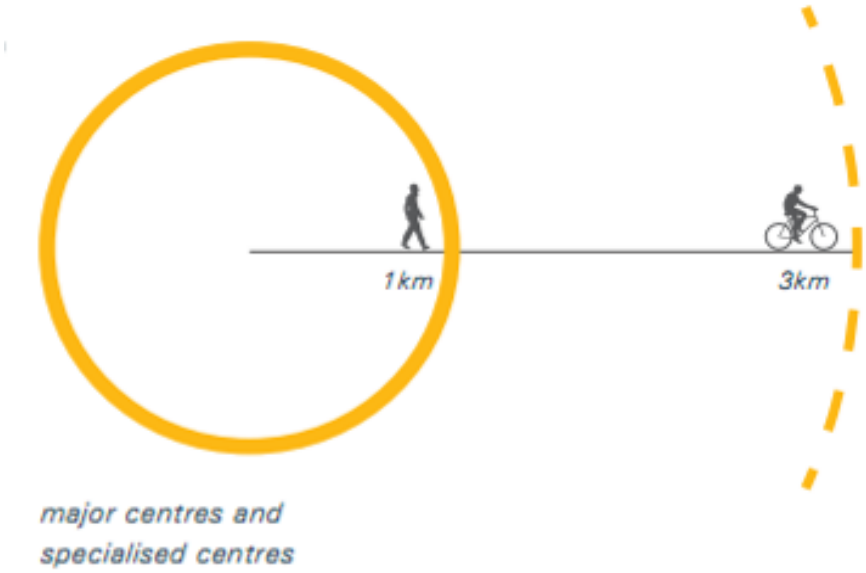


FIGURE 15 – WALKING CATCHMENT SIZE FOR MAJOR CENTRES AND SPECIALISED CENTRES (SOURCE: DRAFT CENTRES GUIDANCE – DEPARTMENT OF PLANNING AND INFRASTRUCTURE)



3.2.2 Housing Provision

The Subregional Strategy outlines a range of key directions and actions with respect to housing. The four key directions to the housing strategy are summarised as follows:

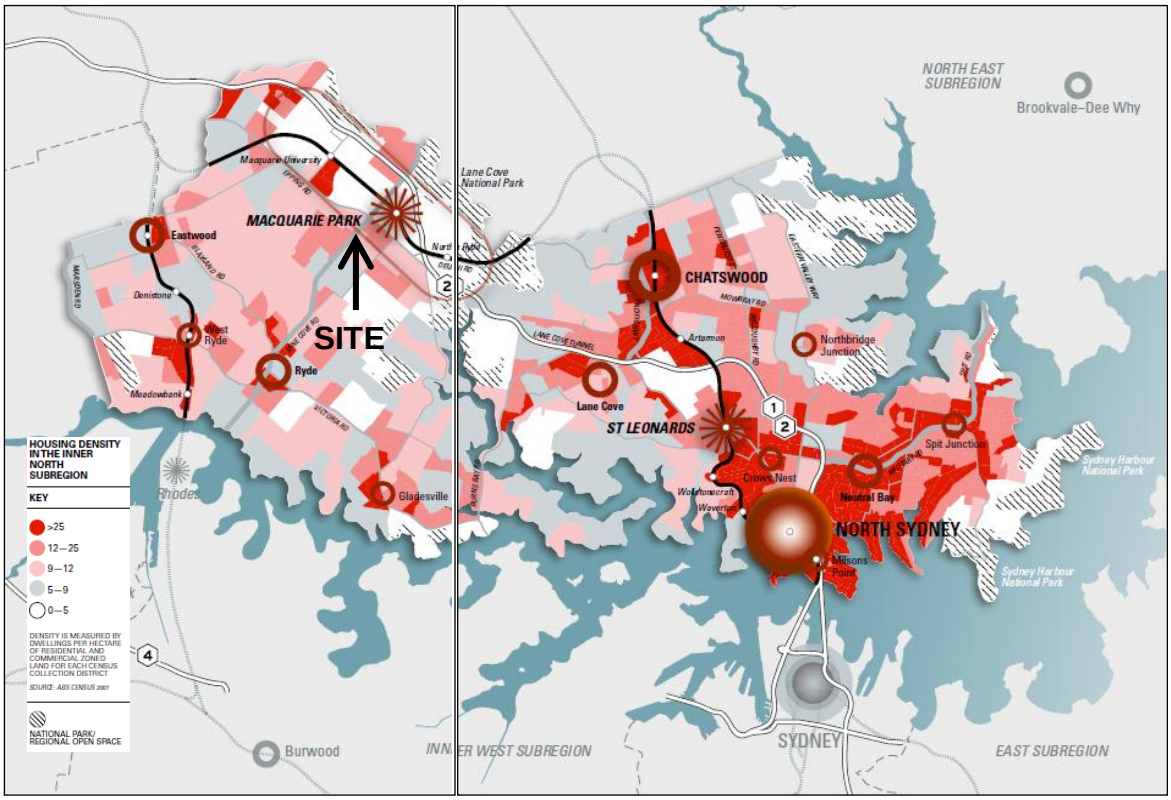
- To provide more housing opportunities to support a diverse workforce and population.
- To increase housing choice as part of the housing targets.
- Plan for 30,000 new dwellings.
- Enable communities to 'age in place'.

TABLE 2 – PROJECT CONTRIBUTION TO THE METRO STRATEGY HOUSING ACTIONS

ACTION	PROJECT CONTRIBUTION
C1 – Ensure adequate supply of land and sites for residential development	▪ Maximises the potential for the site to contribute to the housing supply within the subregion and assist Council in identifying appropriate sites to achieve its target dwelling growth of 12,000 new homes by 2031. ▪ Provides new housing product within the LGA which benefits from the site's strategic location. ▪ Provides residential development within an existing serviced area directly adjacent to other residential land
C2 – Plan for a housing mix near jobs, transport and services	▪ Provides a range of dwelling types offering between 1 and 3 bedroom dwellings responding to the average household size. ▪ Responds to the site's close proximity to major new rail infrastructure. ▪ Expands the housing supply within a walkable distance from the train station, bus routes, education facilities, medical services and shopping opportunities.
C5 – Improve the quality of new development and urban renewal	▪ Provides high quality architectural design with high quality materials and finishes. ▪ Incorporates a cohesive landscape concept for the project and public domain. ▪ Designs each residential apartment building in accordance with SEPP 65 and the RFDC. ▪ Provides a logical approach to housing diversity in a highly serviced existing urban area

In addition, the Subregional Strategy seeks to concentrate residential development to strengthen centres and corridors and notes that the majority of residential growth should be accommodated within existing urban areas. The existing residential character of the subregion provides very little density around the Macquarie Park Specialised Centre and the Epping to Chatswood Railway. Given the objectives of the Subregional Strategy in terms of dwelling provision, the proposal represents one of a few opportunities to provide increased housing within close proximity to both an existing centre and a range of transport options assisting with the attainment of dwelling targets.

FIGURE 16 – DENSITIES ACROSS THE DRAFT INNER NORTH SUBREGIONAL STRATEGY (SOURCE: DRAFT INNER NORTH SUBREGIONAL STRATEGY

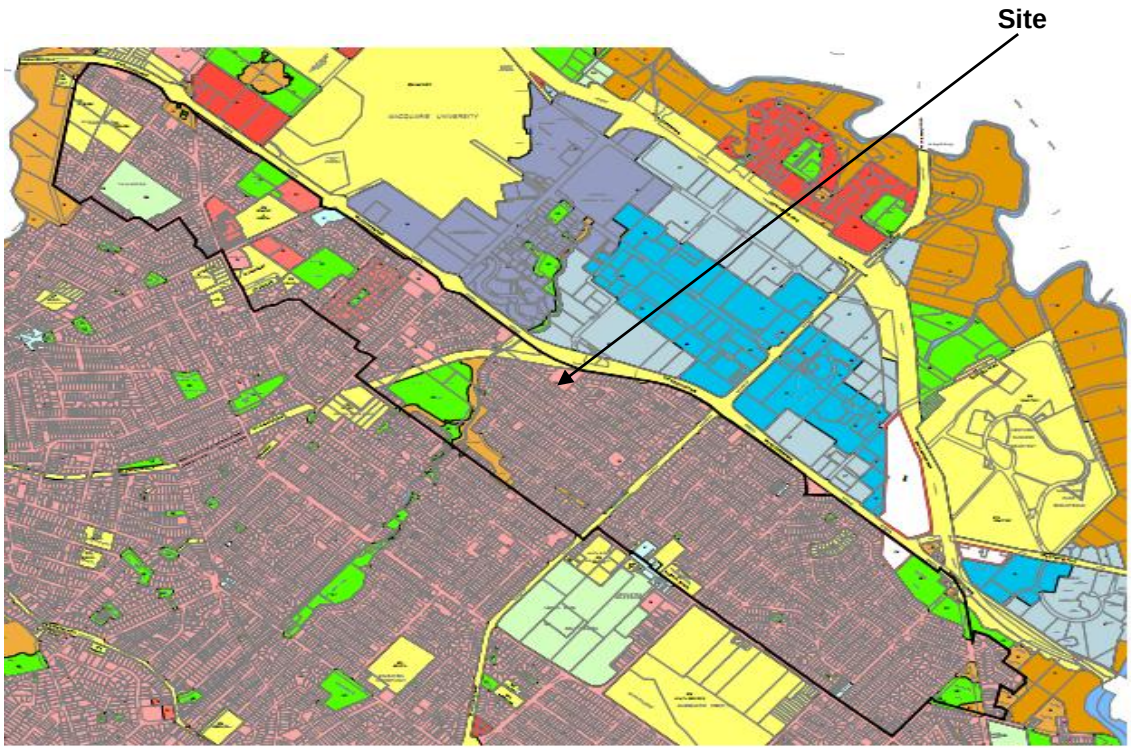


3.3 RESIDENTIAL TARGETS

The 2005 Metro Strategy planned for an additional 30,000 dwellings in the Inner North Subregion by 2031. This figure has increased to 44,000 in the Metropolitan Plan for Sydney 2030, providing an additional 14,000 dwellings to be achieved by 2036. The current Subregional Strategy sets a target of 12,000 additional dwellings up to 2031 within Ryde LGA. At this stage, the Inner North Subregional Strategy (released in 2007) has not been updated to reflect the revised Metro Strategy.

Ryde City Council has prepared a draft Housing Study (endorsed by the Council for consultation on 3 August 2010) in response to the housing targets set by the Subregional Strategy, and to inform the Draft Comprehensive LEP 2011 and DCP 2011. The Draft Study indicates that approximately 3,260 potential additional dwellings will be accommodated within Macquarie Park Corridor by 2031 (pg. 4-29).

FIGURE 17 – DRAFT HOUSING STUDY INVESTIGATION AREA TO THE SOUTH OF EPPING ROAD



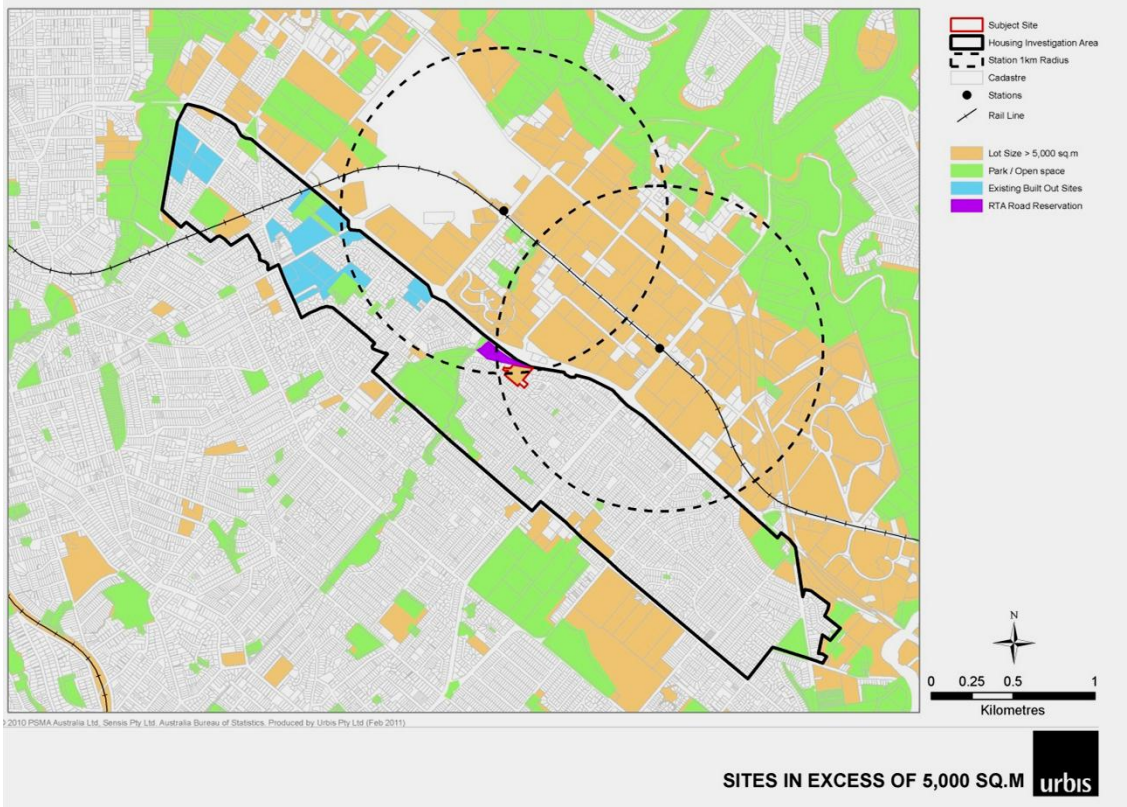
3.4 DEVELOPMENT SOUTH OF MACQUARIE PARK CORRIDOR

While Ryde City Council has resolved to investigate the southern side of Epping Road for future housing development in their Draft Housing Study, there is no immediate direction on the location of specific sites to accommodate additional residential development in a consolidated and transit-orientated manner.

Existing development south of Epping Road is predominantly low density housing zoned R2 under DLEP 2011. With the exception of local parks, open space and the RMS road reservation adjoining Epping Road, the site is one of few which have the scope to accommodate an appropriate amount of housing within walking distance of Macquarie Park & Macquarie University Station's.

The proposal therefore represents a logical and appropriate opportunity to provide transit orientated housing in close proximity to Macquarie Park Corridor within the Housing Study investigation area.

FIGURE 18 – FIGURE INDICATING POTENTIAL REDEVELOPMENT SITES (OVER 5,000M^2) SOUTH OF EPPING ROAD



4 Part 3A of the EP&A Act – Major Projects

The Minister declared the project to be one to which Part 3A of the Act applies on 15 October 2010. While the NSW Government has recently repealed Part 3A of the EP&A Act, it has enacted transitional provisions for projects already lodged under the previous Part 3A.

Transitional provisions are in place for the project that confirm Part 3A still applies to the project. The Minister will delegate his Part 3A determination role for applications made on behalf of private proponents to the Planning Assessment Commission (PAC) or senior officers of the Department of Planning and Infrastructure.

Therefore, while Part 3A projects have been repealed, it remains in force for this application.

5 Community Consultation and Response to Submissions

This PPR represents an evolution of the original scheme proposed in the submitted and exhibited Environmental Assessment Report. Design evolution has occurred in direct response to issues raised in consultations undertaken by both the applicant and the DPI, and technical assessments undertaken by DPI, Ryde City Council and various public authorities to which the DPI referred the original application.

5.1 APPLICANT'S COMMUNITY CONSULTATION

Urbis Social Policy was engaged to coordinate consultation activities over a four week period in February and March 2011 to identify key stakeholder issues in relation to the proposal. Further consultation activities were undertaken in June 2011. A report which provides details of the community consultation is attached at Appendix F.

5.1.1 Consultation Activities

Activities undertaken as part of the consultation process included:

- Letters sent to neighbouring residents
- Invitations for briefings sent to Ryde City Councillors and local members
- Distribution of newsletters to wider catchment
- One-on-one meetings with neighbouring residents
- The establishment of a website, 1800-number and email address
- A Community Information and Feedback Session, held 16 March 2011
- The completion of feedback forms.

5.1.2 Feedback from Consultation

A total of 59 residents took part in the March consultation process. Key issues emerging from consultation include:

- Traffic generation and congestion
- Parking
- The height and scale of the development
- The planning process
- Amenity impacts
- The capacity of local infrastructure and services
- Landscaping

As discussed in Section 5.3 below, a response to each of these matters has been addressed through the revisions of the Concept Plan in the PPR, which is discussed further in relevant sections of this report.

5.2 STATUTORY EXHIBITION PERIOD

The Environmental Assessment Report for the project was formally submitted to the Department of Planning on 9 February, 2011. The project was publically exhibited from 11 August to 9 September 2011. Submissions received were provided to the proponent. Our response to these submissions is provided at Section 5.3 below.

