architectus™

North Ryde Station Precinct

Master Plan

30th November, 2010

Cover Image - View from Delhi Road to the existing North Ryde Station entry.

architectus™

Contents

1.0 Introduction

Introduction and Background

This report documents the development of a master planning concept for a significant site of approximately 14.06 ha located within close proximity to North Ryde Station on the Epping to Chatswood Rail Link (ECRL). The site is referred to as the North Ryde Station Precinct and is comprised of landholdings owned by the Transport Construction Authority (10.46 ha), the Department of Planning (1.48 ha), the RTA (0.29 ha) and ING (1.76 ha)

The ECRL began operations on 23 February 2009 and incorporates 3 underground stations in the North Ryde area; Macquarie University, Macquarie Park and North Ryde (located on Delhi Rd, adjacent to the M2 and Epping Road). Both Macquarie University and Macquarie Park Stations have been operating beyond forecast expectations, with steadily increasing patronage. North Ryde Station by contrast, is significantly underutilised and has consistently experienced low patronage levels.

Whereas Macquarie University and Macquarie Park Stations are surrounded by significant employment, retail and educational activities, North Ryde Station Precinct experiences a context of significant areas of undeveloped land, which has resulted as a legacy of the construction of the ECRL and M2 Motorway and more recently, the impact of the global financial crisis on local economic conditions. This current situation contributes significantly to the underutilisation of North Ryde Station and combines with the relative location of the station and the divisive qualities of the major roads (Epping Road, M2, Delhi Road) to create a situation where the station lacks integration with its immediate and surrounding area and therefore suffers from a restriction on significant additional patronage growth.

The vast majority of vacant land within close proximity to the rail station is controlled by NSW government instrumentalities. This factor is critical as it allows the combination of sites to form a co-ordinated solution rather than the often disparate development pattern evident elsewhere. This creates a unique opportunity for government to achieve an integrated landuse transport solution and demonstrate positive change in a more public transport supportive form of development.

The Concept Master Plan Report

Rather than a definitive master plan proposal, this Concept Master Plan Report sets out the key principles and opportunities that will inform and guide the development of detailed site planning and urban design within the next stage of the project. The document is structured into 4 components:

Transit Oriented Development Structure and Principles

The overall objectives for the project are the creation of a Transit Oriented form of development to support the existing North Ryde Station. This section provides a summary of Transit Orientated Development (TOD) principles and the opportunity for the North Ryde Station Precinct.

Urban Design Principles

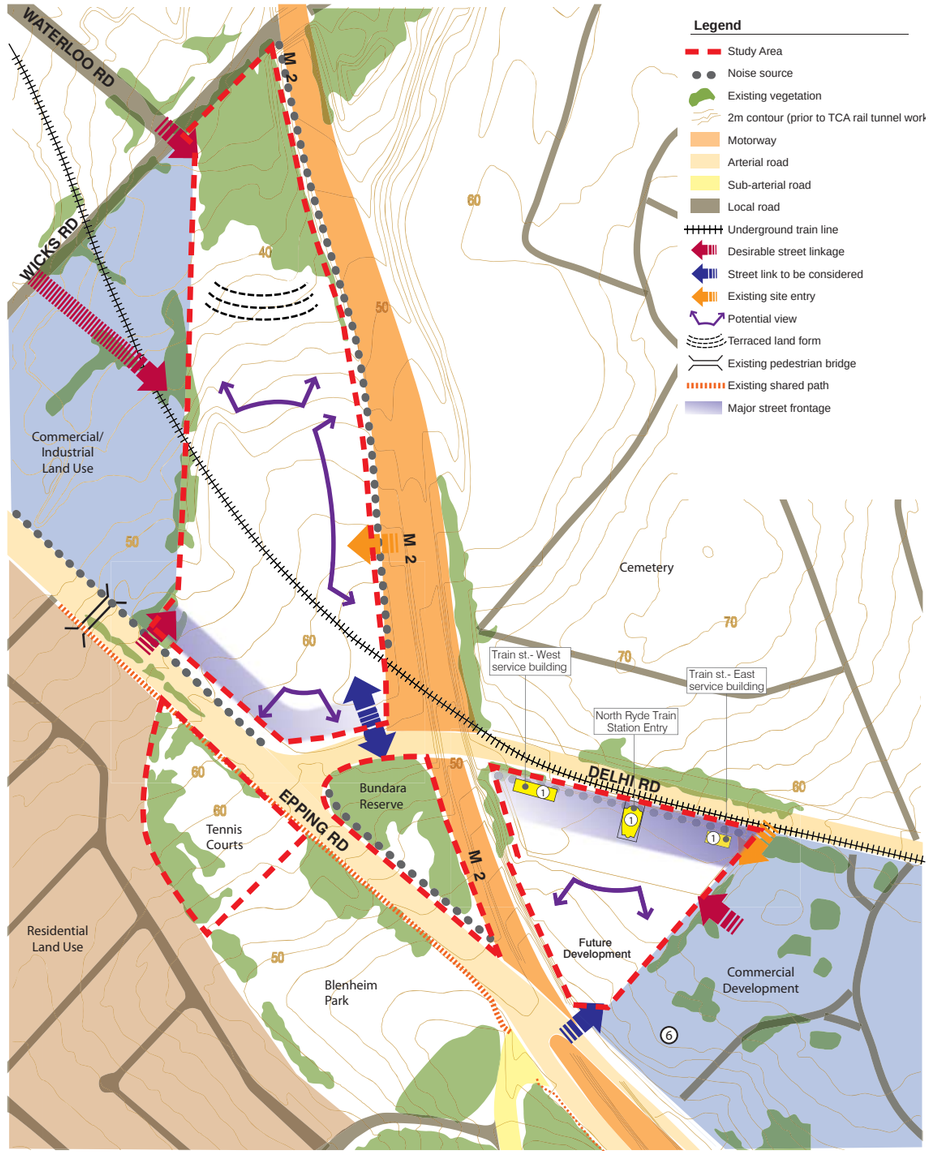
These principles provide the framework on which detailed master planning will be based. They relate both to the site's context, as well as to site specific actions and outcomes.

Precedents

This section provides a selection of imagery for public and private domain proposals envisaged for the site.

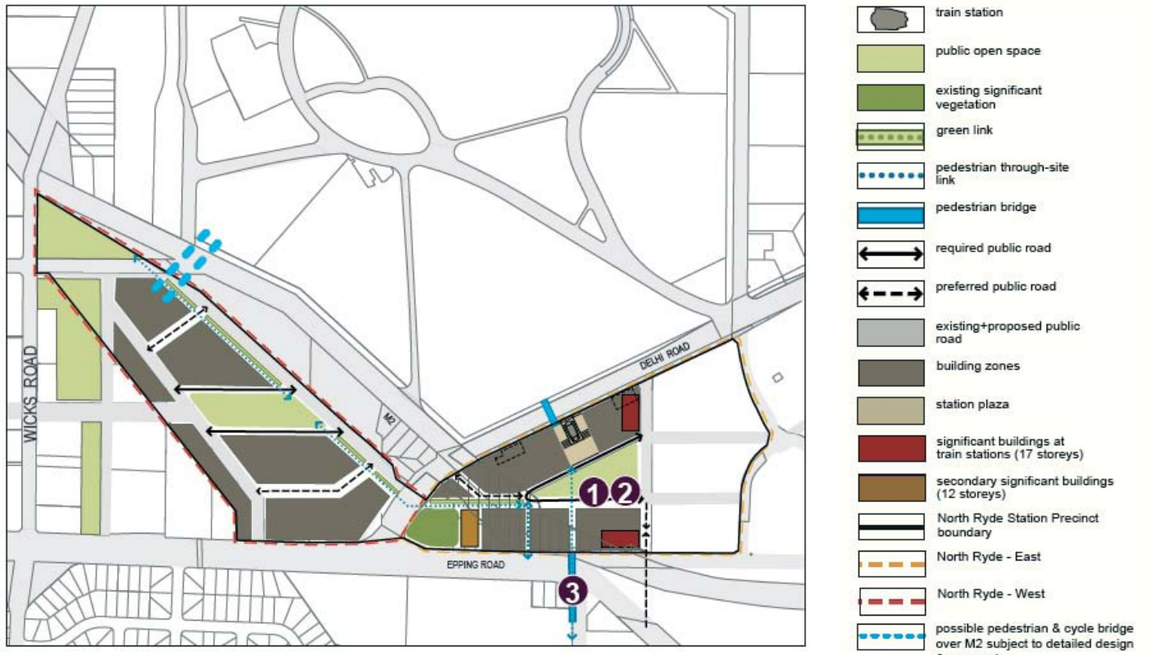
Conclusions and Resulting Floorspace

This final section re-establishes the urban design principles with the fundamental objective for (TOD) for the site and provides an estimate of the site's total floorspace capacity within this context.



Site Features Analysis

2.0 Planning Overview



North Ryde Station Precinct Illustrative Plan

Local EPIs	Details
Ryde Local Environmental Plan 2010	• TCA and DoP owned lands are 'deferred matter' • RTA owned lands zoned low density residential (R2) and Infrastructure (SP2). • ING Site zoned as Commercial Core (B3)
Ryde DCP 2010 – Part 4.5 Macquarie Park Corridor	• North Ryde Station indicative provisions illustrated. Identifies that sites are subject to further masterplanning. • TCA and RTA owned lands part of North Ryde Station precinct. DoP owned land outside precinct.

Table 1 - City of Ryde Environmental Planning Instruments and plans

Macquarie Park Corridor DCP

The site is identified in the Macquarie Park Corridor DCP (MPC DCP). The North Ryde Station Precinct, is specifically identified as a 'special precinct' in the MPC DCP, which states that:

The North Ryde Station Precinct provides an important link between the Riverside Corporate Park and the Macquarie Park Corridor to the west. The precinct includes two distinct sub-precincts: North Ryde – East, which is centred around the North Ryde Station and a new public park adjoining Riverside Corporate Park, and North Ryde – West, which is located on an elevated plateau along the edge of the M2 east of Wicks Road.

The MPC DCP goes further to identify the characters of potential future development of these areas within the precinct, stating that:

North Ryde – East is characterised by:

- a rail station plaza and new local park are concentrated adjacent the rail station,
- a vibrant local activity centre with retail and community uses along public spaces and new streets,
- a new street network connecting into Riverside Corporate Park and into the surrounding streets,
- a pedestrian network along streets and through site links connecting into surrounding areas,
- a mix of uses including commercial, residential, retail and community facilities, and
- landmark towers marking the station area.

