North West Rail Link

Rouse Hill Station
Draft Structure Plan

A Vision for Rouse Hill Station Surrounds

NSW GOVERNMENT Transport

NSW GOVERNMENT Planning

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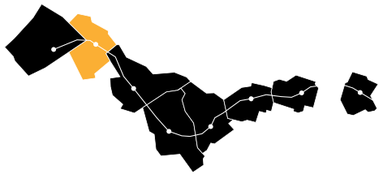
March 2013

Rouse Hill Draft Structure Plan
Table of Contents



Rouse Hill Draft Structure Plan
1. Introduction

1.1 CONTEXT

The North West Rail Link (NWRL) is a priority transport infrastructure project for the NSW Government. The NWRL will include eight new stations and services as part of a 23 kilometre link, running from Epping to Cudgegong in north-west Sydney, connecting with the Epping to Chatswood Rail Link (ECRL) and Sydney's wider rail network.

The north west of Sydney is expected to experience high growth with the need for new dwellings and additional jobs to meet demand. To sustainably manage this growth, metropolitan planning aims to provide for a more compact, accessible city, capable of supporting more jobs, homes and lifestyle opportunities within close proximity of public transport.

The delivery of a new rail line in the North West is a significant investment in public infrastructure and represents an opportunity to carefully consider the wider implications of rail and to comprehensively plan for the future. The North West has great potential to become a major transport-oriented corridor, delivering a significant amount of employment, high levels of self-containment and an unrivalled level of amenity and lifestyle within a desirable residential community.

The NWRL will meet the challenge of future growth, by:

- **Providing rail access** between North West Sydney and Epping, Macquarie University, Macquarie Park, Chatswood, St Leonards, North Sydney and the Sydney Central Business District (CBD), including new rail services to existing centres in the Hills District, such as Castle Hill, Rouse Hill and Norwest Business Park.
- **Reducing vehicle trips**, when rail is introduced to the North West all modes of public transport will become a more attractive and accessible alternative to the private motor vehicle.
- **Improving travel times** from, to and within the North West and delivering a reliable, dependable service which far surpasses that of the bus or car.

1.2 REPORT STRUCTURE

The following report is a study to determine the challenges and opportunities the new station will present to the Rouse Hill locality. This study will culminate in a collective vision and Draft Structure Plan for the station precinct, to guide the future character of the Study Area and to reinforce the delivery of the NWRL and a new station at Rouse Hill. In preparing the Draft Structure Plan, consideration has been given to the following:

1. **Role of the Study Area in the NWRL corridor.** Consideration is given to the role the Study Area will perform within the rail corridor and the North West.

2. **Analysis of the physical characteristics**. A comprehensive site analysis has been undertaken to ascertain the natural and physical opportunities and constraints of the Study Area. Please refer to *Section 2: Opportunities & Constraints Analysis*.

3. **Analysis of the existing planning controls in the Study Area.** The key planning controls that apply to the Study Area have been examined to determine their ability to respond to a new rail link and station. Please refer to *Section 3: Current Planning Controls*.

4. **Identification of Opportunities for Growth**. Sites that may contribute to the growth of the Study Area in response to a new rail link and station have been identified. Please refer to *Section 4: Opportunities for Future Development*.

5. **Vision for the Study Area.** The overall vision for the Study Area is informed by the above analysis. This vision will be realised through the Draft Structure Plan, which provides an overall guide to the future character of the Study Area. Please refer to *Section 5: Vision and Structure Plan*

6. **Actions and Implementation.** To achieve the overall vision for the Study Area, a series of actions to be undertaken, have been identified. Please refer to *Section 6: Actions and Implementation*

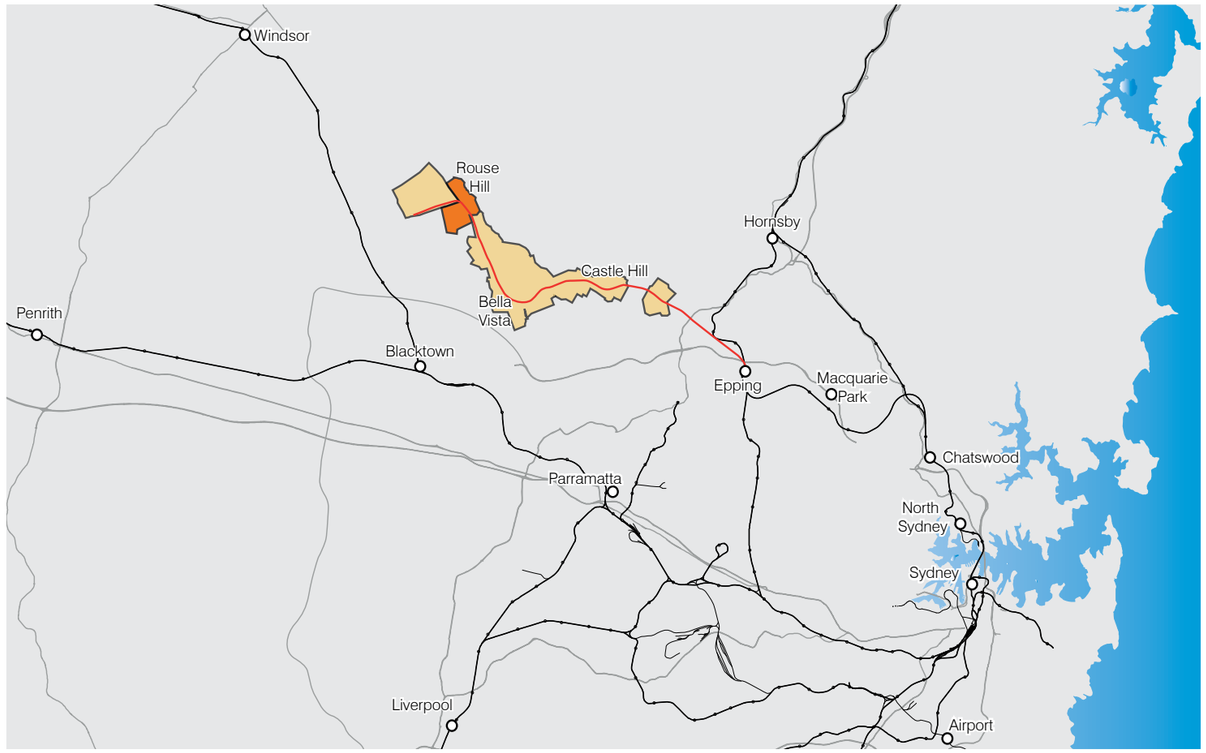
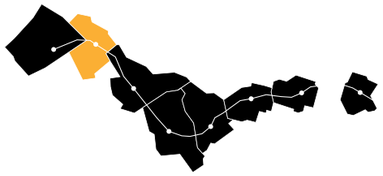


Figure 1: North West Rail Link in the context of Metropolitan Sydney



1.3 STUDY AREA LOCALITY & CHARACTER

The NWRL includes a new station at Rouse Hill. The new train station will be located on the west side of Rouse Hill Town Centre shopping complex, near the intersection of Rouse Hill Drive and Tempus Street.

Rouse Hill is designated as a Major Centre serving the North-West, comprising employment, retail and services under the Metropolitan Plan for Sydney. It is an important shopping and business centre for the region, which is to include higher density residential development within 1km to the centre. In this regard, the Metropolitan Plan supports residential intensification within the walking catchment of the train station and recognises that any forward planning for the Rouse Hill study area and its surrounds will need to consider the future requirements for office buildings, retailing opportunities, education, community and cultural facilities.

