



**Planning &
Environment**

STATE SIGNIFICANT DEVELOPMENT ASSESSMENT REPORT:

**North Ryde Station Precinct – ‘M2 Site’
(SSD 5093)**

**Concept Proposal including allocation of floor
area and
Stage One works including subdivision,
roadways, open space and infrastructure**



Secretary's Assessment Report
Section 89H of the
Environmental Planning and Assessment Act 1979

February 2015

ABBREVIATIONS

Applicant	UrbanGrowth NSW
CIV	Capital Investment Value
Consent	This development consent
DCP	Development Control Plan
Department	Department of Planning and Environment
EEC	Endangered ecological community
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instrument
ILP	Indicative Layout Plan
LEP	Local Environmental Plan
Minister	Minister for Planning
NRSP	North Ryde Station Precinct
OSD	On site detention
RAP	Remediation Action Plan
RtS	Response to Submissions
Secretary	Secretary of the Department of Planning and Environment
SEPP	State Environmental Planning Policy
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SSD	State Significant Development
STIF	Sydney Turpentine Ironbark Forest
TSC Act	Threatened Species Conservation Act 1995
UAP	Urban Activation Precinct
VPA	Voluntary Planning Agreement

Cover Image: Artists impression of potential future development on the site (Source: Applicant's promotional video)

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*NSW Government
Department of Planning and Environment*

EXECUTIVE SUMMARY

This report provides an assessment of a State Significant Development (SSD) Application for a concept proposal for development of the 'M2 site' at North Ryde. The application is submitted by UrbanGrowth NSW and relates to a site located within the North Ryde Station Precinct (NRSP) which is an Urban Activation Precinct (UAP).

The M2 site is one of two sites within the NRSP which is located within the City of Ryde local government area, and has been designed to provide for high density residential, retail, commercial and community uses on the land surrounding the North Ryde Railway Station.

The proposal seeks approval for subdivision, construction of roadways, open space, and infrastructure and to redistribute allocation of maximum gross floor area to future development lots across the site. The proposal will provide key infrastructure and development lots to enable the future development as envisaged through the UAP process and rezoning of the site in 2013.

The application was publicly exhibited for 45 days between 9 April 2014 and 23 May 2014. The Department received a total of 19 submissions, comprising 13 submissions from public authorities and six submissions from the general public and interest groups.

Council does not object to the proposal, however raised a number of concerns relating to the assessment of future applications and with aspects of the infrastructure design and delivery. Other key issues raised in submissions include traffic impacts arising from the future development of the site, impacts to infrastructure, ecological impacts to flora and waterways; and urban design impacts. The Department notes that many of these strategic issues were considered during the UAP process and as part of the Department's preparation of the Development Control Plan (DCP) for the NRSP. Detailed built form issues will be addressed in future development applications on the proposed lots.

The applicant submitted a Response to Submissions providing additional information and amending the proposal to address the concerns raised during the exhibition.

This assessment report addresses the key issues associated with the proposal including gross floor area (GFA) allocation, open space and public domain and internal road networks. Issues relating to traffic and infrastructure upgrades and developer contributions to support the proposal are also considered, as well as environmental impacts relating to flora and fauna, site contamination, stormwater, heritage and construction management.

The Department has assessed the proposal on its merits and has found that the proposal is consistent with the objectives and the vision for the precinct outlined in the UAP and the NRSP DCP. The redistribution and reallocation of GFA to development lots is consistent with the overall level of development proposed by the UAP and will provide an appropriate high density transit-oriented development. The variation to the floor space ratio (FSR) development standard in *Ryde Local Environmental Plan 2010* is supported on the basis that the overall GFA across the site is within the maximum permitted, and the proposal continues to satisfy the objectives of the zone and the FSR control.

The proposal will provide high quality open space areas and appropriate vehicular, pedestrian and cycle facilities and provision for future community facilities consistent with the objectives of the DCP and vision for the precinct. The Department supports the provision of a linear parkland, providing a high amenity green spine through the site, linking the Northern Bushland Park to Central Park.

The proposal also appropriately mitigates the impacts of the development and makes a positive infrastructure contribution to the wider locality through the provision of the new pedestrian bridge, external road upgrades, and contribution to regional transport infrastructure.

Subject to recommended conditions, the Department concludes that the application is in the public interest and that the SSD Application should be approved.

1. BACKGROUND

1.1 North Ryde Station Precinct

On 17 October 2012, the North Ryde Station Precinct (NRSP) was identified as an Urban Activation Precinct (UAP) for a residential, retail, commercial and community uses redevelopment. Following consideration of the proposal and submissions received, on 23 September 2013, the NRSP was rezoned for high density residential mixed use and public open space uses.

The NRSP Development Control Plan (DCP) was adopted on 4 December 2013, which outlines a vision for the NRSP as a Transport Oriented Development and a vibrant community to live, work and visit. The NRSP is estimated to provide up to 330,000 m² of residential and / or commercial floor space that could provide up to 3,000 new homes and 1,500 commercial and retail jobs.

The NRSP features two key development lots, being the M2 Site (the subject site) and the Station North and Station South Site (Figure 1).

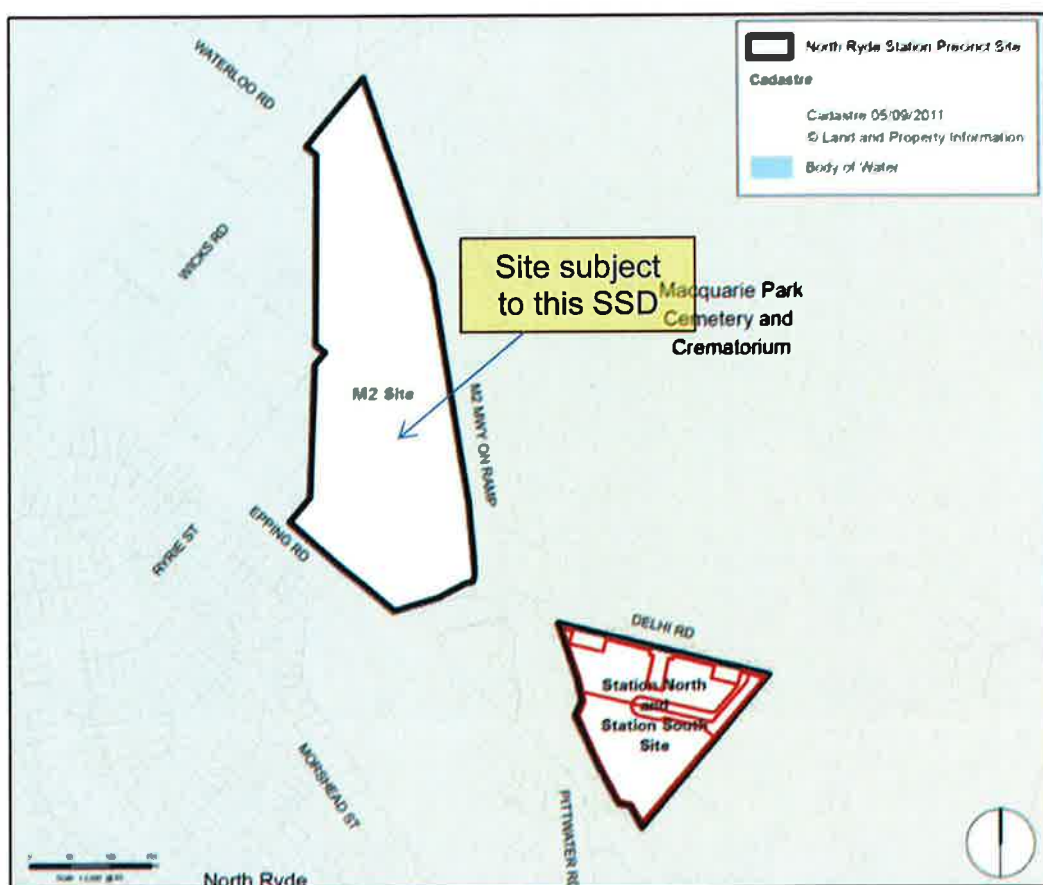


Figure 1: North Ryde Station Precinct (Source: Applicant's EIS from SSD 6256)

On 18 December 2014 the Department approved a State Significant Development (SSD) Application (SSD 6256) for subdivision, public domain and infrastructure works on the Station North and Station South site within the NRSP.

The City of Ryde Council is currently assessing an application for development within the Station North site. The proposal seeks approval for a mixed use development comprising four buildings with a maximum height of 14 storeys (above basement levels) containing 380 apartments, three retail tenancies, car parking, a publicly accessible central plaza and associated drainage and landscaping works. The application will be determined by the Joint Regional Planning Panel.

1.2 The Subject Site

The subject site occupies the northern portion of the NRSP and has a total area of 91,530m². It is known as the 'M2 Site' and is owned by Urban Growth NSW. Its legal description is Lot 101 in Deposited Plan 1131776. It also utilises other nearby land (part Lot 2 in DP 528488 and Lot 7 in DP1046090) for access. The site is bounded by the M2 Motorway to the east, Epping Road and Delhi Road to the south, Wicks Road to the north, and Commercial properties to the west.

The land generally slopes down to the north, towards Wicks Road. The northern portion of the site contains remnant bushland and a small creek known as Porters Creek. Otherwise the site has generally been cleared and has been used as a site compound associated with the M2 Hills Motorway upgrade and the Epping to Chatswood railway line.

Surrounding development includes large scale commercial / office premises to the north and east, a mix of open space and residential uses to the south across Epping Road, and the Macquarie Park Crematorium and Cemetery to the west beyond the M2 Motorway.



Figure 2: Subject Site shown in red (base image source: Nearmap)

2.3. Summary Description of Proposal

The key components and features of the proposal are provided in **Table 1** and shown in **Figures 3 to 5**.

Table 1: Key components of proposal

Aspect	Description
Concept Proposal Summary	Subdivision of the site, allocation of GFA to development lots and provision of roads, open space and infrastructure.
Subdivision	Subdivision of the site into: • 12 development lots; • five public open space lots (lots 101, 103, 106, 108 and 111); and • two public road lots.
Gross Floor Area Allocation	Allocation of maximum 238,919m ² of gross floor area to the development lots as follows: • Lot 104: 49,384m² • Lot 105: 24,136m² • Lot 107: 4,332m² • Lot 109: 0m² (future road access lot) • Lot 201: 42,949m² • Lot 202: 25,626m² • Lot 203: 28,468m² • Lot 204: 15,764m² • Lot 205: 29,210m² • Lot 206: 5,413m² • Lot 207: 6,883m² • Lot 208: 6,754m² Allocation of a maximum additional 2,500m ² of gross floor area on Lot 104 for a community facility
Infrastructure, Civil works and Landscaping	As set out under Stage 1 works below.
Stage 1 Works	Subdivision and provision of roads, public open space and infrastructure in phases as follows:
Phase 1 Site Preparation works	• Demolition, site clearing and vegetation removal; • remediation works; • bulk earth works including site regrading, box-out of roads and removal of surplus fill material; • temporary stormwater detention; • sedimentation and erosion controls; and • rehabilitation of riparian zone along the Porters Creek.
Phase 2A Superlot Subdivision	Creation of 4 public roads and a future public road lot; five public reserve lots; three development lots (104, 105 and 107) and two superlots.
Phase 2B Civil and Public Domain Works	Road and intersection construction including: • signalised intersection of Waterloo and Wicks Road including pedestrian crossing; • extension of Waterloo Road through the M2 Site to Epping Road to create a Spine Road; and • a left-in intersection for the M2 Site on Epping Road; Open Space establishment and embellishment including: • Northern Bushland Park; • Community Linear Park; • Central public open space; and • Community Plaza. Pedestrian pathway and cycleways Construction and upgrade to pedestrian pathway and cycleway networks,

Aspect	Description
	including: - shared ways for pedestrian and cycleway connectivity along the Spine Road and around the central open space; and - external footpath connections and upgrades including landscape works on Delhi Road, Epping Road and Wicks Road. Drainage and Water Sensitive Urban Design (WSUD) works on the public land, including: - stormwater drainage and water quality infrastructure; - Porters Creek culvert; and - rehabilitation of riparian zone along the Porters Creek within the Northern Bushland Park. Public domain works on the public land, including: - civil works, trenching in road corridors with provision of utility infrastructure for electricity, gas, potable water, sewer and telecommunications; - street planting and installation of furniture; - street lighting; - public art installation; - public toilet block in Central Park; - external works to upgrade and extend utilities to service the site including stormwater and drainage, water mains, sewer main works, electricity feeder main works; and - relocation of the existing gas main to along the eastern and northern boundaries of the site.
Phase 3 Subdivision	Creation of development Lots 201 to 208.
Phase 4 Bridge	Construction of the pedestrian / cycle bridge across Delhi Road (to be completed prior to the first occupation certificate for residential development on the site).



Figure 3: Proposed pedestrian bridge over Delhi Road (source: Applicant's RtS).

2. PROPOSED PROJECT

2.1. Project Description (as exhibited)

The proposal, as exhibited in the Environmental Impact Statement (EIS), sought staged development consent for:

A Concept Proposal for development of the site including:

- subdivision into 13 development lots, 4 public open space lots, 2 public road lots;
- allocation of a maximum gross floor area to each of the development lots (total of 238,919m² across the site); and
- allocation of a maximum gross floor area (2,500m²) to one of the public open space lots for the purpose of a community facility.

Stage 1 approval for:

- site preparation works, including demolition of structures, remediation works, bulk earth works and sedimentation controls;
- staged subdivision into 13 development lots, 4 public open space lots, 2 public road lots;
- construction of new 4 new roads and associated infrastructure on the site;
- landscaping and construction of public open space including 3 parks and a plaza space on the site;
- construction of a new pedestrian bridge over Delhi Road; and
- upgrades to roadways and intersections surrounding the site.

It is proposed that, in accordance with Section 83B(3)(a) of the *Environmental Planning and Assessment Act 1979*, future consent will be sought separately to erect and use buildings and ancillary development on the development lots and the community facility.

In accordance with Section 83B(3)(b) of the *Environmental Planning and Assessment Act 1979*, no further consent is necessary for the Stage 1 works.

The Stage 1 works have a Capital Investment Value of approximately \$41 million and are expected to generate 80 construction jobs.

2.2. Response to Submissions

Following the public exhibition of the EIS, the Department placed a copy of all submissions received on its website. The Department requested that the applicant provide a Response to Submissions (RtS) and address a number of issues in relation to the GFA allocation, pedestrian / cyclist bridge, traffic and access and open space.

The applicant provided a RtS (**Appendix A**), which contains further information and clarification on the key issues raised by the Department, the public and agencies. The proponent also amended the proposal including changes to the size of the development lots and re-allocation of one lot to a public open space use, change to the location and type of the community facility, changes to the open space areas including the play area arrangements and the landscaping, revision of the design of the pedestrian bridge over Delhi Road, revision to road designs including bus stop arrangements, inclusion of an additional access point from Epping Road, and relocation of a gas main.

Addendums to the RtS were submitted addressing further concerns raised by the Department, TfNSW and the EPA and revising the GFA allocation on the site.

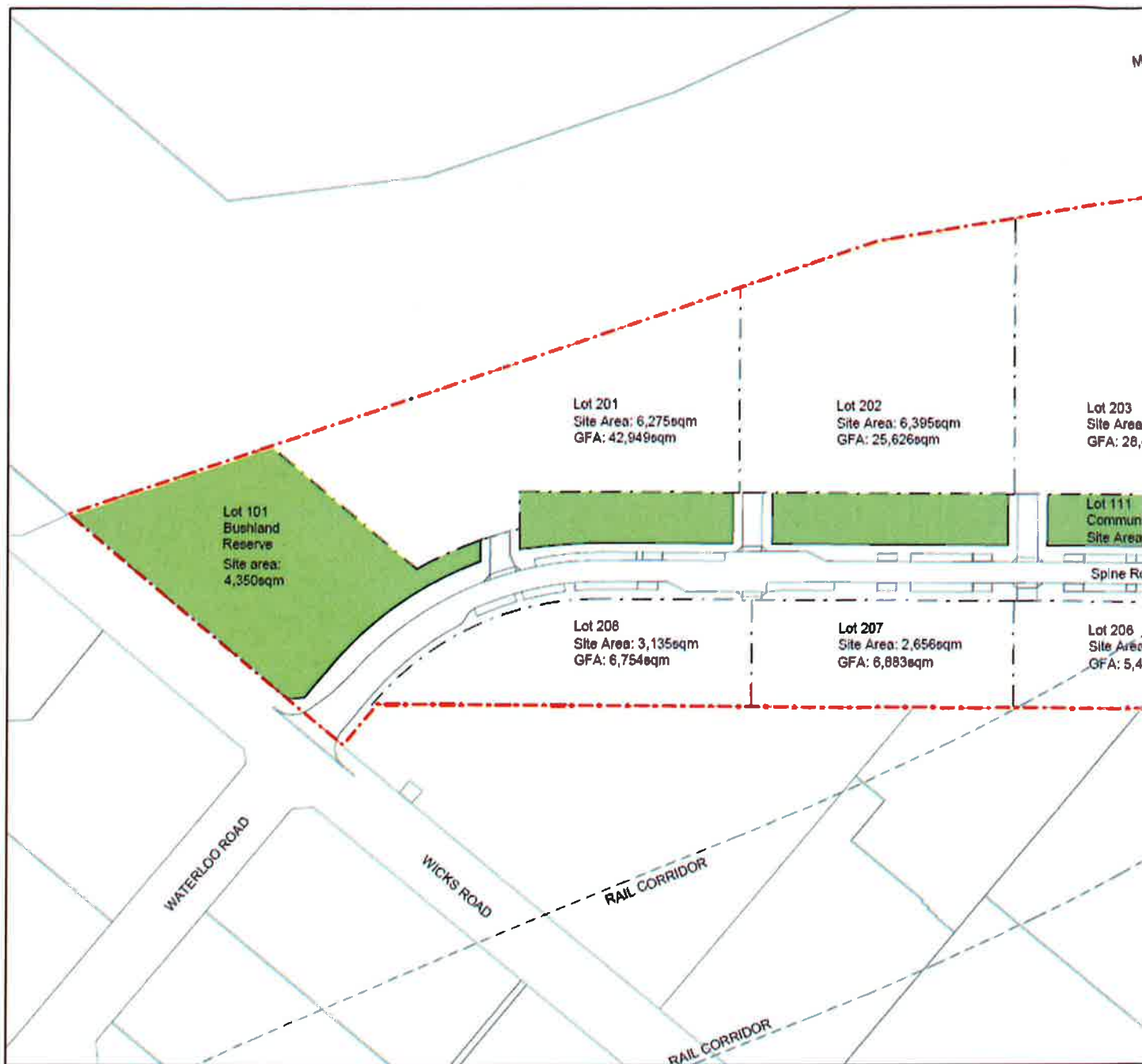


Figure 4: Proposed subdivision and GFA allocation (Source: Applicant's Addendum RtS)



Figure 5: Proposed Stage 1 Works (Source: Applicant's RtS)

2.4. Future Building Indicative Layouts

The application is also accompanied by an indicative building layout showing potential future building envelopes which would also result in further variations from the DCP. However, these building layout plans are for information purposes only, to assist with the assessment of the current application. Approval is not sought for the indicative envelopes as part of this application. The indicative building layouts and envelopes have not been considered as they do not form part of the current proposal and any variations in future applications from the DCP controls will be a matter for Council's consideration as part of the assessment of the future DAs.