And, North Ryde West is characterised by:

- new residential neighbourhood,
- a series of public parks, communal open spaces and reserves,
- a new street network connecting into the Macquarie Park Corridor grid and the extension of Waterloo Road,
- commercial uses along Epping Road and a range of uses supporting the residential neighbourhood, including a small retail hub for daily shopping and community facilities,
- a road and linear planting creating a buffer along the edge of the M2,
- building forms and heights that reinforce the street network and public spaces, and
- a bushland reserve at the northern end of the North Ryde – West site.

The proposed development is consistent with the intended character of the precinct and generally consistent with the 'Special Precinct Illustrative Plan' (refer to image on left for Council's Special Precinct Illustrative Plan). The Special Precinct Illustrative Plan also identifies examples of type of development any future design around the North Ryde Station may take. The images (left), are examples provided in the MPC DCP.

In addition, the proposal is generally consistent with various access and design elements identified in the MPC DCP Street Network Structure Plan and Built Form Structure Plan, including but not limited to:

- Provision for Road 38;
- Provision for an internal access/service road;
- Provision for open space; and
- Provision for a road connection to adjoining lands to the east of the site.

Local Planning Framework

The subject sites fall within the CoR LGA. A number of local environmental planning instruments (EPIs) apply to the lands, as summarised in Table 1 on the left.

Land Use Zone

The subject sites fall within the CoR LGA. Council has been progressively updating its planning controls applying to the Macquarie Park Corridor area. TCA previously requested from Council that its sites be identified as "deferred matters" under the updated planning instruments. OSL similarly requested that its site be listed as "deferred matters" from draft LEPs. Given the "deferred matter" status, the planning controls applying to TCA's and DoP's lands revert back to the Ryde Planning Scheme Ordinance (Ryde PSO) provisions.

State Planning Framework

The NSW State Plan identifies key strategies for integrated land use development and specific seeks to achieve "Jobs closer to home".

The proposal meets the State Plan priorities in the following ways:

- continuing to implement the Metropolitan Strategy, which plans for the growth of the Sydney region and provides guidance for all 41 metropolitan councils on how to best plan for jobs and services close to homes
- integrating urban growth and transport delivery through the Metropolitan Transport Plan and the review of the Metropolitan Strategy and Regional Strategies
- accelerating the establishment of residential and commercial centres around transport hubs.

Sydney Metropolitan Strategy

The proposal is consistent with the actions of the Sydney Metropolitan Strategy (Metro Strategy) and the Inner North Subregion Draft Sub-Regional Strategy (Draft INSS). Specifically, the Draft INSS aims to ensure that adequate land is available and appropriately located to sustainably accommodate the projected housing and employment needs of the region's population over the next 25 years.

3.0 Urban Design Principles

Land Ownership

The North Ryde Station Precinct covers five seperate sites, which are under different ownership. Refer to land ownership figure.

The precinct provides an opportunity to create a Transit Orientated Development of significant scale and diversity.

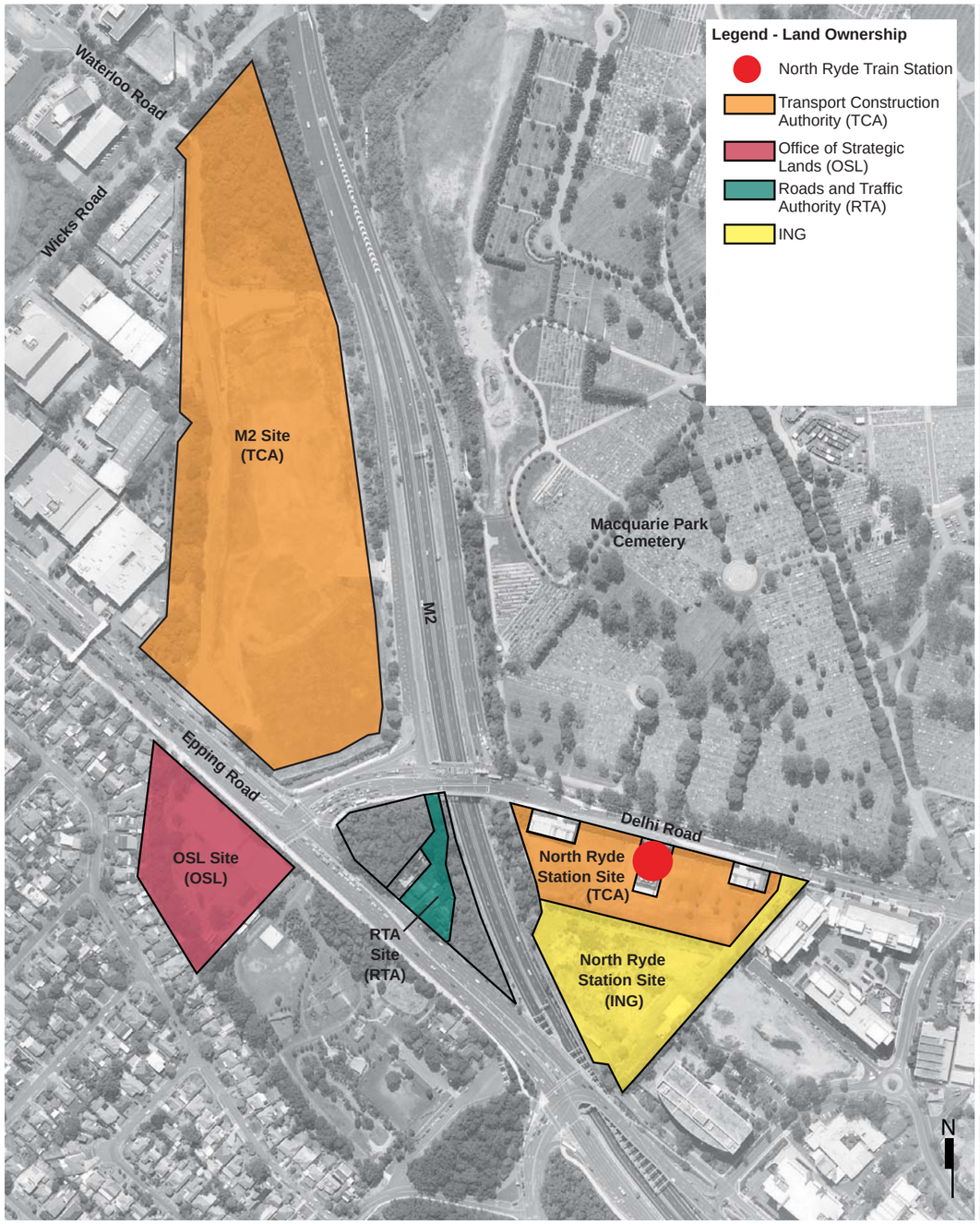
Notwithstanding the various land ownerships, the Transport Construction Authority (TCA) is driving the redevelopment due to the complex dynmanics of the proposed and its understanding of these issues, which include:

- relationship between land use and strategic transport planning issues,

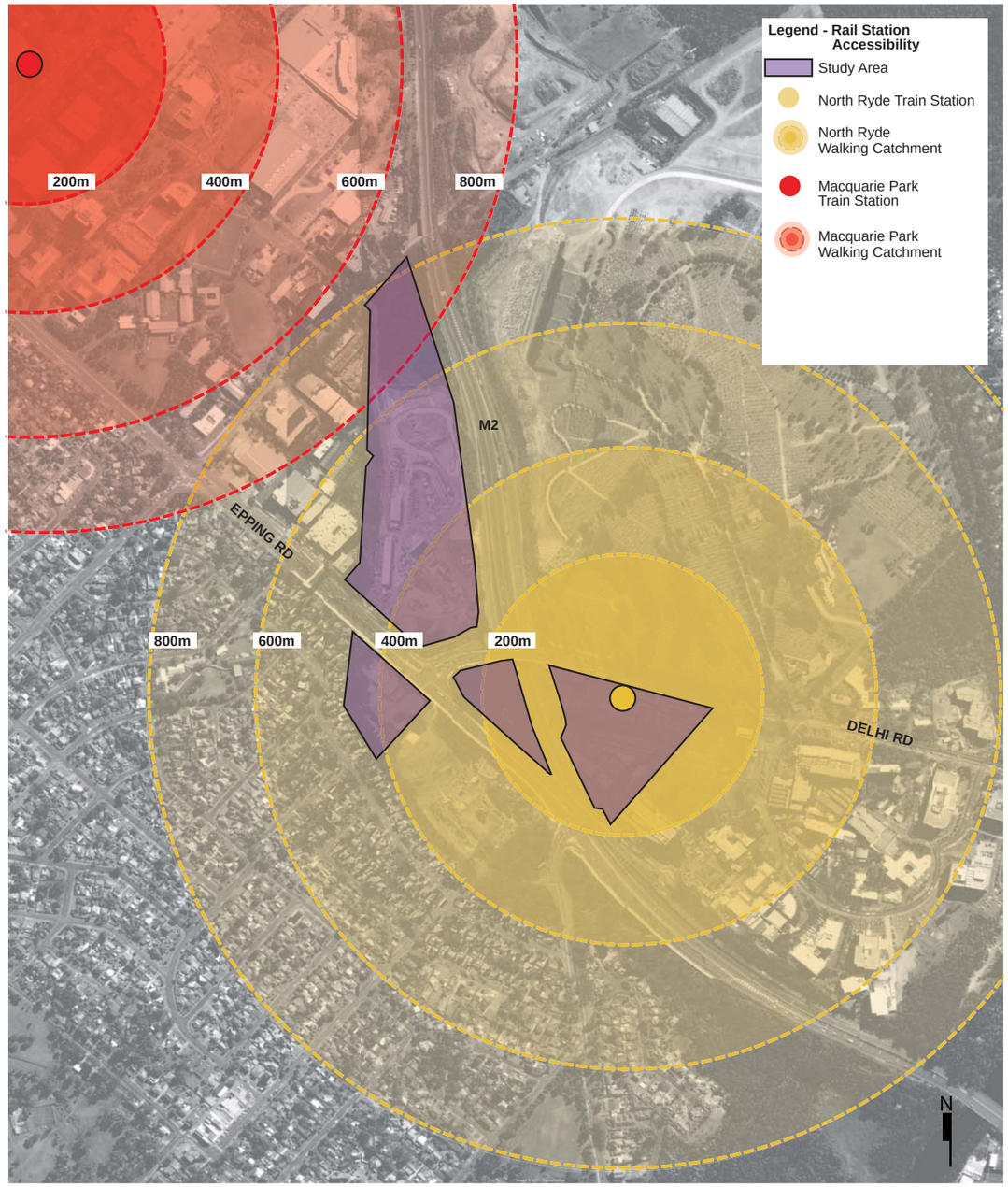
- social and economic issues caused by the seperated lands,

- relationship between connectivity constraints and development opportunities associated with North Ryde Station and surrounding lands, and

- understanding th existing environmental issues.