5.3 RESPONSE TO PUBLIC SUBMISSIONS

ISSUE	NO. OF SUBMISSIONS	RESPONSE
PLANNING PROCESS Proposal should not be assessed under Part 3A	1	The Minister declared that the proposal is subject to Part 3A of the Act on 15 October 2010. Despite the repeal of Part 3A, transitional arrangements have been included for projects which have valid DGRs issued on or before 8 April 2011 (where the DGRs are less than two years old as of that date) and will remain as Part 3A projects. Therefore Part 3A still applies to the project.
Not consistent with Council's development controls	20	The project is consistent with the broader scale strategic planning for the area and does not result in unreasonable impacts. The project represents one of very few opportunities to provide transit oriented housing to complement the Macquarie Park Corridor and rail.
Setting a precedent	18	The proposal is in line with the strategic planning for the area, providing transit-oriented housing near the Macquarie Park Corridor.
TRAFFIC Increase in traffic congestion and generation	34	It is acknowledged that there will be an increase in traffic as a result of the proposed development. However, the environmental capacity for the development is 300 vehicles/hr in accordance with the RMS's Guide to Traffic Generating Developments. The proposed development poses an increase in traffic from 160 vehicles/hr to 234 vehicles/hr. This remains significantly below its environmental capacity. The proposal also presents a number of mitigation measures to minimise these impacts, including allowing egress from Whiteside Street to Epping Road, and restricting internal road connection to David Avenue using boomgates.
Safety concerns due to increase in traffic	11	Following community consultation, the proposed access arrangements and internal road layout was revised to reduce the traffic generation in the local road network. Following comments from

ISSUE	NO. OF SUBMISSIONS	RESPONSE
		the RMS, a boomgate restricted exit is proposed to David Avenue.
Traffic Management & Accessibility Study does not address all impacts	3	The Transport Management and Accessibility Study prepared by Traffix addresses all issues required to be considered by the RMS.
Rat running	11	The proposed access arrangements ensure that there will be no additional opportunities for rat-running in the local network as the road layout restricts movements from the site into the local road network under boomgates.
Streets are too narrow	3	It has been recommended that Council re-evaluate its current local parking restrictions. By reducing the availability of on-street car parking, the narrowness of local roads will not present any significant traffic impacts.
Nothing is proposed to alleviate conditions	2	While the proposal does not alleviate current conditions, it does not exceed the environmental capacity for the development of 300 vehicles/hr ,in accordance with the RMS's Guide to Traffic Generating Developments
Cannot practically prevent drivers turning left onto Whiteside Street	1	Comment noted.
Increase in on-street parking	12	As discussed above, it is recommended that Council re-evaluates its local parking restrictions in order to alleviate current and potential on-street parking.
Does not assess the future importance of Eastwood County Road as a link to Parramatta	1	The RMS have not advised of any current plans to implement this link. However, the proposal is in no way compromising the RMS's ability to implement this link in the future.
SOCIAL IMPACTS/INFRASTRUCTURE Insufficient infrastructure capacity – negative impact	14	The area is considered to be a highly urban area with all services available. Augmentation of these services will be detailed at construction certificate stage of the process if required.
Density and increase in population is inappropriate	8	The project represents one of very few opportunities to provide transit oriented housing to complement the significant public and private Macquarie Park Corridor and rail.
Macquarie Hospital does not have	1	Comment noted.

ISSUE	NO. OF SUBMISSIONS	RESPONSE
capacity for increased population		
Will attract University Students – negative impact on the character of the area	1	Comment noted.
Impact on property prices	16	Urban renewal and increased densities are widely recognised to increase surrounding land values, and this would be expected to occur as a result of the project.
AMENITY		
Solar access - overshadowing	3	The Concept Plan was amended after community consultation in order to reduce overshadowing for properties on Parklands Avenue. Building A has been reduced to 6 storeys in height and setback substantially from the boundary.
Development is not within 1km walking distance to train stations	1	The Pedestrian Route has been measured using GIS. The pedestrian route to Macquarie University Station is calculated to be approximately 820m, while the distance to Macquarie Park Station is approximately 760m. As such, the development is well within 1km walking distance to the train stations.
Against the removal of the greenbelt	2	The site contains little vegetation and does not form part of anything that could be described as a 'green belt'.
ARCHITECTURAL DESIGN Design is unattractive	1	Comment noted.
Inconsistent with surrounding character	1	As mentioned above, the proposed development has been reduced in height in order to be more consistent with the surrounding network.
Construction will pose risk to health – respiratory harm	1	Construction will take place in accordance with standard practice and Council conditions of consent.
Inappropriate scale	21	Building heights have been reduced to more appropriately respond to the surrounding context. Building A has been reduced in height from 8 storeys to 6 storeys with all other buildings being 2-3 storeys. As such, the

ISSUE	NO. OF SUBMISSIONS	RESPONSE
		proposed development is more consistent with the surrounding character of the area.
Plans are misleading	11	The Architectural plans have been prepared in accordance to standard practice, using information gathered by surveyors and drawn to scale. Specific reference was made within the submissions to Figure 28 within the EA. The discrepancy noted within this plan is actually an accurate representation of the variation in the landscape that exists between the eastern elevation and the western elevation of the proposed development.

5.4 REFERRALS TO AGENCIES

As part of the statutory assessment process, a range of agencies provided comments in relation to the project to the Department of Planning and Infrastructure. Agencies that have provided a submission include:

- Roads and Maritime Services
- NSW Transport State Transit
- Sydney Water
- NSW Office of Water
- Victor Dominello MP State Member for Ryde

The submissions received are summarised and addressed at Section 5.5.

5.5 RESPONSES TO AGENCIES

NO.	AGENCY SUBMISSION	ISSUES OR COMMENTS	RESPONSE
	Roads and Maritime Services	**Vehicular Access** – The RMS supports the concept for left in left out access onto Epping road via Whiteside Street. This is subject to appropriate designs for the Epping Road/Whiteside Street and Whiteside Street/Site Access intersections. The design must minimise potential for rat-running; address and minimise safety issues arising from the existing merge lane across Whiteside Street on Epping Road; and will not preclude any current vehicle movements. The RMS supports an additional vehicular access point on David Avenue.	The proposed design provides for left-in left-out access onto Epping Road as supported. An additional vehicle access point has been included on David Avenue.

NO.	AGENCY SUBMISSION	ISSUES OR COMMENTS	RESPONSE
		Future Access to Epping Road – Access may not be available via Epping Road if the proposed freeway is constructed.	Noted
		Local Area Traffic Management Study – Applicant will suggest improvements to minimise traffic flow distribution from Kent Road into Milroy Street, Trevitt Street and Napier Crescent. Consideration shall be given to investigating the additional traffic loading to the Kent Road/Lane Cove Road intersection with the view of potential capacity improvements for the side road.	A local area traffic management (LATM) study has been offered by the applicant in the context of the access arrangements as now proposed, with entry and exit onto Epping Road and a minor exit onto David Avenue (refer to **Appendix L**).
		Indented Bus Bay – The RMS does not support the proposed indented bus bay on Epping Road on RMS owned land. The proposed location is not regarded safe for an indented bus bay. The site is considered to be well serviced by public transport with a bus stop and bus shelter located east of the site near Paul Street.	The bus bay on Epping Road has been removed from the proposal.
		RMS Owned Land – The RMS requires a detailed plan including a shared path and landscaping – RMS owned land is currently used as a works compound site; any proposed landscaping should not compromise the site's access or be a maintenance issue for the RMS.	The proponent will commit to implementing an indicative landscape package and new pedestrian and cycle path as outlined in Section 7.6.
		Site Access – The layout of the proposed car parking areas associated with the proposal should be in accordance with AS 2890.1 – 2004 and AS 2890.2 – 2002 for heavy vehicle usage. Provision for building maintenance vehicles and removalists need to be provided on-site. All vehicles shall be wholly contained on site before being required to stop.	The proposed car parking areas will be in accordance with the relevant standards and will be wholly contained on site before being required to stop.
		Construction – All demolition and construction vehicles are to be contained wholly within the site and vehicles must enter the site before stopping. A construction zone will not be permitted on Epping Road. A Construction Traffic	A condition requiring the preparation of a construction traffic management plan is reasonable and is invited. It is emphasised that this cannot be dealt with until such times as the access principles for the site generally have been established and a builder appointed.

NO.	AGENCY SUBMISSION	ISSUES OR COMMENTS	RESPONSE
		Management Plan should be submitted to Council prior to the issue of a Construction Certificate. **Setbacks** – must ensure appropriate setbacks, in particular on the northern boundary. **Acoustics** - The proposal should be designed so that road traffic noise from Epping Road is mitigated by durable materials. Noise walls are not supported by the RMS and should be avoided as noise mitigation.	Setbacks have been significantly increased on the northern boundary with further setbacks to levels 5 and 6 of Building A. See Acoustic Report at Appendix H, which demonstrates compliance with the relevant guidelines. While a noise wall is proposed to Epping Road, it is to be screened by earth mounding and planting. Furthermore, it will only serve the open space part of the site. The apartments themselves are independently acoustically protected.
	NSW Transport State Transit	**On-site parking** – Questions whether the proposed strategy is appropriate for the development as there are little or no parking controls within the area, and limiting parking will do little to detract from private vehicle usage. **Bus bay** – the proposed bus bay on Epping Road needs to be approximately 50m in length to cater for the current level of bus services. **Traffic management plan** – State Transit will require the opportunity to provide input into the traffic management plan.	Urbis has recommended that Council re-evaluate its current local parking restrictions. By reducing the availability of on-street car parking, the narrowness of local roads will not present any significant traffic impacts. The bus bay on Epping Road has been removed from the proposal. It is emphasised that a Traffic Management Plan cannot be dealt with until such times as the access principles for the site generally have been established and a builder appointed. State Transit will have the opportunity for input.
	Sydney Water	**Water** – The 100mm drinking water main fronting the proposed development in Epping Road does not comply with the Water Supply Code of Australia requirement for minimum sixed mains for the scope of development. It needs to be extended as a 200mm main from the 250mm main on the northern side of Epping Road and cross linked into the existing 100mm main on the southern side of Epping Road.	Noted, these are Section 73 Certificate requirements that will be dealt with at Construction Certificate stage.

NO.	AGENCY SUBMISSION	ISSUES OR COMMENTS	RESPONSE
		Wastewater – a wastewater extension is required to service the development. A wastewater main must be constructed to connect to the 150mm main at the north west boundary of the site.	
	NSW Office of Water	**Groundwater** – The below ground works / excavations likely to intercept groundwater – a groundwater assessment should be undertaken as part of the Project Application stage. **Water Management Act 2000** – all works that intercept groundwater will soon require an aquifer interference approval (provision to be activated later this year). At this stage, the proponent must ensure all works that intercept groundwater for monitoring, dewatering and test purposes are authorised under Part 5 of the *Water Act 1912*. **Extraction of groundwater** – does not support any permanent or semi-permanent pumping/extraction of the groundwater to protect the buildings. It is requested that the basement car park incorporate a water proof retention system, i.e. a fully tanked structure. **Groundwater Dependent Ecosystems** – As assessment needs to be undertaken at the local scale of any Groundwater Dependent Ecosystems in the surrounding area as part of the Project Application stage.	Noted. A Groundwater Assessment can be provided during the Project Application stage.
	Victor Dominello MP State Member for Ryde	**Scale** – the area is zoned by Ryde City Council as low density residential and the proposal is therefore inconsistent. **Change of character** – the quiet suburban area will be changed into a high density busy thoroughfare. **Traffic** – During AM/PM peak hour the surrounding residential streets are already used as 'rat runs' and are heavily congested. The proposal will add further	The proposal is consistent with the strategic planning for the area which proposes residential development to support the Macquarie Corridor. While the project will transform the low density character, the larger built forms to Epping Road step down to surrounding lower scale development. It is consistent with the strategic planning for the area. It is acknowledged that there will be an increase in traffic as a result of the proposed development. However, the environmental capacity for the

NO.	AGENCY SUBMISSION	ISSUES OR COMMENTS	RESPONSE
		stress to an already overburdened traffic system. It will cause further deterioration with increased commute times, increased traffic and traffic noise, increased pollution. The solutions outlined in the Transport Management and Accessibility (TMAP) study are unsubstantial and inconsiderate of the current resident's use of the surrounding streets.	development is 300 vehicles/hr in accordance with the RMS's Guide to Traffic Generating Developments. The proposed development poses an increase in traffic from 160 vehicles/hr to 245 vehicles/hr. This remains significantly below its environmental capacity.
		Parking – While Council has introduced parking restrictions in the area, on-street parking availability still persist and will only get worse as a result of the proposal.	Parking is provided in accordance with relevant guidelines. Furthermore, on a site within walking distance of a railway station, it would be inappropriate to provide excessive parking. Notwithstanding this, a range of parking amelioration measures are included in the Statement of Commitments (see Section 7.9).
		Amenity – The reduction of solar access to the minimum three hours in mid-winter will pose a health and lifestyle risk to current residents. The size and scale of the development is out of character with the area and will negatively impact on resident's amenity and standard of living.	Building heights have been reduced to appropriately respond to the surrounding context. Building A has been reduced in height from 8 storeys to 6 storeys. As such, the proposed development is more consistent with the surrounding character of the area.

5.6 RESPONSE TO DEPARTMENT OF PLANNING & INFRASTRUCTURE REVIEW OF SUBMISSIONS

The Department of Planning and Infrastructure prepared a letter dated 29 September 2011outlininng their key issues with the Concept Plan with the Environmental Assessment, following review of the submissions received during public exhibition.

The following outlines DoPI's key issues and our responses, reflected within the Preferred Concept Plan.

Height Built Form and Density

- *Further analysis of building heights is required, including options for a reduced height of Building Envelope A by 2 storeys and a stepped form at its western and north-eastern corners to a maximum of 4 storeys. This is required to reduce overshadowing and provide a more effective transition to adjoining properties.*

The height of building A in the Preferred Project Concept Plan has been reduced from 8 to 6 storeys, as requested within the DoPI letter. Setbacks have been increased for levels 5 and 6 to provide the stepped form on the western and north-eastern corners. This provides an effective transition in terms of reduced heights to adjoining properties and reduces overshadowing (**refer to Appendix G**).

- *Options are required for revised building envelopes. This should include a reduction in the overall bulk and scale of Building Envelope A through increased setbacks to adjoining properties; the incorporation of breaks and separations in the envelope to improve solar access, residential amenity and accessibility; and provide for central open space with improved usability and amenity. In this regard, the proposal does not appear to comply with minimum building separation distances and solar access requirements under the Residential Flat Design Code (RFDC).*

The proposal complies with all solar access and amenity requirements as per SEPP 65 (see Appendix O). Further consideration of options has been provided at **Section 8.2.3**. With regard to separation for usability and amenity, a double height void link is provided in Building A for ground floor access between the northern open space and the central mews as shown in the ground floor plan located at **Appendix G**.

- *Further analysis is required of the general layout to address acoustic privacy and general amenity for Building Envelope A in view of the proximity of Epping Road and the County Road Reservation.*

The Acoustic Report (see **Appendix H**) demonstrates compliance with the relevant guidelines. While a noise wall is proposed to Epping Road, it is to be screened by earth mounding and planting. Furthermore, it will only serve the open space part of the site. The apartments themselves are independently acoustically protected.

Further analysis is required of unit sizes as they appear not to comply with minimum sizes under the RFDC.

As stated in the SEPP 65 Design Verification Statement (refer **Appendix O**) the minimum apartment sizes apply to the typical apartments in the development. Furthermore, apartment sizes are not proposed as part of the Preferred Concept Plan and plans indicating unit layout are for illustrative purposes only.

Access

- *Further assessment and analysis of the traffic implications of the proposal, including detailed consideration of specific issues raised by the RMS is required.*

An addendum to the originally submitted traffic report has been prepared by Traffix to address the issues raised during exhibition (refer **Appendix L**). This report details specific responses to the issues raised by the RMS

- *Further analysis of the internal road access is required. This should include options to provide it underground to maximise open space and deep soil areas and pedestrian safety.*

Underground access is provided for internal vehicle movements however, the internal road at ground level has been specifically included to create a sense of address and activation of the area.

An addendum to the originally submitted traffic report has been prepared by Traffix to address the issues raised during exhibition (refer **Appendix L**).

- *Further analysis of through-site linkages and pedestrian amenity is required. This should include options to reduce walking distances particularly to communal open space and external destinations, and improve way-finding and safety.*
- With regard to separation for usability and pedestrian amenity, a double height void link is provided in Building A for ground floor access between the northern open space and the central mews as shown in the ground floor plan located at **Appendix G**.

6 Key Changes to the Concept Plan in the PPR

Key changes between the originally submitted Concept Plan and the Concept Plan the subject of this Preferred Project Report are:

Height, Built Form and Density

Density

The Preferred Concept Plan proposes 163 units compared to 213 units proposed under the original Environmental Assessment. The overall floor space has been reduced from 21,715m^2 (FSR 1.59:1) to 18,027m^2 (FSR 1.29:1). This represents a significant reduction in density, which is also reflected in the bulk and scale of the proposed built form.

Height

Height concerns were predominantly focussed on Building A, which has now been reduced from 8 storeys to 6 storeys (19.2 metres). This reduces the previous disparity with surrounding low scale forms.

Setbacks

The setback of building A to adjoining properties has been increased to mitigate the difference in scales. Additionally the upper two levels of the building have also been setback, to create a more transitional form.

Access

Traffic and Parking

Direct access to David Avenue was originally proposed by the applicant at the 'Test of Adequacy' stage. Following concerns raised during community consultation about 'rat-running' in local street network, the access was deleted from the EA scheme. However, the RMS has specifically supported the reintroduction of the provision of egress only access to David Avenue and such access is therefore again proposed.

This access will be restricted to exit for residents under boom gate control.

The additional bus bay proposed on Epping Road within the exhibited Environmental Assessment has been removed from the proposal as requested by the RMS.

All supplementary documents, such as the Traffic Report and SEPP 65 Documentation, have been amended to reflect the above modifications.