2.5. Strategic Context

2.5.1 NSW 2021

NSW 2021 is the NSW Government's strategic business plan for setting priorities for action and guiding resource allocation. *NSW 2021* is a ten year plan to rebuild the economy, provide quality services, renovate infrastructure, restore government accountability and strengthen the local environment and communities.

The proposal supports *NSW 2021* as it will enable the future development of the site within the NRSP for residential, retail, commercial and community uses with excellent accessibility to public transport and will provide for the infrastructure to support this.

2.5.2 A Plan for Growing Sydney

A Plan for Growing Sydney was released in December 2014 and guides the development of Sydney metropolitan areas over the next 20 years. The Plan sets out housing targets for the Sydney region at 644,000 additional dwellings.

A key action of the Plan is to facilitate additional new housing in designated infill areas through priority precincts, including the NRSP. The proposal provides the subdivision and infrastructure works which will enable future residential, retail and commercial development in the precinct, as envisaged by the Department's Urban Activation Precinct program, consistent with the objectives of the Strategy.

2.5.3 Draft Inner North Subregional Strategy

Ryde LGA is located within the Inner North subregion. The *Draft Inner North Subregional Strategy* identifies Macquarie Park as a Specialised Centre and the northern anchor of the Global Economic Corridor, providing a unique economic space, with clustering of high technology businesses and a campus type working environment and amenities.

The *Inner North Subregional Strategy* creates an employment target of 23,100 additional jobs for Macquarie Park. It seeks to ensure the inner north sub-region is a strong global economic corridor consolidating its role as part of global Sydney with good employment opportunities throughout its local centres.

The Strategy also identifies the need to locate residential development around centres and corridors with access to public transport and local services. The proposed development supports this aim by enabling future residential and retail development with good access to public transport.

The proposal is therefore consistent with the key directions and targets of the *Draft Inner North Subregional Strategy*.

2.5.4 North Ryde Station Precinct Finalisation Report and Development Control Plan

In July 2013 the Department prepared a Finalisation Report in support of the NRSP which resulted in an amendment to Ryde LEP in September 2013. The amendment rezoned land within the precinct (**Figure 6**), and incorporated new FSR and height controls for the sites. In December 2013 the NRSP DCP was adopted, which outlines the vision for the precinct as a Transport Oriented Development with a high population base density.

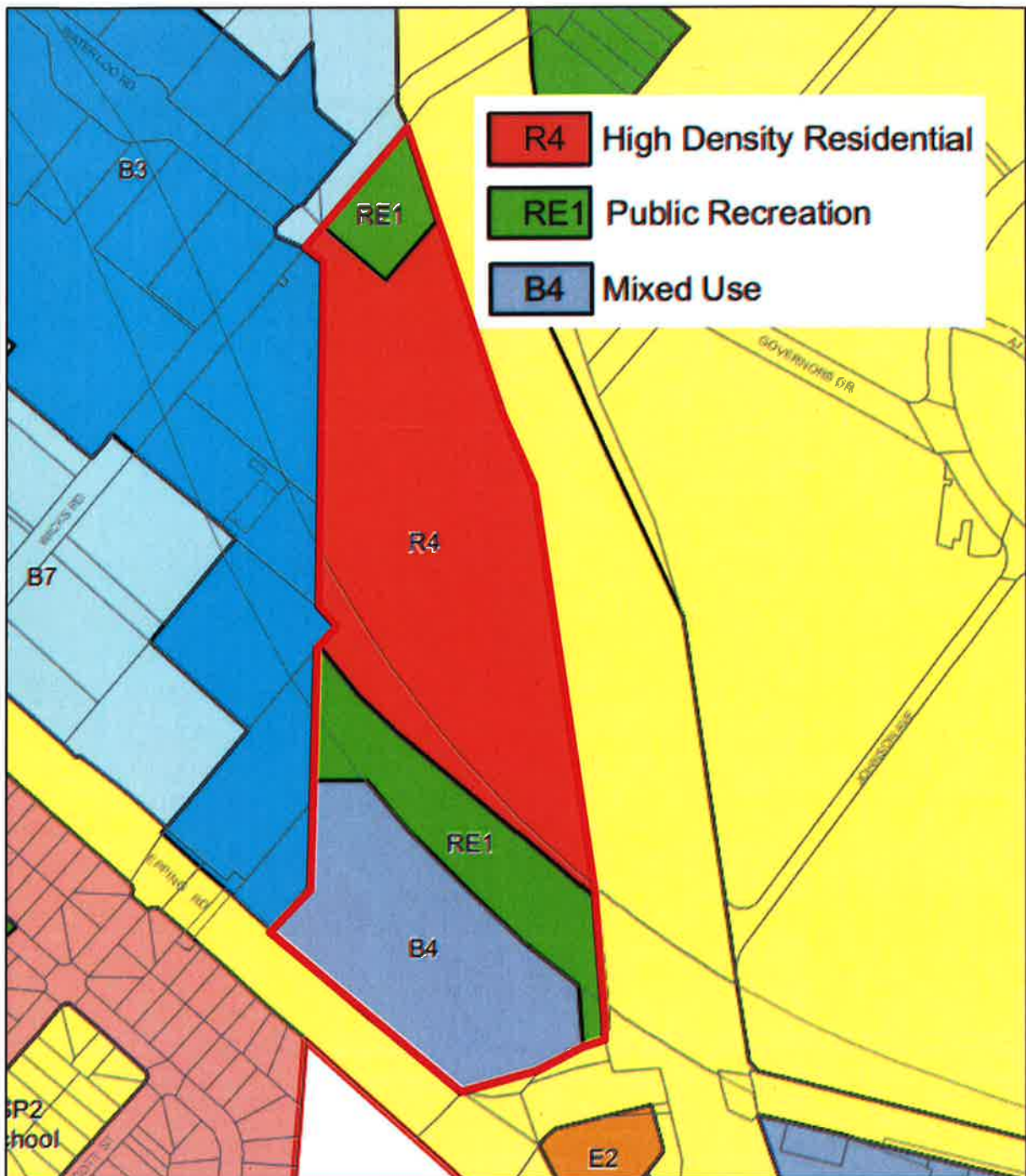


Figure 6: RLEP 2010 zoning map extract

The NRSP is estimated to provide up to 330,000 m² of residential and / or commercial floor space that could provide up to 3,000 new homes and 1,500 commercial and retail jobs.

The proposal achieves the objectives and vision for the NRSP by enabling the future provision of high density residential and mixed use development with within close proximity

to North Ryde Station, and the provision of open space and public domain spaces that are activated, service the needs of future residents and provide high quality connections for pedestrians and cyclists to public transport and the local centre.

The proposal varies from the Indicative Layout Plan (ILP) which was considered in the Finalisation Report and ultimately adopted into the NRSP DCP in terms of the road alignments, open space layout, and location of community facilities.

The Department notes that the ILP in the NRSP DCP is an indicative guide only and the DCP recognises that it is only one option as to how the overall precinct may develop and that there may be other options for the site's layout which may also be appropriate in achieving the vision for the precinct. The Department has given consideration to the variations from the indicative layout in the DCP in **Section 5** of this report and **Appendix B**. The variations do not affect the achievement of the objectives of the DCP indicative layout plan and the vision for the precinct.

3. STATUTORY CONTEXT

3.1. State Significant Development

Under clause 12 of Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011*, the proposal is State Significant Development (SSD) as it includes development on land within the NRSP site for the purposes of a principal subdivision establishing major lots / public domain areas and also creation of new roadways and associated works. The Minister for Planning is therefore the consent authority.

3.2. Secretary's Environmental Assessment Requirements

In accordance with section 78A(8A) of the EP&A Act, the Secretary notified the applicant of the Environmental Assessment Requirements for the SSD application. The Department is satisfied that the EIS adequately addresses compliance with the SEARs to enable the assessment of the application for determination purposes.

3.3. Determination under Delegation

In accordance with the Minister's delegation, the Executive Director, Infrastructure and Industry Assessments, may determine the application as:

- the relevant local council has not made an objection; and
- a political disclosure statement has not been made, and
- there are less than 25 public submissions in the nature of objections.

3.4. Permissibility

The site is zoned B4 Mixed Use, R4 High Density Residential and RE1 Public Recreation under the *Ryde Local Environmental Plan 2010* (Ryde LEP 2010). The proposed development including subdivision, new roadways, public recreation and infrastructure works are permissible in the applicable zones. Further discussion on Ryde LEP 2010 is provided in **Appendix B**.

On 12 September 2014, Ryde LEP 2014 was gazetted and replaced Ryde LEP 2010 for any application received from that date. Due to saving and transitional arrangements, as the application was submitted prior to 12 September 2014, Ryde LEP 2010 still applies to the subject site. Notwithstanding, the proposal is permissible under the Ryde LEP 2014 which adopts an identical zoning arrangement on the site.

3.5. Environmental Planning Instruments

The following environmental planning instruments (EPIs) apply to the site:

- *State Environmental Planning Policy (State & Regional Development) 2011;*
- *State Environmental Planning Policy (Infrastructure) 2007;*
- *State Environmental Planning Policy No. 55 - Remediation of Land; and*
- *Ryde Local Environmental Plan 2010.*

An assessment of compliance with the relevant EPIs is provided in **Appendix B**. In summary, the Department is satisfied that the application is consistent with the requirements of the EPIs.

3.6. Objects of the EP&A Act

Decisions made under the EP&A Act must have regard to the objects of the Act, as set out in Section 5 of the Act and read as follows:

- (a) *to encourage:*
- (i) *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,*
 - (ii) *the promotion and co-ordination of the orderly and economic use and development of land,*
 - (iii) *the protection, provision and co-ordination of communication and utility services,*
 - (iv) *the provision of land for public purposes,*
 - (v) *the provision and co-ordination of community services and facilities,*
 - (vi) *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,*
 - (vii) *ecologically sustainable development, and*
 - (viii) *the provision and maintenance of affordable housing,*
- (b) *to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) *to provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The proposal complies with the above objects, particularly (a)(ii) as the proposal promotes the orderly and economic use of the site, (iv) and (v) as the proposal provides land for public purposes including roadways, open space, and community facilities; and (vii) as the proposal includes measures to deliver an ecologically sustainable development (**Section 3.7**).

3.7. Ecologically Sustainable Development

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- (a) *the precautionary principle;*
- (b) *inter-generational equity;*
- (c) *conservation of biological diversity and ecological integrity; and*
- (d) *improved valuation, pricing and incentive mechanisms.*

The Department has considered the proposed development in relation to the ESD principles and has made the following conclusions:

Precautionary Principle – The proposed subdivision and construction of infrastructure will enable the future use of the site as envisaged in the NRSP. The proposal will not result in any serious or irreversible environmental damage.

Inter-Generational Equity – The proposed subdivision and construction of infrastructure establishes the development lots for future development. The future development will incorporate environmental initiatives (e.g. BASIX) to assist in maintaining the environment for future generations.

Biodiversity Principle – The majority of subject site has been cleared for some time and has low environmental sensitivity and the proposal would not disturb any significant flora or fauna. Significant flora in the northern part of the site will be retained and protected under the proposal.

Valuation Principle – The cost of infrastructure and measures to ensure an appropriate levels of environmental performance will be incorporated into the future development of the site.

3.8. Environmental Planning and Assessment Regulation 2000

Subject to any other references to compliance with the Regulation cited in this report, the requirements for Notification (Part 6, Division 6) and Fees (Part 15, Division 1AA) have been complied with.

4. CONSULTATION AND SUBMISSIONS

4.1. Exhibition

In accordance with section 89F of the EP&A Act and clause 83 of the EP&A Regulation, the Department is required to make the EIS of a State Significant Development application publicly available for at least 30 days.

After accepting the EIS, the Department:

- publicly exhibited the application from 6 August 2014 until 5 September 2014, (being 30 days) on its website, at its Information Centre and at the City of Ryde Council's Planning and Business Centre, Ryde Library and North Ryde Library;
- advertised the exhibition in the Sydney Morning Herald, Daily Telegraph and Northern District Times on the 6 August 2014; and
- notified adjoining landholders, and relevant State government authorities and City of Ryde Council in writing.

The Department received a total of 18 submissions, comprising nine submissions from public authorities and six submissions from the general public and interest groups in response to the EIS, and four submissions from public authorities in response to the RtS.

Copies of the submissions may be viewed at **Appendix A**. A summary of the issues raised in the submissions is provided below.

4.2. Public Authority Submissions

A total of nine submissions were received from public authorities. Four further submissions were received from public authorities in response to the RtS.

The issues raised by the public authorities are summarised in the **Table 2** below. The issues raised have been addressed in the applicant's RtS, in **Section 5**, and/or by way of a recommended condition in the Instrument of Consent at **Appendix C**.

Table 2: Summary of public authority submissions

City of Ryde	
EIS	Council does not object to the proposal but identified several key areas of concern: • planning pathway – inconsistencies between the proposal and the NRSP DCP will cause issues for Council in the assessment of future applications; • infrastructure delivery – raised concerns with the proposed regional transport upgrades and advised that Council is in discussions with the applicant regarding the delivery of other local items as part of a future voluntary planning agreement; • urban design – raised concerns that the reallocation of floor space will result in bulky buildings with adverse overshadowing impacts; • open spaces – raised concerns with the detailed design and embellishment of open spaces and made recommendations for improvement; • public domain – identified conflicts between proposed utilities and services, planting areas, and parking areas; • transport and accessibility – made recommendations to improve roadways, intersections and shared paths and requests additional information in relation to bus stops, car share and traffic generation. Raises concerns with bus safety, the need for additional intersection treatments and objects to proposed traffic light phasing; • riparian corridors / biodiversity – further consideration should be given to the Endangered Ecological Community located in Bundarra Reserve which will be impacted by the proposal as well as the vegetation communities and the riparian corridor in the northern bushland park; • heritage – raised concerns with the proposed treatment of a well with potential heritage value on the site and concerns over shadow impacts from the proposal to the heritage listed cemetery; • construction impacts – recommended additional measures to mitigate noise impacts and consultation with Jemena to relocate the gas pipeline; and • flooding and drainage – raised concern that the flooding impacts on the downstream reaches have not been adequately assessed, recommends alternative water quality treatment devices to avoid ongoing high maintenance costs within the public domain areas.
Transport for NSW (TfNSW)	
EIS	TfNSW requests that the following issues be addressed: • travel lanes along the Spine Road should be increased in width (from 3.25 metres proposed to 3.5 metres) to accommodate articulated bus services; • the bus bay adjacent to Mews Road should be designed to ensure that articulated buses do not block access into and out of Mews Road; and • three articulated bus layover spaces should be provided in the retail precinct along with two separate toilets for the exclusive use of bus drivers.
RtS	TfNSW made the following comments: • amended plans in relation to the Epping Road access are required as the layout proposed by the RtS is not supported; • amendments to improve bus access are recommended; • the proposal has additional impacts on the Wicks and Epping Road intersection; • the planning agreement for works to the State Road network should be executed with the Minister for Planning with advice from TfNSW and the terms of the agreement are still being negotiated; and • conditions are recommended in relation to the pedestrian bridge.
Roads and Maritime Services (RMS)	
EIS	RMS provided the following comments: • the proposed pedestrian bridge and road upgrade works (Wicks Road / Waterloo Road intersection and deceleration lane) may require a works authorisation deed, will need to meet RMS and Austroads design requirements and owners consent requirements; • as the proposal will result in queue lengths along Wicks Road which may lead to

	congestion within the site, the proponent should investigate increasing capacity to exit the site; and • standard conditions are recommended in relation to access, stormwater, geotechnical requirements and construction traffic.
Sydney Trains	
EIS	Sydney Trains requested that conditions be imposed requiring the endorsement of Sydney Trains for any works deeper than 2 metres and either above or within 25 metres of the rail corridor, and modification to the pedestrian / cycle bridge so that it is not within the Sydney Trains easement.
RtS	Sydney Trains request that the conditions previously provided be imposed on any consent granted.
Environment Protection Agency (EPA)	
EIS	The EPA provided the following comments: • licensing – it is unclear whether the proposal will require any licensing; • water quality – additional information should be provided on the impact of the development on the water quality of Porters Creek and Lane Cove River, the Integrated Water Management Plan, and the ongoing monitoring and maintenance of the stormwater system; • construction noise – mitigation measures should be identified and implemented; • contaminated land – the potential risk for site contamination from the former landfill site adjacent to the development should be addressed and the RAP updated; and • recommendations are made in relation to waste management plans, construction management plans and future environmental assessment matters.
RtS	The EPA advised that a number of issues remain outstanding including: • water quality; • contaminated land; • sewerage management; and • future development.
Sydney Water	
EIS	Sydney Water outlined various requirements and restrictions for providing sufficient water mains supply and sewerage connections to the site. Details will to be confirmed prior to issue of Section 73 Certificate.
Department of Primary Industries – NSW Office of Water	
EIS	Office of Water provided the following comments: • further information is needed to clarify the location of Porters Creek and width of the riparian corridor; • the proposed new culvert should be designed in accordance with the Office of Water guidelines; and • conditions are recommended to mitigate impacts on groundwater flows to the area along Porters Creek which may be a groundwater dependant ecosystem.
RtS	Office of Water provided the following comments: • conditions are recommended in relation to treatments of the creek and bank and to remove any remaining confusion about the width of the riparian corridor; • questions why the gas pipeline needs to be rerouted within the Northern Bushland Park and recommends conditions to protect the pipeline where it crosses Porters Creek; and • advises that the applicant's response that the proposed Stage 1 works are unlikely to affect groundwater is accepted and previous conditions relating to groundwater are no longer included.
Office of Environment and Heritage	
EIS	Office of Environment and Heritage provided the following comments: • bushland reserve – the proposal should clarify the nature of the bushland reserve and the impacts of the stormwater management on the bushland reserve and to creek stability; • stormwater management – requests that the Stormwater Management Plan specifically assess pre and post development flow rates and any impacts to affected

	waterways and ensure that the development has a neutral or beneficial impact on environmental values downstream; biodiversity – impacts to vegetation on the southern side of Delhi Road should be assessed.
Jemena	
EIS	Jemena own a high gas pressure main traversing across the northern part of the site which would conflict with proposed future apartment buildings and seek that the gas main be relocated along the western and northern boundaries of the site.