3.0 Urban Design Principles



Rail Station Accessibility

The North Ryde Station Precinct is extremely well located with respect to public transport access. All parts of the site are located within 800 metres of North Ryde Station, while the northernmost portion of the M2 site is also located within 800m of the Macquarie Park Station. The entire site is within 10 minutes walk to high quality rail services, which underpins the appropriateness of increased residential densities and mix of activities for this site.

While all of the Precinct is well located with respect to rail stations on the ECRL, Epping Road, Delhi Road and the M2 presently provide significant barriers to movement, particularly for pedestrians. In addition to grasping the opportunity for more intensive development, a key principle for this future development will be to significantly improve connectivity from each of the component sites, across these barriers and to the station at Delhi Road.

Transit Orientated Development - Structure and Principles

The Transit Oriented Development (TOD) principle developed initially in the late 80's and 90's as a reaction to the sprawling, low density neighbourhoods and separationist zoning that characterised much of North America's new development. Faced with increasing costs of transport (particularly public transport) and a declining quality of life, proponents of TOD sought a change to the way America's urban areas were being planned and built, with a return to more compact, mixed use neighbourhoods that fostered community and supported the efficient provision of public transport.

The principles of TOD remain compelling and are now widely adopted as accepted planning practice in Australia. In simple terms, the TOD concept promotes the concentration of moderate and high density housing, along with complementary employment, retail, community services and open space in mixed use precincts focused on key points of the public transport network, such as rail stations. Essentially, there is a strong and supportive relationship between land use and public transport services where the location, design, configuration of uses emphasises a pedestrian friendly environment that reinforces the use of public transportation.

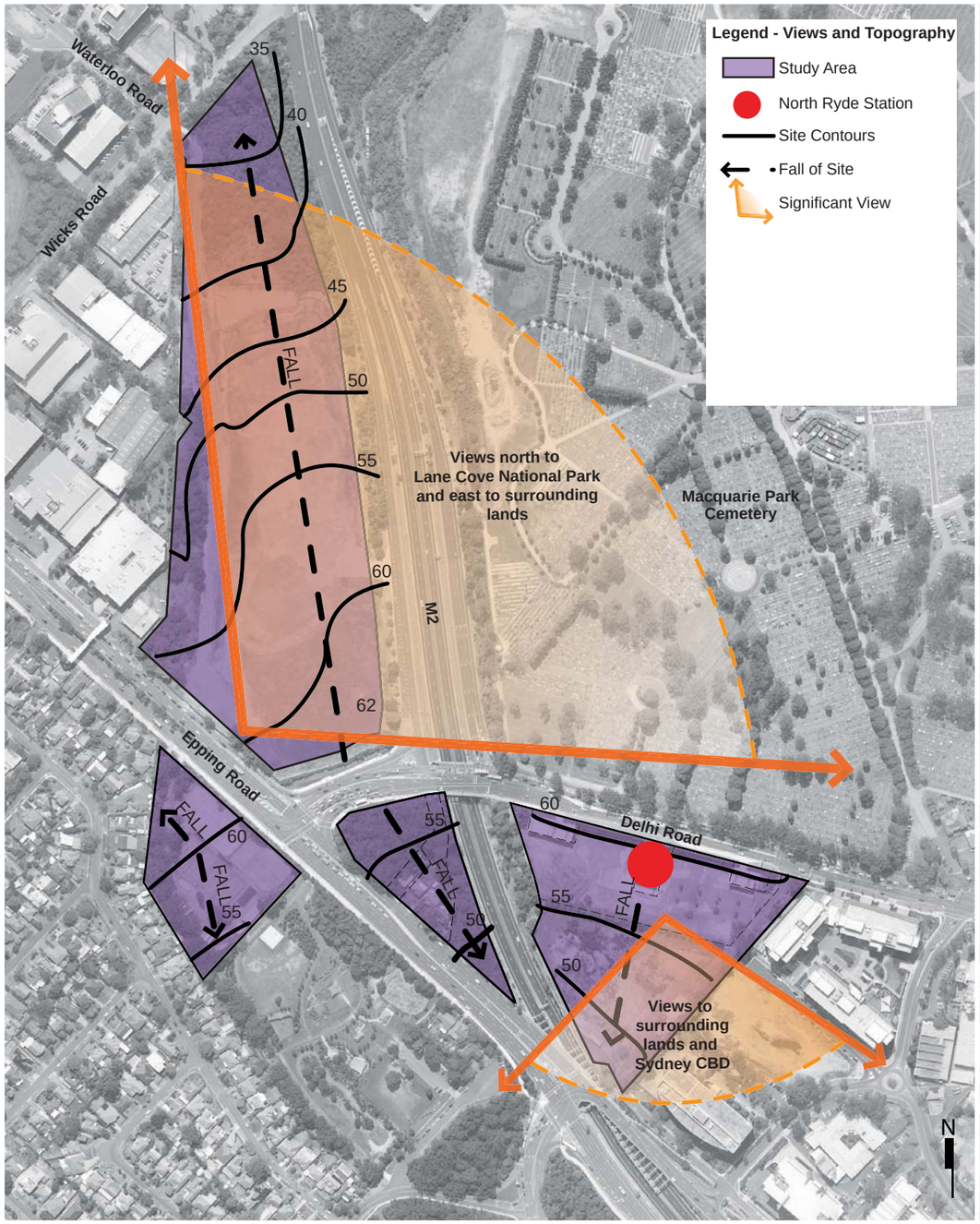
With principles of Transit Oriented Development in mind, the proposed Concept Master Plan provides for the development of a mixed residential, commercial and retail hub set within a high quality and connected public domain system. Importantly for the efficient utilisation of the existing commuter rail infrastructure, the Concept Master Plan proposal provides for relatively higher densities of development, focused within the immediate context of the station. A dense and connected pattern of streets, pedestrian and cycle routes permeates the Precinct and connects directly to the wider system, thereby providing significantly increased accessibility for both existing and future communities, and particularly for North Ryde the Macquarie Park Corridor and Riverside. The Concept Master Plan in turn promotes this access system as a core element of a safe, stimulating and comfortable public domain in order to maximise the propensity for access to, and use of, the ECRL.

3.0 Urban Design Principles

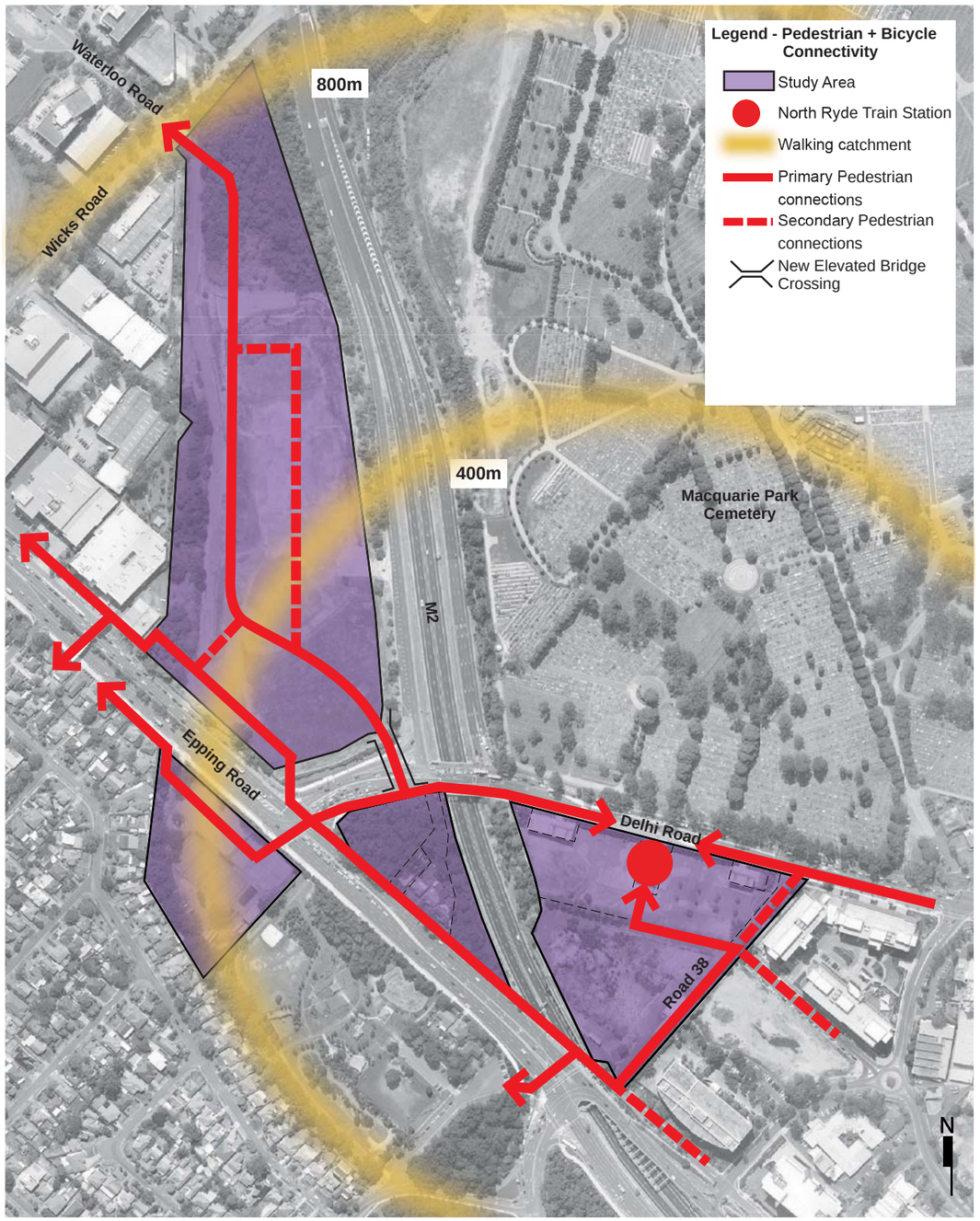
Views and Topography

A high point for the precinct is located on the southern part of the M2 site. From here, the site falls steadily northward toward Wick's Road, providing the opportunity to both capture significant north views and excellent solar access. Elsewhere, and particularly south of the high point, extensive district and city views are afforded to the south and southeast from the North Ryde Station site.

The alignment of Delhi Road provides a ridge between the M2 Site and sites to the south of Epping and Delhi Road, with land sloping away reasonably gradually for the Office of Strategic Lands (OSL) owned lands and Roads and Traffic Authority (RTA) owned lands. The North Ryde Station site (Northern Site - TCA land) has been created as a flat site, excavated out of the natural topography adjacent to Delhi Road. The height difference at the escarpment here is approximately 8 metres, and will impact on potential development typologies through reduced access to light and ventilation at lower levels. The topography slopes gradually southward on the North Ryde Station Site (Southern Site - ING Land) ending abruptly at the M2 cutting.