7 Preferred Concept Plan

7.1 INTRODUCTION

The Preferred Concept Plan (see Figure 19 and Appendix G) seeks approval for building envelopes (GFA), footprints and heights, parking numbers and driveway crossovers, and landscape scheme. Specifically, the Concept Plan proposes the demolition of the existing structure on the site, excavation of two stepped basement levels and the construction of 163 residential units in 4 blocks:

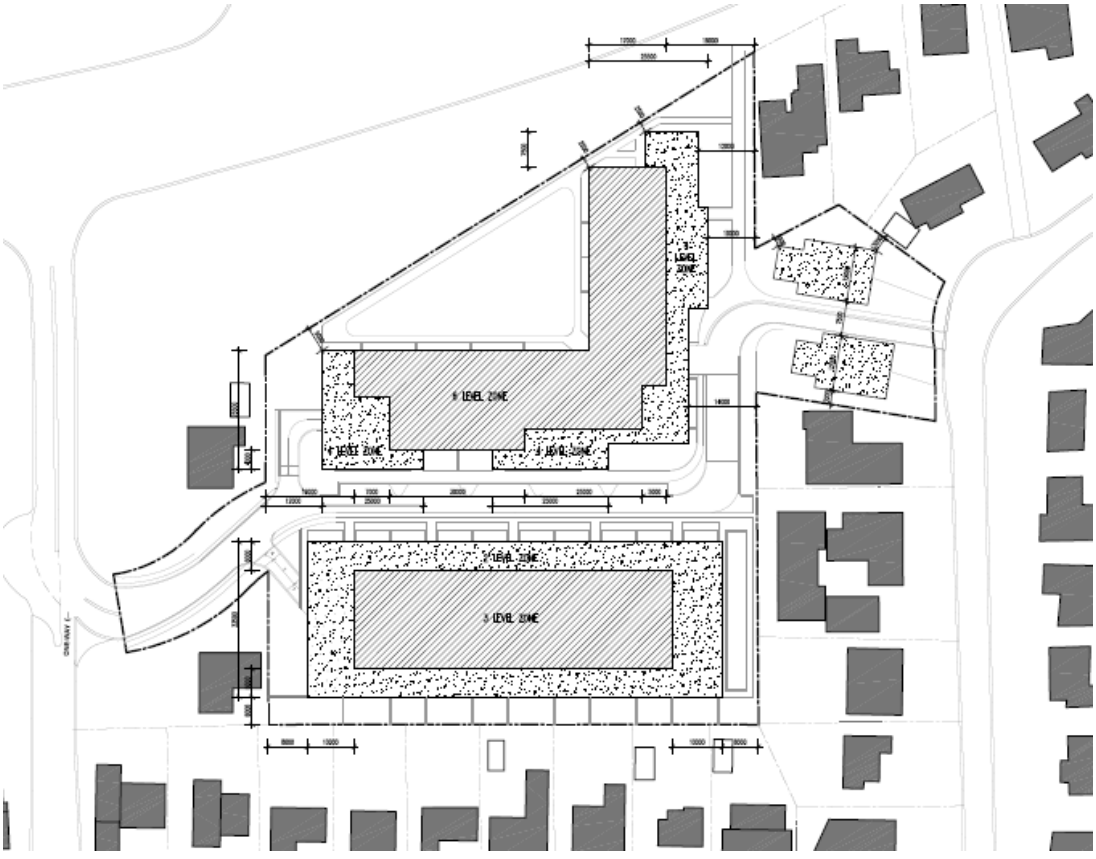
- 1 x 6 storey building (Building A)
- 1 x 2-3 storey building (Building B)
- 1 x 2 storey building (Building C)
- 1 x 2 storey building (Building D)

Vehicular access and egress is proposed via Whiteside Street, which will operate as a two-way street north of its intersection with the internal road and as a one-way street south of this intersection. A left out onto Epping Road has been agreed in principle following meetings with the RMS. A Statement of Commitment has been drafted in relationship to this access arrangement. Access is also proposed via David Avenue to allow access to Lane Cove Road. This access would operate as a controlled exit for residents under boom gate control.

The Preferred Concept Plan is included at Figures 19 & 20 and Appendix G.

The Concept Plan envelopes do not include detailed landscaping or ancillary buildings (e.g. garden sheds), entry porticos, roof plant or lift overruns. Such building/landscaping elements will be outside the Concept Plan envelope, but will be limited to a maximum single storey in height. Balconies are included within the Concept Plan envelopes.

FIGURE 19 – PREFERRED CONCEPT PLAN



7.2 NUMERIC OVERVIEW

TABLE 3 – NUMERIC BREAKDOWN

SITE AREA	13,936
Gross Floor Area[2]	18,027.8 m^2 Building A: 12,155.4 m^2 Building B: 5,167.8.7 m^2 Building C/D: 704.6.4m^2
Floor Space Ratio[3]	1.29:1
Building Height[4]	Building A: 6 storeys (19.2m) Building B: 2-3 storeys (11.4m) Building C/D: 2 storeys (7.8m)
Total Number of Units	163
▪ **Number of 1 Bedroom Units**	45
▪ **Number of 2 Bedroom Units**	103
▪ **Number of 3 Bedroom Units**	15
Average 1 Bedroom Unit Size	61.5m^2
Average 2 Bedroom Unit Size	87.8m^2
Average 3 Bedroom Unit Size	126.6m^2
Parking Spaces	225

2 ***gross floor area*** *means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes:*

- *a) the area of a mezzanine, and*
- *b) habitable rooms in a basement or an attic, and*
- *c) any shop, auditorium, cinema, and the like, in a basement or attic,*
- *d) but excludes:*
- *e) any area for common vertical circulation, such as lifts and stairs, and*
- *f) any basement:*
  - *i. storage, and*
  - *ii. vehicular access, loading areas, garbage and services, and*
- *g) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and*
- *h) car parking to meet any requirements of the consent authority (including access to that car parking), and*
- *i) any space used for the loading or unloading of goods (including access to it), and*
- *j) terraces and balconies with outer walls less than 1.4 metres high, and*
- *k) voids above a floor at the level of a storey or storey above.*

3 ***floor space ratio*** *of buildings on a site is the ratio of the gross floor area of all buildings within the site to the site area.*

4 ***building height*** *(or* ***height of building****) means the vertical distance between ground level (existing) at any point to the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.*

FIGURE 20 – CONCEPT PLAN SECTION

7.3 ILLUSTRATIVE DESIGN

While approval is only sought for the key parameters of the project as indicated in the Concept Plan, Figures 21 - 26 illustrate a scheme of the type facilitated by the Concept Plan.

FIGURE 21 – PHOTOMONTAGE OF INDICATIVE DESIGN LOOKING EAST FROM THE ENTRANCE TO WHITESIDE

FIGURE 22 – LOOKING SOUTH ACROSS THE COMMUNAL OPEN SPACE TO THE NORTHERN FACADE OF BUILDING A

FIGURE 23 - LOOKING AT THE INTERNAL ROAD AND COURTYARD HOMES

FIGURE 24 – PHOTOMONTAGE TAKEN FROM EPPING ROAD LOOKING TO THE WEST

FIGURE 25 – PHOTOMONTAGE TAKEN FROM PARKLANDS ROAD LOOKING TO THE NORTH-EAST

FIGURE 26 – PHOTOMONTAGE TAKEN FROM DAVID AVENUE LOOKING TO THE WEST

7.4 LANDSCAPING

An indicative landscape concept has been prepared by Aspect Studios. The landscape concept is included below and a supporting statement is included at Appendix I.

The indicative landscape scheme seeks to:

- Provide a 'green buffer' to the proposed development to assist in integrating the buildings into the surrounding urban and residential fabric;
- Unify the various open spaces within the site through material choice, colour, spatial geometry and planting selection;
- Provide adequate privacy through walls, fences, screens and planting;
- Provide sufficient soil depths for intended plants;
- Utilise robust materials and planting to avoid intense maintenance regimes;
- Adhere to WSUD and ESD principles in terms of stormwater management, selection of low water-use plants and porous ground surfaces;
- Revitalise the existing RMS land to create a more appealing open space;
- Provide new public connections through the site that extend existing pedestrian and cycle links;
- Provide communal spaces that allow and encourage gardening and other social activities for residents.

A variety of landscape spaces are provided on the site including a through-site link, community garden, atrium, communal courtyard, private courtyards, public pocket park, buffer planting and roof gardens. These will provide a positive contribution to the existing landscape character of the area in a highly sustainable manner.

7.5 ENVIRONMENTALLY SUSTAINABLE DESIGN (ESD)

Various sustainability initiatives will be included in the proposed Concept Plan to improve the sustainability of the site. Initiatives have been evaluated which will assist the building in meeting minimum compliance requirements of BASIX and SEPP 65, as well as an evaluation on which initiatives can be included to improve the efficiency of the site beyond minimum compliance.

By including initiatives that take the buildings beyond minimum compliance, the development is providing itself with a point of difference which will have good marketing value and will demonstrate best practice and leadership in environmental design.

The Concept Plan adopts a number of measures to minimise water and energy use, and the discharge of pollution including:

- Water sensitive urban design – pavement design facilitates run-off minimisation,
- Use of plants that require low levels of irrigation,
- Biodiversity - use of predominantly native plants to encourage fauna
- Carbon sinking - planting of large quantities of trees that will have long lives
- Use of recycled site water for irrigation,
- Use of recycled materials (mulch, aggregates, soil),
- Use of robust hard materials (consideration of material life cycle),
- Direct pavement run-off towards soft landscaped (permeable) areas as much as possible
- Capture roof water / store / filter and use for irrigation and water supply to water play and water features,
- Water efficient fixtures and fittings
- Rainwater tanks
- Natural ventilation and the inclusion of ceiling fans
- Fluorescent or LED lighting
- Gas cook tops
- 3 star energy rated dryers and 3.5 star energy rated dishwashers

To optimise the social sustainability of the project, the landscape concept has been designed around well-designed spaces that will provide a variety of programmed and multi-use spaces to allow for changing recreation needs over time, and a carefully designed public domain that creates safe, attractive and vibrant recreation and entertainment opportunities.

A complete description and analysis of the ESD measures proposed for the project is provided in the ESD Strategy prepared by Built Ecology (Appendix K).

7.6 IMPROVEMENT TO RMS ROAD RESERVATION

The area to the north of the site, adjacent to Epping Road, is a Road Reservation owned by the RMS. The reservation was acquired to facilitate the Eastwood County Road which is a 55 year old unbuilt road proposal, stretching from Kissing Point Road at Dundas to Epping Road at North Ryde, via Eastwood. The reservation, wide enough to permit construction of a six-lane highway-standard road, was gazetted in July 1951 as part of the County of Cumberland Planning Scheme and is known as either “County Road No. 5012” or “Eastwood County Road”.

It is currently used as a works compound (see photograph below) in an unorganised manner.

The proponent will commit to implementing (at the proponents cost) an indicative landscape package (including boundary planting) and a new 2.5m wide shared pedestrian and cycle path is proposed to link

in with existing path networks and the new development. A bus layback and bus shelter have been included in an indicative location that may be a desirable outcome for this area. This is all subject to the approval of the RMS.

PICTURE 11 – AERIAL PHOTOGRAPH OF RMS ROAD RESERVATION (SOUCE: NEARMAP)

7.7 ACCESS AND TRANSPORT

A Transport Management & Accessibility (TMAP) Study has been undertaken by Traffix which is included at Appendix L. The access and traffic measures have been considerably amended following the outcomes of community consultation.

Vehicular access and egress is proposed via Whiteside Street, which will operate as a two-way street north of its intersection with the internal road and as a one-way street south of this intersection. A left out onto Epping Road has been agreed in principle in recent meetings with the RMS. A Statement of Commitment has been drafted in relationship to this access arrangement. Egress is also proposed via David Avenue to allow access to Lane Cove Road. This would operate as a controlled exit for residents under boom gate control.

The access arrangement proposes:

- Restricted ingress and egress to the site via Whiteside Street.
- Left in/right-out movements only to Whiteside Street to restrict traffic flow into surrounding local streets.
- Internal road connection to David Avenue under boom gate control for resident access to Lane Cove Road.

The project incorporates two split basement car park levels comprising 225 car spaces all accessed via Whiteside Street. The car park entry is located away from the main pedestrian routes into the site. Parking has been designed in accordance with required standards and will provide 6 metre wide aisles. Visitor parking is provided on-street within the internal road system of the development.

Bicycle facilities will be included to Councils standards at the detailed design phase of the development and will include secure parking racks.

7.8 DRAINAGE AND FLOODING

A Stormwater Management and Flood Assessment has been undertaken by Worley Parsons. The report details flooding, stormwater management, hydrology and Water Sensitive Urban Design matters proposed as part of the project and is included at Appendix M. While changes have been made to the Concept Plan layout, the principles contained in the Stormwater management and Flood Assessment submitted at EA stage remain relevant.

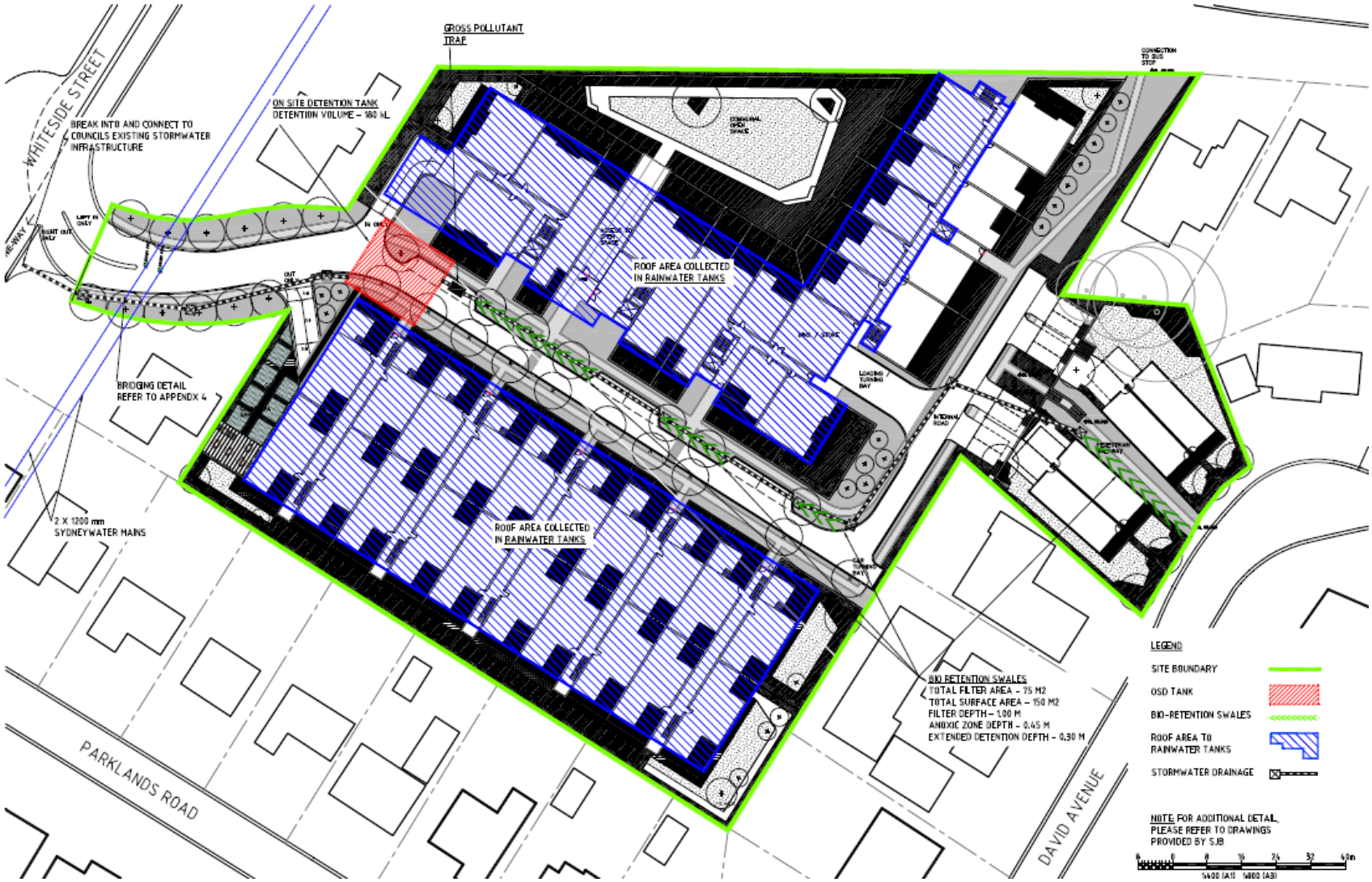
In summary:

- The project will adopt standard best practice for managing stormwater quantity, quality and flooding.
- Adequate drainage and appropriately designed overland flow paths will be constructed across the development to ensure stormwater flows are conveyed safely from the site into Council's existing stormwater infrastructure network.
- Stormwater runoff generated across the site will be controlled and reduced with the implementation of on-site detention.

Water quality will be managed on site through the implementation of Water Sensitive Urban Design (WSUD) best practices principles. WSUD initiatives will include rainwater tanks, litter baskets, OSD tanks and bio-retention basins.

The Concept Stormwater Management Plan prepared by Worley Parsons as part of the Stormwater Management and Flood Assessment is included at Figure 27.

FIGURE 27 – CONCEPT STORMWATER MANAGEMENT PLAN



7.9 STATEMENT OF COMMITMENTS

A copy of the Draft Statement of Commitments table is included in Appendix N. The Statement of Commitments includes the following initiatives:

- Contributions: Section 94 Contributions to be made for the project will be in accordance with calculations provided in Section 7.10 prior to issue of Construction Certificate.
- Car share: Discussions will be undertaken with car share providers and a parking space will be allocated for exclusive use by shared vehicles. Detailed in Project Application.
- Bicycle facilities: Bicycle facilities: the project will provide for bicycle facilities and parking in accordance with Council's standards. Detailed in Project Application.
- RMS reserve: The upgrade of the adjoining RMS reserve is proposed at the proponent's cost (it is noted that the proponent does not own the reserve and as such this proposal is a commitment only and not a part of the project to which this application formally applies).
- Community Garden: A community garden will be provided in accordance with the Landscape Plan and Landscape Report at Appendix I. Detailed in Project Application.
- WSUD: WSUD measures will be implemented in accordance within the Stormwater Management and Flood Assessment prepared by Worley Parsons (refer to Appendix L). Detailed in Project Application.
- Transport management: A single and one-off yearly rail pass from Macquarie Park to the Sydney CBD will be provided to the purchaser/s of each apartment. Note, one (1) rail pass only will be provided per apartment.
- ESD: ESD principles and measures will be implemented for the project in accordance with the ESD Strategy prepared by Built Ecology and located at Appendix K. Detailed in Project Application.
- Construction Management Plan: The proponent agrees to prepare a Construction Management Plan outlining the methods of construction, traffic management, crane height and location details and the like prior to issue of Construction Certificate.
- Compliance with the Building Code of Australia: All buildings will be designed in accordance with the Building Code of Australia. This will be detailed at Construction Certificate stage.
- Augmentation of services: The approval of all existing utility service providers (e.g. gas, electricity, telephone, water, sewer) will be obtained, and any required augmentation works undertaken prior to commencement of work.
- Noise mitigation: Noise mitigation measures will be implemented in accordance with the Noise Impact Assessment prepared by Heggies (refer to Appendix H). Detailed in Project Application.
- Remediation of Land: If necessary a Remedial Action Plan will be submitted for approval and audited upon implementation. This will be undertaken at the Project Application stage prior to commencement of works if required.
- Traffic: The applicant will fund the preparation of a Local Area Traffic Management (LATM) study in accordance with RMS Guidelines. A draft brief will be submitted to Council with the Project application, and any reasonable funding requirement identified by Council prior to determination of the Project Application will be paid to Council by the applicant, for the purpose of funding the undertaking of this study, prior to the issue of a Construction Certificate.
- Traffic: Subject to the specifications of Ryde City Council, the applicant will fund traffic improvements discussed in detail within the Traffic Study. This will be detailed in the Project Application, and all works constructed at the applicant's cost, prior to the issue of an Occupation Certificate.