The NWRL has the potential to strengthen Rouse Hill's role as a Major Centre by supporting growth in and around the centre. This will help achieve key policy settings of the Metropolitan Plan for Sydney such as building more homes in an existing urban area, enabling residential growth in areas where there is available or planned public transport capacity and providing jobs closer to home.

The boundary of the Study Area is based on the nearest road boundary within a radius of 800m from Rouse Hill Station, which is a distance normally considered to reflect a 10 minute walking trip. The boundary has also been defined by taking into account the existing character, predominant land uses, built form and natural elements of the area.

The Rouse Hill Study Area is an established residential and retail/commercial centre that covers approximately 327 hectares and is located within both Blacktown and The Hills Shire Local Government Area (LGA).

The study area extends north to Aberdour Avenue, east to Caddies Creek, south to Sanctuary Drive and Merrivale Road and west to include Castlebrook Lawn Cemetery and Crematorium and part of the Ponds.

The Study Area comprises the existing Rouse Hill commercial/retail/residential centre at its core, Castlebrook Lawn Cemetery and Crematorium and surrounding residential areas. The general built form of the mixed commercial/retail/residential buildings within the core vary between 2 to 8 storeys. Rouse Hill Shopping Centre is an open street style shopping centre and includes a bus transport hub located at Windsor Road.

Outside the core, the Study Area comprises largely residential development and bulky good retail outlets along Windsor Road including a service station, Aldi supermarket and the Mean Fiddler. Housing stock consists of 1-2 storey detached houses set on medium to large blocks, with strong landscaped settings and extensive vegetation. The Study Area also contains some heritage items which add another dimension to its built form.

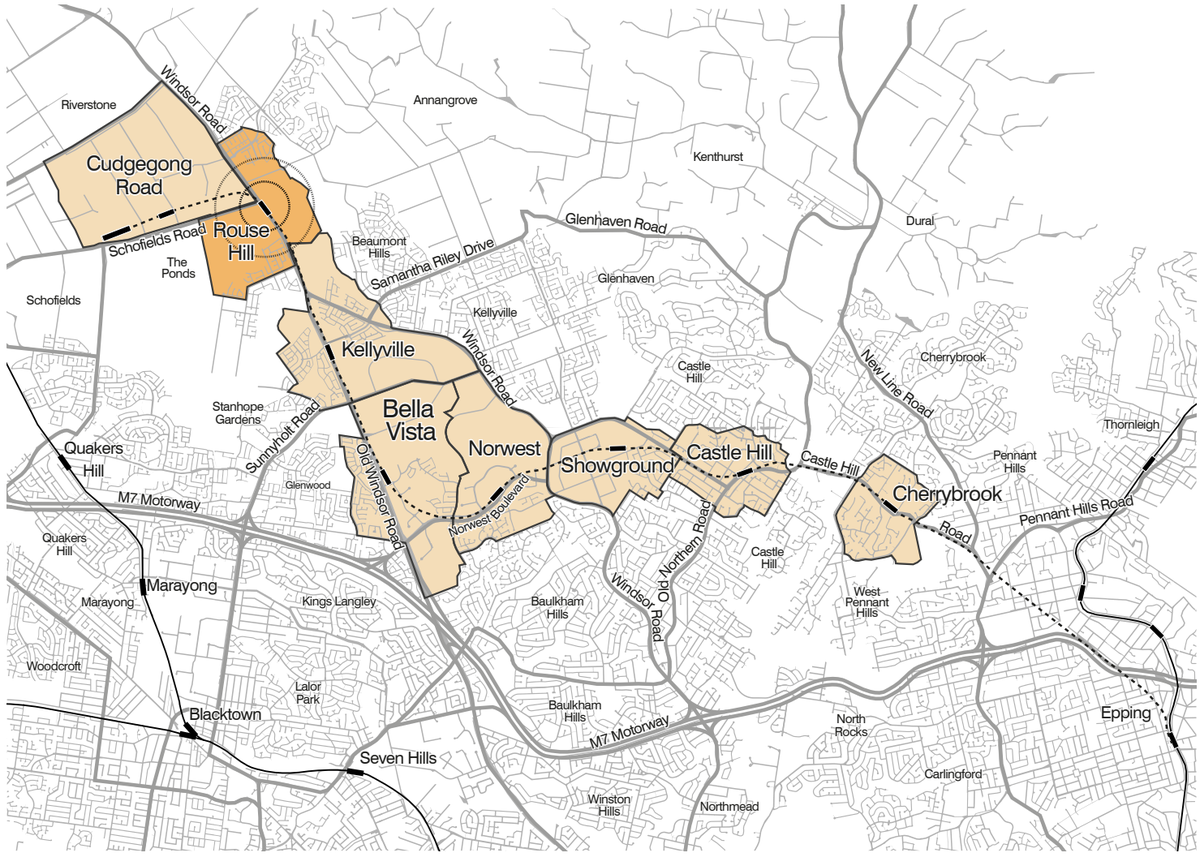


Figure 2: Rouse Hill Study Area, in the context of the North West Rail Link.

Rouse Hill Draft Structure Plan
2. Opportunities & Constraints Analysis

2.1 INTRODUCTION

This section is an assessment of the opportunities and constraints within the Study Area. The physical characteristics of the Study Area have been mapped and analysed to identify physical constraints and opportunities within the Study Area. These characteristics include: transport, traffic and accessibility; open space networks and ecology; topography and landslip; drainage and hydrology; bushfire risk; and infrastructure easements. Constraints related to recent development, heritage and strata-title have also been examined.

The combination of these elements will reveal the overall level of constraint within the Study Area and highlight those sites which have the opportunity to change in response to a new rail link and station at Rouse Hill.

The analysis of the information contained within sections 2, 3 and 4 of this report have been drawn from a number of sources including:

- Blacktown Council
- The Hills Shire Council
- Department of Planning and Infrastructure
- Land and Property Information Division of NSW
- Transport for NSW

Figure 3: Rouse Hill Station Study Area, showing station location, study area boundary and key land uses
Source: Google Maps 2012

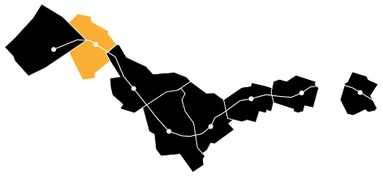


Figure 4: Images of the existing built form and character within the Study Area

Rouse Hill Draft Structure Plan
2. Opportunities & Constraints Analysis

2.2 TRANSPORT, TRAFFIC & ACCESSIBILITY

The Study Area is accessible from two principle routes – Windsor Road and Schofields Road. Windsor Road bisects the study area north to south linking Windsor to the CBD and Western Sydney (via the M2 and M7) and important employment centres, such as Norwest Business Park and Macquarie Park. Schofields Road provides the main east-west arterial road linking Riverstone to Rouse Hill. Old Windsor Road also potentially acts as a barrier between the eastern and western parts of the Study Area.

Internally within the Study Area, the street layout in areas that have recently been developed is made up of local roads in a fine grain and connective street network. Permeability for all transport modes is restricted by large areas of undeveloped land within the Study Area.

The local bus network connects Rouse Hill to Schofields, Kellyville, Norwest, Castle Hill and the CBD/Macquarie Park via Windsor Road and the M2 Motorway.