3.0 Urban Design Principles



Pedestrian and Bicycle Connectivity

As noted previously, the entire site is located within a 10 minute walk of high quality rail services. Due to the undeveloped nature of the Precinct, it presently represents a barrier for pedestrian and cycle accessibility to the station for the wider contextual area. Development of the site not only presents an opportunity for Transit Supportive Development in itself, but also provides opportunity for greater pedestrian and cycle connectivity to the station from surrounding areas. In particular, a more direct route from Waterloo Road, through the M2 site will become available. All routes from the north may also be greatly improved through the potential of a grade separated crossing of Delhi Road Likewise, connection to the station from the south may also be greatly enhanced through construction of Road 38 and the provision of a pedestrian/cycle connection to Epping Road adjacent to the existing pedestrian crossing.

3.0 Urban Design Principles

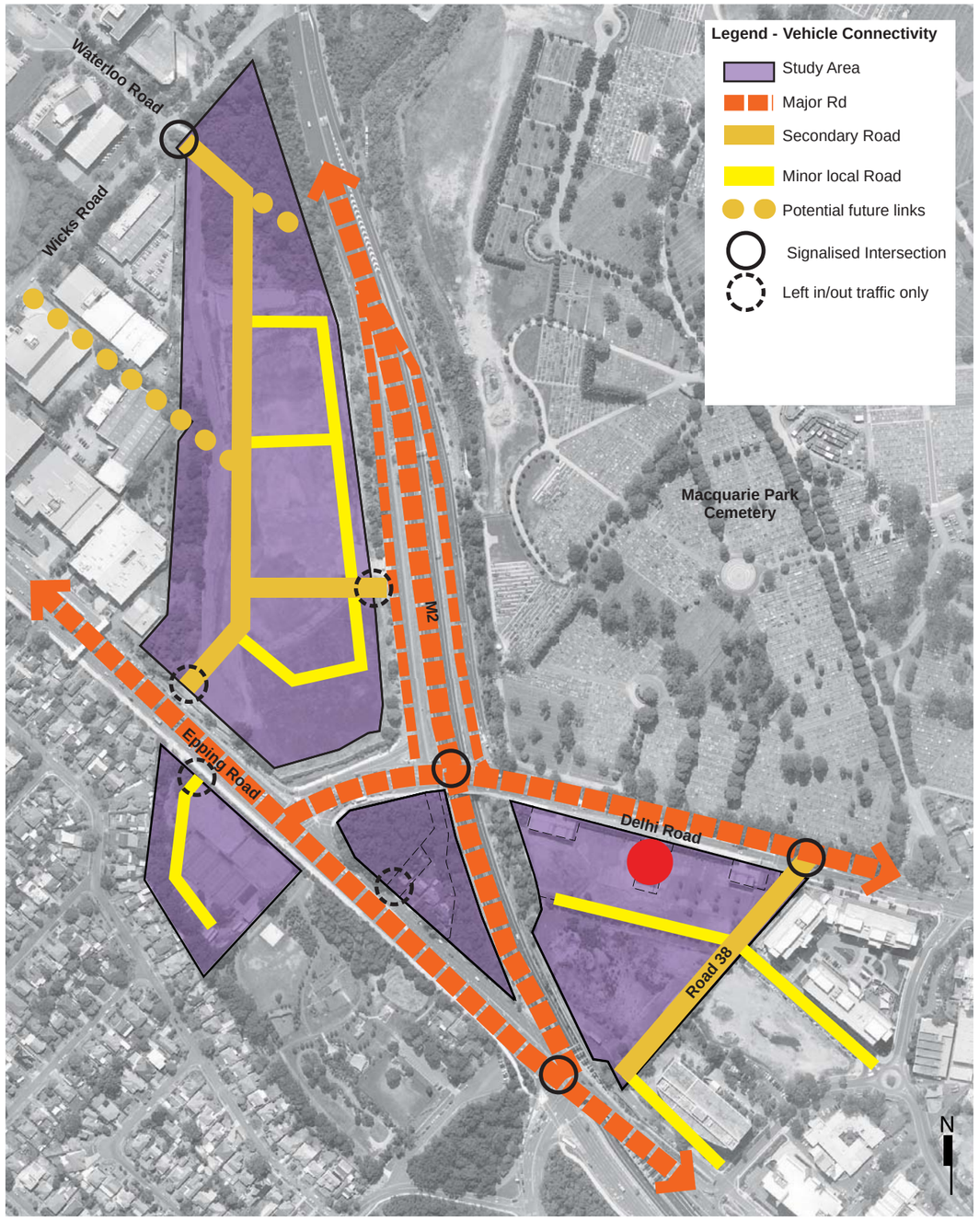
Vehicle Connectivity

It is important that the North Ryde Station Precinct is integrated with the existing (and potential) road network in the local area.

The RTA site and OSL site are accessed directly from Epping Road, and due to their relatively small size, will not have a significant internal street system. Located between Epping Road and existing residential development at it's rear, the OSL owned lands may also provide a potential more direct connection to the station for North Ryde residents if adjacent sites were to be appropriately redeveloped at some point in the future.

The development of the North Ryde Station Site will see the construction of Road 38 from Delhi Road through to a point just above the M2 cutting. The two sites require only a single entry road to service them, connecting from Road 38. It is important that the alignment of this lower scale internal road is coordinated with the existing street system in the adjoining Stockland development to the east. Integration with the existing bus network is another important factor to the success of the precinct as a transit orientated development. With the provision of new vehicular connections there is the opportunity to facilitate more effective bus routes from surrounding areas to the station. The increased connectivity of North Ryde Station to the surrounding community will increase patronage of the station.

Being the largest, the M2 site presents the need for a new network of streets. An extension of Waterloo Road through the site to Epping Road may form the main spine for a connected, orthogonal grid of new streets within the site. This grid will provide good accessibility throughout the site and may connect seamlessly to the M2 on-ramp or long term extensions from Wicks Road, through redevelopment of adjacent sites.



3.0 Urban Design Principles

Open Space Strategy

With a combined site area of just over 14 hectares, open spaces are a necessary component of the future development, and it is critical that a strategy is developed for the location and type of public and private spaces.

Two important bushland areas contribute greatly to the local character and amenity of the precinct. These bushlands include one located at the northern most point of the M2 site and the other located at the intersection of Epping and Delhi Road, which is also known as Bundara Reserve.

Major roads also play an important part in defining the existing and potential character of the Precinct. The divisive impact of Delhi Road created the opportunity for 2 key public spaces that may form the focus for development at the rail station, and at the larger M2 site. The linear nature of the M2 Site also creates the opportunity for a linear open space connection linking northwards to the retained bushland area. From this green spine, the strategy sees the development of several smaller private spaces that both relate to the public space network and also provide a local focus for adjacent buildings. Additional private space opportunities on the OSL and North Ryde Station sites may also perform the same focal role.

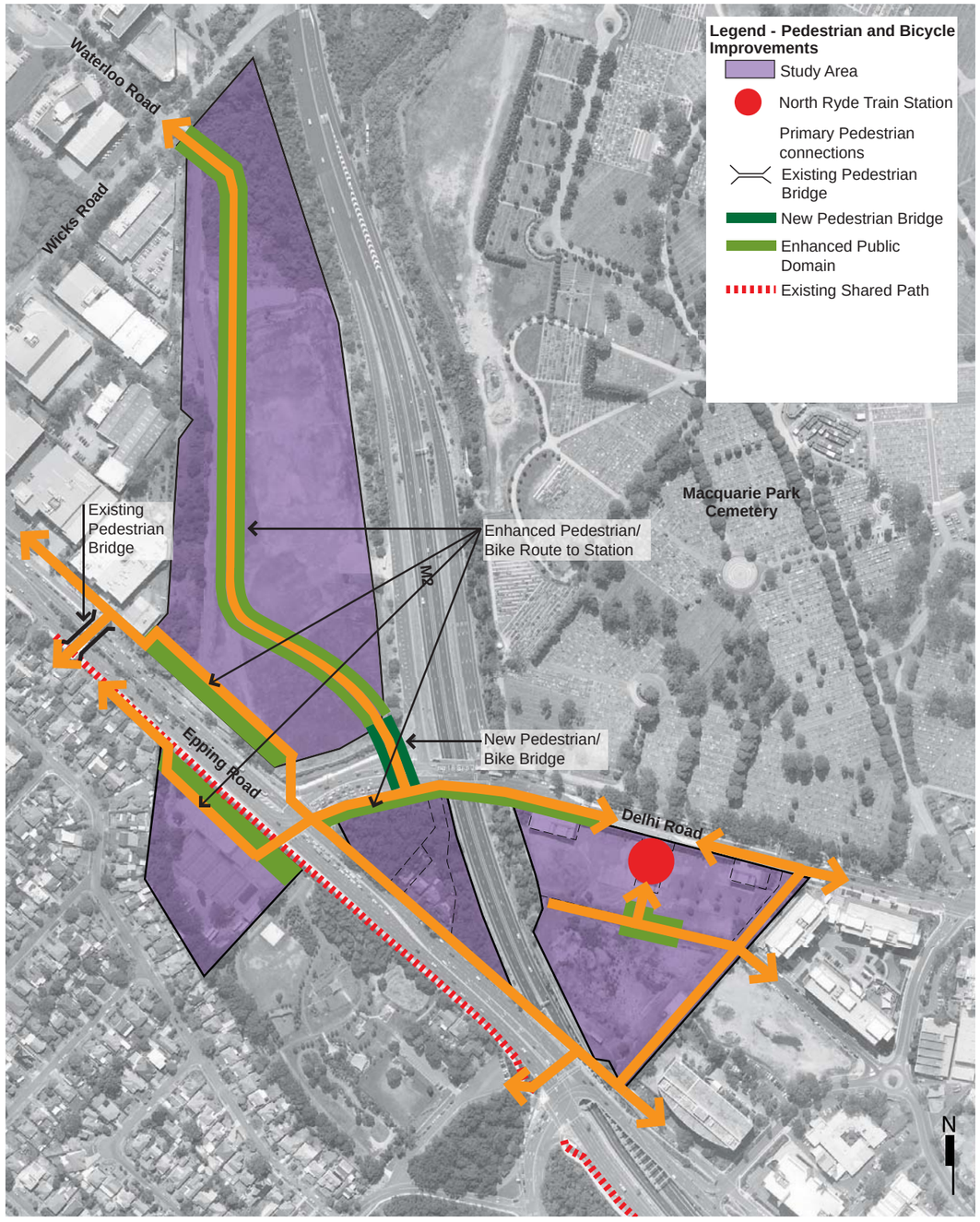
The traffic volumes and noise impacts from the M2 and Epping Road create an opportunity for the provision of public domain elements that have a mitigating effect on these impacts. Specifically, a green buffer may be located along the M2 boundary, while the frontage areas of Epping Road have potential to both increase pedestrian and building separation and provide a “green gateway” to the Macquarie Park area.