8 Director General's Environmental Assessment Requirements

8.1 RELEVANT EPIS, POLICIES AND GUIDELINES TO BE ADDRESSED

Director General's Environmental Assessment Requirement No. 1

Planning provisions applying to the site, including permissibility and the provisions of:

- *Objects of the EP&A Act 1979;*
- *NSW State Plan 2010;*
- *Sydney Metropolitan Plan 2010*
- *Draft Inner North Subregional Strategy;*
- *Metropolitan Transport Plan 2010;*
- *NSW Bike Plan 2010;*
- *NSW Planning Guidelines for Walking and Cycling;*
- *Interim Guideline for Development Near Railway Corridors and Busy Roads;*
- *NSW Office of Water Groundwater Policies;*
- *NSW Health, Healthy Urban Development Checklist 2010;*
- *Ryde LEP 2010, Ryde DCP 2010, and other relevant DCPs*
- *SEPP (Building Sustainability Index) 2004;*
- *SEPP 55 - Remediation of Land;*
- *SEPP 65 - Design Quality of Residential Flat Development and the Residential Flat Design Code (RFDC);*
- *SEPP (Infrastructure) 2007; and,*
- *Nature and extent of any non-compliance with relevant environmental planning instruments, plans and guidelines and justification for any non-compliance.*

8.1.1 Environmental Planning and Assessment Act 1979

The objects of the Act are provided in Table 4 along with an assessment of the proposal against them:

TABLE 4 – ASSESSMENT OF THE PROPOSAL AGAINST THE OBJECTS OF THE ACT

OBJECT	PROJECT
a) to encourage: *(a) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*	The project represents good urban management as it will provide additional dwellings which can utilise existing transport and other infrastructure and complimented the employment opportunities presented by Macquarie Park.
(b) the promotion and co-ordination of the orderly and economic use and	The project will facilitate the development of housing in close proximity to public transport and the Macquarie

OBJECT	PROJECT
development of land,	Park Specialised Centre.
(c) the protection, provision and co-ordination of communication and utility services,	The project is in an existing urban area and as such will utilise existing services. If necessary, the project will provide for the augmentation of these services.
(d) the provision of land for public purposes,	The project will provide for the upgrade of an existing RMS road reserve[5]
(e) the provision and co-ordination of community services and facilities, and	Given the site's proximity to a range of local services and facilities including schools, parklands, medical and shopping the additional population will be adequately catered for.
(f) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and	The project will not result in any adverse impacts to native animals, plants, populations, ecological communities, or their habitats.
(g) ecologically sustainable development, and	The project will provide best practice ESD measures as discussed in Section 6.6
(h) the provision and maintenance of affordable housing, and	The project will contribute to the diversity and availability of housing stock in an accessible and well-connected location.
b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and	The project represents a Major Project and as such is assessed by the Minister. Ryde Council will be consulted as part of the community consultation program.
c) to provide increased opportunity for public involvement and participation in environmental planning and assessment	A community consultation program has been undertaken by the proponent (see Section 5) and will be complimented by statutory exhibition of the application by DOPI.

8.1.2 NSW State Plan 2010

The NSW State Plan 2010 replaces '*The State Plan, A New Direction for NSW 2006*' as a set of priorities for the NSW Government. The NSW State Plan 2010 provides targets for creating 'better transport and liveable cities'. Relevant priorities and targets are outlined below.

Improve Public Transport System

> *"Increase share of commuter trips made by public transport to and from the Sydney CBD within peak hours to 80% by 2016"*

By providing for 163 dwellings within close walking distance to the Macquarie Park train station and regional bus services, this project will positively contribute to the government's target.

[5] It is noted that the reserve is owned by the RMS. While the proponent therefore commits to implement these works, such implementation will be at the discretion of the RMS.

Increase the number of jobs closer to home

"Increase the percentage of population living within 30 minutes by public transport of a city or major centre."

The proposal satisfies this target given its proximity to the Macquarie Park corridor and metropolitan rail services linking the site to Chatswood and the CBD within 30 minutes travel time.

Grow cities and centres as functional and attractive places to live, work and visit

The proposal is entirely consistent with this priority as the proposal provides for housing adjacent to the Macquarie Park Corridor, where future additional housing growth opportunities are limited. The inclusion of new residents in the locality will add to the vibrancy of the area.

8.1.3 Draft Inner North Subregional Strategy

The site falls within the Inner North Subregion of the Metro Strategy. The Subregional Strategy provides the intended outcomes and specific parameters for the development of the subregion.

The Subregional Strategy identifies four key directions for its housing component as follows:

- To provide more housing opportunities to support a diverse workforce and population.
- To increase housing choice as part of the housing targets.
- Plan for 30,000 new dwellings.
- Enable communities to 'age in place'.

Specifically, the Housing Strategy component of the Subregional Strategy provides the following actions:

- C1 – Ensure adequate supply of land and sites for residential development through:
- C2 – Plan for a housing mix near jobs, transport and services by:
- C5 – Improve the quality of new development and urban renewal through:

The project will contribute to the outcome of these actions by:

- Providing a range of dwelling types offering between 1 and 3 bedroom dwellings responding to the average household size.
- Responding to the site's close proximity to major new rail infrastructure.
- Providing new housing product within the LGA which benefit from the site's strategic location.
- Expanding the housing supply within a walkable distance from the train station, bus routes, education facilities, medical services and shopping opportunities.
- Maximising the potential for the site to contribute to the housing supply within the subregion and assist Council in identifying appropriate sites to achieve its target dwelling growth of 12,000 new homes by 2031.
- Providing residential development within an existing serviced area directly adjacent to other residential land.
- Providing high quality architectural design with high quality materials and finishes.
- Incorporating a cohesive landscape concept for the project and public domain.
- Designing each residential apartment building in accordance with the SEPP 65 and the RFDC.

The subregional strategy is further discussed in Section 3.2.

8.1.4 Metropolitan Transport Plan 2010

The Metropolitan Transport Plan is to be fully integrated within the NSW Metropolitan Strategy. The Plan presents a 10 year funding guarantee in order to achieve four ideal transport qualities:

- Commuting to work easily and quickly.
- Transport and services accessible to all members of our community.
- An efficient, integrated and customer focused public transport system.
- Revitalised neighbourhoods with improved transport hubs.

Of relevance to the proposal is the implementation of the North West Rail Link. It is anticipated to connect regional commuter car parks and bus interchanges and offer a fast direct route connecting population centres and strategic locations between the north west of Sydney, Macquarie Park and the CBD.

The Plan's current estimates indicate that by 2024 the North West Line will carry 18.7 million passengers each year. By creating greater linkages to Macquarie Park, this area may be expected to increase in population. In this way, the provision of multi-unit housing near employment and a recently constructed train station is consistent with the Metropolitan Transport Plan.

8.1.5 NSW Bike Plan 2010

The NSW Bike Plan is a comprehensive plan to transform cycling and to encourage people to ride more often and more safely in NSW. It details a 10 year plan for new bicycle infrastructure to be funded by the NSW Government commitment of $158 million to improve cycling networks in NSW in the Metropolitan Transport Plan: Connecting the City of Cities.

The proposal positively responds to the aspirations of the Bike Plan by providing numerous bicycle parking spaces, and providing a link to the nearby regional bike path network at Shrimpton's Creek.

8.1.6 NSW Planning Guidelines for Walking and Cycling 2004

The Planning Guidelines for Walking and Cycling 2004 aim to ensure the provision of pedestrian and cycle access locations within close proximity to major crossings and desire lines. The proposal is appropriately placed to ensure this, allowing access from three street frontages and providing ease of connectivity given its location immediately adjacent to a regional cycle route (see Figure 12). It is also within walking distance of a range of local services and facilities and is adjacent to a major cycleway network.

8.1.7 Integrating Land Use and Transport – A Planning Policy Package 2001

Integrating Land Use and Transport – A Planning Policy Package 2001 seeks to reduce private vehicle use and promote active and public transport options instead. The site's proximity to both a range of public transport options and local facilities is directly consistent with the intent of the policy package.

8.1.8 Interim Guideline for Development near Rail Corridors and Busy Roads

The Interim Guideline seeks to protect the safety and integrity of key transport infrastructure from adjacent development, and ensure that adjacent development achieves an appropriate acoustic amenity by meeting internal noise criteria specified in the Infrastructure SEPP. The Noise report at Appendix H addresses the guidelines contained within this document.

8.1.9 NSW Office of Water Groundwater Policies

The NSW State Groundwater Policy Framework Document provides direction on the ecologically sustainable management of the State's groundwater resources. It establishes objectives and principles of groundwater management to guide decision making within the state and local government. The Geotechnical Investigation report at Appendix E addresses the guidelines contained within this document.

8.1.10 NSW Health - Healthy Urban Development Checklist 2010

The purpose of the NSW Healthy Urban Development Checklist is to assist health professionals to provide advice on urban development policies, plans and proposals. The checklist is principally about helping to determine the health effects of proposals, and how these can be improved to provide better health outcomes.

Section 9.2 provides housing checklist questions which "*encourage housing that supports human and environmental health*". This primarily focus on encouraging walking, cycling or travel by public transport. The proposed development positively responds to this by the provision of high quality housing proximate to a range of public transport options.

8.1.11 Ryde City Council's Macquarie Park Traffic Study – Final Report

A Paramics micro simulation assessment has been undertaken as part of the Traffic Report (Appendix L). This modelling has been conducted in accordance with the Macquarie Park Traffic Study. The outcomes of this modelling are discussed within the Traffic Report.

8.1.12 Draft Ryde LEP 2011

Ryde Draft LEP 2011 was placed on preliminary exhibition on 19th January 2011, but has not yet been formally authorised by the Department of Planning and Infrastructure for consultation under Section 65 of the EP & A Act. The Draft plan does not propose any major changes to the zoning or development standards which apply to the site, but has updated some of the zone objectives which apply to the R2 zone under Ryde LEP 2010.

Zoning

Under DLEP 2011 the site is zoned R2 Low Density Residential. The objectives of the R2 zone are to:

- *To provide for the housing needs of the community.*
- *To provide for a variety of housing types and densities.*
- *To enable other land uses that provides facilities or services to meet the day to day needs of residents.*

The proposed development is entirely consistent with the above objectives by providing a new range of housing opportunities within walking distance of nearby transport infrastructure. While the applicant would be happy to provide a local convenience store to meet the day to day needs of residents, it is noted that a range of local shops in David Avenue are currently vacant which could be used for these purposes. It would therefore be unnecessary to provide additional local shops which would compete with the unoccupied shops nearby.

Permissibility

Development for the following purposes is permitted in the R2 zone:

Bed and breakfast accommodation; Boarding houses; Business identification signs; Child care centres; Community facilities; Dual occupancies (attached); Dwelling houses; Educational establishments; Environmental protection works; Group homes; Health consulting rooms; Hospitals; Multi dwelling housing ; Places of public worship; Recreation areas; Residential care facilities; Roads.

All other development is prohibited.

Relevant Development Standards

Development standards under the LEP that are applicable to the site include:

- Floor Space Ratio – Maximum 0.5:1 (1.29:1 proposed).
- Building Height – Maximum building height of 9.5m (heights of 7.8m – 19.2m proposed).

8.1.13 Ryde LEP 2010

Ryde Local Environmental Plan 2010 (the LEP) is the consolidating plan for the City of Ryde. It translated existing provisions under Ryde Planning Scheme Ordinance, LEP 173 (Macquarie Park) and some development controls contained in Ryde Development Control Plan 2006 into the State Government's Standard LEP Instrument. It was gazetted on the 30 June 2010.

Zoning

Under LEP 2010 the site is zoned R2 Low Density Residential.

Permissibility

Development for the following purposes is permitted in the R2 zone:

> *Home-based child care; Home occupations Bed and breakfast accommodation; Boarding houses; Business identification signs; Child care centres; Community facilities; Dual occupancies (attached); Dwelling houses; Educational establishments; Group homes; Health consulting rooms; Hospitals; Multi dwelling housing (attached); Places of public worship; Recreation areas; Residential care facilities; Roads*

All other development is prohibited.

As the proposed use is defined as a residential flat building[6] under the LEP, it is prohibited in the R2 zone. However, pursuant to Section 75O and 75R of the Act, in deciding whether or not to give approval for a Concept Plan, the Minister may (but is not required to) take into account the provisions of any environmental planning instrument, other than State Environmental Planning Policies (SEPPs). While the above LEP prohibition, and the following development standards, must be 'considered', they are not strictly applicable to the proposed Concept Plan.

In terms of land use, the site is clearly zoned for predominantly residential purposes. The prohibition of residential flat buildings therefore relates to density, not underlying use. The proposed residential use is therefore not inconsistent with the underlying purpose of the zoning, notwithstanding its increased density, and the stated objective of not significantly altering the existing character of the location.

Relevant Development Standards

Development standards under the LEP that are applicable to the site include:

- Floor Space Ratio – Maximum 0.5:1 (1.29:1 proposed).
- Building Height – Maximum building height of 9.5m (heights of 7.8m – 19.2m proposed).

However, pursuant to Clause 4.4A of the LEP, the maximum floor space ratio shown for a building on land in Zone R2 Low Density Residential only applies to development for the purposes of a dwelling house or attached dual occupancy, not to 'residential flat buildings', as is proposed.

While the project clearly exceeds the underlying development standards, it is proposed on the basis of the strategic context of the site relative to the Macquarie Park Corridor and railway station. The height and bulk of the project has therefore been established with reference to the surrounding context, residential amenity and opportunities to promote additional housing proximate to transport infrastructure.

The proposed building heights sought under the Concept Plan respond to the surrounding uses to ensure that high levels of residential amenity can be maintained. In particular, the 2 to 3 storey built form are proposed adjacent to the residential interfaces with David Avenue (Buildings D/E) and Parklands Road (Building C) to the east and south of the site. Buildings A and B are taller elements which have been designed to respond to the height of the Avaya Building on the northern side of Epping Road, and create a symmetrical framing and strong edge along Epping Road.

6 Pursuant to the LEP "**Residential flat building** means a building containing 3 or more dwellings, but does not include an attached dwelling or multi dwelling housing."

In addition to the heights proposed, the Concept Plan also provides generous amounts of building separation to surrounding properties which is consistent with the guidelines espoused within the Residential Flat Development Code.

In considering the future character of the area in a broader strategic planning context, the height and bulk of the Macquarie Park Corridor has already transformed the nature of the local area. The surrounding hubs of the Corridor which are in close proximity will continue to undergo transformation over the coming years. The outcomes of draft Housing Study reflect the intention by the Council to investigate potential growth areas to the south of Epping Road to accommodate addition growth into the near future.

8.1.14 Ryde Development Control Plan 2010

Council adopted the City of Ryde Development Control Plan 2010 on 16 June 2009 and the Plan came into effect on 30 June 2010. While the DCP contains controls for residential flat buildings, it explicitly states that these do not apply to Low Density Residential Zones (i.e. including R2). Given that the DCP is zone-based and not directly translatable to the proposal, the guidance contained within the RFDC has been applied as an applicable criterion.

8.1.15 SEPP (Building Sustainability Index: Basix) 2004

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans.

Notwithstanding that the proposal is at a Concept Plan stage, the proposed building envelopes and site configuration has been designed in a manner to facilitate Basix compliance at the Project Application stage.

8.1.16 Ryde Bicycle Strategy and Master Plan 2007

As addressed in the Traffic Report (located at Appendix L) and Section 2.7 of this report, the site is provided with comprehensive access to the regional bike path network (refer to Figure 12). In addition the provision of bicycle facilities will be appropriately incorporated at the detailed design phase of the development in accordance with Council's standards.

8.1.17 Macquarie Park Pedestrian Movement Study 2009

The Ryde Park Pedestrian Movement Study 2009 does not propose any significant upgrades to the pedestrian or bicycle environment surrounding the site. Convenient pedestrian access exists between the site and Macquarie Park train station, Avon Road shops and Cox's Road shops.

A new 2.5m wide shared pedestrian and cycle path is proposed to link in with existing path networks and the new development.

8.1.18 Macquarie Park Public Domain Technical Manual

As discussed in the SEPP 65 Design Verification Statement included at Appendix O, the Concept Plan has been design in accordance with the intent of the Macquarie Park Public Domain Technical Manual. As this proposal seeks approval for the Concept Plan only, further compliance with the manual will be demonstrated at later detailed design stages of the project.

8.1.19 SEPP 55 - Remediation of Land

The key objective of this policy is:

> *To promote the remediation of contaminated land in order to reduce the risk of harm to human health or any other aspect of the environment:*
>
> - *by specifying when consent is required for remediation work and when it isn't*

- *by specifying considerations that are relevant in rezoning and development applications for consent to carry out remediation work*
- *by placing certain standards and notification requirements for remediation work.*

The SEPP states that land must not be rezoned or developed unless contamination has been considered and, where relevant, land has been appropriately remediated.

A Phase 1 Preliminary Environmental Site Assessment undertaken by Environmental Investigation Services (Appendix D) has found that, as the site and surrounding area has predominantly been used as semi-rural land with cultivated sections.

Whilst the results of some onsite tests showed elevated levels of contaminants in some soil samples it is not expected that these levels will inhibit the suitability of the site for residential development, subject to further assessment following the demolition of existing buildings on site.