4.3. Public Submissions

A total of six public submissions were received during the exhibition of the application, three from adjoining business or interest groups and three from the general public. The issues raised by the interest groups and adjoining businesses are summarised in the table below.

Table 3: Summary of adjoining business or interest group submissions

Ryde – Hunter's Hill Flora and Fauna Preservation Society	
Ryde – Hunter's Hill Flora and Fauna Preservation Society raised the following concerns: - the proposal should provide a full ecological assessment of the site and surrounds and achieve canopy connectivity between Bundarra Reserve and Porters Creek; - the proposal should assess bushland on the RMS land and impacts of the pedestrian bridge on the adjoining endangered ecological community; and - concerns that the proposed stormwater system is insufficient and may lead to failing of the local system with downstream impacts for Lane Cove River.	
SITA	
SITA own the resource recovery centre at 145 Wicks Road (400m from the site) and object to the proposed high rise high density development in close proximity to the site, particularly on the basis that the proposal may generate new complaints regarding noise and odour emissions from the site, placing strain on existing noise and odour control measures on the site. SITA considers that the proposal should give further consideration to the proximity to this facility and the organic waste processing facility on the corner of Wicks and Waterloo Roads and associated potential air quality impacts. SITA requests prospective purchasers be advised of the location of the facility and requests a mechanism for funding any upgrades to the measures that may be required as a result of additional complaints from the new premises. SITA also raised concerns over traffic impacts to the surrounding streets, the need for road widening, and cumulative impacts from the development (water, air quality, noise and traffic).	
Pirasta	
Pirasta own the Macquarie Link Business Park at 277 – 283 Lane Cove Road to the west of the site. Pirasta supports the proposal, but expressed concerns that the commitments to external road infrastructure are inadequate given the State benefits from a windfall increase in the value of land and given that the three main intersections in proximity to the site are already failing and will be placed under more pressure by the development. Further funding should be directed to this infrastructure.	

Three other public submissions were received during the exhibition of the application. Issues raised included:

- lack of connection to the existing Epping Road bike path;
- impacts of the pedestrian bridge on Bundarra Reserve;
- impacts to trees and biodiversity;

- the impact of additional traffic on the surrounding road network;
- excessive density and height of buildings;
- reliability of the EIS;
- inconsistency with the Director General's requirements; and
- inadequate community consultation;

4.4. Applicant's Response to Submissions

The applicant provided a response to the issues raised in submissions which is included in the Response to Submissions document (**Appendix A**) and resulted in a number of amendments to the development as outlined in **Section 2.2**.

The Department is satisfied that the issues raised in submissions have been addressed through the Response to Submissions and additional information, this report and the recommended conditions.

5. ASSESSMENT

5.1. Section 79C Evaluation

Table 3 identifies the matters for consideration under section 79C of the EP&A Act that apply to SSD, in accordance with section 89H of the EP&A Act. The EIS has been prepared by the applicant to consider these matters and those required to be considered in the SEARs and in accordance with the requirements of section 78(8A) of the EP&A Act and Schedule 2 of the EP&A Regulation.

Table 3: Section 79C(1) Matters for Consideration

Section 79C(1) Evaluation	Consideration
(a)(i) any environmental planning instrument	Satisfactorily complies - see Appendix B .
(a)(ii) any proposed instrument	Not applicable.
(a)(iii) any development control plan	Not applicable, however an assessment against the NRSP DCP is provided in Section 5 and Appendix B of this report.
(a)(iia) any planning agreement	No formal planning agreement as yet. Discussion in relation to future planning agreements are considered in Section 5.8 .
(a)(iv) the regulations	The application satisfactorily meets the relevant requirements of the Regulation, including the procedures relating to applications (Part 6 of the Regulations), public participation procedures for State significant developments and Schedule 2 of the Regulation relating to environmental impact statements.
(a)(v) any coastal zone management plan	Not applicable.
(b) the likely impacts of that development	Appropriately mitigated or conditioned - refer to Section 5 of this report.
(c) the suitability of the site for the development	Suitable as discussed in Sections 3 and 5 of this report.
(d) any submissions	Refer to Sections 4 and 5 of this report.
(e) the public interest	Refer to Section 5 of this report.
Biodiversity values impact assessment not required if: (a) On biodiversity certified land (b) Biobanking Statement exists	Not applicable.

5.2. Key Assessment Issues

The Department has considered the objectives of section 79C of the EP&A Act, the EIS, the issues raised in submissions, and the RtS in its assessment of the proposal. The Department considers that the key issues associated with the proposal are:

- floor space allocation;
- open space and public domain;
- internal road networks;
- traffic and road upgrades;
- proposed pedestrian bridge; and
- developer contributions;

Each of these issues are discussed in the following sections of this report.

5.3. Floor Space Allocation

The Ryde LEP specifies a range of maximum FSR limits across the site from 1.39:1 in the north to 4.31:1 in the centre of the site (**Figure 7**). The proposal seeks approval for three key variations:

- redistribution of density within the site, by relocating floor space from the central part of the site towards the north-east corner of the site, although the total maximum commercial and residential floor space across the site (238,919m²) is consistent with what could be achieved under the current FSR controls. This would result in some changes to future built forms on the site, with a greater building mass in the north-east corner of the site and reduced building mass elsewhere;
- allocation of a maximum gross floor area (GFA) to each of the development lots within the site, including the GFA which would have been allowed in the area that is now proposed for new roads; and
- allocation of an additional 2,500m² of floor space for community facility uses in addition to the floor space sought to be permitted for commercial and residential purposes.

Each of these three variations are considered below.

5.3.1 Redistribution of GFA and Potential Impacts on Built Form

The FSR controls in Ryde LEP 2010 are closely aligned to the ILP in the NRSP DCP. As the proposal involves a number of variations to the LEP in terms of road layout and open space, it is also proposed to redistribute the GFA across the broader site, while maintaining a total maximum commercial and residential GFA of 238,919m², as allowed by the LEP.

A comparison of proposed commercial and residential floor space with the LEP FSR controls is shown in **Table 4** and the existing floor space ratio controls are shown in **Figure 7**.

The key change in this application is a significant increase in GFA in the north-eastern corner of the site (Section W). Virtually all of the reallocation of the floor space is within the high density residential zone (Sections Q2, V1, X and W on the FSR map) so that the proposal does not result in any material change to land use mix.

The applicant advised that the reallocation of floor space responds to the proposed subdivision layout and has been carefully considered as the overall urban design arrangement for the site. The applicant also contends that an increase in this location is appropriate as it is located within the walking catchments of 2 railway stations (**Figure 8**) and will enable GFA to deliver tower buildings to mark the northern edge of the precinct.

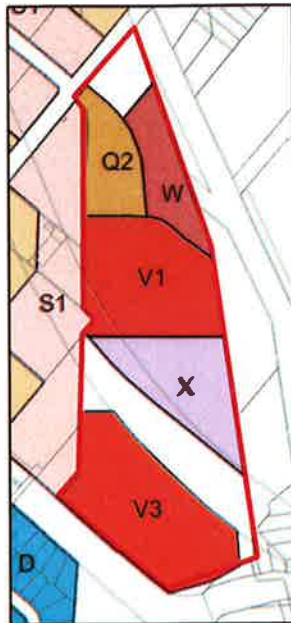


Figure 7: Extract from floor space ratio map, RLEP 2010

Table 4: Comparison of permissible and proposed floor space (does not include 2500m² of community facility floor space)

LEP Zone	Permissible GFA	Permissible FSR	Proposed GFA	Proposed FSR
Q2	11,374m ²	1.39:1	6,754m ²	0.83:1
W	29,162m ²	3.5:1	45,701m ²	5.48:1
V1	59,559m ²	3:1	55,607m ²	2.8:1
X	61,515m ²	4.3:1	53,006m ²	3.71:1
V3	77,309m ²	3.3:1	77,851m ²	3.32:1
Total	283,919m ²	3.1:1	283,919m ²	3.1:1

As it would result in a departure from the FSR development standard in the Ryde LEP, the applicant submitted a clause 4.6 variation request in support of the proposal. The clause 4.6 request concludes that the proposed variation will lead to a better outcome for the development of the site, as it would:

- be consistent with the objectives of the FSR standard and zoning objectives;
- facilitate the development density envisaged in the Finalisation Report;
- be consistent with the vision for the precinct, without adverse external impacts;
- improve amenity for all development without creating any greater adverse impacts on surrounding properties;
- enhance definition of the Mixed Use and High Density Residential precincts; and
- be consistent with the maximum overall GFA permitted across the site.

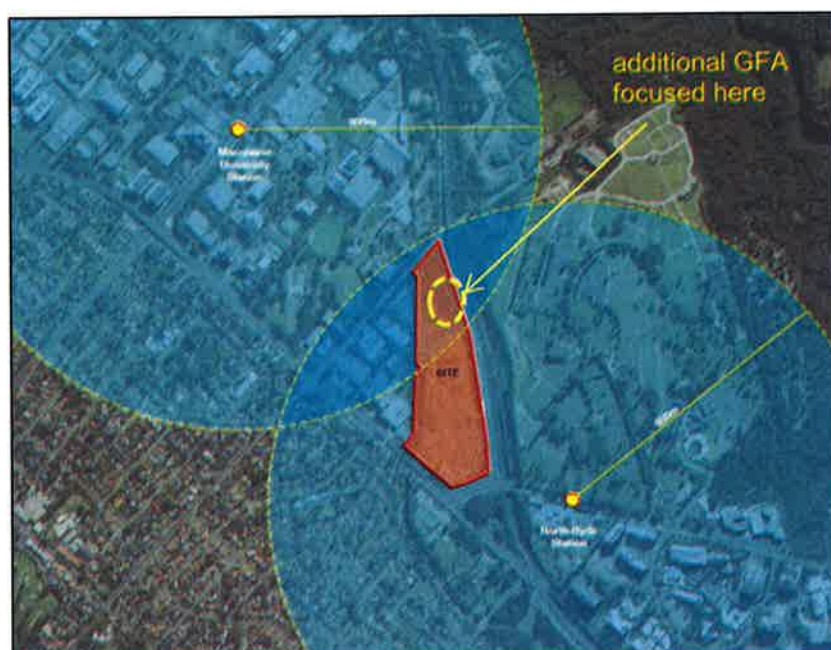


Figure 8: Proximity to public transport (source: Applicant's RtS)

Concerns were raised in public submissions that the proposal resulted in excessive density and height of buildings. The Council raised a concern that the reallocation of floor space without changes to the height controls will result in bulky buildings with larger floor plates than envisaged by the DCP, with adverse overshadowing impacts.

Building bulk will be considered in greater detail in future development applications, with consideration given to the relevant controls in the NRSP DCP and SEPP 65 and the Residential Flat Design Code in terms of design quality, adequate building separation, building floor plate, adequate solar access, cross ventilation and environmental efficiency.

The proposal allows for a wide variation in future building forms to appropriately address issues of building bulk. An indicative future built form layout (as shown in **Figure 9**) indicates that it would be possible to provide building forms that do not result in an unacceptably bulky appearance.

Further, any increase in density (and therefore potential building bulk) at the northern end of the site (which it is also noted is not nearby any existing residential land uses) will be off-set by reductions in density and building bulk elsewhere on the site, so that when viewed from a wider perspective, the overall quantum of building bulk will be the same as any alternative arrangement envisaged by the current controls. This can be seen by comparing the potential indicative built form layout at **Figure 9**, with the earlier scheme, developed for the UAP process at **Figure 10**.

The Department has considered the applicant's justification and the variation from the standard in **Appendix B** and agrees that the proposal satisfies both the objectives of the zoning and the FSR development standards as it:

- allows for effective control over the bulk of future development (as discussed above);
- allows for an appropriate level of development across the broader site, consistent with the overall development envisaged in the NSRP Finalisation Report which informed the development standards and with no change to land use mix as a result of the proposal;
- does not impact the total infrastructure provision requirements as the overall level of development on the site does not change, and the specific infrastructure needs have been addressed by the current proposal;
- remains consistent with planning objectives in that all areas of the M2 site are within the walking catchment of a train station;
- does not impact on the consolidation of development at the railway station nodes as the proposal does not seek to change floor space for development immediately adjoining the stations;
- does not impact on the peripheral locations of the corridor or corporate building settings; and
- allows for an improved layout to the site which reinforces the importance and function of the Central Spine through the provision of the adjunct linear park and provides and improved street layout.



Figure 9: Artist's Impression of possible future development on the site under current proposal (source: Applicant's promotional video).



Figure 10: Artist's impression of the potential development under the original UAP scheme. (source: North Ryde Station Precinct Planning Report)

The Department concludes that the site is strategically well placed to deliver a high density mixed use neighbourhood in close proximity to public transport. Importantly the overall GFA across the broader site will be consistent with the FSR development standard and deliver a maximum of 238,919m² of residential and commercial floor space. The Department is satisfied that the proposal is consistent with the objectives of the FSR controls and the zone objectives for the site, and is in the public interest. On this basis, compliance with the FSR controls would be unreasonable and unnecessary.

5.3.2 Allocation of GFA from Roads

By setting total GFA for each development site, the proposal in effect seeks to reallocate floor space from land that is proposed to be used for roads and open space to the adjoining development lots. Areas proposed as road reserves and public open space within the mixed use and high density residential zones cannot achieve the floor space that is permissible on that land, and therefore seeks to transfer the permissible floor space to the adjoining land, where it can be realised.

The Department notes that Ryde LEP 2010 provides that development may include the GFA that applies to the part of the site occupied by the proposed road, where the site includes part of the proposed access network within the Macquarie Park Corridor. While the LEP clause that permits this variation does not apply specifically to the subject site, the Department notes that the site adjoins properties that benefit from this clause, including the commercial sites immediately to the west. This approach is consistent with the Department's assessment of the Station North and Station South Site (SSD 6256) where GFA was reallocated from the road reserve to a development lot.

The Department therefore concludes that reallocating GFA from roads is acceptable given that:

- the proposal does not seek additional GFA to that permitted on the existing site;
- it would be reasonable to allow the GFA if the subdivision and construction of buildings was being assessed concurrently, prior to the creation / dedication of the road reserve and such an approach would not result in a variation from the development standards;
- retention of the GFA supports the development envisaged in the NRSP Finalisation Report that was based on achieving 330,000m² across the entire precinct; and
- retention of the GFA supports the objectives of the development standard to encourage the provision of a new street network, and provide incentives for redevelopment in return for the provision of the proposed access network as a public benefit.

5.3.3 Additional GFA for Community Facility

The proposal seeks a variation from the RLEP 2010 FSR controls in that it seeks the allocation of 2,500m² of floor space for a community facility on Lot 104, in addition to the floor space sought to be permitted for commercial and residential purposes.

The variation arises because the location of the proposed facility has now changed. The community facility was previously envisaged to be located within the RE1 Public Recreation zone, which did not include any floor space ratio controls, and as such, could have been provided in addition to the floor space permitted on the remainder of the site. It is now proposed to relocate the centre from the public recreation zone to the mixed use zone.

The Department has considered the relocation of the community facility to Lot 104 in **Section 5.4** and concludes that the new location is appropriate. The provision the community facility will provide a public benefit to future residents and is consistent with the objectives of the NRSP DCP.

Overall floor space across the site remains the same despite the relocation and therefore no material impacts arise from the variation. The variation also supports the objectives of the standard to enable the consent authority to respond to future infrastructure needs of the community. On this basis the Department concludes that further minor variation from the development standard is well founded in this instance. A full consideration of the variation from RLEP 2010 is provided in **Appendix B**.

5.3.4 Conclusion

The Department therefore concludes although the proposal results in some variations from the RLEP 2010 FSR controls, the variations are acceptable given that:

- total residential and commercial GFA for the site is identical to the total permitted by the RLEP 2010 controls and the reallocation of floor space within the site achieves the objectives of the FSR control and the zoning objectives;
- reallocation of GFA from road and open space areas to development sites is consistent with the approach taken within the locality and supports the development envisaged in the NRSP Finalisation Report based on achieving 330,000m² across the precinct; and
- the variation arising from the community facility floor space only arises due to its relocation from the public recreation zone to the mixed use zone. The relocation is supported and results in no discernible impacts.

5.4. Open space and public domain

The NRSP DCP envisaged a network of open spaces throughout the site including a bushland park at the north of the site, a community park in the centre of the site, and a large area of central open space and an urban plaza in the south of the site. The DCP also provides for a 2,500m² community facility in the western portion of the site and a dedicated shared pedestrian/cycle way along the eastern boundary of the site. The Department has considered the design and provision of open spaces, the community facility and the shared pedestrian/cycle way below.

5.4.1 Open space

The proposal will deliver the northern bushland park, central park and community plaza, with only minor variations to the configuration and size of these areas as identified in the NRSP DCP. However, the community park in the centre of the site has been removed in favour of linear parkland along the spine road. The overall amount of open space to be delivered across the precinct will be increased by 11% from 16,800m² to 18,677m² (Table 5 and Figures 11 and 12).