3.0 Urban Design Principles

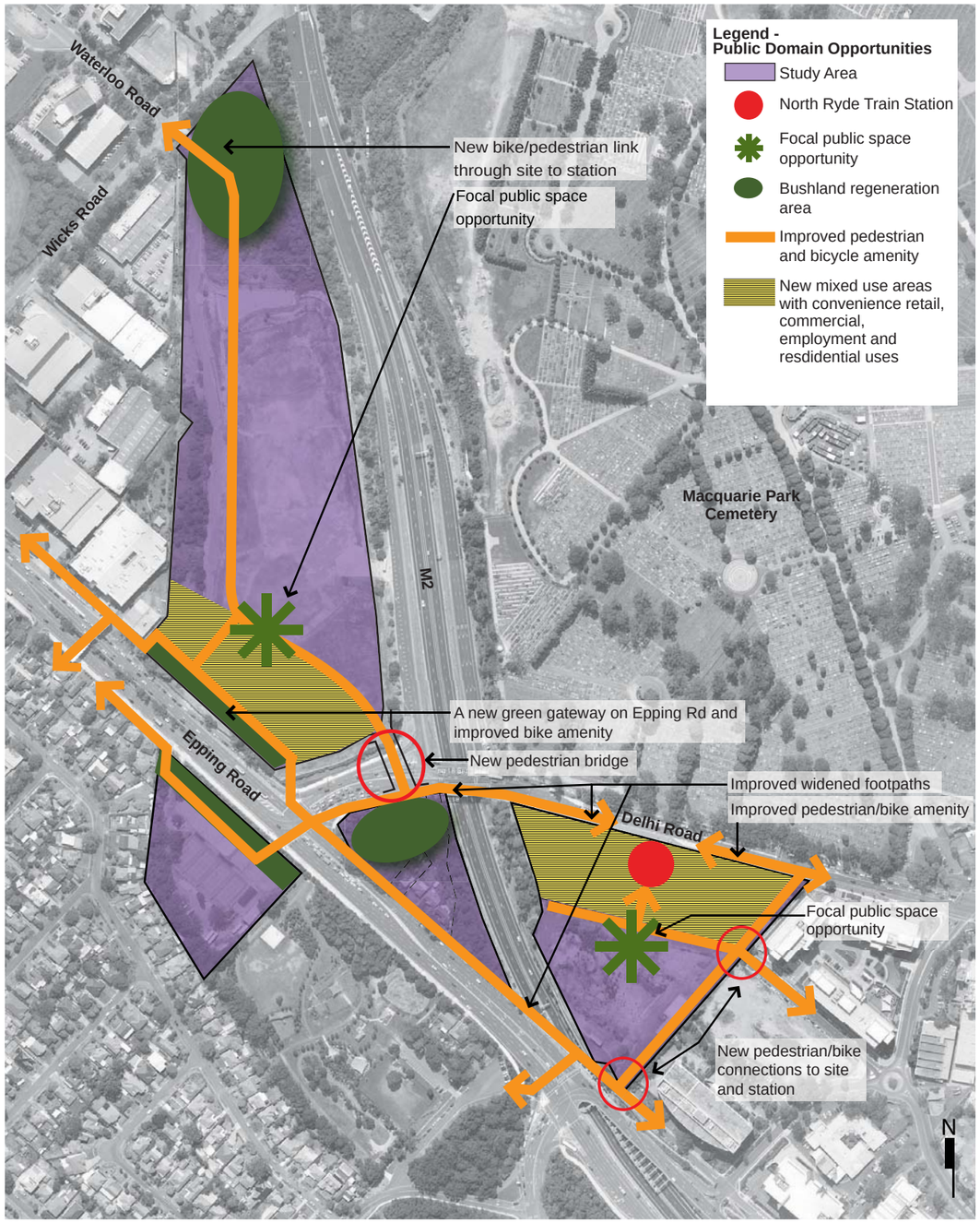
Pedestrian and Bicycle Improvements

A range of significant improvements to the local and regional pedestrian and cycle network may be delivered through development of the North Ryde Station Precinct. In addition to formalisation and improvement of existing pedestrian and cycle infrastructure, specific opportunities also exist for the following key works:

- Provision of a new and direct pedestrian/cycle connection between Waterloo Road and Delhi Road, through the M2 site.
- Construction of pedestrian/cycle bridge link across Delhi Road.
- Enhanced pedestrian and bicycle routes along both sides of Epping Road and on the southern side of Delhi Road to the station.
- Extension of Road 38 to the M2 cutting and construction of a pedestrian and cycle link that extends across the M2 cutting to connect with Epping Road.



3.0 Urban Design Principles



Public Domain Opportunities

Development of the North Ryde Station Precinct can realise a range of improvements to the existing public domain system. Consisting of both improved connectivity and the creation of distinct public spaces, key opportunities include:

- Improvement and rehabilitation of existing bushland sites at Wicks Road and Delhi Rd-Epping Road
- Creation of a “Green Gateway” element along each side of Epping Road consisting of increased setbacks, planting and integrated pedestrian/cycle routes.
- Creation of a focal public space at the rail station and the southern half of the M2 site.
- Improved and widened pedestrian connections along Delhi Road and Epping Road.
- Provision of a high quality pedestrian/cycle link through the M2 site
- Provision of a grade separated pedestrian/cycle connection across Delhi Road.
- Integration with the existing pedestrian and road network east of the North Ryde Station site.
- Provision of a pedestrian/cycle connection from the rail station to Epping Road via the new Road 38.

3.0 Urban Design Principles

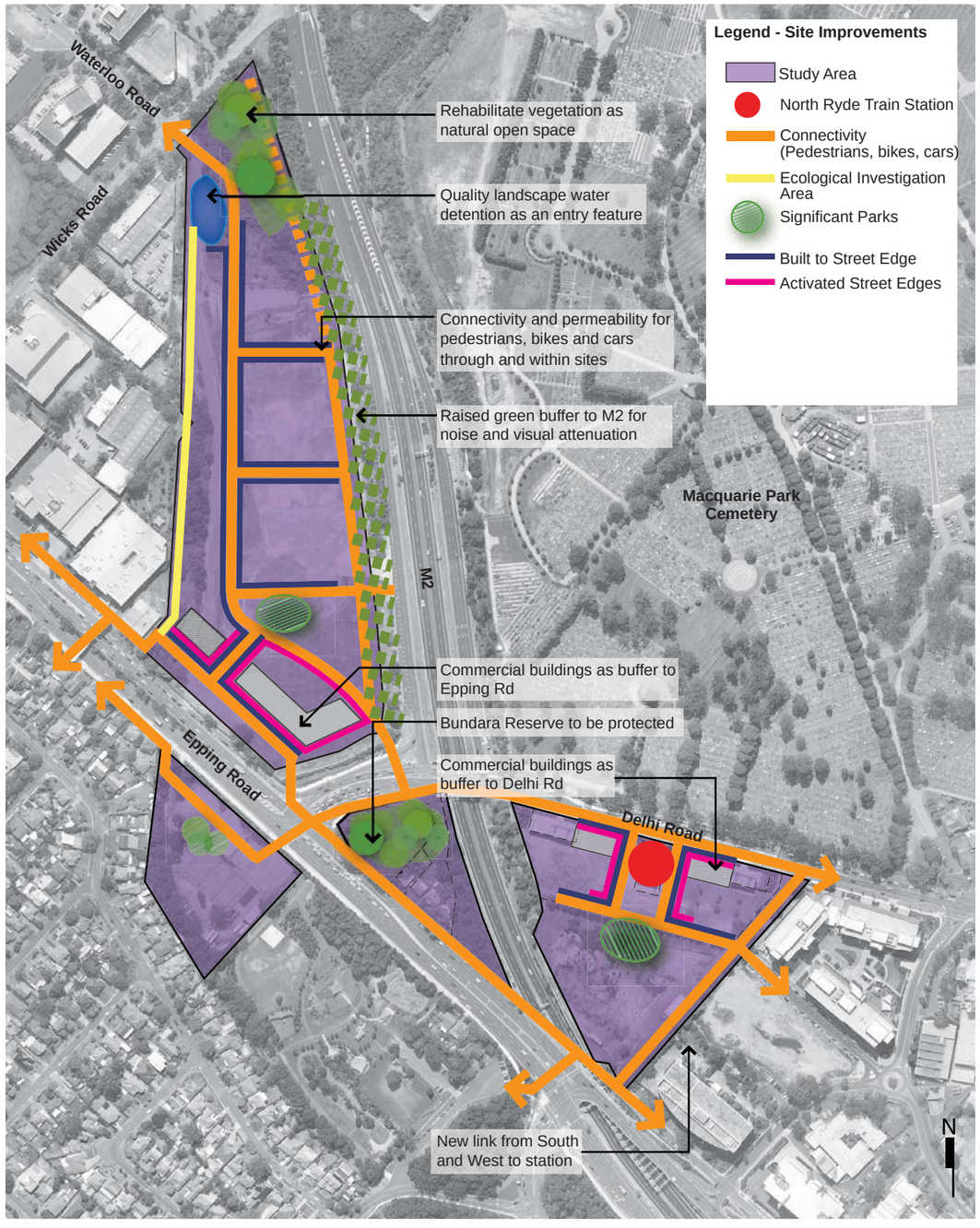
Site Improvements

In addition to the Public Domain improvements identified above, development of the site will also see the implementation of a highly connected street system that is well integrated and connected with pedestrian and cycle networks.