Figure 5 below demonstrates the 5, 10 and 20 minute walking catchments from the proposed station location. Within the Study Area, pedestrian and cycling accessibility is restricted by barriers such as crossing the major arterial route of Schofields and Windsor Road and the lack of permeability associated with the large areas of undeveloped land.

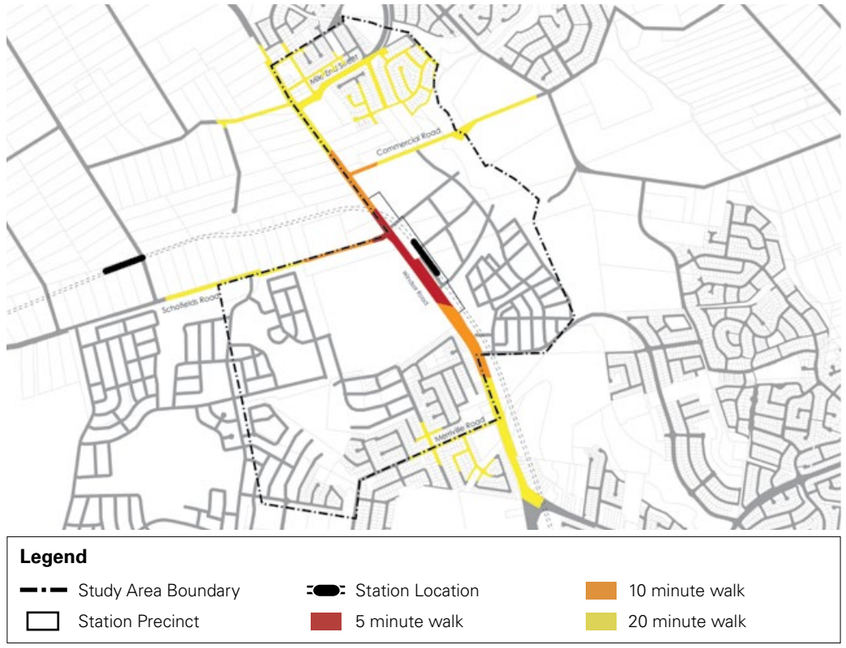


Figure 5: Walking Catchment within the Study Area

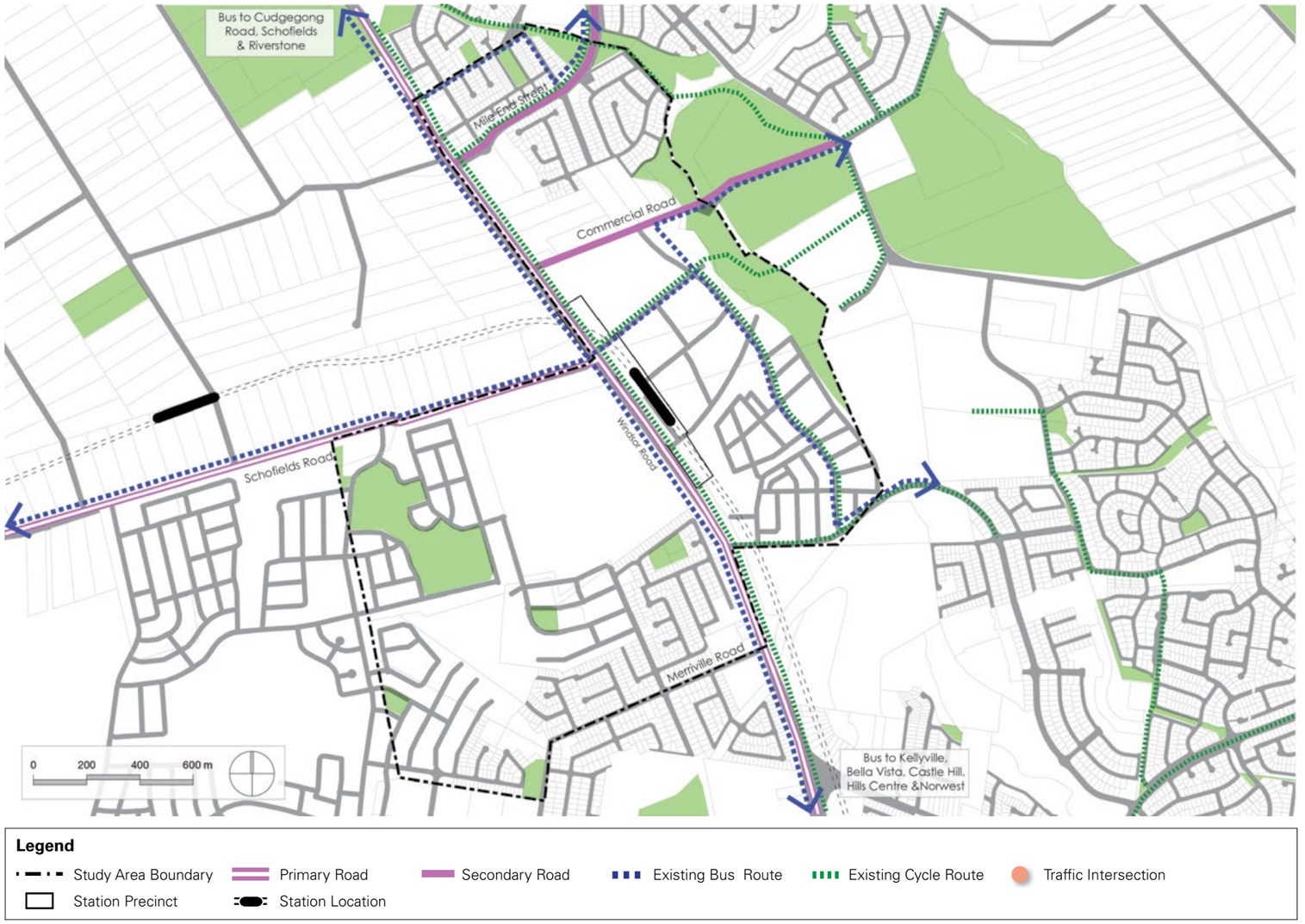
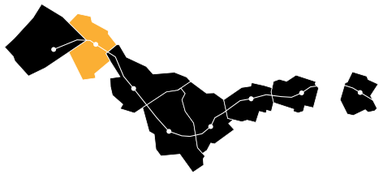


Figure 6: Access & Movement within the Study Area



2.3 OPEN SPACE & CONSERVATION

Within the Study Area there are a number of scattered pocket parks and an open space corridor associated with the Caddies Creek Riparian Corridor. Exterior to the site are a number of major open space areas including Rouse Hill Regional Park, The Hills Centenary Park and Bruce Purser Reserve. These major parks represent a significant recreational facility for the area. These spaces are worthy of retention and enhancement, and are candidates for proposals under any future open space/public domain strategies.

The Study Area contains amounts of Sydney Turpentine Ironbark Forest, listed as a Critically Endangered Ecological Community under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* as well as the *Threatened Species Conservation Act*, predominantly located along the western Study Area boundary.

There are also pockets of Cumberland Plain Woodland, classified as a Critically Endangered Ecological Community under the *Environment Protection and Biodiversity Conservation Act (EPBC) 1999* and the *NSW Threatened Species Conservation Act 1995*, located within the existing Commercial Road Reserve and William Harvey Reserve. In addition, the Study Area contains dispersed pockets of unclassified vegetation. Further assessment of the ecological values of the Study Area may be required to inform any future rezoning.