Table 5: Comparison of Required and Proposed Open Space Areas

	NRSP DCP Open Space Requirements (minimum)	Proposed Open Space
Northern Bushland Park	4,000m ²	4,350m ²
Community Park	2,000m ²	3,575m ²
Central Park	6,300m ²	5,736m ²
Pedestrian Plaza, Mixed use precinct	2,000m ²	2,941m ²
Community Centre	2,500m ² with active recreation facilities and a playground	0m ² (but 2,500m ² indoor facility proposed on Lot 104)
Lot 108	-	2,075m ²
Total	16,800m²	18,677m²

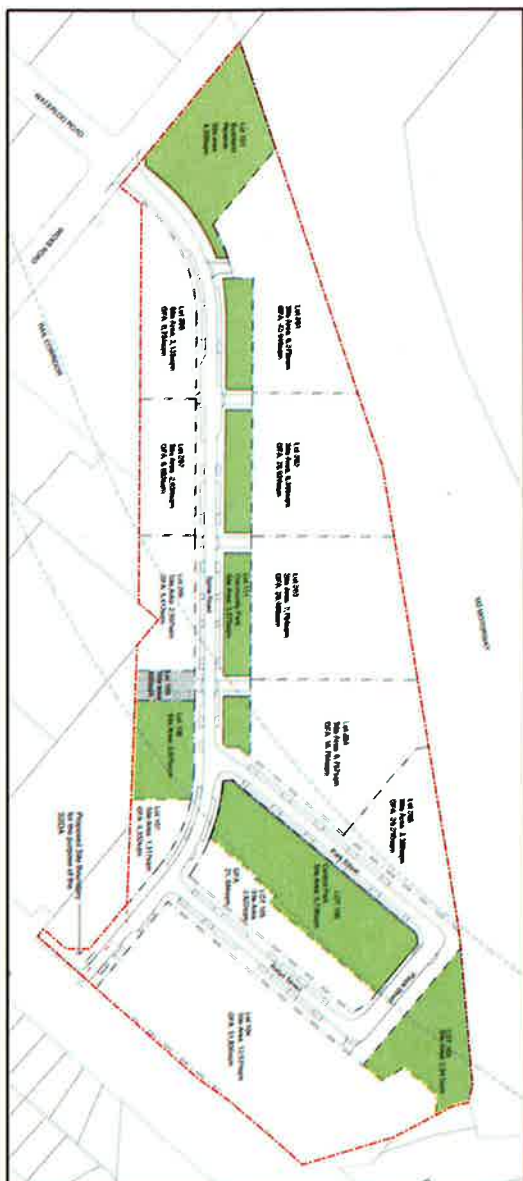


Figure 11: Proposed Open Space Layout (source: Applicants RtS)

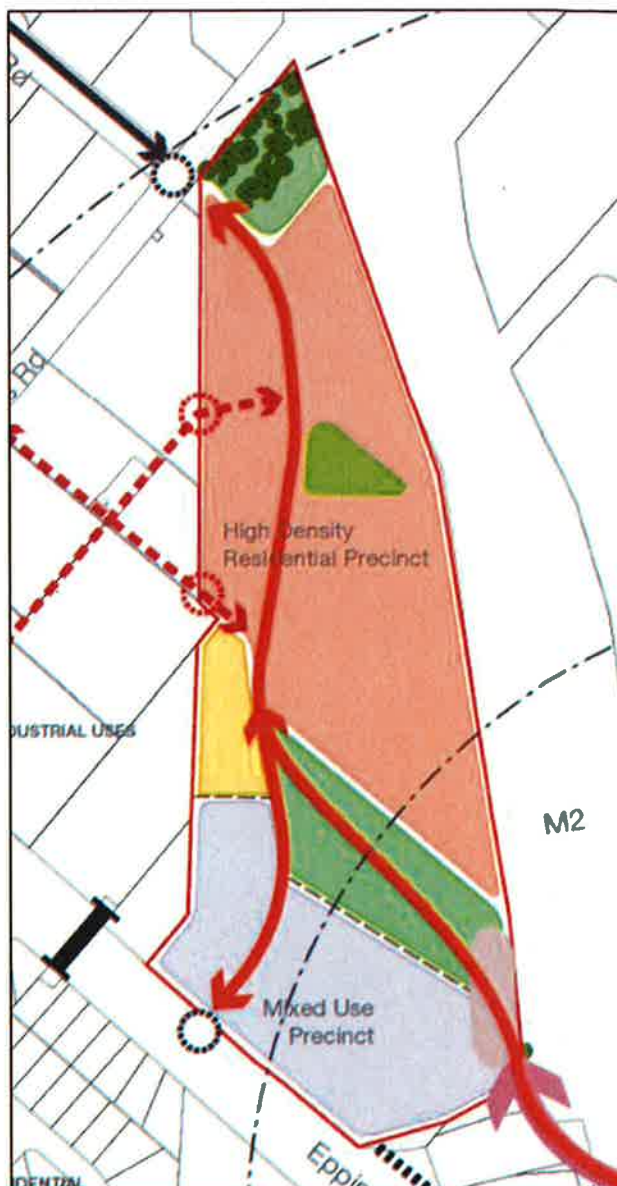


Figure 12: DCP indicative layout plan (open space areas in green)

The Department supports the minor reconfiguration and design of the northern bushland park, central park and community plaza given that:

- the open space layout in the DCP is indicative only and the DCP notes alternatives layout can be considered;
- there is an overall increased provision in the quantity of open space;
- the applicant has undertaken a detailed landscape concept design which provides high quality open space areas to meet the needs of future residents including:
 - a 900m² all ages playground, large grassed area for passive recreation; extensive plantings and amenities in the central park;
 - extensive rehabilitation to the northern bushland park to provide a high quality area of natural open space, with well-designed boardwalks to enable all residents access to to view the creek and natural environment without affecting the significant trees and habitat areas;
 - the community plaza provides an additional area of open space that makes a contribution to the site and enables the provision of large trees for shading and amenity; and

- the boundaries are generally consistent with the public recreation zone boundaries, and portions of the open space which fall outside of these boundaries are permissible with consent in the R4 residential and B4 mixed use zones.

In relation to the replacement of the community park with a linear park, the applicant notes that the linear park will connect the proposed bushland park and central park to form a linked network of open space and a defined high quality pedestrian and cycle route through the site.

The Department and Council initially raised concerns about the amount and location of active uses within the linear park and suggested that some facilities should be consolidated or relocated to the central park. Concerns were also raised regarding conflicts between the various uses, private building entries and the proposed pedestrian/cycle way.

In response, the applicant reconsidered the play equipment and exercise equipment in the linear park, and also confirmed that future building entries will be accessed off the mews roads, rather than the parkland thereby removing any conflicts between public and private uses.

The Department supports the linear park configuration as it:

- provides improved and more equitable access to open space for future residents compared to the community park;
- provides increased open space, being greater in area than the envisaged community park;
- provides a high level of amenity incorporating quality landscaped spaces and finishes;
- results in a positive urban design outcome, visually softening the appearance of the future high density buildings on the lots and providing an attractive streetscape along Spine Road; and
- incorporates a shared pedestrian/cycle way (as discussed in **Section 5.2.3**) within an attractive green space, improving the experience for pedestrians and cyclists traveling through the site.

The Department is therefore satisfied that the proposal will deliver high quality open space areas to meet the needs of future residents, and is consistent with the provision for open space set out in the NRSP DCP. As the open space areas are assets which will be transferred to Council's ownership, the Department recommends that detailed landscape plans be developed in consultation with Council prior to construction commencing.

5.4.2 Community facility

The proposal seeks to change the location of the community facility from the indicative location shown within the DCP plans (within the open space zone along the western boundary of the site) to the mixed use precinct in the south of the site (proposed lot 104).

The change arises from discussions between the applicant and Council over the requirements for a community facility, who have reached an agreement that the community facility should be located within the development, rather than a standalone building as identified in the DCP. The area that was previously identified for the community facility (proposed lot 108) is now proposed to be dedicated to Council as open space in addition to the three open space areas discussed above.

The type of facility will be a matter for the applicant and Council to negotiate as part of the VPA and the future development application for Lot 104.

The Department supports the proposed relocation of the community facility to the mixed use precinct as it will complement the range of retail, commercial and residential uses on proposed lot 104. Further, it is also appropriate that the location, form and use of the community facility be decided in conjunction with Council, as the ultimate owner of the centre.

A condition is recommended requiring development applications for the future development of the lots to pay contributions in accordance with Council's Section 94 Contributions plan, or in accordance with any VPA negotiated with Council prior to the issue of the first development application.

5.4.3 Cycleway / pedestrian shareway

A three metre wide cycle and pedestrian pathway is provided within the linear parkland in place of the separate shared pedestrian/cycle way identified in the DCP (Figures 13 and 14).

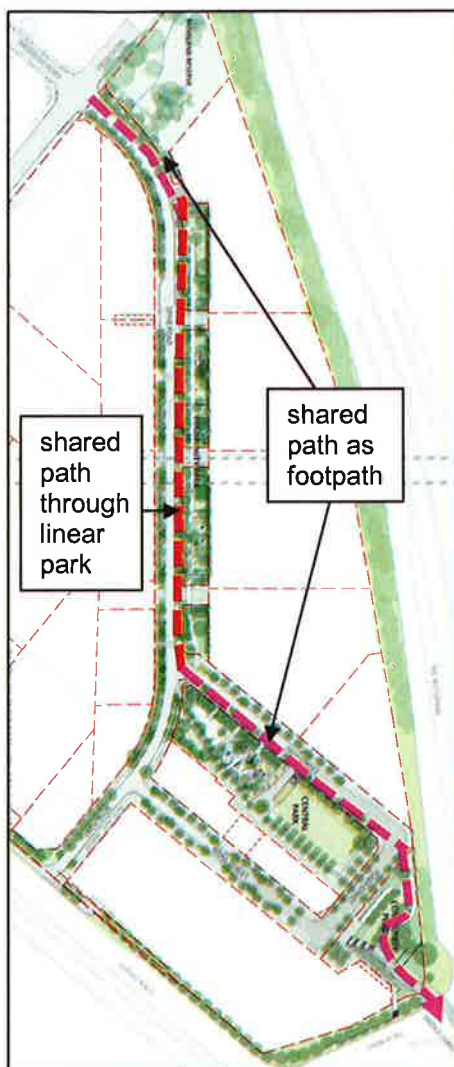


Figure 13: Proposed route of shared way
The Department and Council raised concern about conflicts between cyclists and users of the linear park and suggested consideration be given to separating the cycle path from the pedestrian and recreation areas.

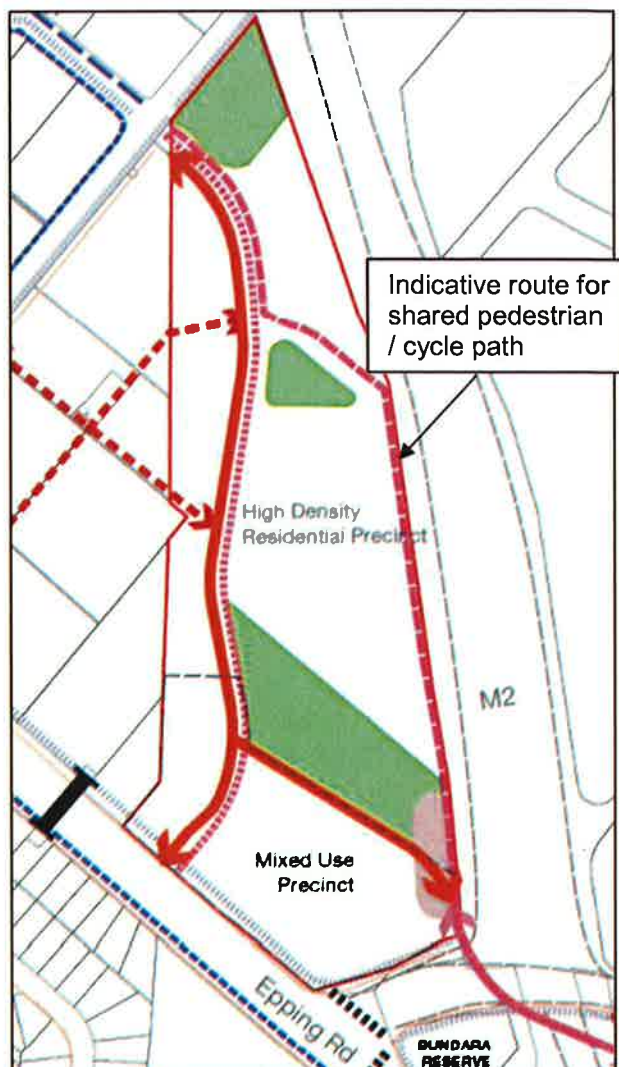


Figure 14: Extract from NRSPDCP showing indicative shared way

As outlined in **Section 5.4.1**, the applicant has reconsidered the range of uses within the linear park and relocated/consolidated these uses to minimise the conflicts between active uses in this space. In addition to reducing the areas of activation, these areas have also been separated from the cycle and pedestrian path by either being raised or lowered or separated by barriers (refer **Figure 15**). Line marking, signage, and paving treatments are proposed to further require vehicles to give way to pedestrians and cyclists at all crossings and will further reduce any potential for conflicts.

Noting that the M2 edge road is not proposed along the eastern edge of the site (as discussed below in **Section 5.5**), the Department supports the similar deletion of the pedestrian / cycle shareway from this location. The location along the M2 edge road would provide a direct route

with fewer conflicts, it would also lack activation and direct surveillance. The proposed location adjacent to the Spine Road and the linear parkland is therefore preferred as it offers a high level of direct surveillance and activation.



Figure 15: Artists impression of shared path adjacent to consolidated exercise area

The Department is satisfied with the measures taken by the applicant to minimise the conflicts. On this basis the Department is satisfied that the proposed shared cycle / pedestrian path within the linear park provides an acceptable alternative to the separate designated shareway envisaged by the DCP.

5.5. Internal road networks

5.5.1 DCP requirements for Street Design

The DCP provides a hierarchy of local streets in the NRSP and outlines the requirements for new streets in terms of carriageway widths, parking, tree planting and footpaths. The indicative streets on the M2 site include:

- Spine Road, which will be the main road corridor through the site which links Epping and Wicks Roads;
- Park Street, Plaza Street and Retail Street, which together form a loop road through the mixed use precinct and around the Central Park; and
- a local road along the edge of the M2.

The proposal provides the Spine Road, and Park, Plaza and Retail streets forming a loop around the Central Park. However, the proposal does not provide the M2 edge road, but instead includes provision for Mews Roads, which will be provided as part of future applications to provide access from Spine Road to the development lots. Provision is also made for a future road connection between Spine Road and the adjoining commercial precinct to the west (refer **Figures 16 and 17**).

The Department has considered each of these streets below.

(a) Spine Road

The location and alignment of Spine Road is generally consistent with the NRSP DCP. The proposed carriageway width of 6.5 metres (3.25 metres per lane) and parking lane widths (2.5 metres) are also consistent with the DCP. However the entire width of the proposed road reserve is 17.5 to 18 metres, being narrower than recommended width of 20 metres in the NRSP DCP, due to reduced footpaths and verge planting. The reduction in carriageway width

is acceptable in this case as it is offset by the generous footpaths and landscaped areas provided by the Linear Park which adjoins the Spine Road.

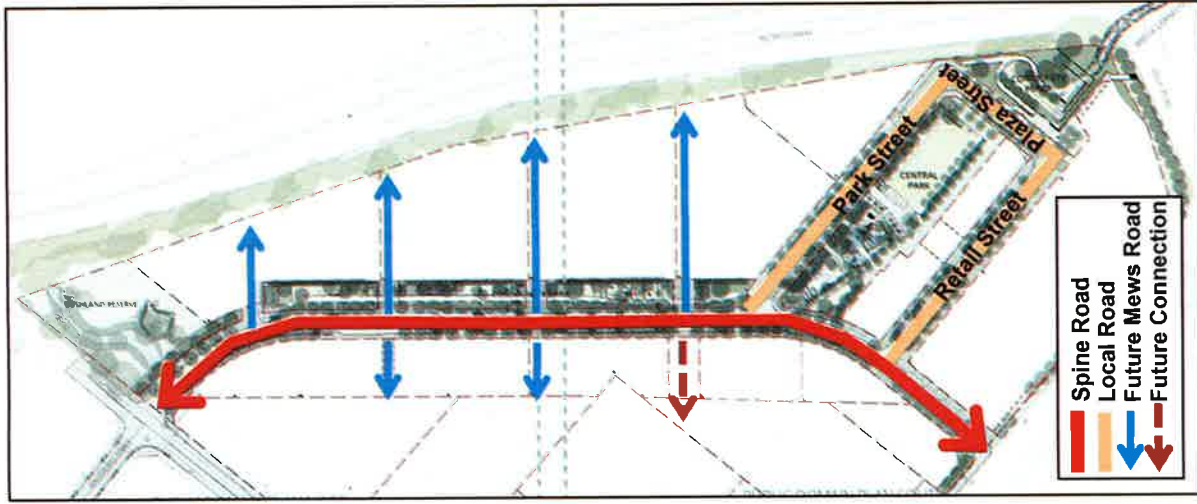


Figure 16: Proposed roads

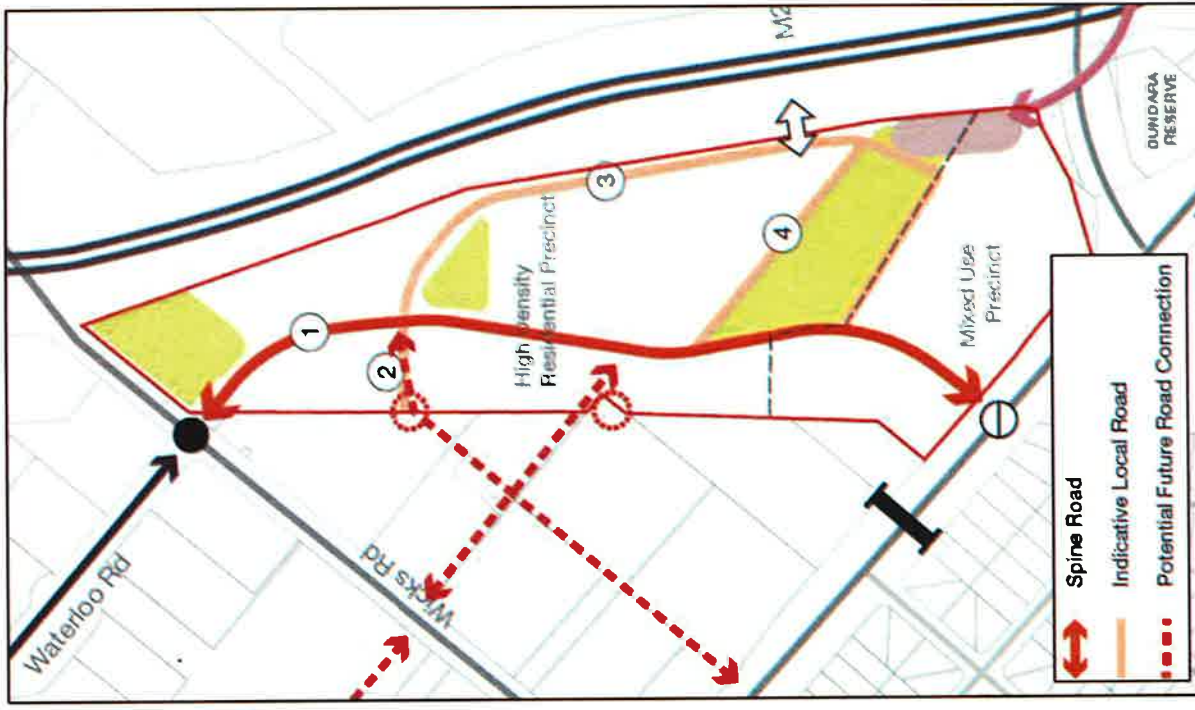


Figure 17: Extract from NRSP DCP indicative vehicular movement

Council raised some concerns with the potential for conflicts on Spine Road at the access to lots 104 and 107. In response the applicant has increased the width of the carriageway at the southern end of Spine Road by 1.2 metres to improve access arrangements and reduce the potential for conflict. The Department is satisfied that access can be safely provided to the adjoining development lots, subject to appropriate design of site access at the future Development Application stage for each development lot.