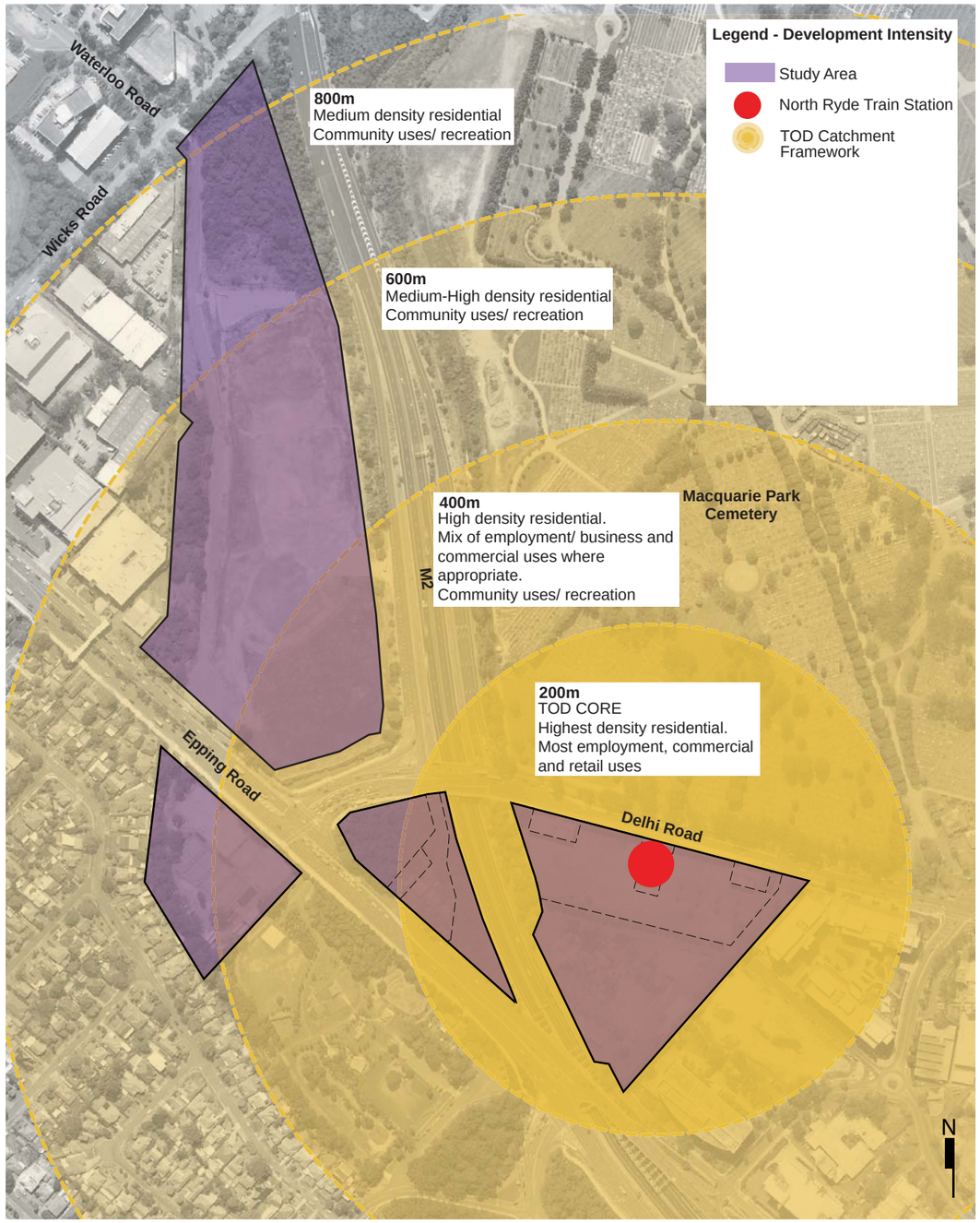
As significant amount of new development on the M2 site, combined with its slope and catchment characteristics will create a need for a well developed water cycle management system. A key element of this system will be the provision of areas to detain and filter stormwater runoff. If well designed, these features also provide opportunity as a high quality landscape feature that may be integrated with the public open space system.

Noise impact from surrounding busy roads is a key issue for development of the site. A range of strategies to mitigate these impacts are available. For the M2 frontage, a green buffer consisting of planting and mounding is appropriate to combine with the level changes and existing vegetation that already exist. Along Epping Road and Delhi Road frontages, commercial buildings may be placed to form a barrier between the major road and the interior of each site. This strategy provides:

- visual exposure for commercial tennants,
- provides an enclosed and protected area for residential development, and
- is consistent with mixed land use adjacent to rail stations.



3.0 Urban Design Principles



Development Intensity

A key TOD principle is to provide the greatest densities and mix of activities within the closest proximity to significant public transport. This principle can see the creation of a 200m radius TOD core, where the highest density residential and most employment, commercial and retail uses are located. Within 400 metres, high density residential and a mix of community, recreation and commercial uses are appropriate. As the radii extend outwards to 800 metres, the mix of uses would be reduced to medium density residential, community and recreation facilities. For the M2 site, this general pattern also needs to be tempered with the alignment of major roads and existing development in adjacent areas. In this respect, the TOD Core zone could logically be extended to include the southern section of the M2 site.

3.0 Urban Design Principles

Land Use

In line with TOD principles for the relative location of development intensity, a general arrangement of land use activity is appropriate for implementation on the site. While general in nature, the principles will see the development of mixed use zones at North Ryde Station and southern part of the M2 site. While recognising that key open spaces will also be incorporated within the future development area, the remaining parts of the M2 and the OSL sites are appropriate for a predominance of residential development mixed with a range of supporting activities.

Three general Land Use Zones are proposed for the precinct:

Mixed Use (Core)

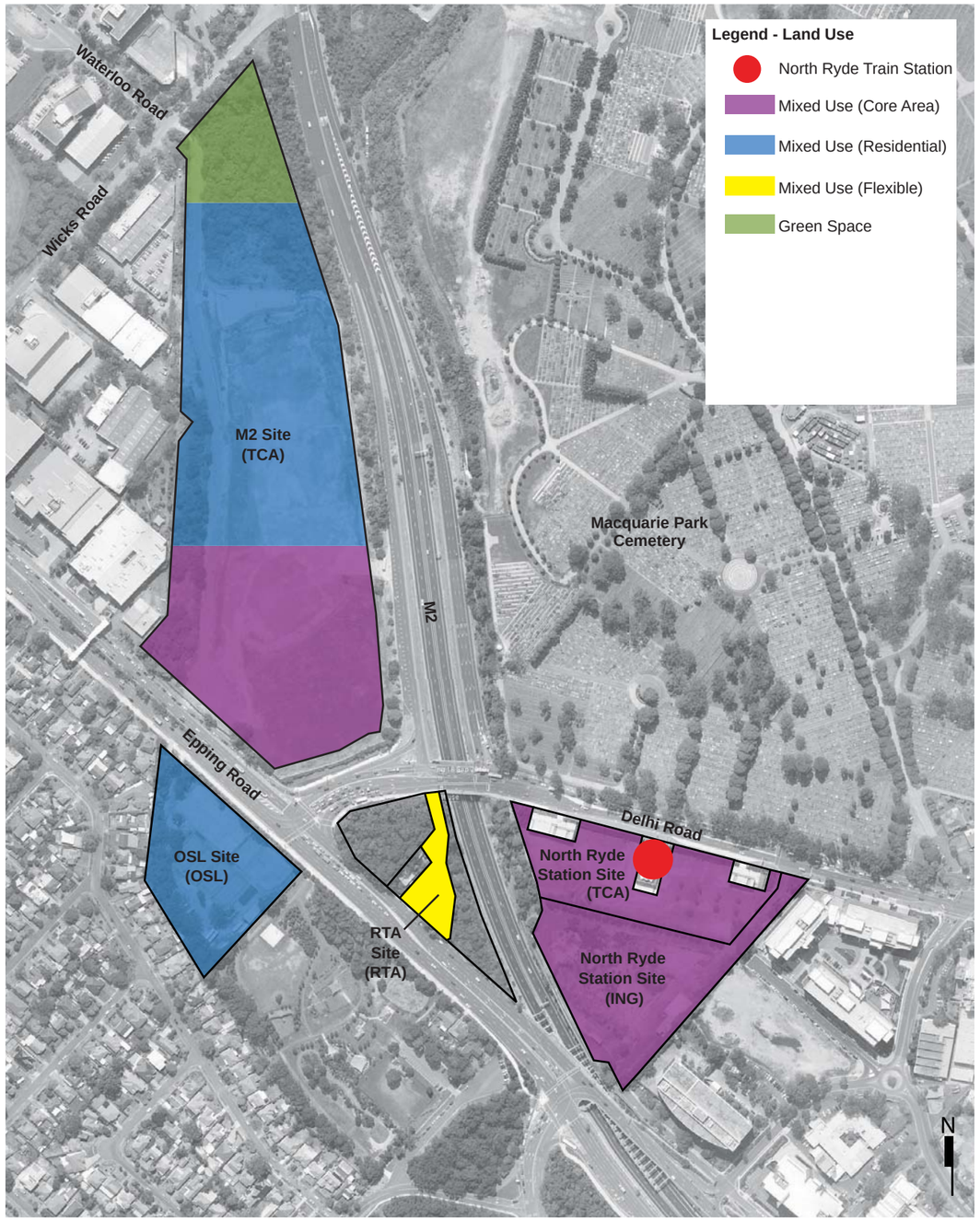
This area, in closest proximity to the rail station is appropriate for a wide and intense diversity of retail, commercial, residential (including affordable housing), public space and other uses.

Mixed Use (Residential)

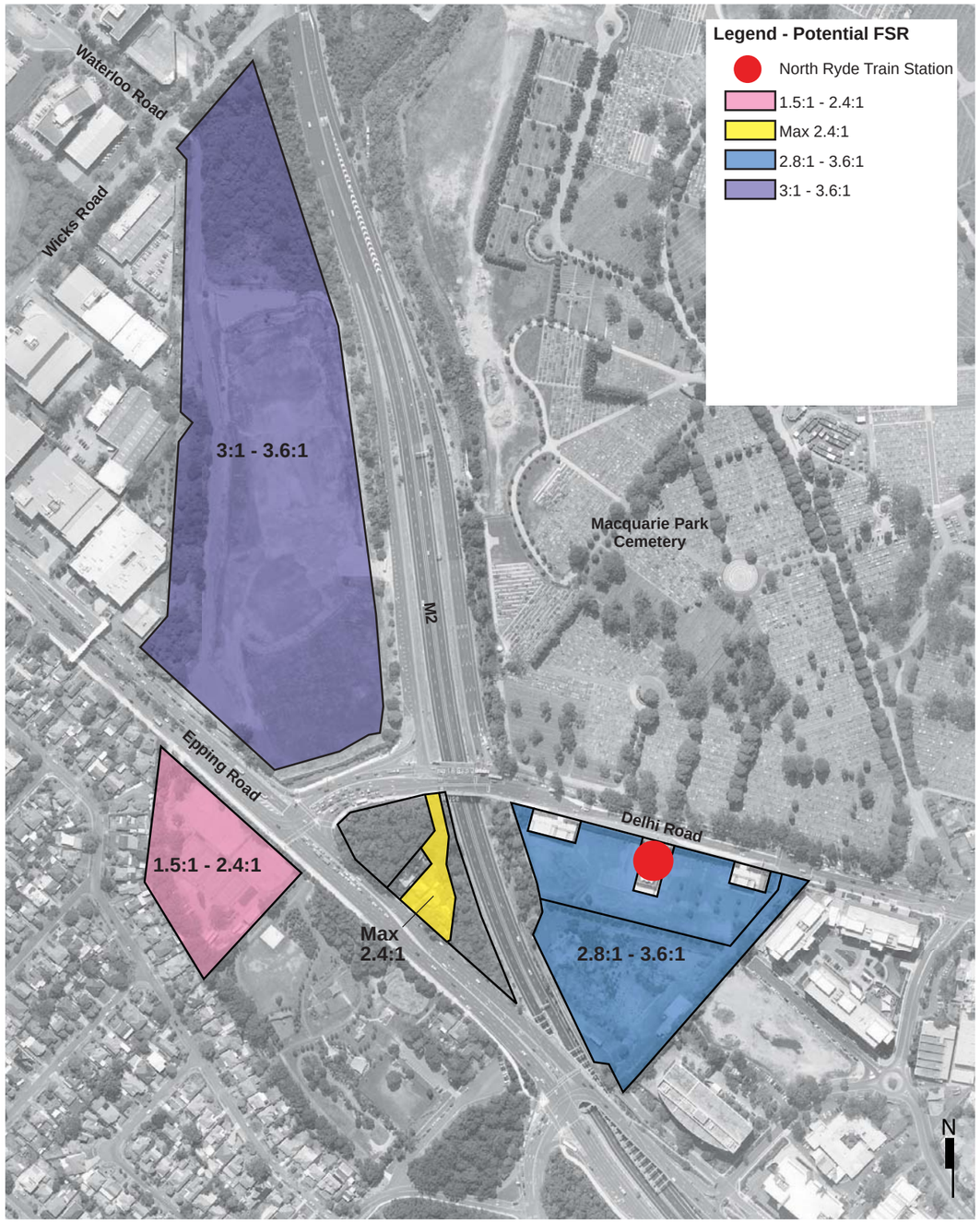
This zone constitutes those areas slightly less accessible to the rail station. The area is appropriate for a predominance of residential (including affordable housing), but with additional public spaces and retail, community and commercial activities on lower floors or in individual buildings