Figure 7: Open Space & Conservation within the Study Area

Rouse Hill Draft Structure Plan
2. Opportunities & Constraints Analysis

2.4 HERITAGE & SPECIAL USES

Figure 8 shows two sites within the Study Area accommodate special uses. This includes the Castlebrook Lawn Cemetery and Crematorium located at the corner of Schofields and Windsor Road, and Rouse Hill Anglican Church located at the intersection Windsor Road and Mile End Road.

Several general heritage items are located within the Study Area. These include:

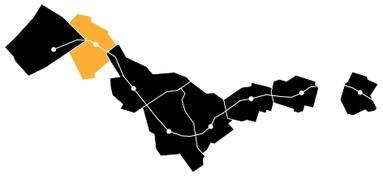
- Rouse Hill Anglican Church;
- Vinegar Hill Woolshed & the Mean Fiddler;
- Aberdoon Homestead;
- Open space area associated with the Town Creek Riparian Corridor;
- Eire Way House.

The Queens Arms Inn site located on the corner of Windsor and Mile End Road is identified as an 'archeological site'. There are no heritage conservation areas located within the Study Area.

In the Blacktown LGA, the cemetery is identified as a special use.

The Draft Structure Plan seeks to protect the heritage items identified in *Figure 8: Heritage & Special Uses* within the Study Area.

Figure 8: Heritage & Special Uses within the Study Area



2.5 TOPOGRAPHY

The topography within the Study Area is characterised by a ridgeline that runs south-north across Schofields Road and falls gently away to two drainage lines, Caddies Creek to the east and Second Ponds Creek to the west.

Heights within the Study Area range between approximately 42-84 metres above sea level. The high point within the Study Area is located within the park located on Glenheath Ave.

Slope analysis of the Study Area shows that land levels are highest in the south west within Kellyville Ridge.

Figure 9: Topography within the Study Area

2. Opportunities & Constraints Analysis

2.6 DRAINAGE

The station is located parallel to Windsor Road and within the Caddies Creek riparian corridor catchment. This and the Second Ponds Creek catchment drain into the Hawkesbury River catchment which lies to the north.

The predominantly rural land and areas of open space adjoining Caddies Creek and Second Ponds Creek are subject to a low and high risk of flooding. Further investigation may be required at any future re-zoning or development application stage to establish appropriate flood planning levels.

Similarly, given the location at the start of significant drainage catchments, controls governing stormwater capture, treatment and re-use will need to be devised to govern any future growth within the Study Area.

The flooding information captured in this report is preliminary and a detailed flooding study will need to be undertaken at master plan level.

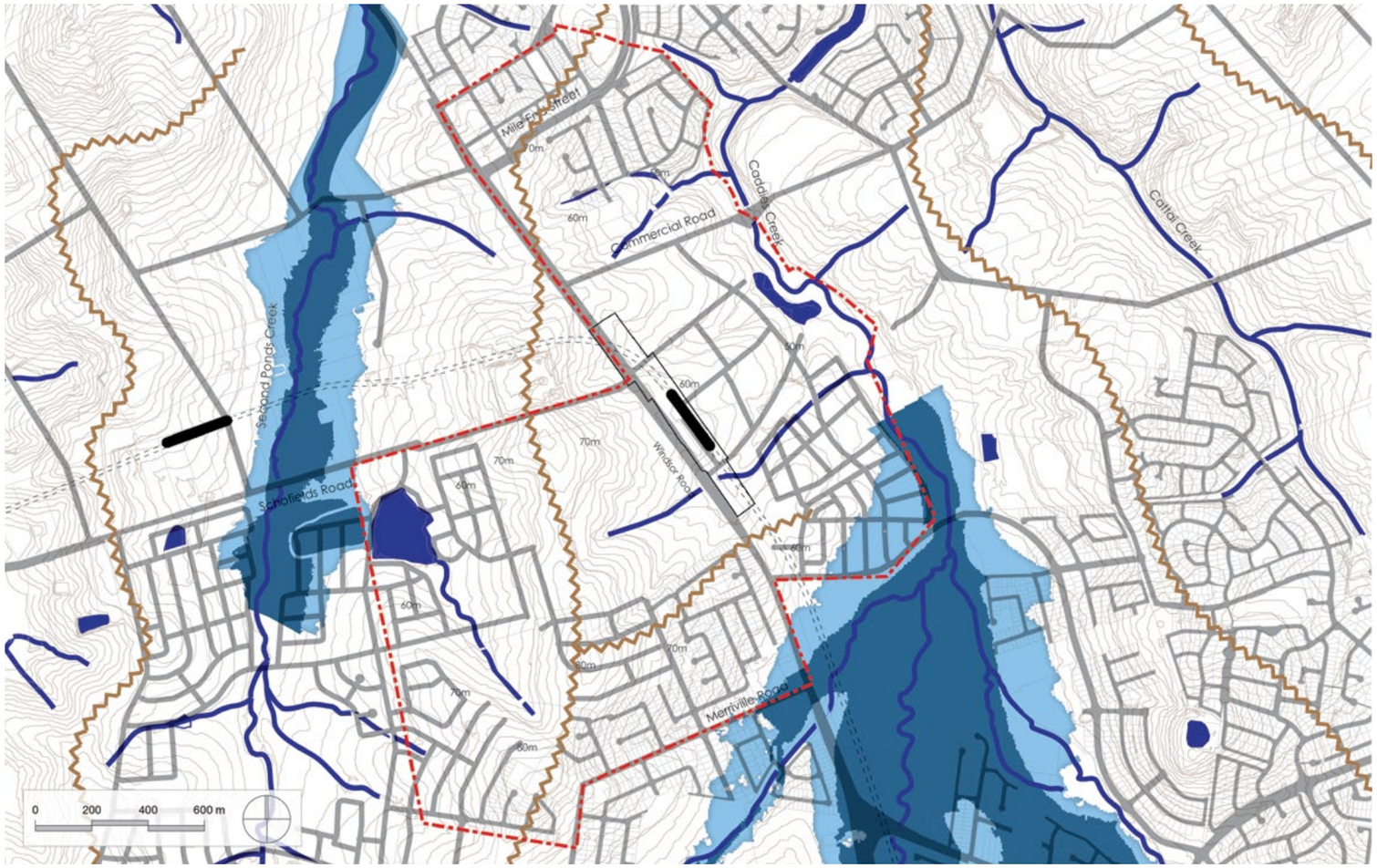
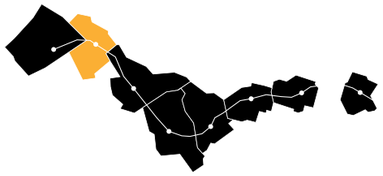


Figure 10: Drainage within the Study Area



2.7 RECENT RESIDENTIAL DEVELOPMENT

The assessment of recent residential development includes any that has occurred over the last 15 years from 1998 to 2012.

An analysis of recent residential development within the Study Area indicates that incremental low density residential development has occurred throughout the Study Area.

Recent development is concentrated within the new Rouse Hill Centre and to areas south of Castlebrook Lawn Cemetery and Crematorium and north of Commercial Road. Within the Rouse Hill Centre this residential development is apartment living. Outside of this it is predominantly low and medium density housing.

Consideration has also been given to the condition and age of the existing building stock and impact of these factors on the likelihood of land being redeveloped in the lifetime of the Draft Structure Plan. Recent development is considered a short to medium term constraint to development as the average life cycle of a building is generally 30-40 years. A proportion of dwellings within the Study Area have been recently built and/or are of sufficient quality to be excluded as potential urban renewal redevelopment opportunity sites in the short to medium term. Refer to section 4 for an overview of the opportunity sites within the Study Area.