(b) Park, Retail and Plaza Streets

The location and alignment of these roads generally reflect the indicative road layout arrangement in the NRSP DCP, although Retail Street is now proposed to run through the mixed use precinct, rather than along the southern edge of the park. The DCP envisaged the streets forming a one-way loop, with a total road reserve width of 10 metres, however they are now proposed as two-way streets and will have road reserve widths of between 15.25 metres and 19.5 metres. The streets comply with the DCP recommended widths for carriageways and parking lanes but proposed verge and footpath areas vary in width from 1.5 metres to 4.5

metres, where the DCP recommends a width of 3 metres. The proposed streets also provide for 3.25 metres wide bus stop and layovers.

The Department supports the variations from the DCP as the relocation of Retail Street through the mixed use precinct and the provision of two-way movements allows for improved access through the site. The Department also supports the minor changes to footpath and verge widths having regard to their location and use. Narrower paths are supported adjacent to parks and plazas as this allows for increase in the width of the adjoining public domain area, and wider paths are provided in other locations such as along Retail Street, and along the shared way. In all cases there is ample room for pedestrian and cyclist movements as well as landscaping and street tree planting.

Council sought clarification as to whether the area around Plaza Street would be a shared zone. Plaza Street, and part of Retail Street and Park Street are proposed to have a carriageway constructed with natural stone (granite) cobbles rather than asphalt concrete surfacing as recommended by the DCP. This is to encourage a low speed environment around the plaza area, although a shared zone is not proposed. The Department supports the use of alternative treatments in this location to encourage low speeds.

(c) Future Road connection to adjoining property to the west

The proposal makes provision for a future road link to provide access from the Spine Road to the adjoining commercial precinct to the west of the site.

Council raised a concern with the proposed location of this future road, as it differs from existing and future planning controls. Specifically, the road would be located approximately 30 metres south of the location envisaged by the indicative road networks maps in the NRSP DCP and the location of the connection shown in the documentation accompanying a planning proposal to create a mixed use precinct on the adjoining land to the west of the site.

The applicant advises that the proposed location reflects the optimum road layout for the M2 site arising from the review of the master planning process. Within the site the road serves to separate the open space from the residential zone and aligns with a proposed mews road to provide a coherent road layout. It also meets the intent of the DCP and the planning proposal by providing an appropriate road link to increase permeability and connectivity to surrounding land uses and the road system.

Further, the applicant advises that it has been in discussions with the adjoining landowner and intends to transfer ownership of road allotment to it at a future date. The adjoining landowner has not raised any objection to the location of the proposed link.

The Department notes that while an indicative road connection is shown in the documentation accompanying the planning proposal, the final street layout will be subject to a future application for development of the adjoining sites. Noting that road lot is set aside from the development lots and is intended to be transferred to the adjoining landowner, with whom discussions have already commenced, the Department is satisfied that any future master planning for the development of the adjoining sites will be able to accommodate the proposed road alignment and connection to the M2 site.

(d) Deletion of M2 edge road

The M2 edge road is deleted in favour of future mews roads (delivered as part of future applications) to provide access to the development lots. The Department supports the alternative arrangement as it enables the provision of a wider landscaping strip along the boundary with the M2 motorway which will assist with reducing the visual and acoustic impacts of the motorway and still providing adequate access to all the development sites. The Mews Road arrangements will also mean that all buildings will have a street address. Intersection analysis with the Mews Road arrangement demonstrates that all internal intersections on the site will operate at a good ('A') level of service with significant spare capacity.

5.5.2 Bus Access

TfNSW requested changes to the road design relating to bus bays and layovers and also requested more information on accommodating articulated buses as the lane widths in Spine Road (3.25 metres) are less than the advised minimum width for new bus capable roads (3.5 metres).

In response, the applicant amended the plans to provide bus stops and bus layover areas in accordance with TfNSW's requirements. In terms of lane widths for bus movements, the applicant undertook further analysis of articulated bus movements which showed that occasional lane sharing would occur when turning to / from Spine Road regardless of the width of the lanes and there would not be a significant difference between the lane sharing from a road with widths of 3.25 metres, or widths of 3.5 metres. Further, the proposed 3.25 metre width is consistent with the NRSP DCP and other local streets in the Macquarie Park corridor.

On this basis, the Department is satisfied that lane widths of 3.25 metres are acceptable, and that bus movements can be accommodated in the precinct.

5.5.3 Road Maintenance and Ownership

The applicant advises that it is intended to dedicate the road network to Council (Spine Road, Retail, Plaza and Park Streets) at the registration of the subdivision plan, subject to an initial maintenance arrangement where the applicant will be responsible for maintaining these roads for a period of 2 years from registration of the plan (with final details agreed through a planning agreement).

The Department recommends that requirements are imposed requiring the dedication of the roads to Council at the time of issue of a subdivision certificate, and that a maintenance plan be prepared in consultation with Council.

5.6. Traffic, mitigation measures, and road works

Traffic impacts and the need for mitigation measures to alleviate congestion were key issues raised in public submissions.

Traffic was considered in detail as part of the UAP, and the Finalisation report acknowledged that a number of intersections in the vicinity of the site were at or exceed capacity during peak periods, and that traffic congestion was a broader regional issue that would require a range of measures beyond those delivered by the development of this site. The associated infrastructure schedule to the Finalisation Report identified infrastructure upgrades and delivery framework necessary to support the precinct including a \$10.4 million contribution to regional transport upgrades that would also assist with the broader traffic congestion issues.

The applicant prepared a traffic impact assessment for the proposed development, based on the reallocation of floor space. The assessment also assumes a change to the future land use mix, which includes an increase in the number of residential units and a decrease in commercial and retail floor space. The assessment has also updated the traffic impacts based on revised RMS figures for traffic generation for high density residential development which indicate a reduction in traffic generation rates. The assessment shows that overall traffic impacts to the area are likely to decrease as a result of the proposed changes. Morning peak hour traffic movements from the site would decrease from 760 vehicle movements per hour (vph) predicted in the original assessment considered in the UAP process, to 620 vph, and evening peak hour movements would decrease from 860 vph to 540 vph.

While it is noted that land use mix will be determined as part of future applications and is not known at this stage, as the proposal results in no increase to overall GFA on the site, and as the traffic generation rates for high density residential development have been reduced by the RMS since the assessment of the UAP, the Department is confident that the overall amount of traffic

generated by the Development will be less than the traffic generation assessed at the time of the UAP.

On this basis the traffic mitigation measures previously established by the infrastructure schedule to the Finalisation Report are considered an appropriate response to mitigate the impacts of the proposed development.

In addition to the pedestrian connection bridge to the nearby North Ryde train station (discussed below in **Section 5.7**) and regional transport measures (discussed below in **Section 5.8**), the Infrastructure Report identified a range of measures that UGNSW or future developers will be responsible for in order to accommodate traffic and transport from development of the M2 site.

Table 6: Required Traffic Mitigation Measures

Required Infrastructure	Comments
Waterloo Road / Wicks Road intersection signalisation and pedestrian crossing	A key intersection necessary to provide adequate access to the site and to be delivered as part of the Stage 1 works. Refer to discussion below.
Epping Road deceleration lane	Key road works necessary to provide adequate access to the site and to be delivered as part of the Stage 1 works. Refer to discussion below.
New bus shelter and facilities at Epping Road	To be provided in conjunction with the deceleration lane. Refer to discussion below.
New bus facilities at Epping Road / Delhi Road	To be provided in conjunction with road widening works on Delhi Road, delivered through a regional transport contribution. Refer to discussion in Section 5.8 .
Completion of the Macquarie Park North Ryde University active transport spine	A cycle way on Waterloo Road to the north of the site will either be funded through section 94 contributions from future development on the site or provided as part of future applications on the site with a local contribution off-set. Refer to discussion in Section 5.8
Transport package, carshare scheme and high profile bicycle parking at retail nodes	To be delivered by developers of the future development lots. The Department recommends conditions to ensure future applications address these requirements.
Wayfinding and directional signage	Delivered as part of the Stage 1 works, with additional signage to be provided on the development sites as part of future applications where necessary. The Department is satisfied that appropriate signage will be provided in the public domain areas in the Stage 1 proposal.
An on-street parking scheme	A parking management strategy was submitted with the application, which leaves many of the details of future management measures to be determined at a future stage. The DCP provides that the strategy should be lodged with the first development application for residential or commercial development. The Department recommends conditions to ensure future applications address these requirements.

(a) Waterloo Road / Wicks Road intersection and Epping Road deceleration lane

The proposal seeks approval for upgrade works to the Waterloo Road / Wicks Road intersection and construction of a deceleration lane in Epping Road as part of the stage 1 works.

TfNSW raised a concern with the design of the deceleration lane which provided an additional access driveway on RMS land. The applicant subsequently amended the plans to address the concern by relocating the access point to within the subject site. The Department is satisfied the updated access arrangements are satisfactory, and notes that final road design will require RMS approval and will need to meet all requirements of the RMS and TfNSW.

Council raised a concern with the proposed traffic light phasing of the *Waterloo Road / Wicks Road intersection* and also advised that the intersection should be designed to accommodate the future cycleway route (*Macquarie Park North Ryde University active transport spine*) which

will go through this intersection when complete. The signalisation of the intersection, including signal cycle times will require full RMS design approval and will be carried out in accordance with the requirements of the RMS. Conditions requiring RMS approval for the road works are included in the recommendation.

The cycle route to the north of the site has not yet been designed in detail and will be provided at a future date from funding provided via section 94 contributions (refer to discussion below). The Department notes that it would be difficult to design the intersection to accommodate a cycleway that is not yet designed, however the Department is confident that any necessary minor changes to the intersection as a result of the future cycle route could be accommodated in the future. Temporary signage is proposed to direct cyclists through the intersection until such time as the cycle route is finalised.

(b) New bus shelter and facilities at Epping Road

The applicant is required to provide a new bus stop on Epping Road as a result of construction of the deceleration lane. The requirement is set out in both the infrastructure schedule and the NRSP DCP. The proposal includes details of the new bus stop design within the roadway, but does not detail the bus shelter design or location. As such, a condition is recommended requiring the provision of a shelter in accordance with the requirements of TfNSW.

In conclusion, the Department is satisfied that all specific traffic and transport measures previously identified as necessary to support the development of the M2 site will either be delivered as part of this proposal, through the regional transport infrastructure contribution, by future developments or through section 94 contributions.

5.7. Pedestrian bridge

The proposal includes a pedestrian / cycle bridge which provides a link from the site, over Delhi Road and the M2, to the entrance to the North Ryde railway station on Delhi Road. The bridge is about 150 metres in length and will be provided independently of any other works or infrastructure contributions and will be constructed by the applicant as part of the Stage 1 works prior to the occupation of the first residential development. The bridge will be dedicated to RMS upon completion.

The Department, Council and the public raised concerns in relation to the bridge design, landing location and impacts on the adjoining bushland in the Bundarra Reserve, as discussed below.

5.7.1 Bridge design

The proposed bridge, as refined in the RtS, has a tubular open lattice form that comprises an expressed truss superstructure construction (refer to **Figures 6 and 18**). The bridge is anchored within the community plaza open space on-site, curves over Delhi Road and lands outside the western entrance to North Ryde Railway Station adjacent to Delhi Road. The final bridge design does not feature any advertising panels.

The Department is of the view that the bridge design has a distinct sculptural quality, which is reinforced by the fluid way it curves over Delhi Road. The uniqueness of the design is likely to form a readily identifiable entity in the locality, which will contribute positively to the character and appearance of the surrounding area.



Figure 18 Aerial view of proposed bridge

5.7.2 Bridge landing

The NRSP DCP envisaged that the eastern end of the pedestrian bridge would land within the urban plaza on the nearby Station North Site, which is to the rear of North Ryde Railway station (refer to **Figure 19**). As noted above, the application proposes an alternative landing location, adjacent to Delhi Road at the western entrance to North Ryde Railway Station.

The applicant found that it was both undesirable and unfeasible to provide the southern landing of the bridge within the urban plaza of the Station North Site due to the site constraints, which include easements, land gradients and adverse pedestrian amenity due to traffic and ventilation noise. The applicant therefore considers that the proposed revised landing location adjacent to Delhi Road is the optimal location.

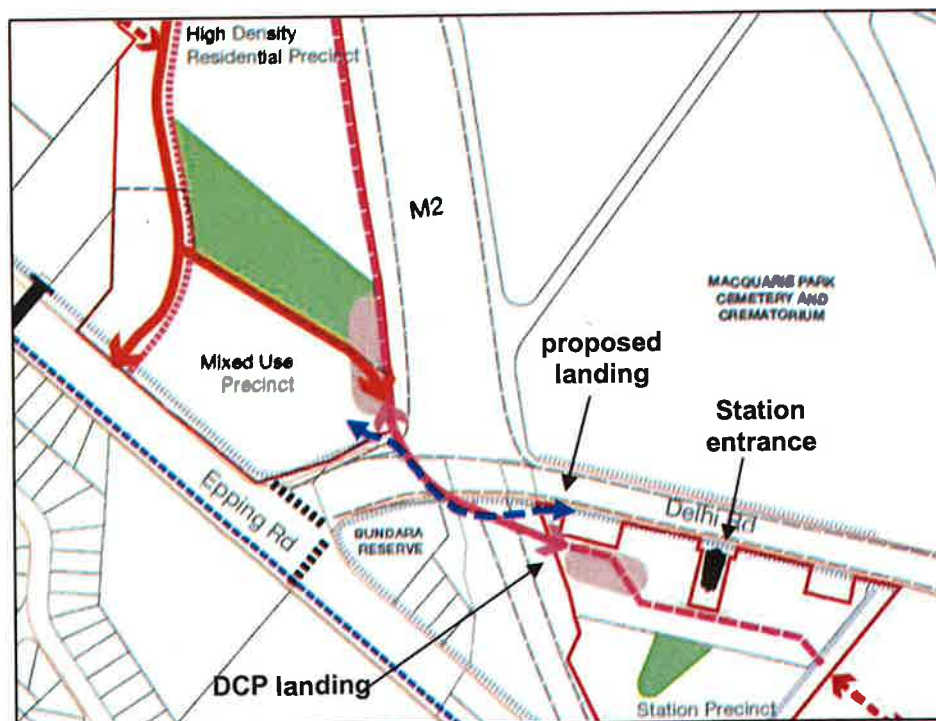


Figure 19: Extract from NRSP DCP with new bridge alignment shown in blue

The Department notes that the Station North Site is currently vacant. However, a Development Application has been lodged with Council for a mixed use development. The Department has reviewed the layout of the proposal (as submitted) and notes that the layout is incompatible with a bridge landing on the site as envisaged by the DCP.

The Department is of the view that the landing of the bridge adjacent to Delhi Road and outside the western entrance to North Ryde Station is acceptable for the following reasons:

- the movement of pedestrians and cyclists from the site to North Ryde Station will form a key desire line. The proposed bridge landing on Delhi Road would be logical from a way finding perspective and would provide a direct access to the entry of the Station;
- the likely delivery and timing of any upgrade works to North Ryde Station (including new entries to the North Station Site) is uncertain;
- the proposed bridge landing location on Delhi Road is more compatible with the current application being assessed by Council for the development of the Station North site; and
- the proposed bridge will provide a high quality pedestrian and cycle link between the site and the railway station consistent with the objectives of the NRSP controls in the DCP (refer to **Appendix B**).

The northern landing of the bridge also varies slightly from the DCP, but is appropriate, as it still lands within the pedestrian plaza and provides direct access to the retail precinct and Central Park.

5.7.3 Impact on Bundarra Reserve

Bundarra Reserve is located on the opposite side of Delhi Road to the south of the site and is a Council reserve adjoined by a small pocket of RMS owned land. The reserve and adjoining RMS land contains 4,900m² Sydney Turpentine Ironbark Forest (STIF), which is listed as an endangered ecological community (EEC) under the *Threatened Species Conservation Act* 2005.

The proposal seeks to clear up to 200m² of STIF to facilitate the construction of the pedestrian bridge and one of its support pylons.

Council, OEH and the public raised concerns about the impact of the proposed pedestrian bridge on the STIF, particularly in terms of removal of trees and overshadowing of habitat.

As a result of the concerns raised, the applicant amended the bridge design and prepared a species impact assessment which considered the impact of the bridge on the STIF community. The applicant considers that the impact on the STIF is acceptable for the following reasons:

- the clearing of STIF (up to 200m²) to facilitate the construction of the pedestrian bridge represents a maximum. This is a conservative approach and if construction allows it may only be necessary to trim, rather than clear, trees;
- overshadowing impacts can be mitigated by appropriate bush care works and the applicant commits to provide contributions towards such works; and
- lighting and impacts during the construction phase can be mitigated by construction protocols including a construction environmental management plan, lighting design, erosion and sediment control.

Given that the bridge must span both Delhi Road and the M2, without impeding pedestrian and traffic flows and sightlines, there are limited alternatives to its arrangement and the location of support pylons. The Department is satisfied that the bridge any support pylons have been aligned to minimise impacts on the reserve and STIF community and that any impacts can be appropriately mitigated/managed.

5.7.4 Conclusion

Overall the pedestrian bridge will achieve a good level of civil design and will provide for an efficient and direct connection between the site and North Ryde Station. The proposal will have

minor impacts on the existing STIF community within Bundarra Reserve, however these impacts can be appropriately mitigated/managed.

5.8. Contributions

5.8.1 Regional Transport Contributions

The infrastructure schedule to the Finalisation Report identifies that \$10.4 million will be allocated by UGNSW to a range of regional transport measures to reduce congestion in the Macquarie Park area. The works include widening of roads in the vicinity of the site (such as Delhi Road and Wicks Road), intersection upgrades (to intersections on Delhi Road, Wicks Road, Pittwater / Epping Road and the Lucknow Road on-ramp), and providing additional capacity (on Waterloo Road).

The proposal includes a corresponding commitment from UGNSW for a contribution of \$10.4 million towards regional transport upgrades and a list of priority projects to be potentially funded by the \$10.4 million.