Mixed Use (Flexible)

The RTA site presents opportunities for residential and/or commercial development. The type and mix of activities is however dependent on future investigations.



3.0 Urban Design Principles



Potential FSR

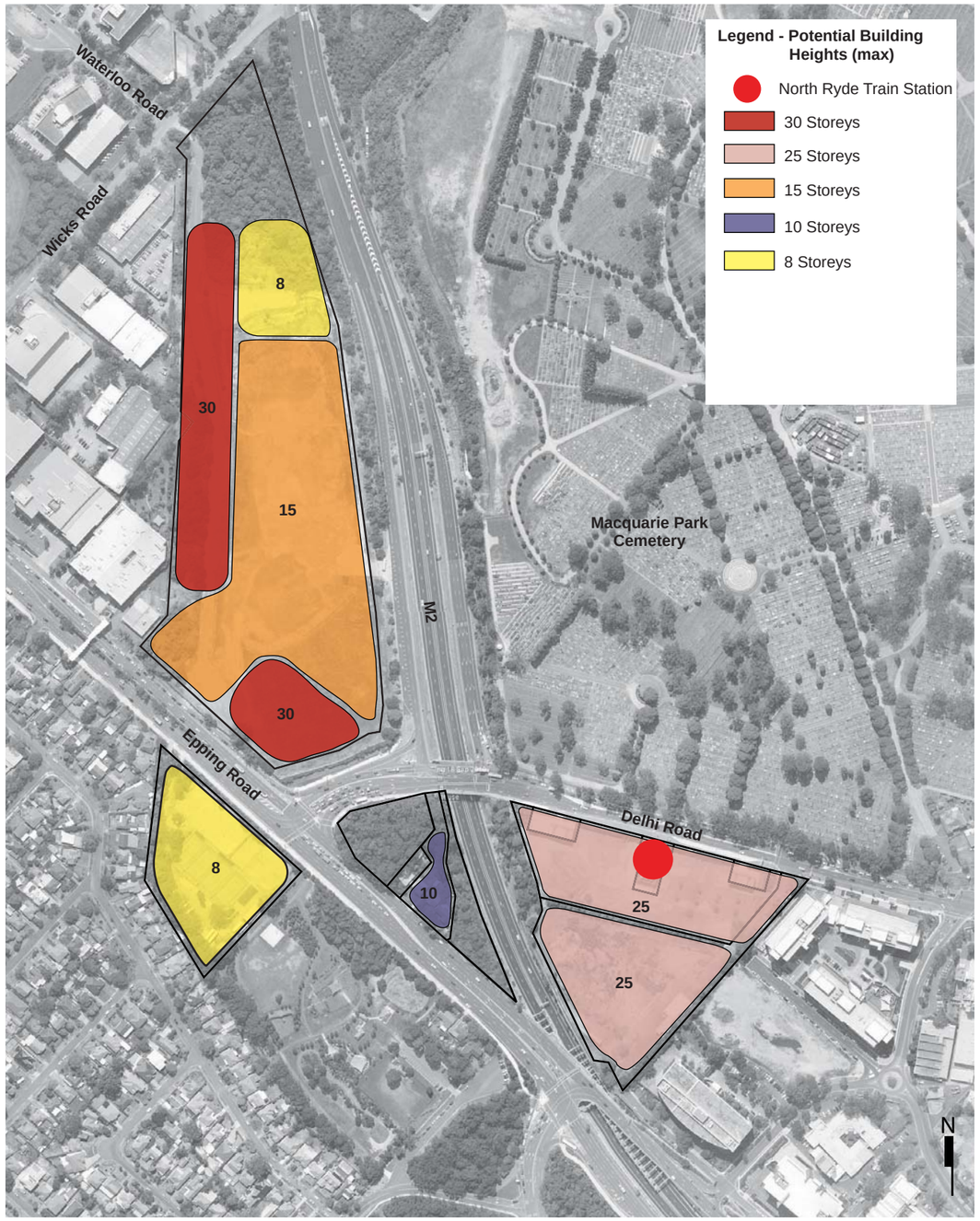
Working again with TOD principles for development intensity and with an understanding of existing controls and development in adjacent areas, a range of appropriate floorspace potential has been developed for the North Ryde Station Precinct, expressed as floor space ratios (FSR's).

- M2 Site: 3:1 - 3.6 :1
- OSL Site: 1.5:1 - 2.4:1
- RTA Site: Maximum 2.4:1
- North Ryde Station Site (North): 2.8:1 – 3.6:1
- North Ryde Station Site (South): 2.8:1 – 3.6:1

3.0 Urban Design Principles

Potential Building Heights

Aligned with the proposed Floor Space Ratios, potential building heights also follow the general pattern of greater intensity with proximity to the station, though are also impacted by the existing landholding size or size of development parcels that may result on larger sites. The opportunity also exists however for taller buildings along the western boundary of the M2 site, due to the limited impact that development in this location will have for both the site and surrounding areas.



4.0 Precedents

1

2

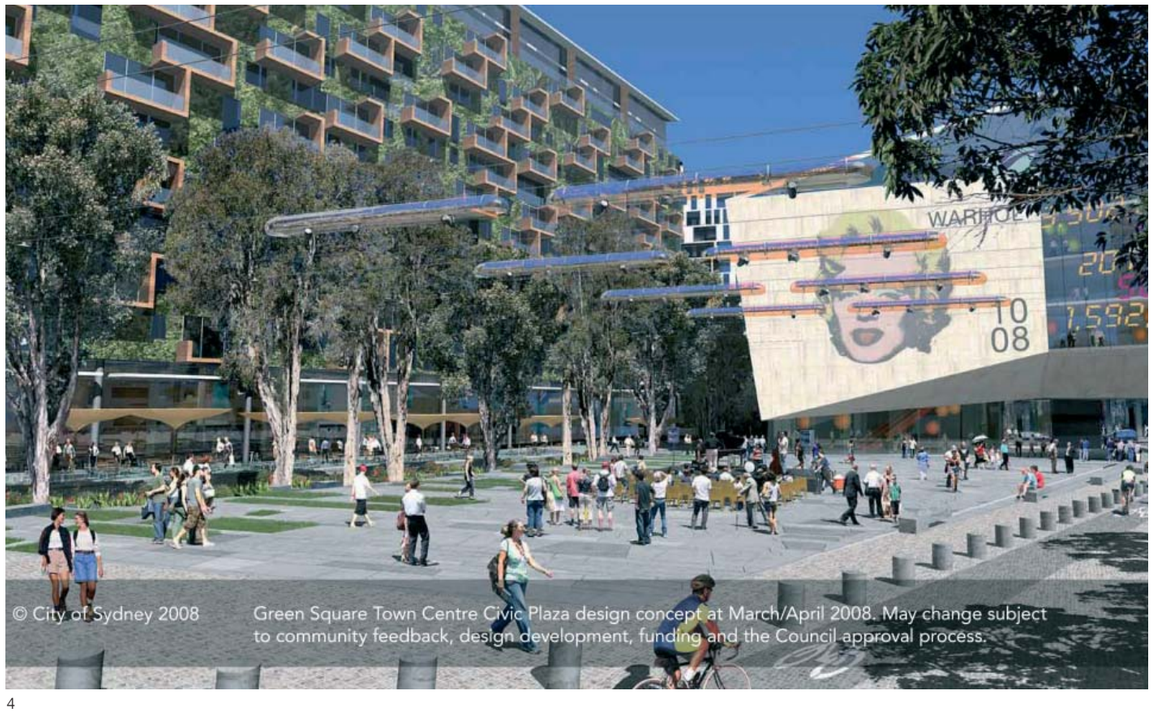
3

Mixed Use

(Clockwise from top left)

These examples of quality mixed use developments demonstrate the importance of creating a vibrant pedestrian focused realm with active edges, greenery, public art and quality finishes and street furniture. Mixed use areas are activated by a diverse range of uses which attract people at different times of the day and night, keeping spaces well used and safe.

1. Kogarah Town Square - AJC
2. Subiaco Town Centre - Roberts Day
3. Southport Central - Archidiom Design
4. Green Square Town Centre - City of Sydney
5. McGill Street Precinct, Summer Hill - Hassell



4

5

4.0 Precedents

Open Space

(Clockwise from top left)

1. The main open space at Landcom's Victoria Park incorporates a contemporary design aesthetic and offers a wide range of diverse activities across the park including barbecue areas, water play and kick around areas.

2. A smaller neighbourhood park at Victoria Park is an ideal location for community events and markets on weekends while including a playground and green open space for residents every day use.

3. Rehabilitating areas of native vegetation provides areas for passive recreation, walking and cycling. These parks provide an interesting contrast to more formal manicured open spaces.

4. Pocket parks offer residents close open space they can identify with and use as extensions of their nearby homes. The Seldon, Mirvac.