Further investigation will be completed upon demolition of existing buildings. If remediation is found to be required a Remedial Action Plan will be submitted for approval and audited upon implementation.

8.1.20 SEPP 65 - Design Quality of Residential Flat Development and the Residential Flat Design Code (RFDC)

The Concept Plan meets the requirements of SEPP 65 and the Residential Flat Design Code (RFDC) as depicted in the SEPP 65 Design Verification Statement and the RFDC compliance table located at Appendix O, both prepared by SJB Architects.

In particular, the proposal responds positively to the following key areas of the Code:

- **Building configuration**: Apartment layout, mix, balconies, ceiling heights, flexibility, internal circulation, storage.
- **Residential Amenity**: Solar access and overshadowing, acoustic and visual privacy, natural surveillance.
- **Building Performance**: Energy efficiency, waste management and water conservation.

8.1.21 Nature and extent of any non-compliance

As previously discussed, the proposal does not meet the height and FSR standards of the LEP. The extent of these non-compliances is as follows:

- The Concept Plan seeks a height of 7.8m-19.2m, exceeding the allowable standard of 9.5m by 9.7m.
- The Concept Plan seeks an FSR of 1.29:1 exceeding the allowable standard of 0.5:1 by 0.79:1.

While the project significantly exceeds the height and density provisions of the R2 Low Density Residential zone under Ryde Local Environmental Plan 2010, the proposed intensification of the site is directly consistent with the principles of a range of broader strategic planning considerations, such as the NSW State Plan 2010, the Draft Inner North Subregional Strategy, the Metropolitan Transport Plan 2010 and Integrating Land Use and Transport – A Planning Policy Package 2001. Aside from the LEP controls, the project is consistent with all other relevant guidelines and controls, including the Residential Flat Design Code.

As the proposed use is defined as a residential flat building under the LEP, it is prohibited in the R2 zone. However, pursuant to Section 75O and 75R of the Act, in deciding whether or not to give approval for a Concept Plan, the Minister may (but is not required to) take into account the provisions of any environmental planning instrument, other than State Environmental Planning Policies (SEPPs). While the above LEP prohibition, and the following development standards, must be 'considered', they are not strictly applicable to the proposed Concept Plan.

In terms of land use, the site is clearly zoned for predominantly residential purposes. The prohibition of residential flat buildings therefore relates to density, not underlying use. The proposed residential use is therefore not inconsistent with the underlying purpose of the zoning.

8.2 BUILT FORM AND URBAN DESIGN

Director General's Environmental Assessment Requirement No. 2

The EA shall address the height, bulk and scale of the proposed development within the context of the locality. In particular, detailed envelope / height and contextual studies should be undertaken to ensure the proposal integrates with the local environment. The EA shall also provide the following documents:

- *Visual and view analysis to and from the site from key vantage points; and,*
- *Comparable height study to demonstrate how the proposed height relates to the height of the existing/approved developments surrounding the subject site and in the locality;*
- *Investigation of alternative options for the siting and layout of the building envelopes, massing and articulation, with particular consideration given to the impact upon residential amenity arising from different options.*

The EA shall address the design quality with specific consideration of the massing, setbacks, building articulation, landscape setting, and public domain, including an assessment against the CPTED Principles.

The EA shall address the urban design interface of the site to:

- *Epping Road, with an appropriate design response to safeguarding the amenity of future residents of the site; and*
- *The surrounding low-density residential dwellings, in particular in terms of fringe impacts and identification of mitigation measures including façade treatment, setbacks deep soil planting etc.*

8.2.1 Comparable Height Study

SJB Architects provides a range of sections (Appendix G) which examine comparable heights within the area and illustrates that the proposed Concept Plan heights are justifiable within the local context.

Notably, the plan identifies that the proposed taller buildings present a comparable height with the development on the northern side of Epping Road, but scale down to 2-3 storeys adjacent to neighbouring properties in David Avenue and Parklands Road.

8.2.2 Visual and View Analysis

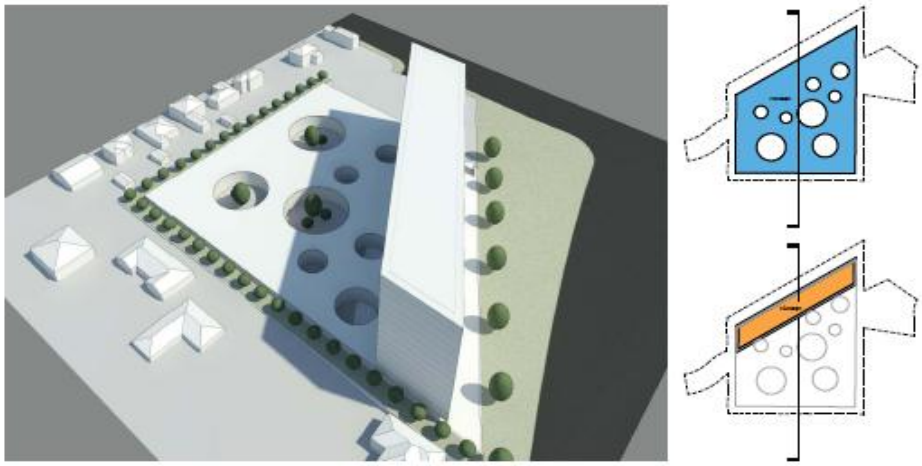
The Visual and View Analysis included at Appendix P demonstrates that the Concept Plan is appropriate for the site with regard to visual impact. The Visual and View Analysis concluded that whilst the project will have impacts on the visual environments of the surrounding area, these impacts are considered to be acceptable both in terms of the design outcome and the establishment of a more suitable form of development than currently exists on the site.

8.2.3 Consideration of options for siting and layout

The various options considered in the evolution of the current proposal are described below. The building height and massing of each option was assessed in terms of the scale and existing built forms in the locality, resulting in lower buildings addressing the neighbouring properties to create a contextual outcome.

Option 1

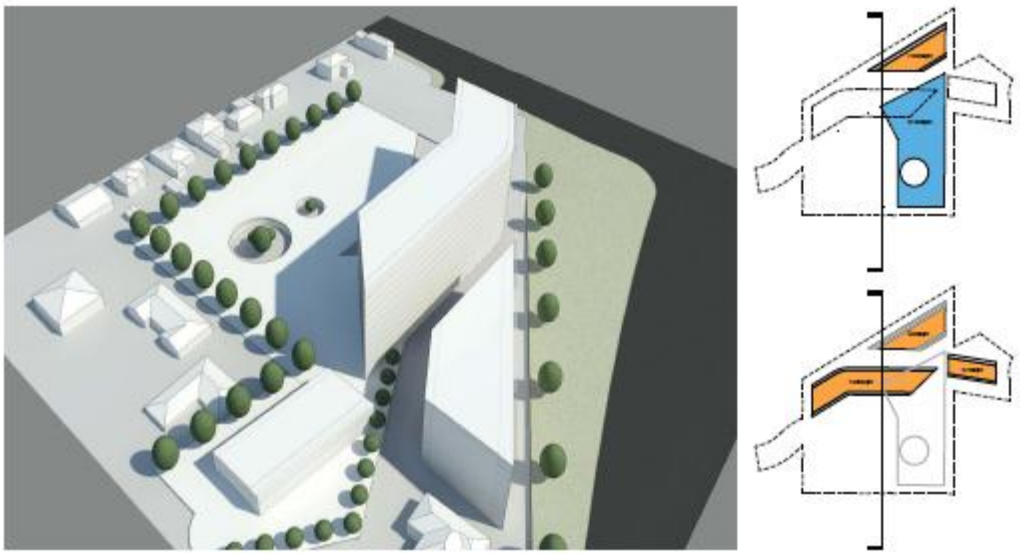
The initial concept was a mixed use development comprising a commercial building partly buried within the topography of the site and a residential building fronting busy Epping Road. The roof of the buried commercial building was to be landscaped as open space and there were circular cut outs in the floor plate to ensure that light and ventilation was provided to the spaces below. This approach would create an acoustic barrier to Epping Road and offer units a desirable northern aspect while locating high quality large plate office space in a subterranean building. This scheme provided excellent open space opportunities and the potential for high quality residential apartments. The location of the large building along Epping Road ensured a significant setback to the adjoining southern properties. This scheme was discarded due to the requirement to not include any commercial office space on site.



PICTURE 12 – OPTION 1 (SOURCE: SJB ARCHITECTS)

Option 2

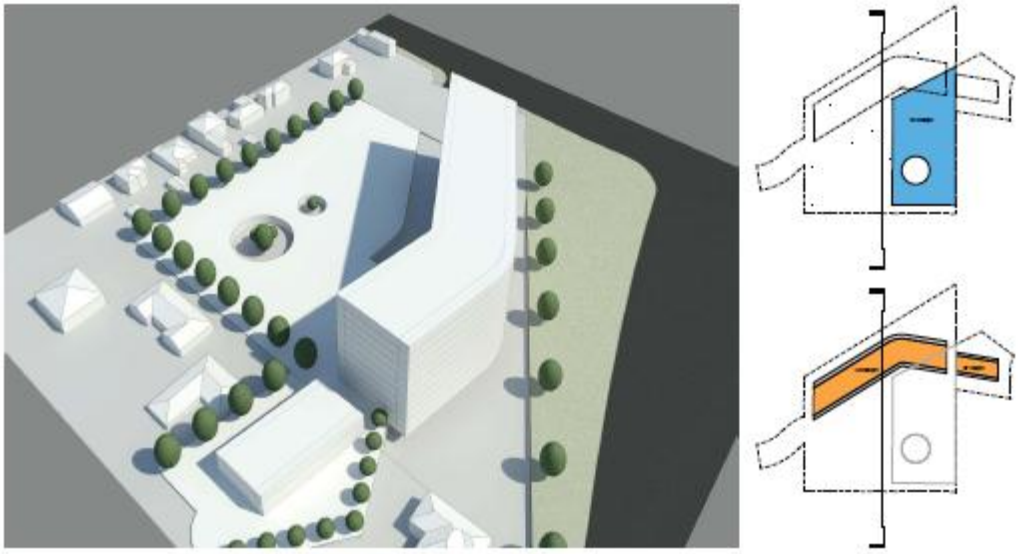
An alternative concept of an entirely residential development was then developed. This incorporated the 'mass on Epping Road' concept from Option 1 but also provided a range of scales, stepping down to the 2 storey dwellings on Parklands Road. The narrow depth of the residential buildings was excellent for cross ventilation and penetration of diffuse light; however stepping of the buildings down from Epping Road resulted in significant overshadowing. It was also felt that the continuous length of building while appropriate to the Epping Road context was inappropriate directly adjacent to the existing residential dwellings on Parklands Road.



PICTURE 13 – OPTION 2 (SOURCE: SJB ARCHITECTS)

Option 3

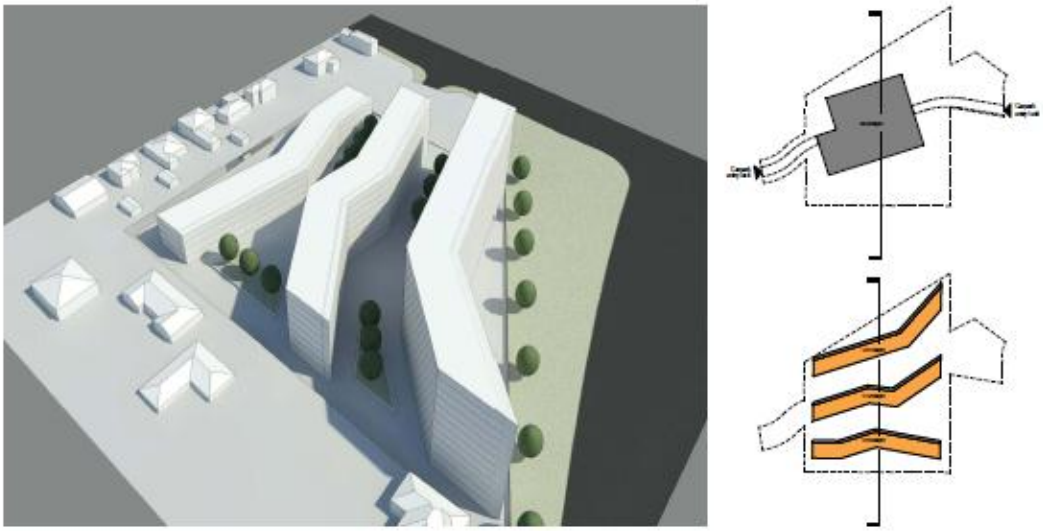
This option reduced the quantum of commercial space located in a subterranean building and broke the continuous residential building fronting Epping Road. In addition a smaller building was located to David Avenue to adequately address the existing local streetscape. It was thought that the break of the Epping Road building did not deliver significant benefits to the surrounding built environment. In addition it was believed that the movement of the mass south would have a negative visual impact on the surrounding residential streets.



PICTURE 14 – OPTION 3 (SOURCE: SJB ARCHITECTS)

Option 4

This option also reduced the quantum of commercial space located in a subterranean building from Option 1 and sculpted the continuous residential building fronting Epping Road to step it away from the adjoining residential property in the eastern corner. A smaller building was located to David Avenue to adequately address the existing local streetscape. It was thought that again the sculpting of the building did not deliver significant benefits to the surrounding built environment. In addition it was believed that the movement of the mass south would have a negative visual impact on the surrounding residential streets.



PICTURE 15 – OPTION 4 (SOURCE: SJB ARCHITECTS)

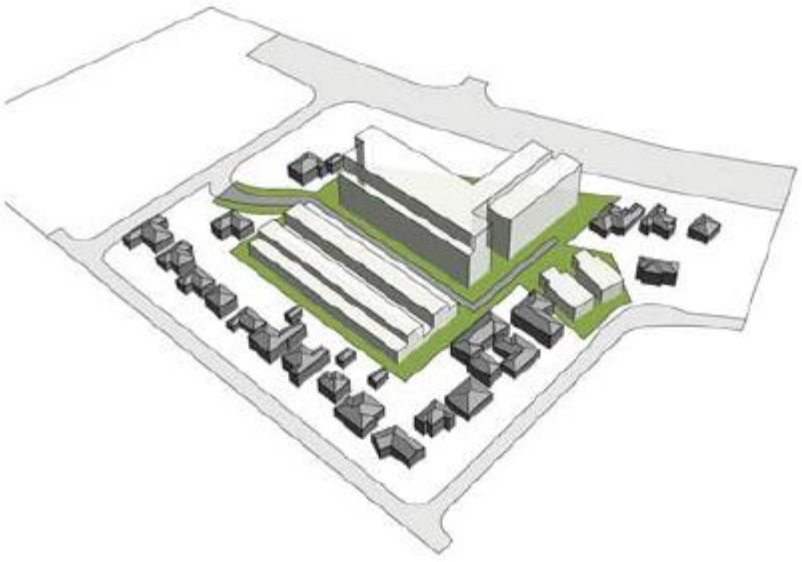
Option 5 (Option presented at community consultation)

This option addresses the scale and speed of Epping Road by locating the largest building form along this northern edge. Two smaller buildings are then located to the east and south of the building to adequately step down the building form to the existing residential dwellings. The singular building to Epping Road was broken in two to enable adequate sun light penetration and cross ventilation, while the buildings south eastern corner was reduced in scale to ensure that the required 3 hours of direct sunlight access to adjoining neighbours was achieved. The two smaller buildings are located with adequate separation to existing adjoining residential dwellings, allowing for significant landscaping to establish.

PICTURE 16 – OPTION 5 (SOURCE: SJB ARCHITECTS)

Option 6 (Revised following feedback from the community and officers at DOPI)

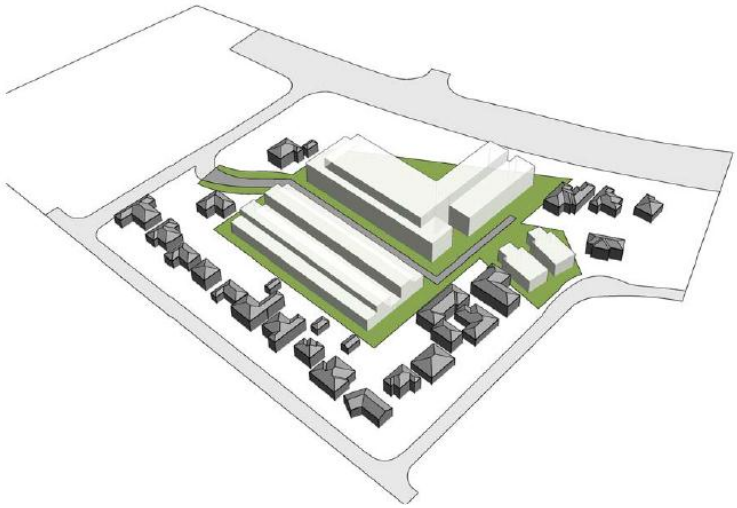
Option 6 indicates the proposed scheme which has been revised following community consultation and feedback from the Department of Planning and Infrastructure. The bulk, height and scale of the project have been carefully considered to address the surrounding properties and the scale of the street. In particular, lower scale 2-3 storey buildings are located adjacent to adjoining low density housing, with a maximum height of 8 storeys concentrated towards Epping Road. This ensures that solar access, privacy and boundary treatments are sympathetic to neighbouring properties.



PICTURE 17 – OPTION 6 (SOURCE: SJB ARCHITECTS)

Option 7 – Preferred Concept Plan

Option 7 indicates the preferred scheme which has been revised following submissions received during the public exhibition of the Environmental Assessment. The bulk, height and scale of the project have been considered in relation to submissions. In particular, this scheme has a maximum height of 6 storeys concentrated towards Epping Road. This ensures that solar access, privacy and boundary treatment are further sympathetic to neighbouring properties and the streetscape.