The Department and Council noted that the list of projects differs from the list set out in the infrastructure schedule to the Finalisation Report, including upgrades to different intersections (such as the Epping and Lane Cove Road intersection), cycleways and bus stops.

In response, the applicant noted that the contribution offered by UGNSW provides for regional transport infrastructure upgrades to be agreed between UGNSW and TfNSW. Both organisations have agreed that the infrastructure schedule is a guide to the kind of regional upgrades necessary. Although discussions have progressed with TfNSW, a final schedule outlining the specific works and their priority order for funding, the timing or method for funding and delivery has not yet been agreed.

UGNSW and TfNSW are also currently in discussions, in consultation with Department, on the proposed voluntary planning agreement (VPA) which would formalise the contribution to the regional transport infrastructure.

The Department agrees that TfNSW, as the authority for regional transport infrastructure, is best placed to determine how the contribution should be allocated, and acknowledges that priorities may shift over time, reasonably resulting in different priorities since the Infrastructure Schedule was drafted. It is therefore appropriate that the allocation of funding to regional projects, the design of those projects, and the timing for delivery of those projects, be determined by negotiations between the applicant and TfNSW.

An the regional transport contribution is necessary to support the future residential and commercial development on the site, the Department is of the view that the final agreement must be in place and executed prior to lodgement of the first development application for any residential or commercial development. The Department has recommended that a condition be imposed on the consent accordingly.

On this basis the Department is satisfied that priority regional transport infrastructure measures can be delivered by the project.

5.8.2 Local Contributions

The infrastructure schedule to the Finalisation report identifies that local infrastructure delivered by UGNSW in the NRSP may be offset against the required Section 94 Contributions which would be payable for future development. The Department notes that this could be formalised with Council as a VPA but also considered as offsets on an application by application basis.

UGNSW has been in discussions with Ryde Council regarding a potential VPA for local infrastructure including open space, roads and community facilities. A preliminary letter to Council from the applicant indicates that it is estimated that future development on the site may attract

approximately \$40 million in development contributions. The applicant has proposed to provide \$35 million worth of infrastructure works, and seeks an offset of \$25 million for those works. Negotiations between the parties are continuing.

Any VPA will need to be finalised prior to the lodgement of the first development application which incorporates residential, retail or commercial floor space. The Department recommends that a condition be imposed requiring development applications for the future development of the lots to pay contributions in accordance with Council's Section 94 Contributions plan, or in accordance with any VPA negotiated with Council.

The Department is satisfied that the proposal will deliver significant public benefits including public open space, community facilities and new roads on the site and regional transport upgrades. On this basis the proposal is supported.

5.9. Other Issues

5.9.1 Biodiversity and Riparian Zone Impacts

The northern part of the site (**Figure 20**) contains remnant Sandstone Ridgetop Woodland and a small creek known as Porters Creek. The northern most part of the woodland, surrounding the creek is proposed to be retained as a bushland reserve, with a boardwalk for public access and viewing. It is also proposed to relocate a high pressure gas main which currently traverses the site to the south of the reserve, to run inside the northern and western boundaries of the reserve. The reserve area is a potential habitat for threatened fauna including bats, birds and one frog species.

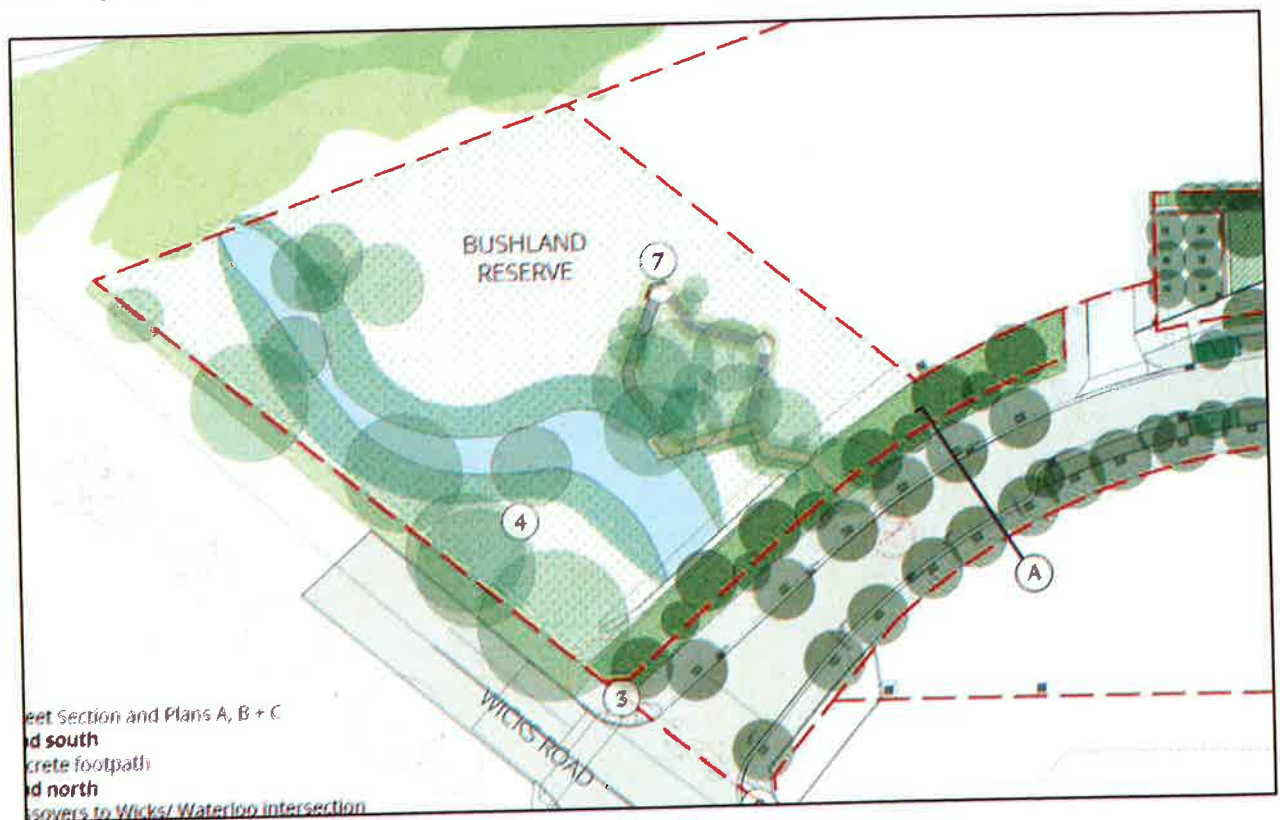


Figure 20: Northern Bushland Reserve

The Office of Environment and Heritage, EPA, Council and the public raised concerns in relation to the design and treatment of this area including inconsistencies the width of the riparian corridor and rehabilitation of the corridor, impacts on the water quality of the creek and creek stability, and the impacts of construction and re-routing the gas pipeline through this area.

To address these issues the proponent updated the ecological assessment and vegetation management plan to include the following mitigating measures:

- the entire Northern Bushland Park will be rehabilitated and revegetated as a riparian corridor, achieving the minimum 30 metre width required by the DCP;
- the path of the relocated gas main has been designed to minimise disturbance to hollow bearing trees, the creek line and to potential bat roosting in nearby stormwater culverts;
- the boardwalk has been carefully designed and located to provide access to all residents to this area without affecting the significant trees and habitat areas;
- a range of mitigation measures are proposed to minimise construction impacts to the bushland reserve, including
 - avoiding construction works in the area in winter and careful monitoring for endangered species outside of winter;
 - identification of clearing limits and tree protection;
 - protection of the riparian areas; and
 - ecologist on site before and during any clearing to ensure protection of fauna;
- a comprehensive rehabilitation program within the vegetation management plan including weed removal, soil preparation, installation of erosion controls such as jute matting, the provision of approximately 14,000 new plants within the reserve and maintenance; and
- erosion and sediment control measures and proposed measures to limit access and disturbance to the riparian zone to address water quality and creek stability during the construction and rehabilitation phase.

The Department is satisfied that the proposed works have been designed to minimise impacts as far as possible on the ecological values of the reserve, the creek and to threatened fauna. The incorporation of the mitigation measures and revegetation proposed by the applicant, in conjunction with some additional conditions and measures suggested by OEH, the EPA and Council relating to culvert design and treatments of the creek and bank, will further minimise impacts. The proposal will allow for the delivery of bushland reserve to make a positive contribution to the open space areas on the site, and to protect and improve the ecological values of the land over the long term with some acceptable short term impacts.

5.9.2 Water Quality and Stormwater Management

The proposal incorporates stormwater management measures including:

- water sensitive urban design (WSUD) treatment devices including streetscape bio-retention and in-ground treatment devices;
- direction of all stormwater runoff from the public domain to the treatment devices which will then discharge to the northern end of Spine Road, downstream of a proposed culvert upgrade to Porters Creek; and
- upgrading of the stormwater drainage system on both sides of Wicks Road including new pipes and stormwater outfall to relieve existing flood impacts on Wicks Road.

Concerns were raised in the public and agency submissions with regards to stormwater management including water quality; integrated water management, on-site detention (OSD) and on-going maintenance.

(a) Water quality

The EPA raised concerns that the proposal did not address the impact that any proposed discharges will have on the downstream environment, specifically Porters Creek and Lane Cove River. The Stormwater Management Plan (SMP) and proposed stormwater drainage system incorporates the treatment of public domain stormwater runoff at the source to meet proposed water quality targets. The SMP concludes that water quality targets for discharges from the site will be met. On this basis, the Department is satisfied that the performance of the stormwater system satisfies the requirements of the NRSP DCP. Water discharged from the site will be appropriately treated through on-site WSUD treatment devices prior to leaving the site which will ensure that the proposal does not have adverse impacts on the downstream environment.

(b) Integrated Water Management Plan

The NRSP DCP requires the provision of an Integrated Water Management Plan (IWMP) for the precinct to reduce stormwater discharge from the site, minimise water consumption and improve stormwater quality.

An IWMP was submitted with the application, however the EPA raised a concern that the IWMP did not adequately address the objectives of the DCP.

The IWMP sets water quality targets and potable water demand targets for the future development lots. It also specifies that water will be recycled on site for use in watering open areas. The proposal also includes WSUD measures within the public domain as discussed above. The Department is therefore satisfied that the IWMP will achieve the objectives of the DCP of reducing discharge, improving quality, and minimising consumption of water.

(c) On-site detention (OSD) exemption

The applicant seeks that future development on the individual lots be exempt from OSD requirements. Ryde DCP allows for OSD exemptions where the applicant can demonstrate to Council's satisfaction that if the site were fully developed, stormwater detention on the subject site would not be beneficial in reducing adverse flooding impacts downstream. This may be the case at the lower end of major catchments.

Council advised it was unable to comment on the request for OSD exemption as there was insufficient information in the report, and points out that the site is large in area and located in the middle of a catchment. Council recommends that any future development should ensure the structural integrity of the downstream conduits are not compromised.

The applicant has not demonstrated that OSD would not be beneficial in reducing flooding impacts downstream. The Department is of the view that the need for OSD on future development lots should be a matter for Council to consider as part of future applications and it is not appropriate to exempt development from the requirement from OSD at this stage as final building forms and footprint have not yet been determined. It would remain open to future applicants to seek an exemption from OSD provision as part of future applications.

(d) On-going maintenance

The EPA raised concerns about who would be responsible for the ongoing maintenance and monitoring of water quality treatment devices and Council also raised a concern with regards to likely frequency and cost of maintenance.

The applicant advises that it will undertake the initial maintenance of treatment devices prior to hand over of the maintenance to Council. The applicant also advises that a detailed maintenance plan is to be developed following final selection of the treatment devices to be installed.

The Department notes that ongoing monitoring of the effectiveness of the water quality measures is an important component of the suitability of the measures proposed. It is recommended that a condition is imposed on the development consent requiring the preparation of a maintenance plan, in consultation with Council. This should address the ongoing maintenance of water equality treatment devices, including a monitoring program to assess ongoing performance. The on-going maintenance and monitoring could be ultimately be incorporated into Council's city wide asset maintenance program.

5.9.3 Contamination

The applicant submitted Stage 2 detailed site investigation assessments and site audit reports for the majority of the site which conclude that those parts of the site examined are suitable for the proposed future uses with no issues that require remediation or ongoing management.

Otherwise, only one area of the site has shown any potential contamination, being a test location within the proposed road reserve near the entrance to Epping Road. Douglas Partners have advised that the area will be remediated through localised standard excavation and off-site disposal at a licenced facility. A generic remediation action plan (RAP) has been provided and a final RAP is being developed. Douglas Partners have confirmed that the site can be made suitable for the proposed development.

A condition is included in the recommendation requiring a final RAP be prepared to guide remediation and validation of the site. In addition, a site audit statement will be required prior to construction commencing on the site. On this basis, the Department is satisfied that the site can be made suitable for its intended purpose.

5.9.4 Heritage

The site contains a brick domed well / cistern, which is not heritage listed, but is considered to have some local heritage value following a heritage assessment carried out as part of the application for the UAP. The well/cistern is currently buried, but its approximate location has been identified using historical aerial photographs.

An archaeological assessment and monitoring report was submitted with the application, which proposes a short program of archaeological monitoring to re-identify the well/cistern and ensure it is uncovered without further damage. The proposed monitoring program sets out that once the well is located, an archaeologist will manually excavate material within the well to a depth of 1.5 metres, identify and record the structure, with samples taken and artefacts collected. Anything deeper than 1.5m would then be excavated by machine with further samples taken.

Council raised concerns that the well/cistern will be removed / demolished with no consideration of the significance of the item. Council recommends that once the well has been located, all works should cease in the vicinity of the well until a further archaeological investigation is undertaken, with the further investigation and methodology to be approved by Council prior to any further excavation or construction works in the vicinity of the site.

As there is limited information on the exact location and significance of the well / cistern, the Department agrees that further archaeological assessment should be undertaken once it is uncovered. This will allow for monitoring, recording and collection of artefacts based on actual assessment of the uncovered item. The Department recommends that a condition is imposed on the development consent to ensure that the archaeological significance and the monitoring methodology is assessed in further detail once the well / cistern is located and prior to any other works taking place in the vicinity of the site.

5.9.5 Sewerage Management

The EPA requested that further information be provided as to whether the development will impact on the performance of the sewerage system, with a particular concern about the potential for water pollution as a result of sewerage overflows.

Sydney Water have advised that the developer will need to upgrade the local sewerage system including provision of new sewers in Waterloo Road in accordance with Sydney Water requirements before a Section 73 certificate will be issued.

The development will also be serviced by a Low Infiltration sewer system which will ensure reduced inflow and infiltration in the sewer system will result in reduced potential for wet weather overflows, reduced treatment costs and improved treatment plant performance.

The Department is therefore satisfied that sewerage from the site will be appropriately managed in accordance with Sydney Water requirements.

5.9.6 Construction Noise

Council raised a concern that the acoustic report submitted with the application suggests that from time to time construction noise will exceed allowable noise levels. Council suggest that additional measures should be required to mitigate the impacts of exceedances to comply with the EPA standards. The EPA also advises that potential noise impact should be assessed and mitigation measures identified and implemented in accordance with the EPA's *Interim Construction Noise Guidelines*.

The applicant advises that a construction noise and vibration management plan will be prepared by the relevant contractor and will take into consideration measures for reducing source noise levels where practicable, as well as other mitigation measures such as acoustic hoarding and appropriate scheduling of noisy activities.

The Department has reviewed the acoustic assessment and notes that without mitigation measures, some nearby commercial, residential and educational premises will experience noise levels from construction works above recommended levels. Properties most highly affected will be the commercial premises immediately to the west of the site, with noise levels exceeding guidelines by up to 23dBA, and Truscott Street Public School, with noise levels exceeding guidelines by up to 10dBA. Some residential receivers will also be adversely affected by some of the works.

The acoustic assessment outlines a range of potential acoustic mitigation measures to reduce the extent of the impacts. The Department recommends that conditions are imposed on the consent requiring that mitigation measures be included in the construction noise and vibration management plan/s to ensure that the noise goals for the site are met. The Department also recommends conditions for management of noise complaints. With the inclusion of mitigation measures, and appropriate management practices, the Department is satisfied that acoustic impacts from the proposal will be acceptable.

6. CONCLUSION AND RECOMMENDATION

6.1. Conclusion

The Department has assessed the merits of the proposal, taking into consideration the issues raised in all submissions, and is satisfied that the impacts have been satisfactorily addressed subject to the recommended conditions.

The proposal is consistent with the objectives and the vision for the precinct outlined in the UAP and NRSP DCP. The proposed subdivision layout and allocation and distribution of GFA across the site will provide an appropriate level of development across the site consistent with the NSRP Finalisation Report to enable the provision of a high density transit-oriented development. The variation to the floor space ratio (FSR) development standard in *Ryde Local Environmental Plan 2010* is supported on the basis that the overall GFA across the site is within the maximum permitted, and the proposal continues to satisfy the objectives of the zone and the FSR control.

The proposal will provide high quality open space areas exceeding the overall open space provision requirements of the NRSP DCP and providing a superior outcome to the DCP arrangement, with more equitable access to open space for future residents. The proposed linear parkland will provide a high amenity green spine through the site, linking the Northern Bushland Park to Central Park, including a shared off road cycle and pedestrian way.

The proposal provides appropriate vehicular, pedestrian and cycle facilities and provision for future community facilities consistent with the objectives of the DCP and vision for the precinct.

The proposal also appropriately mitigates the impacts of the development and makes a positive infrastructure contribution to the wider locality through the provision of the new pedestrian bridge, external road upgrades, and contribution to regional transport infrastructure.

Overall, the Department is satisfied that the SSD application supports the objectives of the NRSP and is in the public interest. It is recommended that the application be approved, subject to conditions.

6.2. Recommendation

It is recommended that the Executive Director, Infrastructure and Industry Assessments, as delegate of the Minister for Planning:

- a) **consider** the recommendations of this report; and
- b) **approve** the State Significant Development Application (SSD 6256), under section 89E of the EP&A Act, having considered matters in accordance with (a) above, and **sign** the attached development consent at **Appendix C**.

Prepared by: Natasha Harras

Endorsed by:



Amy Watson
Team Leader
Metropolitan Projects

Endorsed by:



Ben Lusher
Manager
Key Sites

Approved by:

Chris Wilson
Executive Director
Infrastructure and Industry Assessments

APPENDIX A. RELEVANT SUPPORTING INFORMATION / SUBMISSIONS

The following supporting documents and information to this assessment report can be found on the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5093

APPENDIX B. CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS/ SEPPS

ENVIRONMENTAL PLANNING INSTRUMENTS (EPIs)

To satisfy the requirements of section 79C(a)(i) of the Act, this report includes references to the provisions of the environmental planning instruments that govern the carrying out of the project and have been taken into consideration in the environmental assessment of the project.