1

2

4

3

4.0 Precedents

1

2

3

4

Built Form

(Clockwise from top left)

1. A new medium density residential development at Rhodes by SJB Architects displays a contemporary design solution which addresses and activates the street in a pedestrian friendly way while incorporating height to maximise views.

2. Interest is created in this development through the relatively small scale vertical elements on the facade which suggest the residential use of the building and relate to the human scale.

3. A new residential building at Rouse Hill Town Centre includes other uses at street level to activate the public domain.

4. Attractive low scale terraces and attached houses such as these offer an alternative medium density residential solution which retains a more traditional residential street scale and character.

4.0 Precedents

Pedestrian Connections

(Clockwise from top left)

1. Busy roads will require well designed grade separated pedestrian and cycle bridges especially around TODs where safe easy connections to the station are a fundamental requirement.

2. Increase permeability and connectivity through sites with pleasant pedestrian and cycle routes between buildings. Links should include landscaping, quality finishes and street furniture as well as active uses where possible. Provide secure bike facilities at appropriate places.

3. Freeways and motorways limit pedestrian connectivity unless bridged.

4. Paths for walking and cycling through parks provide active recreation opportunities for residents and the broader community. Enhance pedestrian and cycle links to and from the station to maximise their amenity and encourage their use.

1

2

4

3

4.0 Precedents

Streetscape

(Clockwise from top left)

1. On-street parking, which slows vehicular movement, as well as changes in paving materials and extensions to the verge at crossings all contribute to a safer pedestrian environment. Pedestrian crossings must be located along the desire lines of peoples movement to and from the train station and other attractors such as convenience shops and community facilities.

2. Street trees and footpaths on both sides of the street provide an appropriate interface to the built form. An apartment buildings precence on the street is softened by the choice of mature landscaping appropriate to the location.

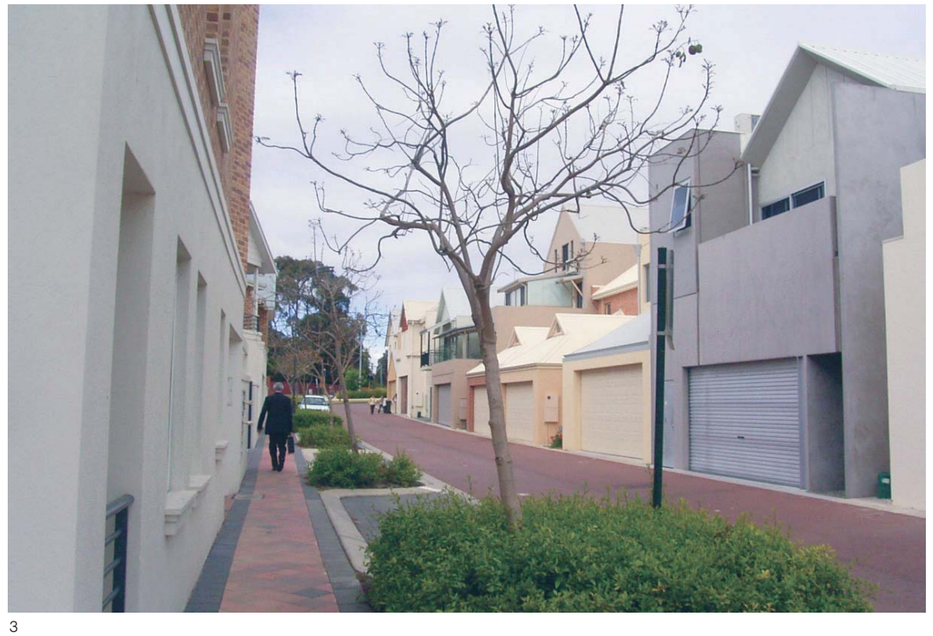
3. A well designed lane in Perth becomes an important part of the pedestrian realm and adds amenity to the adjacent homes by incorporating footpaths, landscaping and quality paving.

4. Great streets for pedestrians include street trees and footpaths on both sides as well as on-street parking and a carriageway designed narrow enough to keep traffic at a safe speed.

1

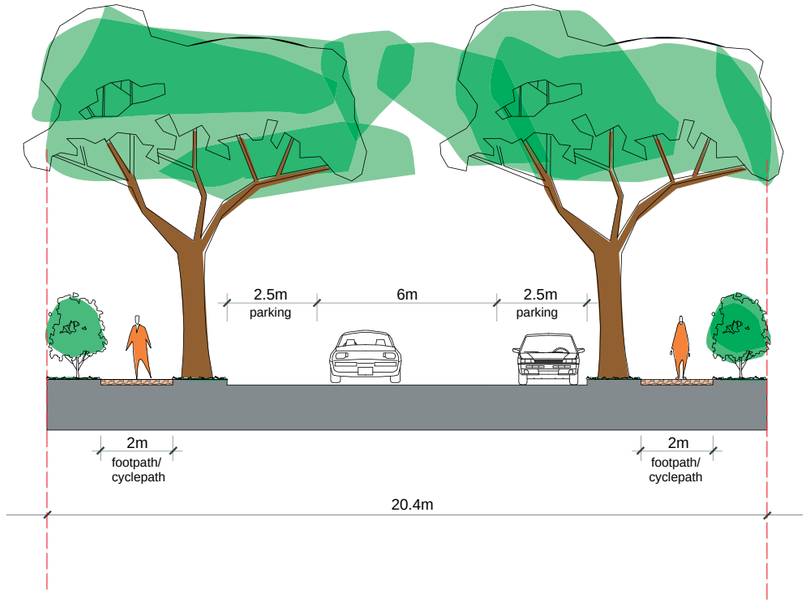
2

4

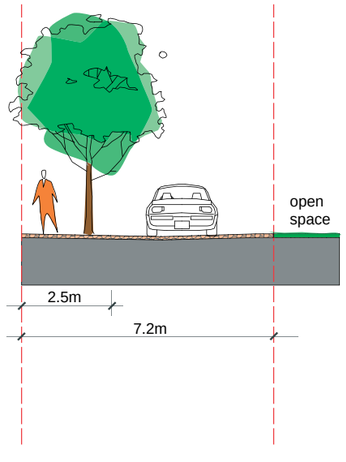


3

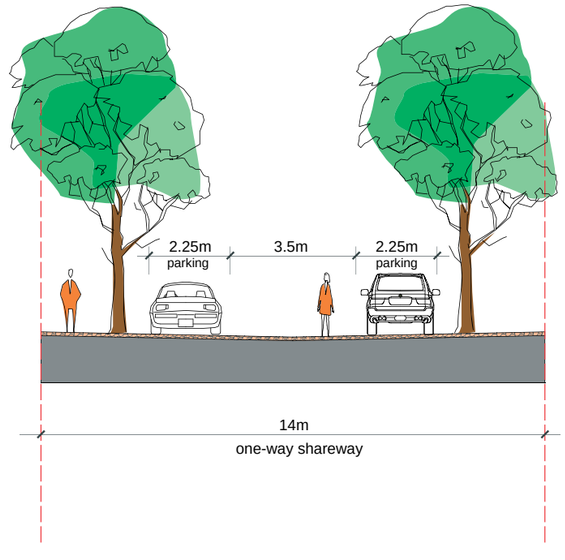
5.0 Street Sections



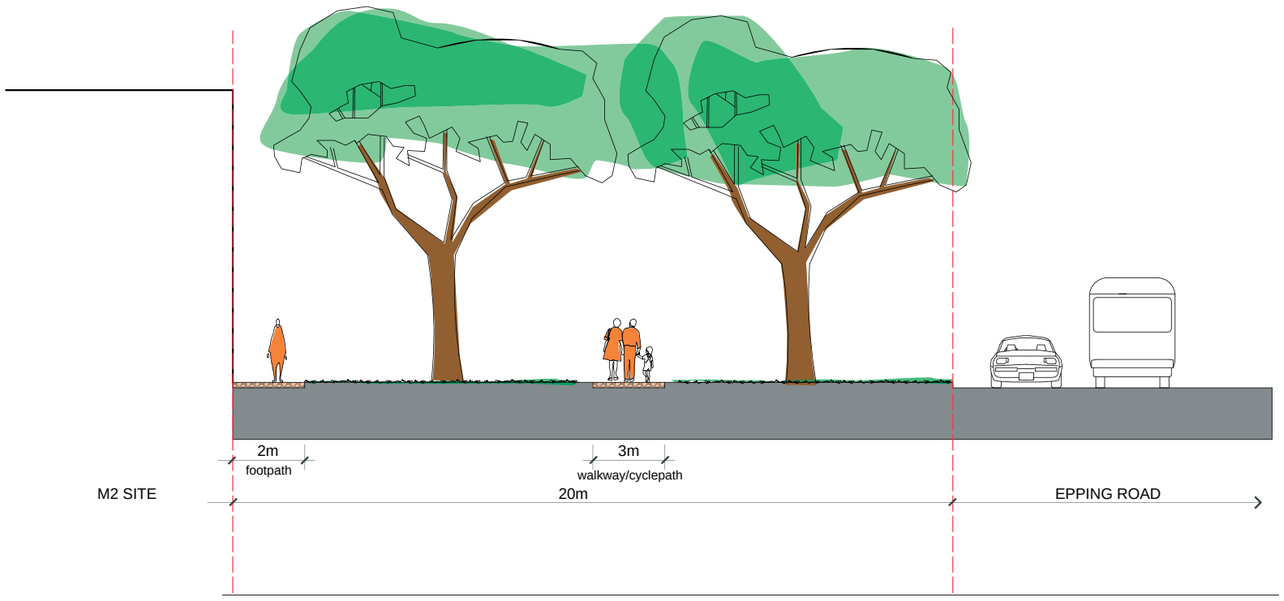
Boulevard



Lane (One-way)



Shareway (One-way)



Epping Road / M2 Site Landscape Buffer

6.0 Conclusion

Conclusions + Resulting Floorspace Potential

The Urban Design Principles contained in this report provide the basis for more detailed master planning that may deliver a mix of uses and a significant intensification of activity within a comfortable walking distance of the North Ryde Station. Within the context of their "structural" nature, the Principles may provide for a total estimated maximum floorspace potential of approximately 367,000 m2, corresponding to a precinct wide floor space ratio of 2.6:1. Within this total, market advice provided to TCA has highlighted the potential for provision of a wide range of activities.

The proposed principles for development of the North Ryde Station Precinct deliver on an opportunity to provide a high quality living and working environment, both focused directly on the rail station, and integrated into the existing contextual environment. In combination, the mix and intensity of development proposed on the five sites that make up the North Ryde Station Precinct support a transit supportive approach to their redevelopment and provide a significant opportunity for Government to demonstrate the application of TOD principles. The proposals support the State Plan and the Sydney Metropolitan Strategy while also providing a vehicle for the application of wider government initiatives such as the provision of affordable housing.

This page is intentionally left blank