PICTURE 18 – PREFERRED OPTION (SOURCE: SJB ARCHITECTS)

8.2.4 Design Quality

As discussed in the SEPP 65 Design Verification Statement (refer to Appendix O), the Concept Plan has been designed to ensure quality built form, urban design and public domain outcomes which are sympathetic to the surrounding environment. The SEPP 65 Design Verification Statement states that:

> *"The proposal seeks to respond to its context by providing a series of differently scaled buildings which relate to the edge conditions at the boundaries as illustrated in the submitted elevations and photomontages and is respectful of privacy of its neighbours. In view of the above, the proposed development is appropriate in its context."*

The bulk, height and scale of the development as well as the range of materials and textures proposed have been carefully considered to address the surrounding buildings, scale of the street and the nature of the residential streetscape. The Preferred Project Plan has been designed to optimise amenity to the proposed dwellings.

8.2.5 Crime Prevention through Environmental Design Principles

SJB Architects have prepared an assessment of the proposal against the Crime Prevention Through Environmental Design (CPTED) principles. The CPTED Assessment is included at Appendix Q.

The report demonstrates that the proposal has been designed to adhere to the CPTED principles. Design elements which support the CPTED principles include:

- Building layout and orientation which promotes passive surveillance;
- Secured entrances to the site; and
- The use of light coloured painting and transparent materials to enhance light and visibility.
- The new buildings will overlook the public domain and communal areas,

- New roads, through-site links and pedestrian and cycle footpaths will increase activities at ground floor and will bring people to the site throughout the day and night,
- The landscape spaces have been designed with minimal visual blockages at the mid story level by utilizing planting that is up to 600mm high, combined with tall trees with branches occurring above 2m high.
- Public domain lighting will be included to illuminate all thoroughfares at night.
- The new public domain and communal areas have been designed to attract users (of all ages),
- The only private domain areas are within the building and courtyard spaces adjacent to units, which is clearly delineated from the public domain and communal spaces.

As illustrated in the CPTED report, the massing, setbacks, building articulation, landscape setting, and public domain effectively promote implementation of CPTED principles across the development.

8.2.6 Key urban design interfaces

As discussed above, the proposed Concept Plan has been designed to specifically respond to the key urban design interfaces of Epping Road and the surrounding residential properties. SJB Architects documentation provides commentary on their approach to positively respond to these interfaces, which is summarised below.

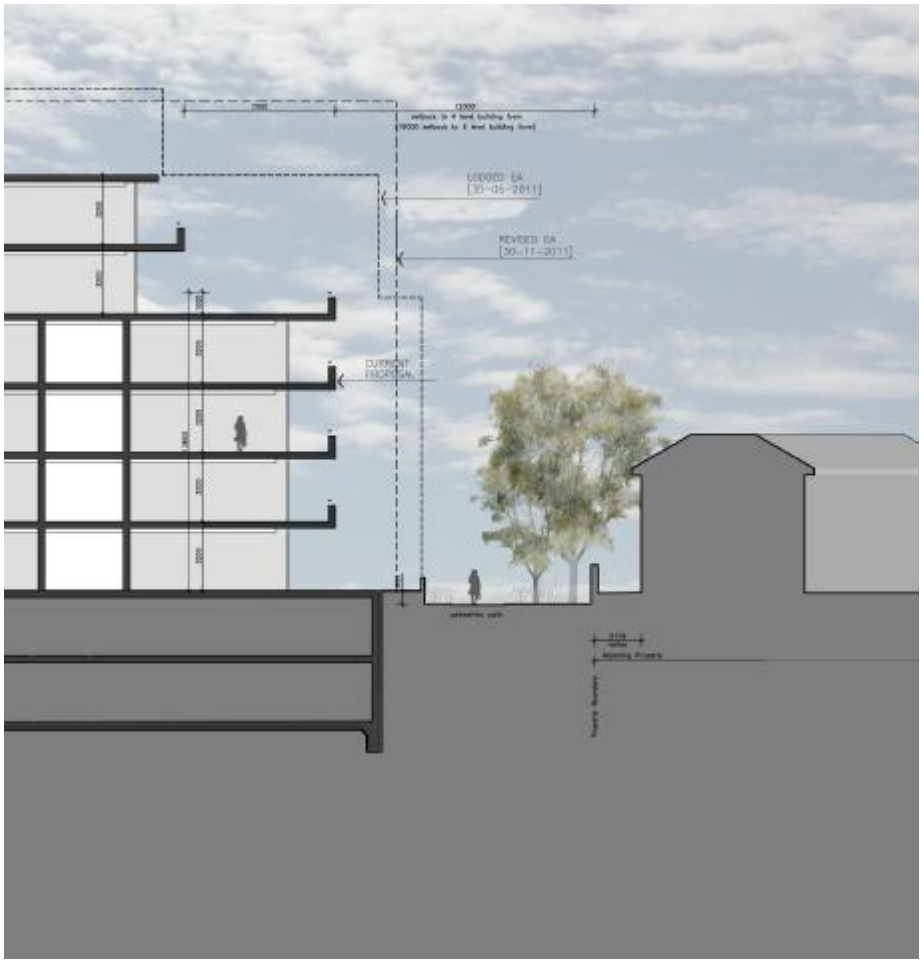
The site has a range of interfaces with surrounding residential properties in Epping Road, Whiteside Street, David Avenue and Parklands Road. Design measures have been proposed to positively respond to these interfaces by providing adequate building separation, landscaping and detailed site and building design elements. These are discussed in more detail below.

<u>Epping Road</u>

The built form which addresses Epping Road has been designed in a manner to safeguard the amenity of future residents. Building A is generously setback from Epping Road, with Buildings B, C & D reduced in scale (and appropriately setback) to reflect the lower scale of surrounding residential dwellings on Epping Road and David Avenue. The configuration of Building A provides an enclosed communal open space area, which will be landscaped and treated to address privacy and acoustic issues.

No 166 Epping Road's south and western boundaries are significantly screened by tall trees and shrubs along its boundaries adjacent to the development site. The Concept Plan seeks to retain the tall and mature trees along this interface, and provide a more generous building separation to the south where Buildings C/D are proposed. Buildings C/D will contain formal landscaped private gardens in addition to the existing vegetation which will provide privacy to these residents.

FIGURE 28 – SECTION DRAWING AT EPPING ROAD INTERFACE



Whiteside Street

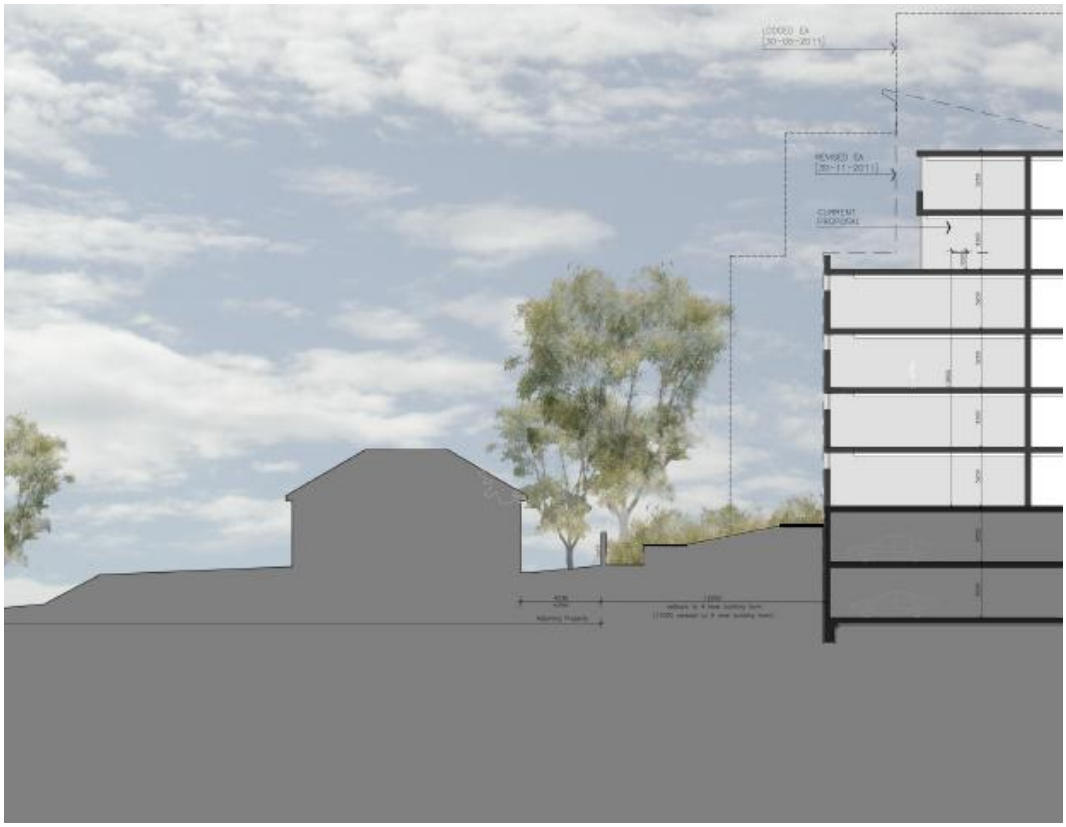
No.4 & Lot 5 Whiteside Street are directly adjacent to the west of the proposed development.

The applicant has made various documented attempts (Refer to Appendix R) to purchase No. 4 Whiteside Street since early 2005 to ensure a larger site amalgamation, and to reduce the potential for the site to become isolated in the future. As these offers have all been declined, the scheme has been designed to reasonably protect these sites' amenity.

Specifically, Building A has been setback over 12m from No. 4 Whiteside Street and Building B has been set back over 9.5m from Lot 5 Whiteside Street. Further, Building B steps down in height from 3 storeys to 2 storeys, with the taller element set back over 17 metres from the boundary. This reflects the scale of the surrounding dwellings adjacent to this property.

Both properties will be separated by the proposed community garden and boundary landscaping on this interface. At present Lot 5 Whiteside Street is located directly adjacent to an existing rural building which is built almost built to the boundary. The Concept Plan seeks to increase the distance separation to this boundary to 8.5 metres and creates a more formal and maintained landscape environment adjacent to this property.

FIGURE 29 – SECTION DRAWING AT WHITESIDE STREET INTERFACE

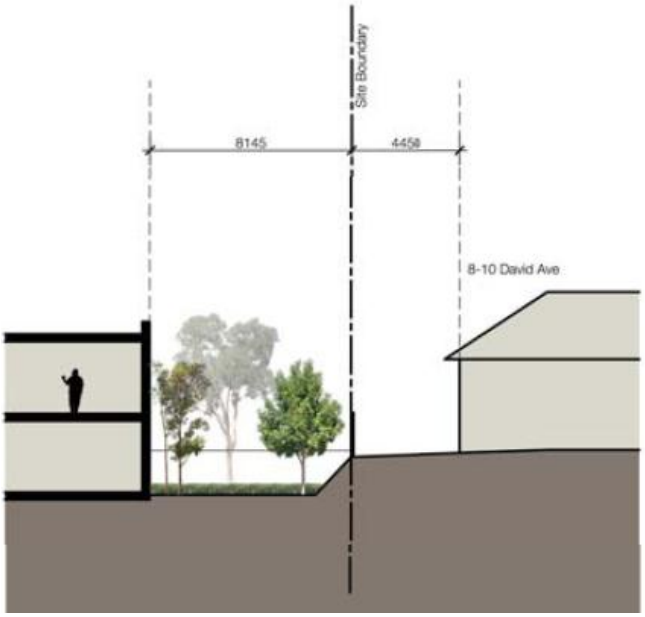


David Avenue

Buildings B, C and D are located in close proximity to Nos 10, 12 & 18 David Avenue to the south-east of the site. Both buildings have a reduced height to positively respond to the transition to the surrounding lower adjacent residential dwellings. Specifically, Building B has a reduced height component to 2 storeys adjacent to the key boundaries with these properties. The height steps up to 3 storeys after a setback of 17 metres.

Buildings C/D provide north facing apartments, with south facing elements of the apartments providing louvers and privacy control measures to reduce any potential for overlooking. Landscape boundary screening is proposed along the new pedestrian footpath to the north of this interface to provide additional privacy here.

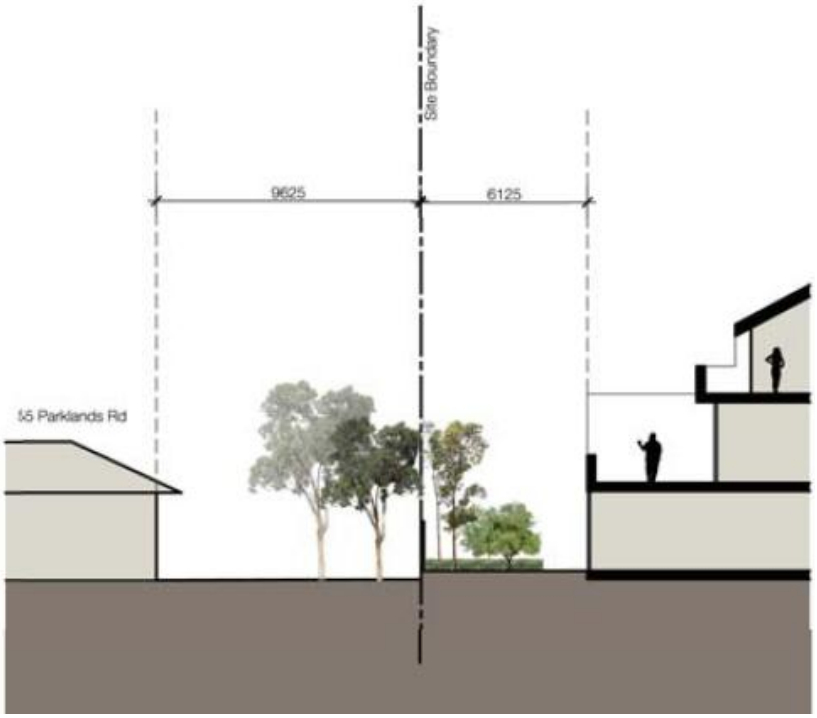
FIGURE 30 – SECTION DRAWINGS AT DAVID AVENUE



Parklands Road

The site adjoins a number of residential properties in Parklands Road to the south of the site. Building heights step down to three storeys adjacent to this boundary to respond to the lower heights of dwellings in this location. Building separation distance on this boundary is in accordance with the guidelines contained in the RFDC, and privacy measures on south facing apartments have been incorporated to reduce any potential privacy issues with this interface. Dense landscaping and the use of landscape mounds will ensure that this results in no overlooking to adjoining residents. The figures below by SJB Architects provide an indication of how privacy matters will be reduced through the Concept Plan design.

FIGURE 31 – SECTION DRAWING AT PARKLANDS ROAD INTERFACE



8.3 SITE AMALGAMATION

Director General's Environmental Assessment Requirement No. 3

The proposal should seek to amalgamate with adjacent properties, particularly adjoining properties on Whiteside Street which would be isolated as a result of the development. Details shall be included in the EA outlining any negotiations with the owners of affected properties. If amalgamation is not possible, the EA shall detail possible development options for the adjacent land.

As discussed above, No.4 Whiteside Street is directly adjacent to the proposed development. The applicant has made various documented attempts (Refer to Appendix R) to purchase this property since early 2005 to ensure a larger site amalgamation, and to reduce the potential for the site to become isolated in the future.

As these offers have all been declined, the scheme has been designed to reasonably protect these sites' amenity.

8.4 LANDSCAPING

Director General's Environmental Assessment Requirement No. 4

The EA must explain the type, function and landscape character of the various private, communal and public areas on the site. Pedestrian linkages should be demonstrated in schematic form.

The EA is to demonstrate how the design of proposed structures and the treatment of public domain and open spaces will:

- *Maximise safety and security within the site and the public domain.*
- *Maximise surveillance and activity within the site and the public domain.*
- *Comply with CPTED principles.*
- *Ensure access for people with disabilities*
- *Minimise potential for vehicle and pedestrian conflicts*

The EA shall consider the interface of the proposed development and public domain improvements needed to provide a high level of residential and pedestrian amenity.

The Landscape Plan and Design Statement prepared by Aspect Studios at Appendix I provides a detailed explanation of the type, function and landscape character of private, communal and public areas on the site. While changes have been made to the Concept Plan layout, the principles contained in the Landscape Plan submitted at EA stage remain relevant. These are also detailed below.

Through-site link

The through-site link acts as an important vehicular, pedestrian and cycle link into the existing road and footpath network. A two-way, 6m wide shared way is proposed entering the site from Whiteside Street. To continue the link through the site, a 1.5m wide footpath and cycleway is proposed from the shared way through to David Avenue. The pavement surface of the shared way is a unit paver to match proposed footpaths and will be kerb-less, to highlight it as a slow zone area. Visitor parking is provided along both sides of the shared way.

Community Garden

The inclusion of community gardens on the site provides residents with the ability to grow their own produce as well as to become involved in a resident-based activity, providing opportunities for strong social interactions. The gardens reflect the market gardening and orcharding history of the locality pre-1950s urbanization.

The space consists of raised garden beds for seasonal vegetable planting, as well as permanent planting of herbs and other edible plants. This on site production of food will promote self-sustainability and community. A barbeque and covered outdoor dining facilities have been provided to create opportunities for resident interaction and social activities beyond gardening alone. Storage areas for tools, a notice board and sink will be included for residents' use.

Communal Courtyard

Situated to the north of the site, this space provides a large area for community gathering, an important buffer to the existing low density residential developments, and a space experienced and viewed by the proposed units. Materials and plants have been selected to provide an attractive outlook from above, whilst creating inviting spaces for passive recreation and respite.

The area has been designed to provide a usable turf space and is surrounded by gravel and planting to maximise permeable ground surfaces. Species selection aims to provide variety of form, textures and colours, creating a rich planting outcome. A collection of native and exotics have been utilised, all being climate appropriate and robust to maximise aspect benefit and minimise water and maintenance input.

The communal courtyard has a 2.6m masonry wall adjacent the RMS land boundary to provide acoustic protection. The wall is set 1m from the boundary to allow dense screen planting on both sides of wall.

Private Courtyards

A pad of timber decking within gravel and low planting is proposed for each courtyard as a flexible design that can be easily adapted by residents to suit their needs. One or two small flowering trees have been selected for individual courtyards. Buffer planting in the communal spaces also enhances the courtyards with the borrowed landscape assisting in strengthening the 'green outlook' for the residents.