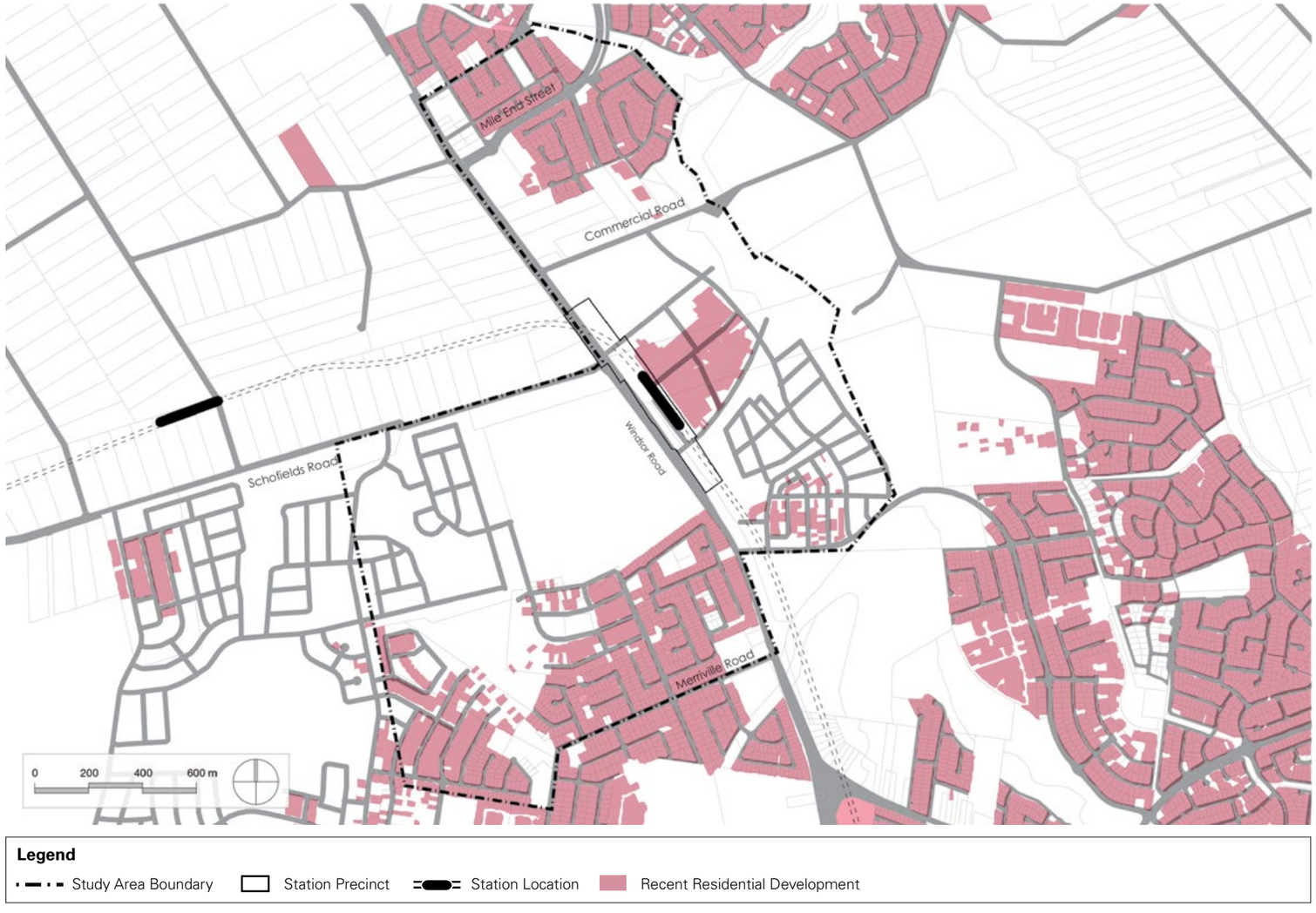


Figure 11: Recent Residential Development within the Study Area

Rouse Hill Draft Structure Plan
2. Opportunities & Constraints Analysis

2.8 OTHER CONSTRAINTS

There are areas within the Study Area which, as a result of their highly vegetated setting, are prone to bushfire. Bushfire prone land is concentrated east of Windsor Road within the area of the Rouse Hill Centre and south of this area. The remainder of the Study Area is otherwise free of bushfire prone land.

Any redevelopment of land within these bushfire prone areas will need to provide the required asset protection zones in accordance with relevant Planning for Bushfire Protection guidelines.

An electricity easement diagonally traverses the Study Area in the west.

There is a single strata title ownership located along Windsor Road. Land governed by strata title arrangements are considered a constraint to redevelopment, as under current legislation, the approval of all owners and lenders is first required. Accordingly, these schemes are not likely to contribute to the future residential capacity of the Study Area into the foreseeable future.

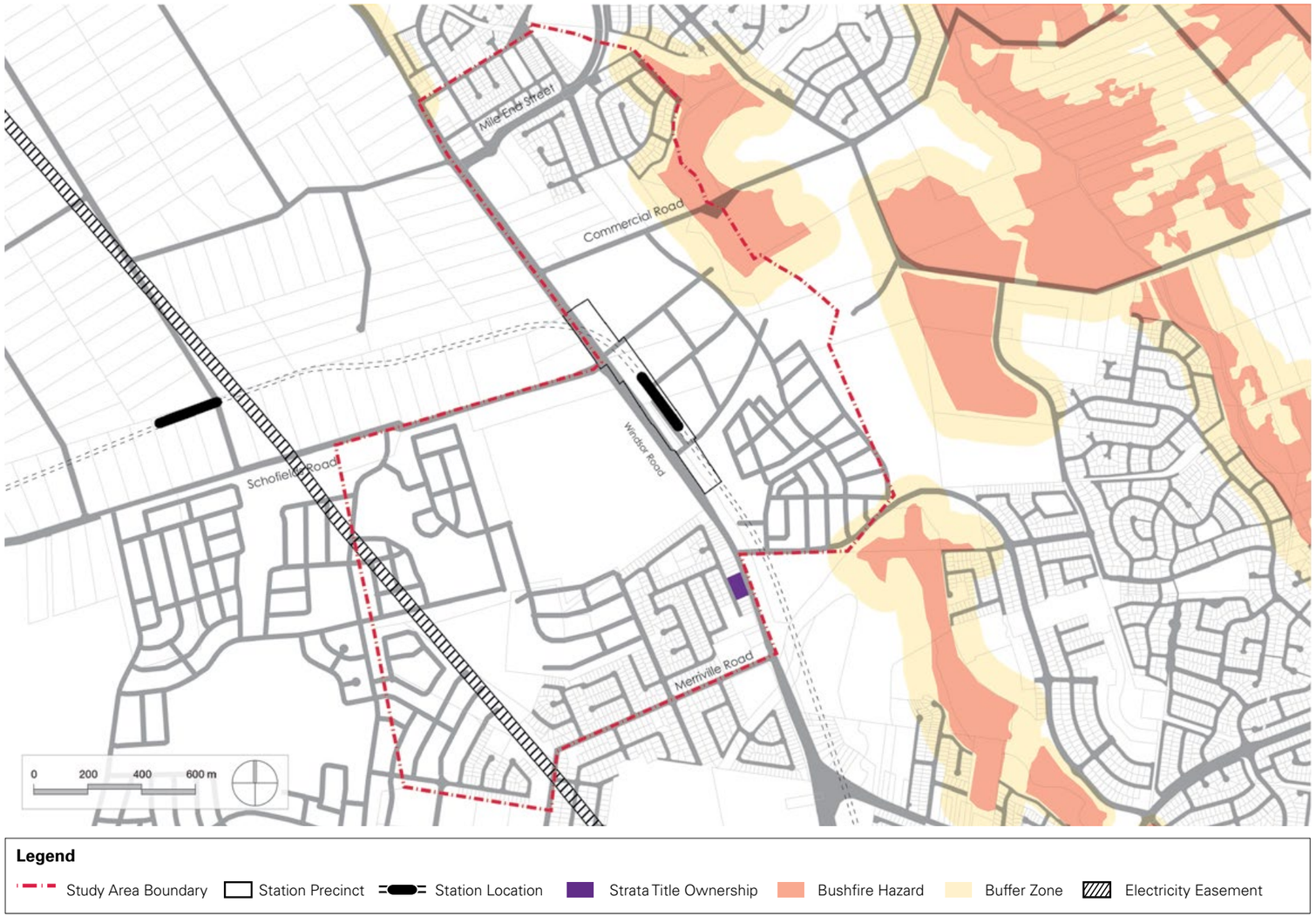
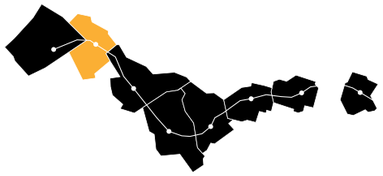