Controls considered as part of the assessment of the proposal are:

- *State Environmental Planning Policy (State & Regional Development) 2011*;
- *State Environmental Planning Policy (Infrastructure) 2007*;
- *State Environmental Planning Policy No. 55 - Remediation of Land*;
- *Ryde Local Environmental Plan 2010*; and
- *Ryde Local Environmental Plan 2014*.

COMPLIANCE WITH CONTROLS

State Environmental Planning Policy (State and Regional Development) 2011

Relevant Sections	Consideration and Comments	Complies?
3 Aims of Policy The aims of this Policy are as follows: (a) to identify development that is State significant development,	The proposed development is identified as SSD.	Yes
8 Declaration of State significant development: section 89C (1) Development is declared to be State significant development for the purposes of the Act if: (a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and (b) the development is specified in Schedule 1 or 2.	The proposed development is permissible with consent under the <i>Ryde Local Environmental Plan 2010</i> . The site is specified in Schedule 2 of the EP&A Act.	Yes
Schedule 2 State significant development - identified sites (Clause 12) Development at North Ryde Station Precinct Site Development on land identified as being within the North Ryde Station Precinct Site on the State Significant Development Sites Map if the development is for the purposes of: (a) a principal subdivision establishing major lots or public domain areas, or (b) the creation of new roadways and associated works.	The proposed development is within the North Ryde Station Precinct site and is for subdivision, new roads and associated works.	Yes

State Environmental Planning Policy (Infrastructure) 2007

Clause 86 of the SEPP requires development that involves the penetration of ground to a depth of at least 2 metres below ground level within or above a rail corridor, to refer the application the Chief Executive Officer of the rail authority for the rail corridor. In this regard the application was referred to Transport for NSW on 8 April 2014.

Comments were received from Sydney Trains on 10 October 2014 (Sydney Trains took over the property functions of RailCorp on 1 July 2014). Sydney Trains raised a number of issues with

the proposal in relation to the relation of drainage and access easements and also whether the proposal triggers clause 86 of the SEPP.

The applicant has confirmed that the proposal does not involve excavation greater than 2 metres below ground level.

Conditions are recommended to address any amendments to existing easements as required by this application.

State Environmental Planning Policy No. 55 - Remediation of Land

An assessment of the proposal having regard to the requirements of SEPP 55 – Remediation of Land is provided in **Section 5.5** of this report.

Ryde Local Environmental Plan 2010

The site is zoned B4 Mixed Use, R4 High Density Residential and RE1 Public Recreation under the provisions of the *Ryde Local Environmental Plan 2010* (Ryde LEP 2010). The proposed development including subdivision, new roadways, public recreation and infrastructure works are permissible in the applicable zones.

The proposal is consistent with the objectives of the zones as follows:

Zone Objectives	Compliance
Zone B4 Mixed Use - To provide a mixture of compatible land uses. - To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling. - To create vibrant, active and safe communities and economically sound employment centres. - To create safe and attractive environments for pedestrians. - To recognise topography, landscape setting and unique location in design and land-use.	The proposed infrastructure will enable the future provision of land uses on the site consistent with the objectives of the zone. The roads, footpaths cycle ways and pedestrian bridge have been designed to maximise accessibility of the mixed use zone to public transport with direct access to the train station and with roadways designed to accommodate bus stops and layovers. The open space and public domain areas have been designed to provide safe and attractive environments that add to the vibrancy of the community.
Zone R4 High Density Residential - To provide for the housing needs of the community within a high density residential environment. - To provide a variety of housing types within a high density residential environment. - To enable other land uses that provide facilities or services to meet the day to day needs of residents. - To allow higher density development around transport nodes and commercial and retail centres. - To allow for revitalisation, rehabilitation and redevelopment of residential areas while ensuring that building design does not adversely affect the amenity of the locality.	The proposed infrastructure will enable the future provision of housing within a high density residential environment. Housing types will be determined at future application stages. Open space areas are also provided within the zone to meet the day to day needs of residents. All parts of the site are within the walking catchment of a train station and the proposed local centre. Building design will be a matter for future applications
Zone RE1 Public Recreation - To enable land to be used for public open space or recreational purposes. - To provide a range of recreational settings	The proposal provides extensive public open space areas within the open space zone which include a range of recreational settings and activities including a bushland park, playground, park, plaza, and

and activities and compatible land uses. - To protect and enhance the natural environment for recreational purposes. - To provide adequate open space areas to meet the existing and future needs of the residents of Ryde. - To protect and enhance the natural bushland in a way that enhances the quality of the bushland and facilitates public enjoyment of the bushland in a way that is compatible with its conservation.	landscaped areas Open space areas are adequate and exceed the total open space envisaged by the DCP for the site Detailed measures to protect and enhance the northern bushland are incorporated, including rehabilitation, extensive plantings, and an elevated boardwalk to facilitate public enjoyment.
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Clause 4.4 of the LEP specifies a range of maximum FSR controls across the site from 1.39:1 in the north to 4.31:1 in the centre of the site. The proposal results in a variation from these controls as set out in detail in **Section 5.3** of this report.

Clause 4.6 allows for development consent to be granted despite a variation from the development standard in cases where It is considered that the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out. Consideration must also be given to a written request from the applicant demonstrating:

- that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and
- that there are sufficient environmental planning grounds to justify contravening the development standard; and

The clause also requires the concurrence of the Director-General, however this clause does not apply to SSD applications, as provided by s79B(2A).

The clause provides that a development could be found to be in the public interest because it complies with the objectives of the zone and objectives of the standard. The zone objectives were considered above and the proposal was found to comply. The objectives of the standard were considered in **Section 5.3** and in the following table.

FSR Development Standard Objectives	Compliance
Generally (a) to provide effective control over the bulk of future development, (b) to allow appropriate levels of development for specific areas, (c) to enable the consent authority to assess and respond appropriately to future infrastructure needs.	The bulk of future development as discussed in Section 5.3 and the proposal in conjunction with applicable planning controls, provides for effective control of future building bulk. An appropriate level of development across the broader site is provided, consistent with the overall development envisaged in the NSRP Finalisation Report which informed the development standards and consistent with the total that could be developed under the LEP. There is no impact to total infrastructure provision requirements as the overall level of development on the site does not change, and the specific infrastructure needs have been addressed by the current proposal.
Within the Macquarie Park Corridor (a) to achieve a consolidation of development around railway stations, with the highest floor space ratios at the station nodes, (b) to allow feasible development of the sites around railway stations and	The proposal does not impact on the consolidation of development at the railway station nodes as the proposal does not seek to change floor space for development immediately adjoining the stations, however all areas of the M2 site are within the walking catchment of a train station;

facilitate focal points at the station areas, (c) to ensure that the peripheral locations of the corridor reflect the landscape needs and building setting requirements of the corporate building, (d) to reinforce the importance and function of the central spine (Waterloo Road and Riverside Main Street) with suitable built form, (e) to encourage the provision of a new street network, (f) to provide incentives for redevelopment in return for the provision of the proposed access network as a public benefit.	The proposal does not impact on the peripheral locations of the corridor or corporate building settings. The proposal allows for an improved layout to the site which reinforces the importance and function of the Central Spine through the provision of the adjunct linear park and provides an improved street layout. The proposal incorporates a new street network. Not applicable.
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As required by the clause, a written request from the applicant was submitted, also demonstrating compliance with the objectives of the zones and the standard and outlining planning grounds to justify the contravention.

As held by the court in *Wehbe v Pittwater Council* [2007] NSWLEC827, development standards are not an end in themselves but a means of achieving environmental and planning objectives. Where the objectives of the FSR control are achieved, strict compliance with the standard would be unnecessary (it is purpose is achieved anyway) and unreasonable (no purpose would be served).

Other than retaining compliance with planning objectives, the planning grounds in which the justification for contravention is based, include that the variation allows for an improved layout to the site which reinforces the importance and function of the Central Spine through the provision of the adjunct linear park and provides an improved street layout and resolves a number of other shortcomings with the earlier scheme (as set out in **Section 2.5.4** of the report).

The objective of clause 4.6 is to provide flexibility in the application of development standards in circumstances where better outcomes from the development can be achieved.

The Department is therefore satisfied that there are reasonable grounds to grant consent to the development, despite the variation from the FSR development standard, as

- the proposal is consistent with relevant planning objectives and therefore will be in the public interest;
- the variation allows for an improved site layout; and
- strict compliance with the standard in these circumstances would therefore be unreasonable and unnecessary.

Ryde Local Environmental Plan 2014

Ryde LEP 2014 came into effect on 12 September 2014. Clause 1.8A of *Ryde LEP 2014* states that if a development application has been made before the commencement of this plan in relation to land to which the plan applies and the application has not been finally determined before that commencement, the application must be determined as if the plan had not commenced. As the application was submitted prior to 12 September 2014, *Ryde LEP 2010* still applies.

Other Policies

In accordance with clause 11 of the *State & Regional Development SEPP*, Development Control Plans do not apply to State significant development. Notwithstanding, the objectives of relevant plans and policies that govern the carrying out of the project are appropriate for consideration in this assessment in accordance with the SEARs.

North Ryde Station Precinct Development Control Plan 2013

An assessment of the proposal against the relevant controls applicable to the proposal as set out in NRSP DCP 2013 is provided below:

Vision for NRSP	Assessment
2.1 Vision for North Ryde Station Precinct The vision for the Precinct is for a “Transit Oriented Development” which has direct access to North Ryde Station on the Epping to Chatswood Rail Link, and which is connected, accessible, permeable, and has a high base population density. The Precinct’s development will encourage greater activity around the railway station through the inclusion of suitable land uses to encourage greater use of the public transport network. The vision for the Precinct also seeks to: • Maximise public transport patronage through the appropriate placement of compatible land uses and improvements in accessibility and connectivity through the Precinct and to North Ryde Station. • Represent ‘place making’ through activation of the space, creation of a destination and creation of identifiable landmarks, including an appropriate mix of uses and community facilities. • Create communities that are well connected to employment areas via public transport, pedestrian and bicycle links. • Create integrated open space and public domain spaces encouraging their use and activation by key buildings. • Create liveability through innovation, leading edge design and sustainability. • Provide a logical extension of urban areas for employment, residential, retail and commercial land uses.	The proposal facilitates the future development of the site with a high base population density consistent with the vision for the NRSP. The pedestrian bridge in conjunction with cycle and pedestrian links on the site provides connectivity to the Station. The development also provides for bus services within the site. The proposal incorporates provision for a community facility and creation of a destination in the local mixed use precinct incorporating large local park, playground and plaza areas. The proposed linear park with shared way integrates and connects the all parts of the site to the local centre, other open space areas on the site, and public transport connections. The proposal enables the development of future buildings on the site that will incorporate innovation and sustainability measures established through the integrated water management plan and further measures required by the DCP.
2.2 Design Principles	N/A
Urban Structure	
3.1.1 – Regional Context	N/A
3.1.2 – Indicative Layout Plan The indicative layout for the Precinct is shown in Figure 3. The indicative layout has been developed to achieve the target yields necessary to support the site’s development as a Transit Oriented Development	The proposal seeks approval for provision of 241,419m² of GFA to the M2 site allotment,

while maximising resident and user amenity. It proposes the creation of three distinct neighbourhoods: • Station precinct • Mixed use precinct • High density residential precinct Objectives - Ensure that development in the Precinct occurs in a coordinated manner consistent with the vision for the site. - Ensure that the site is developed in accordance with the following principles: - A north-south spine road which will link the northern precincts (mixed use precinct and high density residential precinct) with Wicks Road and Epping Road. - Employment uses within 500 metres of the station and residential uses within 800 metres of the station. - Distribution of open space off the major circulation spine(s). - Road areas minimised and open space optimised to create highest area possible for development parcels. - Development parcels oriented for good solar access, with parks and potential retail spaces oriented towards the afternoon sun. - Streets defined through appropriate and visually appealing built form. - Towers located generally off-axis to minimise visual impact. - Open space and north facing frontages maximised. - Streets generally ending in open space or green views. - Other than in the station precinct, taller buildings located away from Epping Road and along the M2 Motorway to reduce the appearance of building bulk. - Heights are managed to create transitions to surrounding land uses. - Pedestrian and cycle connections are maximised through and around the Precinct, connecting to public transport and other major facilities. - Future connections are accommodated to ensure the site is integrated with surrounding areas. - Allow for flexibility in the implementation and design of the site whilst ensuring achievement of key outcomes and vision for the precinct. Control - All development applications are to be generally in accordance with the Indicative Layout Plan. However, the Indicative Layout Plan is preliminary only and shows one option for development of the Precinct. An alternative layout can be considered. <i>Note: Future applications that create the local road network and development lots for the Precinct will need to confirm how floor space will be distributed across each development lot consistent with the floor space ratio controls identified in the Ryde Local Environmental Plan 2010 (or subsequent relevant LEP). This allocation is to ensure that the built form outcomes for the site are achieved.</i>	consistent with the target yields for the site and enables the creation of the Mixed Use and High density residential precincts. The proposal incorporates: • a north-south spine road as envisaged by the DCP; • facilitation of the mixed use precinct within 500m of the station and residential development within 800 metres of the station; • open space areas adjacent to the Spine Road; • road areas optimised to maximise development but to ensure adequate manoeuvrability of trucks and buses and safety; • a development layout that will enable future developments to maximise solar access, define the streetscape, and locate towers as envisaged by the DCP, and away from Epping Road; • green views provided along the length of Spine Road through the proposed Linear Park arrangement; • pedestrian and cycle connections through the site, connecting to the North Ryde Station and connecting to the Macquarie Park active transport spine. The proposal provides for a variation to the layout compared to that envisaged in the DCP. This is discussed in Section 5 of this report.
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3.2 Circulation Networks Objectives - Restrict car parking to minimise traffic congestion and adverse impacts on the public domain and maximise use of the existing rail infrastructure. - Provide a street network that responds to the topography as well as the existing street network and development pattern. - Maximise the legibility of the street layout by establishing a clear hierarchy of streets, protecting and creating view corridors, and adopting other way-finding elements. - Provide for safe, clear and legible pedestrian, cycle and vehicular movements within the site and to surrounding areas. - Consider and accommodate future connection options to ensure the Precinct is integrated with surrounding areas. Controls - Development applications for subdivision are to be generally in accordance with the Indicative Vehicular Movement Plan at Figure 4. - Provide a clear hierarchy of streets, including a spine road to link Epping Road and Wicks Road. - Provide emergency access to the M2 Motorway. - A signalised intersection is to be provided at Wicks Road/Waterloo Road. - Any proposed variations to the Indicative Vehicular Movement Plan must demonstrate that: - the proposed changes meet the Objectives for this section; - adequate connections are provided to key areas surrounding the site, including Macquarie Park and Riverside Corporate Park; and - emergency access is provided.	The proposal provides streets that generally conform with the indicative vehicular movement, with a number of variations including the deletion of the M2 edge road in favour of Mews Roads. The variations are discussed in detail in Section 5.5. The Spine Road and signalised intersection at Wicks / Waterloo Roads are provided as envisaged by the DCP. RMS have advised that direct vehicular access from the site to the M2 motorway is denied. Therefore no emergency access has been provided as part of this application. It is open to future applications to provide emergency access through a development block if required.
3.3 Public Transport Objectives - Reduce reliance on private vehicles. - Maximise use of public transport by future residents and workers, particularly of North Ryde Station and Epping Road bus services. - Improve facilities for bus users. - Facilitate easy and safe pedestrian and cycle access to public transport facilities. Controls - A Public Transport Facilities Plan is to be prepared for the Precinct identifying the location, design, timing, funding and responsibilities for delivery of key public transport facilities within the Precinct.	Public transport facilities are discussed in Section 5.6. A condition is recommended requiring the provision of a new bus stop and shelter on Epping Road inbound. Other measures will be funded through regional transport contributions of local planning contributions as discussed in Sections 5.6, 5.7 and 5.8 of this report. Transport Facilities Plans will be required by the Council as part of future DAs

2. The key public transport facilities are: - passenger set-down/pick up and cycle parking at the North Ryde railway station; - new bus shelter and facilities at Epping Road inbound stop between Wicks and Delhi Roads; - new bus facilities at Epping Road outbound stop at Delhi Road; - relocation of bus stop and facilities at Delhi Road eastbound stop at Road 38; - completion of the Macquarie University to Macquarie Park North Ryde active transport spine; - Waterloo Road (northern side) shared pedestrian and cycle path. 3. Two separate Public Transport Facilities Plans may be lodged for the Precinct, being for: - the station precinct; and - the high density residential and mixed use precincts combined. 4. The Public Transport Facilities Plan(s) is/are to address the objectives and controls of this section and if two separate plans are prepared each is to identify any shared public transport facilities, as relevant. 5. The Public Transport Facilities Plan(s) is/are to be lodged with the first development application for residential/commercial development and approved prior to first occupation by residents/workers.	
3.4 Open Space Objectives - Create an open space and public domain network through the site that provides for high quality amenity for future residents and workers and accommodates a range of active and passive recreational uses. - Help delineate distinct neighbourhoods through the use of open space. - Ensure that buildings are designed to help activate and define open spaces - Encourage active retail uses (primarily food and beverage retail) around plazas and the station entry. - Contribute to ecological biodiversity and habitat by planting endemic species and consolidating vegetation corridors, including those connecting to Lane Cove National Park. - Accommodate overland flow requirements and improve stormwater quality. - Facilitate ease of circulation within public domain areas. - Maximise access to public open space, and contribute to the pedestrian and cycle network. Controls - Open spaces, including parks and plazas, are to be provided in accordance with the Indicative Open Space Typologies Plan at Figure 5 and with the requirements set out in Table 3. - Open spaces should be designed to maximise solar access but also to provide for shade. - Play areas are to provide for good natural surveillance and be safe. - Parks and plazas are to be designed in accordance with the Macquarie Park Public Domain Technical Manual. - Trees will be predominantly indigenous with some specimen exotic trees. Tree selection and planting should be undertaken in accordance with the City of Ryde Street Tree Master Plan.	Refer to Section 5.4.1 for a detailed discussion of open space. Open spaces are generally provided in accordance with the Indicative Open Spaces Typology Plan with the exception of the Community park which is now proposed as a Linear Park along Spine Road. The proposed change is supported as it: - provides improved access and ease of circulation through the public domain areas of the site - provides increased open space, being greater in area than the envisaged community park; - results in a positive urban design outcome, delineating the residential precinct along Spine Road; and - incorporates a shared pedestrian/cycle way within an attractive green space, improving the experience for pedestrians and cyclists traveling through the site. Proposed trees are predominant endemic species. Solar access will be dependent on future built form layouts, but it will be possible to achieve solar