To the southern side of proposed buildings, shade-tolerant plants have been proposed to create a successful landscape outcome in the limited sun exposure whilst providing a buffer to private courtyard spaces.

Public Pocket Park

Situated in the northern corner of the site, the public pocket park provides and important link to Epping Road for pedestrians to and from the development. A path connects into the existing footpath on Epping Road, and extends through to the through-site link promoting opportunities for a finer grain pedestrian network to link in with existing residential areas.

Buffer Planting

The western, southern and eastern edges of the site share boundaries with existing low density residential properties. Dense, consolidated shrub and tree planting is proposed on all edges to provide a buffer to the properties, and minimise any overlooking issues from the new development. The shrubs selected consist of a mix of native and exotic species, chosen for their dense form and low water and maintenance requirements.

RMS land

The area to the north of the site area adjacent Epping Road is an unappealing and largely unused space which is owned by the RMS. Currently the space is largely overgrown with weedy tree and shrub species.

The landscape proposal aims to revitalise the space and create an attractive open public reserve. A new avenue of large native trees, and low understorey planting will be established to create a buffer from the road whilst retaining sightlines important for security. The proposed planting provide a green outlook for the development, and extend the character of wide planted setbacks already established in the Ryde area.

A new 2.5m wide shared pedestrian and cycle path is proposed to link in with existing path networks. A bus layback and bus shelter have been included in an indicative location that may be a desirable outcome for this area.

Whiteside Street upgrade

The landscape proposal shows Whiteside Street to be upgraded with tree planting and a footpath connecting to the RMS lands proposed shared cycle way and footpath. A two-way, 6m wide road is proposed entering the site from Whiteside Street via a roundabout. Refer to Traffix report for further detail.

FIGURE 32 – INDICATIVE LANDSCAPE PLAN (SOURCE: ASPECT)

8.5 STAGING

Director General's Environmental Assessment Requirement No. 5

The EA shall include staging details for the proposal (if applicable) including the provision and timing of all required infrastructure works, and methodology for protecting the amenity of occupants of completed stages whilst subsequent stages are under construction.

The proposal will be developed as a single project and as such no staging plan has been prepared. Construction phasing will be required to ensure the orderly and efficient delivery of the project. The site is located within a highly urban area with all services available. Augmentation of these services will be detailed at construction certificate phase of the process if required.

8.6 TRANSPORT AND ACCESSIBILITY IMPACTS

Director General's Environmental Assessment Requirement No. 6

- *The EA shall provide a Transport Management and Accessibility Plan (TMAP) prepared with reference to the Metropolitan Transport Plan – Connecting the City of Cities, the NSW State Plan 2010, NSW Planning Guidelines for Walking and Cycling, the Integrating Land Use and Transport policy package and the RMS's Guide to Traffic Generating Developments, including consideration of:*
  - *The potential impacts on the local road network and, in particular, the intersections identified in the RMS response dated 9 December 2010. Consideration should also be given to the use of Ryde City Council's Macquarie Park 2007 Base Paramics Model, where appropriate;*
  - *An assessment of the access restrictions detailed in the RMS response dated 15 December 2010 in relation to adjacent road reservations and their impact on the proposed development;*
  - *An estimate of the trips generated by the proposed development, including an assessment of existing and proposed public transport, pedestrian and cycle movements within the vicinity of the subject site and any measures to address increased demand on existing public transport, walking or cycling infrastructure;*
  - *Identification of measures to manage travel demand and increase the use of public and non-car transport modes and the potential for improving accessibility to local services and facilities and regional connections; and*
  - *Appropriate on-site parking provision having regard to Council and RMS guidelines and availability of public transport (Note: the Department supports reduced car parking in areas well-served by public transport).*
  - *and assist in achieving the objectives and targets set out in the NSW State Plan 2010 and provide an assessment of the implications of the proposed development for non-car travel modes (including public transport, walking and cycling),*
  - *The EA shall include a conceptual sustainable travel plan, with reference to the matters above and other measures such as a car sharing scheme.*

The Transport Management and Accessibility (TMAP) study and additional addendum in response to public exhibition comments, included at Appendix L, address the matters raised in this DGR.

The site is located in close proximity to Epping Road and Lane Cove Road, two major arterial roads, and Herring Road, a sub-arterial road. During the morning and evening peak periods the intersections of these roads are subject to heavy congestion - a matter which the RMS acknowledge as warranting significant future upgrades. This congestion inadvertently results in flow-on and queuing effects to surrounding local roads within the vicinity of these intersections which is a product of the existing network problems here. The challenge with alleviating the capacity of these arterial roads ultimately needs to be resolved at a more regional strategic transport level as a matter of priority.

Traffic congestion, rat-running, on-street car parking and local safety hazards were matters identified by relevant stakeholders during the community consultation process that required additional clarification. Following the outcomes of the consultation and concept design refinement, the applicant has incorporated a range of measures to minimise the impacts of the proposal on the surrounding local roads.

Given the congestion experienced along these major roads, the subject site's position proximate to rail and bus infrastructure presents a unique opportunity to use alternative options to private transport for journeys to work and other destinations.

The proposal is a low traffic-generating use in terms of its impact on the surrounding local roads. The immediate surrounding streets of Whiteside Street, Parklands Road and David Avenue have an environmental capacity of 300 vehicles/hr in accordance with the RMS's Guide to Traffic Generating Developments. Parklands Road, for example, currently experiences a maximum of 106 vehicles/hr in the morning peak. Modelling indicates an additional maximum of 74 vehicles/hr which is well below its environmental threshold.

However, to alleviate pressure and restrict additional opportunities for rat-running on the local road network (two key concerns of residents) the proposal seeks to allow all ingress by vehicular traffic via the existing intersection of Whiteside Street and Epping Road. Egress is proposed via a new public roadway to Epping Road which will form part of Whiteside Street and a restricted access via David Avenue under boom gate control. This was given in principle approval by the RMS.

Based on the above measures, the proposal will restrict any additional impacts on the surrounding local road network. We consider this is a significantly positive response to the concerns raised at the community consultation sessions.

With specific regard to the DGR No. 6, the Table 5 below provides a relevant response below.

TABLE 5 – RESPONSE TO DGR NO. 6

DGR	RESPONSE TO DGR
Provide a Transport Management and Accessibility Plan (TMAP) prepared with reference to the Metropolitan Transport Plan – Connecting the City of Cities, the NSW State Plan 2010, NSW Planning Guidelines for Walking and Cycling, the Integrating Land Use and Transport Policy package and the RMS's Guide to Traffic Generating Developments, including consideration of (refer to the specific matters outlined below):	The TMAP report has been produced with the above documents taken into full account as discussed. It is noted however that for an exclusively residential development generating moderate traffic impacts, the potential for limiting private car use is not as high as can occur with work travel plans, where more policy options are generally available.
The potential impacts on the local road network and, in particular, the intersections identified in the RMS response dated 9th December 2010. Consideration should also be given to the use of Ryde Council's Macquarie Park 2007 Base Paramics Model where appropriate.	The analysis undertaken in the traffic report is based on the Ryde Council Paramics Model and is therefore far more extensive in its ambit than the level of investigation that was contemplated by the RMS. However it is noted that Paramics model provided by Council is questionable and some of the results obtained suggest operational errors in the modelling. In particular large variations in turning movements at intersections not impacted by the development were recorded in addition significant reduction in delays as a result of minor variations in traffic flows. This has been discussed at length with Council. Notwithstanding this, the turning counts at key intersections were extracted and verified and assessed using SIDRA which confirmed no change in existing operation of key intersections resulting from the future development.

DGR	RESPONSE TO DGR
An assessment of the access restrictions detailed in the RMS response dated 15th December 2010 in relation to adjacent road reservations and their impact on the proposed development.	This has been addressed in Section 5.11 of the traffic report. All ingress by vehicular traffic is proposed via the existing intersection of Whiteside Street and Epping Road. Egress is proposed via a new public roadway to Epping Road which will form part of Whiteside Street and a restricted access via David Avenue. This was given in principle approval by the RMS.
An estimate of the trips generated by the proposed development, including an assessment of existing and proposed public transport, pedestrian and cycle movements within the vicinity of the site and any measures to address increased demand on existing public transport, walking or cycle infrastructure.	The impacts of the development have been addressed in detail in the traffic report addendum in Appendix L. The development will generate a maximum net increase of only 74 veh/hr during the AM and PM peak periods. This is, by any estimation, a low level of traffic activity as a consequence of the fact that the proposed land use is a low intensity land use, close to excellent public transport services.
Identification of measures to manage travel demand and increase the use of public and non-car travel modes and the potential for improving accessibility to local services and facilities and local connections.	The development proposes to accept a condition at Project Application stage to require the preparation of a Travel Plan to promote alternate travel modes. This will include the provision of bicycle facilities, opportunities for car sharing, and the promotion of taxis, buses and train services. The provision of parking at a level slightly below Council's minimum requirement is also expected to reduce private car usage.
Appropriate on-site parking provision having regard to Council and RMS guidelines and the availability of public transport (Note: The Department supports reduced car parking in areas well served by public transport.	This has also been addressed in Section 6 of the traffic report. In summary the parking provision proposed is less than that required by Council's DCP 2010 which will encourage the use of alternative transport modes and will result in reduced car dependency which is consistent with the objectives of both the Macquarie Park Corridor and State Government policy more generally. The provision of further reduced parking supply is not supported on the basis of the potential adverse impacts that on street parking could have on the amenity of existing residents in the locality. The RMS's Guideline would require less parking however this would only be applicable within a subregional centre and the subject site is not as well served by public transport as occurs within subregional centres.

In light of the above, Traffix indicate that the proposed development is supportable on traffic grounds and will operate satisfactorily.

8.7 ENVIRONMENTAL AND RESIDENTIAL AMENITY

Director General's Environmental Assessment Requirement No. 7

The EA must address solar access, visual and acoustic privacy, and view impacts and demonstrate that the Concept Plan can achieve a high level of environmental and residential amenity – both for the proposed development and the surrounding properties;

The EA must provide a detailed solar access/overshadowing assessment for the proposal in relation to nearby residential properties; and

The EA must demonstrate how the Concept Plan addresses the requirements of SEPP 65 and the associated Residential Flat Design Code (RFDC).

8.7.1 Sunlight and Overshadowing of Neighbours

Shadow diagrams prepared by SJB Architects are provided with the Concept Plan drawings at **Appendix G** for the winter solstice. These provide an indication of the shadow impacts both within the site and on neighbouring properties.

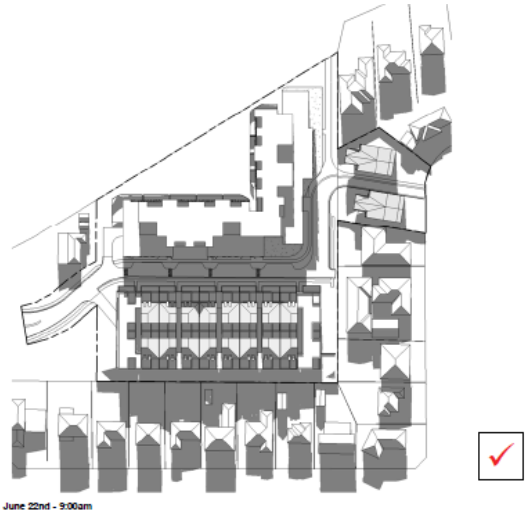
All built forms proposed are oriented to optimise the northern aspect. Within the site, 70% of the living rooms and private open space areas of apartments receive a minimum of three hours of solar access to the living areas and private open spaces during mid-winter. This is above the minimum guideline stipulated in the RFDC.

The proposal will have limited impacts on sunlight access to adjoining properties in David Avenue and Parklands Road on the sites southern and eastern boundaries. The proposed building heights step down towards these interfaces to minimise the impact of overshadowing on these properties, and ensures a minimum of 3 hours sunlight to the private open space areas are achieved on the winter solstice (21 June – shortest day of the year)

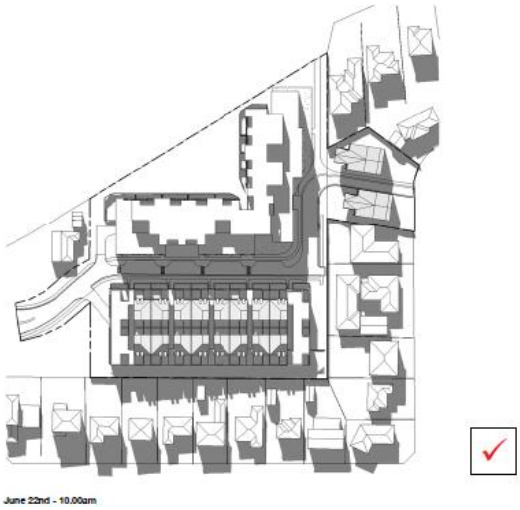
At 9.00am the proposal casts a shadow over number 51-69 Parklands Road. By 10.30am, shadows cast by the proposed building envelopes will barely exceed those cast by the rear fences of these properties, whose sunlight access will be unimpeded for the rest of the day.

A range of properties adjoin the site in Parklands Road to the south, and also No. 12 David Avenue to the west. By midday the extent of overshadowing to these properties is significantly reduced, with shadows moving towards David Avenue properties. By 3.00pm shadows are cast over properties at 10, 12 and 18 David Avenue and 162-166 Epping Road.

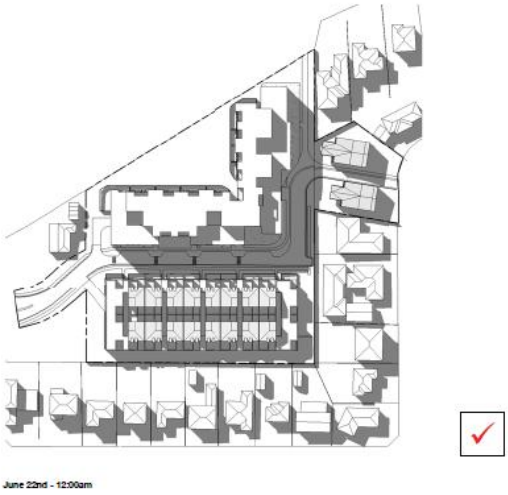
FIGURE 33 – SHADOW DIAGRAMS FOR THE WINTER SOLSTICE (SOURCE: SJB ARCHITECTS)



PICTURE 19 – 9AM (JUNE 21)

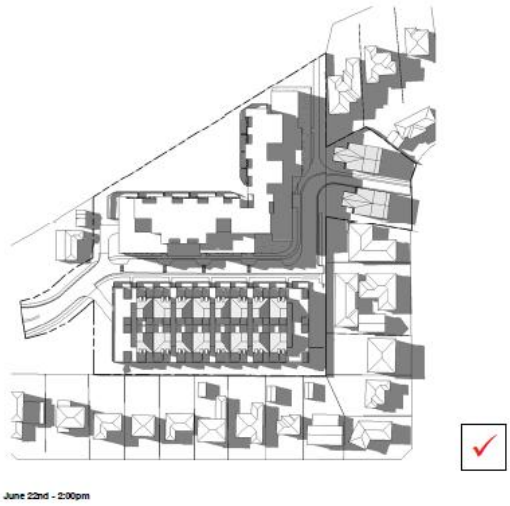


PICTURE 20 – 10AM (JUNE 21)



PICTURE 21 – 12PM (JUNE 21)

PICTURE 22 – 1PM (JUNE 21)



PICTURE 23 – 2PM (JUNE 21)

PICTURE 24 – 3PM (JUNE 21)

12 David Avenue

The principal open space within No. 12 David Avenue contains a swimming pool and a grassed area within the dwelling's rear western boundary. The shadow diagrams indicate that this area of principal open space will receive full sunlight from 9.00am until 11.30amam in mid-winter before which time that half of the yard closest to the dwelling and the outer dwelling will be unaffected. While shadows cast by the proposed buildings will hit the base of the wall of the building at midday, no windows will be affected at this time, and a useable area of private open space will remain in full sun.

No. 12 David can therefore be seen to receive three hours sunlight in mid-winter in accordance with the amenity guidelines of the RFDC. In summer, when a pool would ordinarily be used more frequently, it will receive direct sunlight up until late afternoon.

10 David Avenue

10 David Avenue comprises three dwellings, with two oriented to the ear/western boundary. On the winter solstice, shadows cast by the proposed buildings will not exceed that of the common boundary fence until 11.30am, and will not affect the southernmost dwelling at any time. While the proposed buildings will overshadow the western part of the rear yard of the northern dwelling at midday, the shadow will not reach the building or any windows, and a large north open space area will remain unaffected at this time. Both dwellings will retain more than 3 hours direct sunlight on the winter solstice in accordance with the amenity guidelines of the RFDC.