Figure 12: Other constraints within the Study Area



2.9 COMBINED CONSTRAINTS

The constraints mapping indicates there are large portions of the Study Area that are constrained.

Pockets of recent residential development are scattered across the Study Area. These parcels are unlikely to be developed in the short term, however may be suitable for renewal in the longer term.

There is a large area of undeveloped land that is identified as bushfire prone land. This characteristic and any regulatory guidelines would need to be appropriately considered in any proposal for the area.

The electricity easement that diagonally traverses the Study Area north to south is a significant utility service and the easement represents a constraint.

The Castlebrook Lawn Cemetery and Crematorium is unlikely to offer any opportunity for redevelopment.

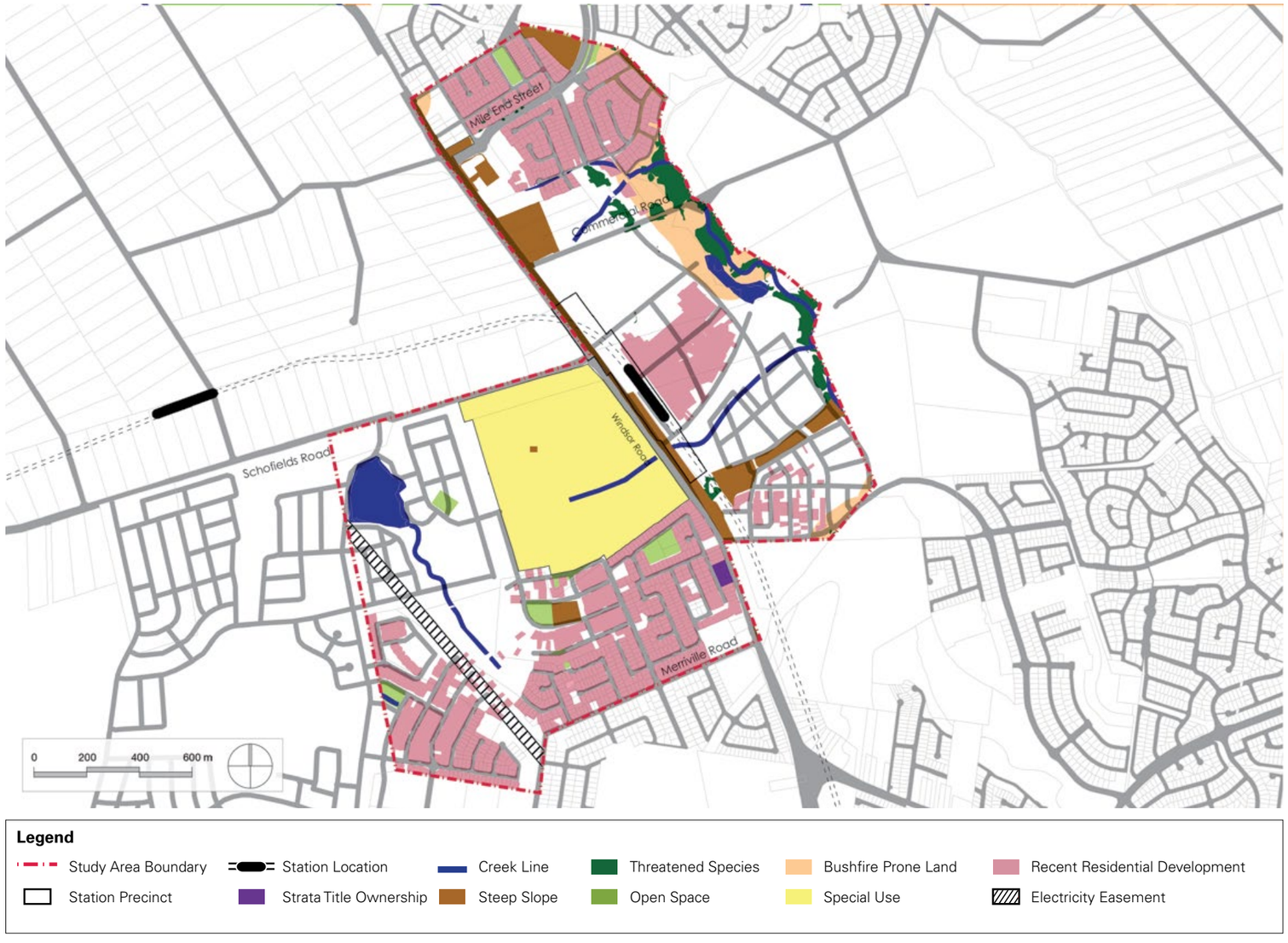


Figure 13: Combined Constraints within the Study Area

Rouse Hill Draft Structure Plan
3. Planning Controls

3.1 INTRODUCTION

This section reviews the existing and proposed Council land use controls that apply to land within the Study Area.

The key planning controls applying to the Rouse Hill Study Area are included in *Draft Blacktown Local Environmental Plan 2013* and the *The Hills Local Environmental Plan 2012*.

3.2 LAND USE

Land within the Rouse Hill Study Area is zoned for low density residential, employment and special uses. Currently, Rouse Hill Town Centre is zoned B4 Mixed Use, to allow for the retail, commercial and residential uses. The drainage corridor lands to the east are zoned SP2 Special Uses (Trunk Drainage).

North of Commercial Road, land is zoned for employment uses (B5 Business Development, B6 Enterprise Corridor and B2 Local Centre). Medium density residential zoning applies to land in the north and south-east of the. In the north and south-east of the Study Area, land is zoned for medium density housing. This zoning accords with the Rouse Hill Master plan, as prepared by Landcom for lands between Commercial Road and Sanctuary Drive.