6. Any proposed variations to the Indicative Open Space Typologies Plan at Figure 5 must demonstrate that: a. the proposed changes meet the Objectives for this section; b. a minimum of three open spaces are provided within the high density residential precinct and mixed use precinct organised off the main north-south spine road; and c. at least 50% of new public space is to receive 3 hours of sunlight on June 21 between 9am and 3pm.	access to 50% of open space areas at mid-winter. Play areas are well designed, safe and will have good natural surveillance. A condition is recommended that final open space landscape plans be developed in consultation with Council to ensure Council's requirements are met.
Public Domain	
4.1 Streets Objectives a. Provide for a clear street hierarchy incorporating new connector and local roads. b. Provide primary access points into the Precinct from the surrounding street network. c. Provide continuous physical and/or visual connections within the Precinct to ensure clear legibility. d. Ensure connector streets are designed to accommodate movement of buses. e. Facilitate the development of active street edges. f. Use streets to define the edges between development and open spaces and to provide passive surveillance opportunities of the open space. Controls 1. New streets should conform to the requirements set out in Section 3.2 Circulation Networks. 2. New streets should be designed in accordance with the dimensions set out in Table 4 and the street sections in Figures 6-12. 3. New roads are to have shared services pits to reduce maintenance costs and reduce conflict with street plantings. Note: Table 4 Street Dimensions / diagrams – not included	The proposal provides streets that generally conform to the indicative vehicular movement with a variation by deletion of the M2 edge road in favour of Mews Roads (as noted above). Individual street designs have a number of variations from the DCP which, as discussed in detail in Section 5.5 of the report, still ensure the objectives of the controls are achieved. The civil plans indicates shared service pits separated from street plantings.
4.2 Pedestrian and Cycle Network Objectives a. Create a safe, high quality pedestrian and cycle network. b. Maximise pedestrian and cycle connections to regional cycle routes through and around the Precinct. c. Maximise pedestrian and cycle permeability within the Precinct. d. Maximise interchange opportunities with public transport. e. Support cycle use by providing appropriate storage and end of trip facilities.	The proposal provides for an alternative pedestrian and cycle link through the site compared to that envisaged in the DCP. Refer to Section 5.4.3 of the report. Cycle Parking and storage will be provided as part

Controls 1. Cycle and pedestrian links are to be provided generally in accordance with the Indicative Pedestrian and Cycle Links Plan at Figure 13 and Street Sections at Figures 6-12. 2. Footpaths are to be provided on both sides of streets. 3. A pedestrian link is to be provided between the mixed use precinct and the station precinct to facilitate access to the railway station (refer to Section 4.3). 4. Bicycle parking is to be provided at the station entry, retail nodes and community facilities in centrally located and well defined areas. 5. Cycle facilities are to be provided in accordance with the Ryde Bicycle Strategy and Master Plan 2007 and Bicycle Parking requirements in Part 9.3 of the Ryde DCP 2010. 6. A new pedestrian/cyclist access is to be provided from the Epping Road/Pittwater Road intersection to Delhi Road. 7. Any new access to the station from the south is to provide for disabled access. 8. Any proposed variations to the Indicative Pedestrian and Cycle Links Plan must demonstrate that the proposed changes meet the Objectives for this section.	of future applicaionts
4.3 Pedestrian and Cycle Station Link Objectives a. Facilitate pedestrian and cyclist access between North Ryde Station and the mixed use precinct. b. Ensure that access points to the bridge are designed to meet universal access requirements. c. Ensure the pedestrian is of high quality and acts as a landmark for the Precinct. Controls a. A pedestrian/cyclist link is to be provided between the North Ryde Station and the mixed use precinct. This link will comprise a bridge between the mixed use precinct and Bundara Reserve and a safe pedestrian/cycle crossing (extension to bridge or at-grade crossing) between Bundara Reserve and North Ryde Station. b. The link and open space at either end will provide universal access between the mixed use precinct and the station precinct. c. The bridge is to be designed as a roll-on and roll-off design. d. Access is to be barrier free. e. The bridge is to be constructed of lightweight materials to minimise the overall bulk of the structure and adverse visual impacts in relation to the Macquarie Park Cemetery and Crematorium. f. Any signage on the bridge is to comply with the requirements of State Environmental Planning Policy No 64 – Advertising and Signage. g. The bridge is to provide for a 5.5 metre clearance over Delhi Road. h. The link between the North Ryde Station and the mixed use precinct is to be of sufficient width to safely accommodate dual pedestrian and cyclist movements. i. The link is to be designed to minimise impacts on native vegetation in Bundara Reserve.	The proposal includes the pedestrian / cycle link. Refer to Section 5.7 of the report for a discussion of the design of the Bridge and impacts to Bundarra Reserve. The Bridge has been designed in consultation with TfNSW and Council and a and more direct arrangement I preferred which does not provide pedestrian access to Bundarra Reserve, but provides direct access to the edge of the Station North Site consistent with the indicative links plan of the DCP. The Bridge has been designed to comply with the requirements of the DCP and enables roll on and roll off and access for all persons. Final design of the bridge will be subject to RMS approval. No signage is proposed as part of this application.

j. Other design requirements for the bridge are: a. Provision of perforated galvanised steel safety screens 3 metre high over major roads; b. Provision of hand rails along full length of the bridge; c. Incorporation of wayfinding signage; d. Integration of lighting within the bridge deck and along the length of the pedestrian link; e. Incorporation of local drainage, with stormwater discharge point at either landing; and f. Provision of vertical transport and stairs to the Bundara Reserve, if required.	
4.4 Stormwater Management Objectives a. Provide for a Precinct-wide approach to stormwater management. b. Reduce stormwater discharge from the site. c. Improve stormwater quality and minimise water consumption through implementation of water sensitive urban design measures. Controls 1. An Integrated Water Management Plan is to be prepared for the Precinct to incorporate water sensitive urban design measures and ensure that stormwater systems are designed and built to minimise pollutant discharges into receiving waterways. 2. The Integrated Water Management Plan is to be prepared in consultation with Council and by a qualified practising Civil Engineer with relevant experience in stormwater and environmental engineering, and include: a. The identification of existing hydrology conditions; b. Objectives and performance standards for water cycle outcomes that are to be achieved during construction and operation of the project, having regard to stormwater management provisions in the Ryde DCP 2010; c. Water management measures to meet objectives and performance standards referred to in clause 4.4(2)(b) including but not limited to: i. On site storage for rainwater reuse; ii. Stormwater treatment devices to remove gross pollutants, sediments, oils and greases from first flush stormwater run-off; iii. Bioremediation swales; iv. Other water sensitive urban design measures such as water efficient irrigation systems, rainwater tanks, and use of drought tolerant plant species. 3. Two separate Integrated Water Management Plans may be prepared for the Precinct, being for: a. the station precinct; and b. the high density residential and mixed use precincts combined. 4. The Integrated Water Management Plan(s) is/are to address the objectives and controls of this section and if two separate plans are prepared each is to identify any combined/cumulative impacts	Refer to discussion in Section 5.8 A condition is recommended requiring an updated Integrated Water Management Plan, to meet the requirements of the DCP.

and shared water management measures, as relevant. 5. The Integrated Water Management Plan(s) is/are to be lodged with the first development application for construction works and approved prior to commencement of works.	
4.5 Street Tree Planting Objectives - Reinforce the street hierarchy, with each street type having a distinctive character based on street tree planting. - Utilise tree species that are of an appropriate scale and form and respond to their local context. - Recognise the role of street trees in habitat creation and providing bio-links and connections. - Create signature planting on key streets. Controls - A Street Tree Plan for each Sub-Precinct is to be lodged with the first development application for road construction works and approved prior to commencement of road construction works for that Sub-Precinct. - The Street Tree Plan is to identify the location, species, planting methodology and maintenance of street trees to satisfy the objectives and controls of this section, and ensure an appropriate degree of consistency is achieved between the different Sub-Precincts. - Street tree planting is to be provided on all streets and generally in accordance with the City of Ryde Street Tree Master Plan. - Street tree planting is to be designed in accordance with the following principles: - Street trees should be used to distinguish between public and private space; - Street tree planting should be durable and include a mix of indigenous and exotic species; - Street trees are to contribute to place making and way finding; and - Street trees should generally be of uniform species within the one street. - Street trees are to be planted in accordance with the relevant street sections, as shown in Figures 6-12. - Street tree planting is to be coordinated with subdivision layout, traffic plan and services layouts to ensure appropriate configuration with vehicle crossovers, sight lines, drainage swales, lighting and other services.	A Landscaping Plan was submitted with the SSD Application. Council raised concerns in relation to some plant species and on this basis the applicant subsequently amended the plan. While details of the landscaping provided are limited, the plan indicates that street trees will be provided on all streets, will include a range of indigenous and exotic species, with generally uniform species and arrangement within each street (up to 2 species within a street). Street tree planting has been coordinated with traffic and civil plans. A condition is recommended requiring a detailed landscape plans be prepared in consultation with Council.
4.6 Street Furniture and Lighting Objectives - Provide a high quality public domain that contributes to the character of the Precinct. - Create a specific and consistent identity for the various precincts through the use of street furniture and lighting. - Provide a robust public domain that ensures ongoing maintenance requirements are minimised.	The applicant indicates that street furniture and lighting will be provided generally in accordance with the requirements set out in Macquarie Park Public Domain Technical Manual.

d. Minimise visual clutter in the public domain. e. Ensure the security and legibility of the public domain. Control 1. Street furniture and lighting is to be provided in accordance with the Macquarie Park Public Domain Technical Manual.	A condition is recommended which will ensure compatibility of the final design of lighting with Council's requirements.
4.7 Public Art	N/A
4.8 Safety Objectives a. Minimise opportunities for criminal and anti-social behaviour. b. Ensure development is undertaken in accordance with the principles of Crime Prevention Through Environmental Design. Controls 1. Incorporate the principles of Crime Prevention Through Environmental Design (CPTED) and Safer by Design (NSW Police) into the design of the public domain. 2. Planting alongside pathways is to be a combination of canopy trees and groundcovers so that sight lines are not obstructed. 3. The public domain is to be lit to comply with Australian Standards. 4. Open spaces are to have more than two access points so that people cannot be cornered. 7. Road widths and lengths, block lengths, and building setbacks are to be designed to reinforce the human scale of the development and encourage walking, cycling and use of the public domain. Note: Other components of 4.8 not included.	Noting the scope of the proposal, issues relating provision of CPTED measures are limited to lighting, road designs and planting of appropriate street tree species. The Department is satisfied that the proposal addresses these matters appropriately.
Built Form	
5.1 Street Frontage Heights	N/A
5.2 Building Setbacks	N/A
5.3 Building Depth and Bulk	N/A
5.4 Mixed Use Buildings	N/A
5.5 Building Design and Materials	N/A

5.6 Overshadowing	N/A
5.7 Landscape Design	N/A
Pedestrian Amenity	
6.1 Active Street Frontages	N/A
6.2 Awnings	N/A
6.3 Signage Signage is to comply with the Macquarie Park controls as set out in Section 6.1.14 of Part 4.5 of the Ryde DCP 2010. In particular, way finding and directional signage is to be installed throughout the development and at site entry points.	Signage has been designed to comply with the controls and address concerns raised by Council during the notification process.
Access, Parking and Servicing	
7.1 Vehicular Access Objectives - Integrate adequate car parking, access and servicing without compromising street character, landscape or pedestrian amenity and safety. - Encourage the active use of street frontages. - Ensure that vehicle crossings over footpaths minimise disruption to pedestrian movement and do not threaten safety. - Make vehicle access to buildings compatible with the public domain. - Ensure vehicle entry points are integrated into building design and contribute to high quality architecture. Controls - Design of driveway crossings is to be in accordance with Part 8.3 of Ryde DCP 2010. - Driveway widths/grades, vehicular ramp width/grades and passing bays are to be in accordance with the relevant Australian Standard. - The location and design of access ways to underground parking is to consider residential amenity particularly the location of doors and windows of habitable rooms. - Potential pedestrian/vehicle conflict is to be minimised by: - providing vehicle access from minor or secondary streets rather than primary streets or streets with major pedestrian activity, where practicable; - limiting the width and number of vehicle access points - generally one crossing per lot will be permitted and where practicable, adjoining buildings may share or amalgamate vehicle access	The proposal provides footpath areas to cater for the expected number of pedestrian movements. Potential conflicts between pedestrians and vehicles are minimised where possible through provision of clear sight lines , use of different paving treatments to clearly distinguish pedestrian areas and from accessways.

points; c. ensuring clear sight lines at pedestrian and vehicle crossings; d. utilising traffic calming devices; e. separating and clearly distinguishing between pedestrian and vehicular accessways; and f. all vehicles must be able to enter and leave the site in a forward direction.	
7.2 Car Parking	N/A
7.3 Bicycle Parking	N/A
7.4 Site Facilities and Services	N/A
7.5 Work Place Travel Plan	N/A
7.6 Accessible Design Objective a. Ensure that the design of new development and the public domain provides equitable, safe and legible access for people with disabilities. Controls 1. Development is to be designed to comply with the controls set out in Part 9.2 of the Ryde DCP 2010 – Access for People with Disabilities. 2. In designing new developments and the public domain, consideration is to be given to the recommendations of the National Disability Strategy NSW Implementation Plan 2012 (particularly the section titled Inclusive and Accessible Communities) and the NSW Disability Action Plan 2012-2017.	The proposed public domain works have been designed to be accessible for all persons.
Environmental Management	
8.1 Environmental Performance	N/A
8.2 Flooding Objectives a. Ensure essential services and land uses are planned in recognition of flooding risks. b. Manage the risk to human life and damage to property caused by flooding through controlling development on land affected by potential floods. c. Apply a merit based approach to proposals that relate to flood affected land – taking into account flooding, social, economic, ecological and design considerations.	The proposal incorporates significant upgrades to the stormwater system including flood mitigation works including a new culvert adjacent to Wicks Road which will enable access for emergency vehicles to the site in major events

Controls 1. To ensure emergency vehicles can access the site during a major storm event, alternative site access is to be provided to the high density residential precinct for emergency vehicles. The alternative access is to be identified in consultation with the NSW State Emergency Service and other relevant agencies. 2. The proposed future road connecting the high density residential precinct with Wicks Road is to be designed to accommodate future flood mitigation works that seek to relieve existing flooding impacts on Wicks Road. 5. Development is to comply with the floodplain management controls set out in Section 6.3.1 of Part 4.5 of the Ryde DCP 2010. Note: Other components of 8.2 not included.	
8.3 Wind Mitigation	N/A
8.4 Air, Noise and Vibration	N/A
8.5 Waste Management	N/A
8.6 Vegetation Management Objective a. Protect and enhance areas of significant native vegetation and riparian corridors. Controls 1. Wherever practical, development within the Precinct should be sited to minimise impacts on existing vegetation and avoid removal of significant trees. 2. An arborist report for each Sub-Precinct is to be lodged with the first development application for road construction works and approved prior to the commencement of road construction works for that Sub-Precinct. The arborist report is to identify significant trees within the precinct and provide an assessment of whether the trees should be retained, removed or pruned, and protection measures during construction for trees to be retained. 3. A site specific Vegetation Management Plan (VMP) is to be prepared and implemented for the Northern Bushland Park. This plan is to be lodged with the first development application for road construction in the high density residential precinct and approved prior to the commencement of road construction works in this precinct. 4. The VMP is to be prepared in accordance with relevant guidelines and based on standard vegetation management actions including: a. Collection of seed from any native vegetation proposed to be cleared at the site;	An arborist survey was provided for the northern bushland park and trees have been retained there as appropriate. The site is mostly cleared, but remaining vegetation within the development lots are proposed to be cleared and the land levelled. This is considered acceptable with the provision of new replacement plantings as part of future applications. A site specific Vegetation Management Plan was prepared for the Northern Bushland Park in accordance with the DCP requirements. A condition is recommended requiring compliance with the plan.

b. Weed control; c. Management of fire for conservation; d. Management of human disturbance; e. Retention of regrowth and remnant native vegetation; f. Replanting or supplementary planting where natural regeneration will not be sufficient; g. Retention of dead timber; h. Erosion control; and i. Retention of rocks. 5. The VMP is to ensure the rehabilitation and regeneration of the Porters Creek vegetated riparian corridor (being 30 metres wide on either side of the creek measured from top of bank), taking into account Council's priority creek rehabilitation works.	
8.7 Soil Management Development is to comply with the Macquarie Park Soil Management controls set out in 6.3.4 of Part 4.5 of the Ryde DCP 2010.	A Civil Design Report, prepared by Robert Bird Group, was provided with the SSD Application. This report indicates that erosion and sediment control measures will be implemented in accordance with Ryde DCP 2010.
8.8 Site Contamination	This is discussed in Section 5.10 of this report.
8.9 Heritage and Archaeology Objective a. Ensure appropriate protection and management of European and Aboriginal heritage within the Precinct. Controls 1. Development applications for buildings in the high density residential precinct to the east of the Spine Road adjacent to the M2 Corridor are to be accompanied by a visual impact assessment which considers the visual impact of the development on the heritage significance of the Macquarie Park Cemetery and Crematorium. Council may waive this requirement for a visual impact assessment if it considers that the proposed development is low scale and will not result in significant adverse visual impacts. 2. Where works are proposed in the vicinity of the bricked domed well or cistern located within the mixed use precinct (as identified in Figure 16 of the North Ryde Station Precinct Rezoning Study –	This is discussed in Section 5.10 of this report.

Aboriginal Heritage Assessment and Non-Indigenous Archaeological Assessment (Artefact Heritage, November 2012)), a report is to be provided detailing the arrangements for the archaeological monitoring of the cistern. These should include that:

- a. When the well/cistern is located during construction excavation works, all works within 15m of the well/cistern are to cease immediately and a heritage/archaeological consultant is to be engaged;
- b. The archaeological consultant is to prepare a report on the condition of the item and its significance. This heritage assessment is to be submitted to Council and a site visit undertaken by Council; and
- c. Once Council is satisfied the appropriate research works and methodology have been prepared, written approval is to be issued by Council prior to any works commencing within this 15m restricted zone.

3. Protective fencing is to be installed at the 15 m perimeter setback from the well/cistern whilst the investigation works are being undertaken.

In light of the assessment detailed in **Section 5** of this report, it is considered that the proposal provides an acceptable level of consistency with the objectives of the NRSP DCP 2013.

APPENDIX C. RECOMMENDED CONDITIONS OF CONSENT