8.7.2 Privacy

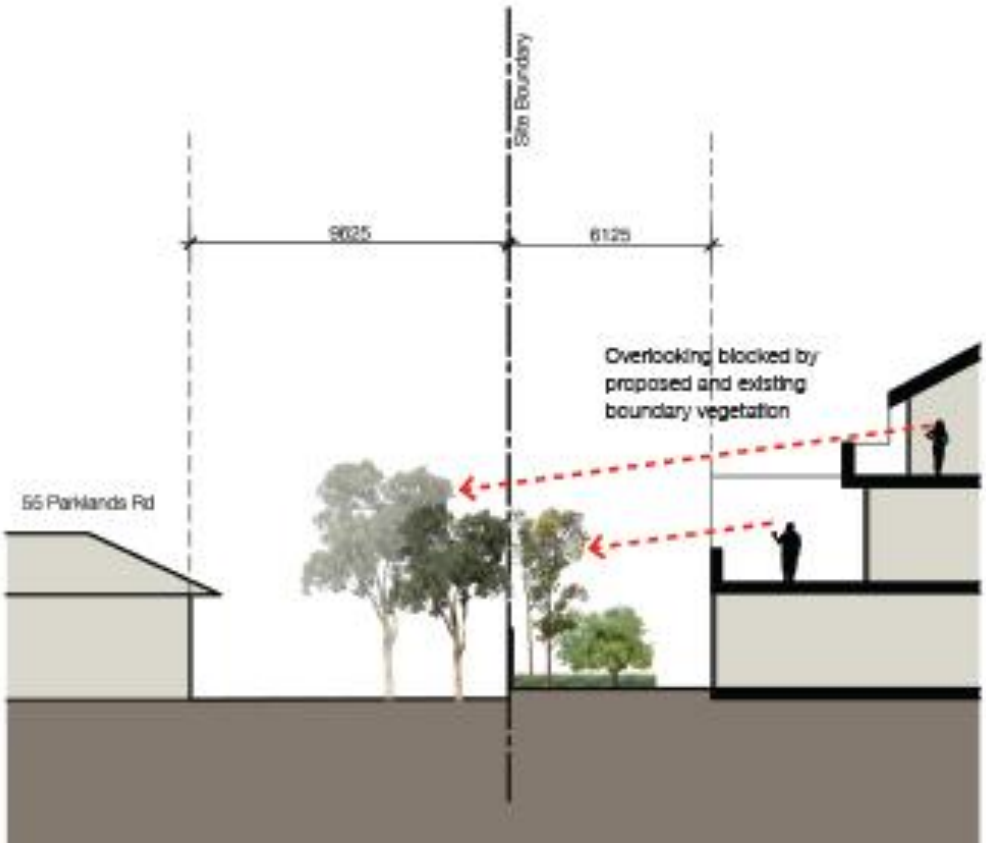
The Concept Plan has been designed to ensure visual and acoustic privacy both within the proposed development and on adjoining sites, based on an understanding of the adjacent context, site configuration, topography, the scale of development and the layout of apartments.

As discussed in Section 6.2.6 the site is surrounded by a variety of key interfaces with adjacent residential properties which require an appropriate design response to ensure that privacy and other potential amenity impacts are minimised.

The building envelopes have been positioned in a manner to ensure adequate separation distance to neighbouring properties, in accordance with the guidelines contained with the RFDC. These guidelines recommend increasing separation between buildings as they get taller, which the Concept Plan positively responds to. Notwithstanding these numerical guidelines, the design has taken into consideration the density, use and design in responding to key interfaces and boundary treatments to ensure privacy is maintained.

In addition to building separation, the proposed development seeks to protect privacy by the skewed arrangement of windows and the use of devices such as fixed louvres, high and deep sills and planter boxes. Figure 32 below provides that the location and orientation of the proposed Concept Plan has been designed in a manner to maximise visual privacy on site and to adjacent buildings.

FIGURE 34 – PROPOSED PRIVACY MEASURES WHICH WILL BE INCORPORATED INTO BUILDING DESIGN (SOURCE: SJB)



8.7.3 *Visual & View Impacts*

As discussed, a Visual and View Analysis (Appendix P) has been undertaken by SJB Architects which provides an overview of the extent of view impacts on surrounding properties. It examines the visual impacts of the proposed building envelopes having regard to the siting, bulk and scale and relationships to key areas of the proposed development.

The analysis concludes that the proposed development displays a rethinking of the urban structure which positively responds to the scale and physical attributes of Epping Road, and provides a transitional relationship to neighbouring properties to the south and east of the site. Coupled with an indicative landscape scheme which seeks to provide a 'green buffer' to assist in integrating the buildings into the surrounding urban and residential fabric, the visual impacts are considered appropriate.

8.8 NOISE ASSESSMENT

Director General's Environmental Assessment Requirement No. 8

The EA should address noise impacts and detail how these will be managed and ameliorated with reference to Australian Standards and the Department's Interim Guidelines for Development near Rail Corridors and Busy Roads.

A Noise Impact Assessment has been completed by Heggies Pty Ltd. As part of this assessment, an ambient noise survey was conducted to determine the existing traffic noise intrusion for the proposed residential buildings onsite. Based on the analysed noise survey results, traffic noise levels have been predicted at representative façades of a Concept Plan.

The Noise Impact Assessment provides that:

> *"The predicted traffic noise levels have been compared to the NSW Department of Planning and Infrastructure "Development near Rail Corridors and Busy Roads - Interim Guideline". The guideline*

recommends internal noise levels of 35 dB(A) for bedrooms and 40 dB(A) for other habitable rooms (excluding bathrooms, garages etc). Furthermore, if internal noise levels with windows or doors open exceed the criteria by more than 10 dB(A), the design of the ventilation for these rooms should be such that occupants can leave the windows closed, if they so desire, and also to meet the ventilation requirements of the Building Code of Australia.

Based on the predicted traffic noise levels, the required building (or facade) noise reduction of Rw+Ctr ranges from 10 dB to 29 dB with the recommended Rw values from 16 dB to 35 dB. As such, it is predicted that mechanical or alternative means of passive ventilation will be required to the most exposed of the living and bedroom areas within the residential buildings.

The required building façade construction required to achieve the minimum required traffic noise reduction will range from "standard" to "acoustically upgraded", where the upgraded component will indicatively comprise heavier glazing with the windows and doors acoustically sealed. Such treatments would be determined during the detailed design phase concurrent with the development of the building envelopes and internal layout details.

Compliance with the relevant internal noise criteria can be achieved with standard and acoustically upgraded building design and construction methods. Passive recreation areas are proposed at ground level and on the roof terrace. To ameliorate the traffic noise at these areas it is proposed to used noise walls. Details of the requirements of the Industrial Noise Policy (which apply to any mechanical plant within the site) are provided for future reference."

The Noise Impact Assessment confirms that mechanical ventilation or alternative means of passive ventilation will be required for some dwellings. However this ventilation should be designed to ensure windows can be opened. It is not anticipated that all windows in all apartments will need to be closed, but rather that mechanical ventilation be provided to allow additional acoustic impact attenuation during particularly noisy times.

An alternative is to incorporate ductwork between the outside and inside (that needs to include either an attenuator or have sufficient length of internal acoustic lining and be constructed not to compromise the acoustic integrity of the building), and incorporate a fan if necessary. It is proposed to determine details for the mechanical ventilation requirements during the detailed design phase of the project.

Further, to comply with noise controls which apply to passive recreation open space, the Concept Plan incorporates an innovative landscaped earth mound which buffers noise from Epping Road into the development.

The Noise Impact Assessment is included at Appendix H.

8.9 ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD)

Director General's Environmental Assessment Requirement No. 9

The EA shall detail how the development will incorporate ESD principles in the design, construction and ongoing operation phases, and demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice and relevant Council controls.

The underlying principle of concentrating new development around major transport nodes in existing areas is one of the most important sustainability objectives for the future development of Sydney, and significantly contributes to:

- Containment of the urban footprint of Sydney.
- Better utilisation of existing infrastructure.
- Reduced private car use and associated congestion and $C0^2$ emissions.

As discussed in Section 5.5 of this report, a comprehensive ESD analysis of the proposal has been undertaken by Built Ecology (refer to Appendix K). The report describes how the proposal incorporates ESD principles and outlines a series of commitments relating to the proposed ESD measures to be incorporated in the development.

In addition, the proposal endeavours to uphold the principles of ESD through a range of initiatives including a communal market garden, upgrade of the adjoining RMS reserve, and establishment of street trees.

The proposal will not only meet the minimum standard of ESD, but will include a number of best practice initiatives. Refer to the ESD Strategy prepared by Built Ecology (located at Appendix K) for a complete description and analysis of the ESD measures proposed for the development.

The proposal will specifically provide the following design, construction and operational ESD measures:

Design

- Passive design of the built form which positively responds to the guidance contained in SEPP 65 including northern orientation, reduced windows on the
- Rainwater collection for use in toilet flushing and irrigation
- Stormwater collection and treatment through water sensitive urban design (WSUD) involving the following initiatives:
  - Swales and bio-retention swales
  - Gross pollutant traps
  - Porous paving and reduced paved areas
  - Retention basins/treatment pond/wetland
- Low water use vegetation
- Reducing reliance on air conditioning through good passive design of the buildings, high levels of insulation, good shading and cross ventilation and installation of ceiling fans
- Providing stairwells in prominent locations adjacent to lifts to encourage their use. Naturally lighting and naturally ventilating these stairwells to reduce energy consumption and improve their amenity – increasing their use

Construction

- At least 80% of construction and demolition waste will be reused or recycled
- Where possible, sustainable materials will be selected, such as concrete with a reduction in Portland cement, recycled steel, avoiding the use of environmentally damaging PVC products and recycled or sustainably sourced timber
- All paints, carpets, adhesives and sealants will have low VOC levels.

Operation

- A rainwater tank of approximately 150kL to provide water for flushing of at least 25% of the dwellings toilets and providing water for irrigation.
- Efficient Fixtures – toilets, taps, showers and the like.
- Energy efficient appliances
- Energy efficient cooking appliances
- Demand reduction in common areas, with efficient lighting controls and minimal mechanical ventilation
- Efficient hot water systems such as gas instantaneous systems for each unit. More efficient centralised systems will be investigated for feasibility in later stages of the project design.
- Carbon monoxide sensors in the car park to control the ventilation
- Access to natural ventilation where possible – providing ventilation grills to underground areas

- Reduced lighting power density to maintain only the minimum compliance levels – reducing unnecessary lighting energy

8.10 CONTRIBUTIONS

Director General's Environmental Assessment Requirement No. 10

The EA shall address the provision of public benefit, services and infrastructure having regard to Council's Section 94 Contribution Plan, and provide details of any Planning Agreement or other legally binding instrument proposed to facilitate this development.

In accordance with the Ryde City Council Section 94 Development Contributions Plan 2007 and the 2010 Contribution Rates for development outside the Macquarie Park area, the following rates are applicable to the proposal:

- 1 bedroom dwelling: $9,313.13 per dwelling
- 2 bedroom dwelling: $11,175.75 per dwelling
- 3 bedroom dwelling: $14,280.11 per dwelling

Based on these rates, the Section 94 Contribution for the proposal has been calculated as follows (based on indicative dwelling numbers in accordance with the Concept Plan):

TABLE 6 – SECTION 94 CONTRIBUTIONS

DWELLING TYPE	NUMBER OF UNITS	RATE PER DWELLING	COST PER DWELLING TYPE
1 bedroom dwelling	43	$9,313.13	$40,046.59
2 bedroom dwelling	103	$11,175.75	$1,151,102.25
3 bedroom dwelling	15	$14,280.11	$214,201.65
		TOTAL:	**$1,405,350.49**

Contributions will be paid in accordance with these calculations.

8.11 CONSULTATION

Director General's Environmental Assessment Requirement No. 11

Undertake an appropriate and justified level of consultation in accordance with the Department's Major Project Community Consultation Guidelines October 2007.

A community consultation was undertaken as part of the project in accordance with the Department's Major Project Community Consultation Guidelines October 2007. The findings of which are presented in Section 4 of the Report, and at Appendix F.

8.12 DRAINAGE AND STORMWATER MANAGEMENT

Director General's Environmental Assessment Requirement No. 12

The EA shall address Drainage/Stormwater/ /Flooding issues associated with the development and incorporate Integrated Water Management and Water Sensitive Urban Design measures, with reference to Council's requirements.

A Stormwater Management and Flood Assessment has been undertaken by Worley Parsons. The report details flooding, stormwater management, hydrology and Water Sensitive Urban Design matters affecting or proposed as part of the development and is included at Appendix M along with a Stormwater Management Concept Plan.

As outlined in the report, the proposal is appropriate with regard to drainage, stormwater and flooding potential as there are no flooding issues on site, appropriate drainage and stormwater control measures will be implemented and no additional infrastructure will be required.

It is proposed that overland flow paths will be constructed to ensure stormwater flows are conveyed into the existing stormwater network.

Further, the Stormwater Management and Flood Assessment proposes the establishment of on-site detention (OSD) tanks to control and limit stormwater runoff generated across the site. These tanks will include a discharge control outlet to control peak flows. Discharge controls will be designed to cater for all storm events up to the 100 year average recurrence interval (ARI) storm event.

The implementation of Water Sensitive Urban Design best practice principles is proposed, including rainwater tanks, litter baskets, OSD tanks and bio-retention basins. Through the implementation of these measures, the Department of Environment, Climate Change and Water pollutant reduction targets for urban stormwater management will be achieved.

8.13 SOIL AND GROUNDWATER MANAGEMENT

Director General's Environmental Assessment Requirement No. 13

The EA is to identify groundwater issues and address any impacts upon groundwater resources and, when impacts are identified, provide contingency measures to remediate, reduce or manage potential impacts.

As discussed in Section 2.3, a Phase 1 Preliminary Environmental Site Investigation (Appendix D) and a Geotechnical Investigation report (Appendix E) have been prepared to examine soil and groundwater conditions on the site.

A Phase 1 Preliminary Environmental Site Assessment undertaken by Environmental Investigation Services (Appendix D) was prepared to assess the soil and groundwater conditions at the site in relation to these past uses and comment on the suitability of the site for the proposed land use. As part of this assessment a site inspection, review of historical site use, examination of regional aerial photographs and a review of geology and groundwater conditions were undertaken.

The report's conclusions and recommendations are summarised below:

- *The area has formerly been used as semi-rural land with cultivated sections. Potentially contaminating activities/facilities at the site include the use of chemicals associated with agricultural and farming practices.*
- *The results of the laboratory tests on selected soil samples covered a range of contaminants commonly encountered in the Sydney region. Elevated levels of contaminants were not detected in the samples analysed. All results were less than Ecological Investigation Levels and the appropriate Health Investigation Levels.*
- *The site can be made suitable for the proposed development provided that:*

- *An additional investigation is undertaken to increase the borehole density to the minimum sampling density recommended by the DECC;*
- *A hazardous building materials survey is undertaken on all site structures;*
- *The surface of the site is thoroughly inspected for the presence of asbestos cement fragments;*
- *All fill material that will be disposed off site is assigned an appropriate waste classification; and*
- *Any additional contamination issues that are discovered during subsequent investigation are addressed in an appropriate manner.*

A Geotechnical Investigation report has been prepared by Jeffery & Katauskas (Appendix E) to obtain geotechnical information on subsurface conditions as a basis for preliminary comments and recommendations on excavation conditions, excavation support, retaining walls, footings and on-grade floor slabs.

Further, an addendum to the Phase 1 Preliminary Environmental Site Assessment was also undertaken to respond to groundwater matters on the site (DGR 13), and with the Geotechnical report collectively make recommendations in relation to groundwater resources. The reports consider that there is a moderate probability that the proposed development will intercept the water table at the site given that the proposed basement car parking envelope levels extends below the water table (i.e. 7.5 metres below). Dewatering may be required in response to this during excavation works at the Stage 2 phase of development, which could be addressed by modelling the impacts of any dewatering and seeking geotechnical advice on how these effects can be mitigated.

8.14 UTILITIES

Director General's Environmental Assessment Requirement No. 14

In consultation with relevant agencies, address the existing capacity and requirements of the development for the provision of utilities, including staging or infrastructure works.

The site is located within a highly urban area with all services available. Augmentation of these services will be detailed at construction certificate phase of the process if required.

8.15 STATEMENT OF COMMITMENTS

Director General's Environmental Assessment Requirement No. 15

The EA must include a draft Statement of Commitments detailing measures for environmental management, impact mitigation and ongoing monitoring.

The Statement of Commitments is contained in Section 5.9 of this report and at Appendix N.

9 Conclusion

The Macquarie Park Corridor is at the centre of the Global Economic Corridor that underpins the Metropolitan Plan for Sydney 2036. Significant existing and planned future employment growth has led to significant investment in the Epping to Chatswood Railway link. In accordance with strategic planning objectives, it is important to compliment this employment and transport investment with additional housing, optimising 'Transit Oriented Development' and opportunities to live and work in the same locality.

While the project will transform the existing low density detached dwelling character of the locality, the larger built forms to Epping Road step down to surrounding lower scale development, and at their tallest point reflect a logical extension of the existing and planned built forms along the adjacent length of Epping Road within the Macquarie Park Corridor.

Detailed traffic modelling demonstrates that the project will not perceptibly alter the traffic performance of any surrounding road intersections, and the proximity of the site to a range of rail, bus, car, cycle and walking transport options, in addition to a range of local services and facilities will assist in reducing private vehicle reliance, and associated pollution and congestion impacts across the city.

Suitable measures have been implemented to mitigate potential overshadowing, privacy and visual impacts upon surrounding residential properties. While the project will significantly alter the existing context of these properties, it will nevertheless provide an alternative high quality environment. Stakeholder consultation and revised measures have been incorporated into the design of the proposal.

In view of the above, we conclude that the project represents one of very few opportunities to provide transit oriented housing to complement the significant public and private investment in the Macquarie Park Corridor and rail. While transformational, the project will not result in any unreasonable adverse impacts but will provide very significant urban benefits. We therefore commend the Concept Plan to the Minister for approval

Appendix A Director General's Environmental Assessment Requirements

Appendix B Site Survey Plan

Appendix C Arborist Report

Appendix D Phase 1 Preliminary Environmental Site Assessment

Appendix E Geotechnical Investigation Report

Appendix F Consultation Report

Appendix G Concept Plan and Indicative Scheme Drawings

Appendix H Noise Assessment

Appendix I Landscape Plan & Report

Appendix J QS Report

Appendix K ESD Report

Appendix L Traffic Report

Appendix M Stormwater Report

Appendix N Statement of Commitments

Appendix O SEPP 65 Documentation

Appendix P Visual Assessment

Appendix Q CPTED

Appendix R Site Amalgamation Details

Sydney
Level 21, 321 Kent Street
Sydney, NSW 2000
Tel: +612 8233 9900
Fax: +612 8233 9966

Melbourne
Level 12, 120 Collins Street
Melbourne, VIC 3000
Tel: +613 8663 4888
Fax: +613 8663 4999

Brisbane
Level 12, 120 Edward Street
Brisbane, QLD 4000
Tel: +617 3007 3800
Fax: +617 3007 3811

Perth
Level 1, 55 St Georges Terrace
Perth WA 6000
Tel: +618 9346 0500
Fax: +618 9221 1779

Australia • Asia • Middle East
www.urbis.com.au
info@urbis.com.au