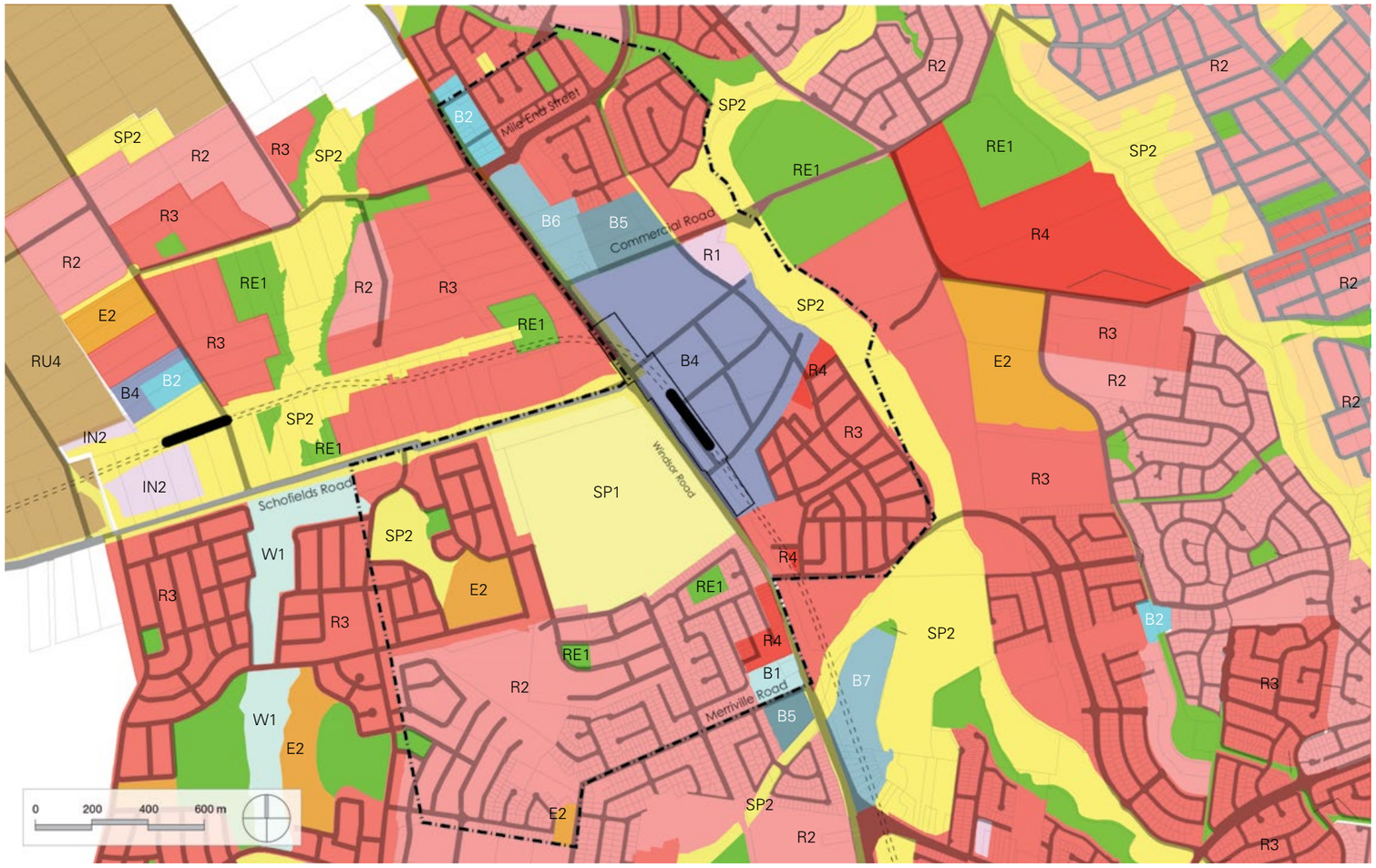
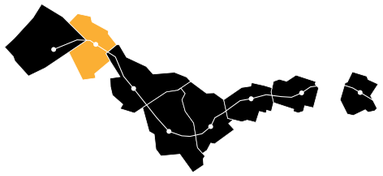


Figure 14: Zoning Controls within the Study Area



3.2 BUILDING HEIGHT

Height controls in the Study area vary from 36m (at the mixed use Rouse Hill Town Centre), 25m for the mixed use lands north of the existing retail/residential centre, 12m at the employment lands north of Commercial Road and abutting Windsor Road,10m at low density residential areas in the north, 12m for low density residential areas in the south.

The drainage corridor in the east is not subject to a height limit.

The maximum building height controls for residential developments to the west of Windsor Road, within Blacktown LGA, range from 9 metres for dwelling houses, and to 1-2 storeys for dual occupancies, integrated housing and medium density housing.

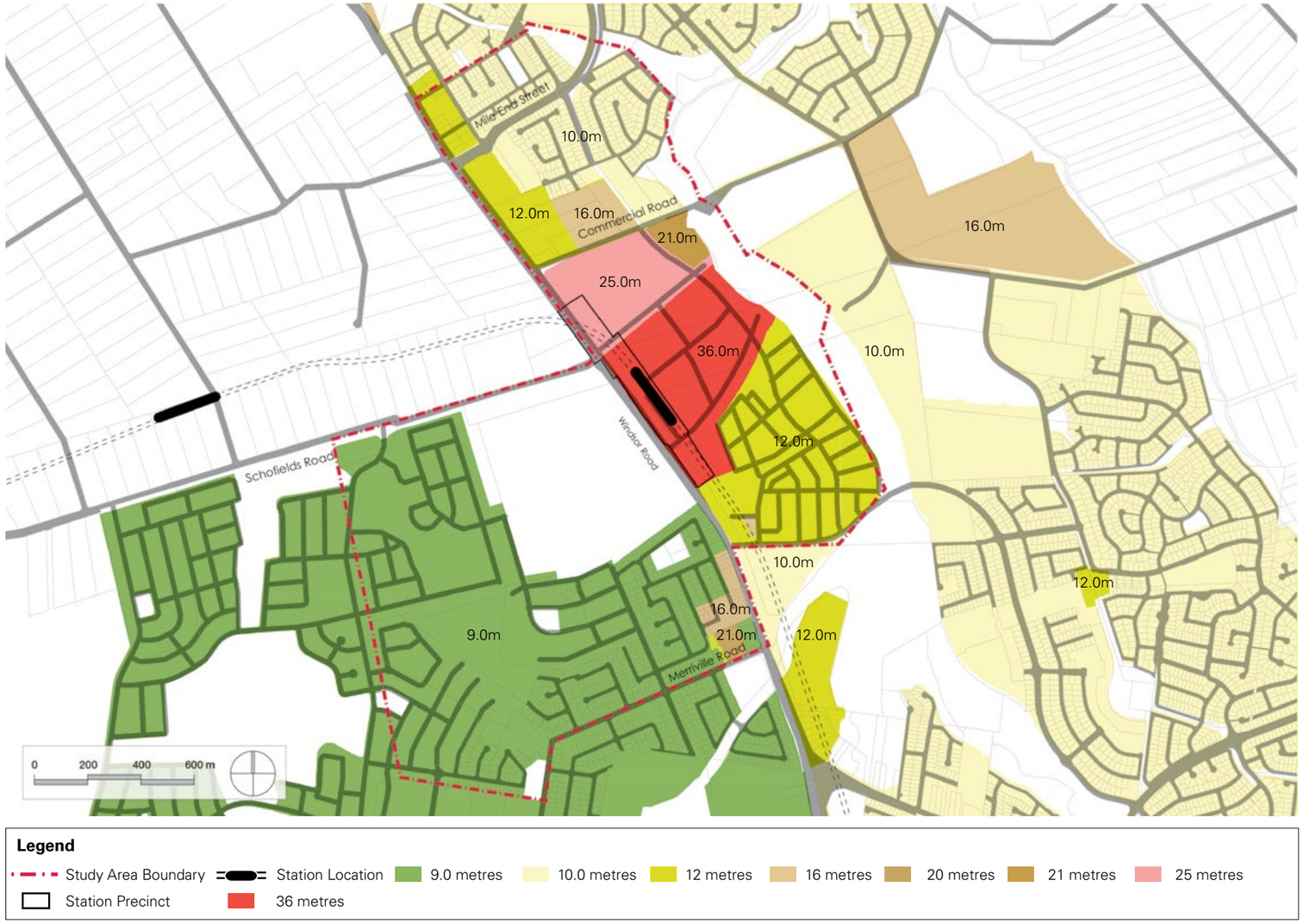


Figure 15: Building Height Controls within the Study Area

3. Planning Controls

3.3 LOT SIZE

Areas of land zoned for residential uses (medium and high density) within The Hills LGA are governed by a minimum lot size of 450sqm.

Within the mixed use and commercial zones along Windsor Road lot sizes are prescribed to a minimum 600sqm.

Minimum lot sizes in the area zoned *Business Development* along Commercial Road are 8,000sqm.

A plan illustrating the existing zoning controls is provided in *Figure 16: Minimum Lot Size Controls*.

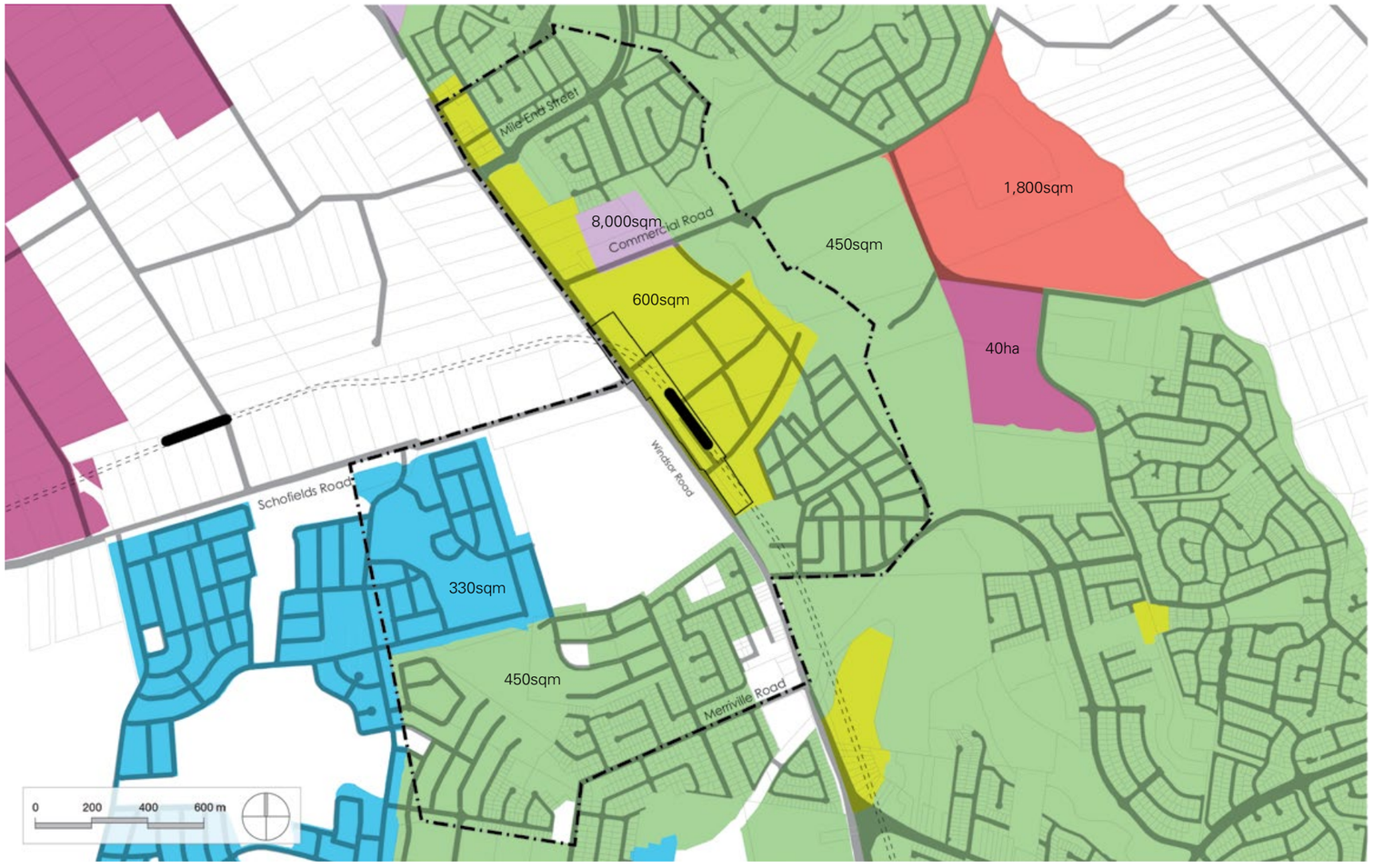
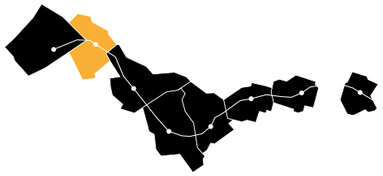


Figure 16: Minimum lot size controls within the Study Area



3.4 FLOOR SPACE RATIO

Floor space ratio (FSR) controls refer to the relationship of the permitted built form to the area of a site.

Under the *Hills Local Environmental Plan 2012*, the employment area along Windsor Road has an FSR of 1:1.

Under Blacktown Local Environment Plan 2013 the area zoned B1 Neighbourhood Centre has an FSR of 0.15:1.

A plan illustrating the existing zoning controls is provided in *Figure 17: Floor Space Ratio Controls*.

Figure 17: Floor space ratio controls within the Study Area

Rouse Hill Draft Structure Plan
4. Opportunities for Future Development

4.1 OPPORTUNITY SITES

The outcome of the opportunities and constraints review of the existing planning controls of the Study Area leads to the identification of sites that could make a contribution to the growth of the Study Area in response to a new rail link and station.

Those sites which are unconstrained present opportunities for renewal within the Study Area within two categories. Short term opportunity sites that may be renewed prior to 2036 and long term opportunity sites that are subject to recent residential development, however, due to the average 30-40 year building lifespan, may present themselves as opportunities for renewal beyond 2036.

The diagram adjacent highlights these opportunity sites, both short and long term. The sites located to the west of the of the Castlebrook Cemetery present a large amount of opportunity land within walking distance to the proposed Rouse Hill station. The cemetery is a significant barrier in terms of accessibility to these opportunity sites and there is a significant amount of vegetation that needs to be retained in the area. Contiguous opportunity sites may also allow for the amalgamation of lots in to larger single landholdings.

To the north of the proposed station, the opportunity sites are the least constrained. These sites have good access from Commercial Road and are within walking distance to the station and town centre. The area also has good visibility from Windsor Road making it ideal for commercial development. This area is ideal for new development.

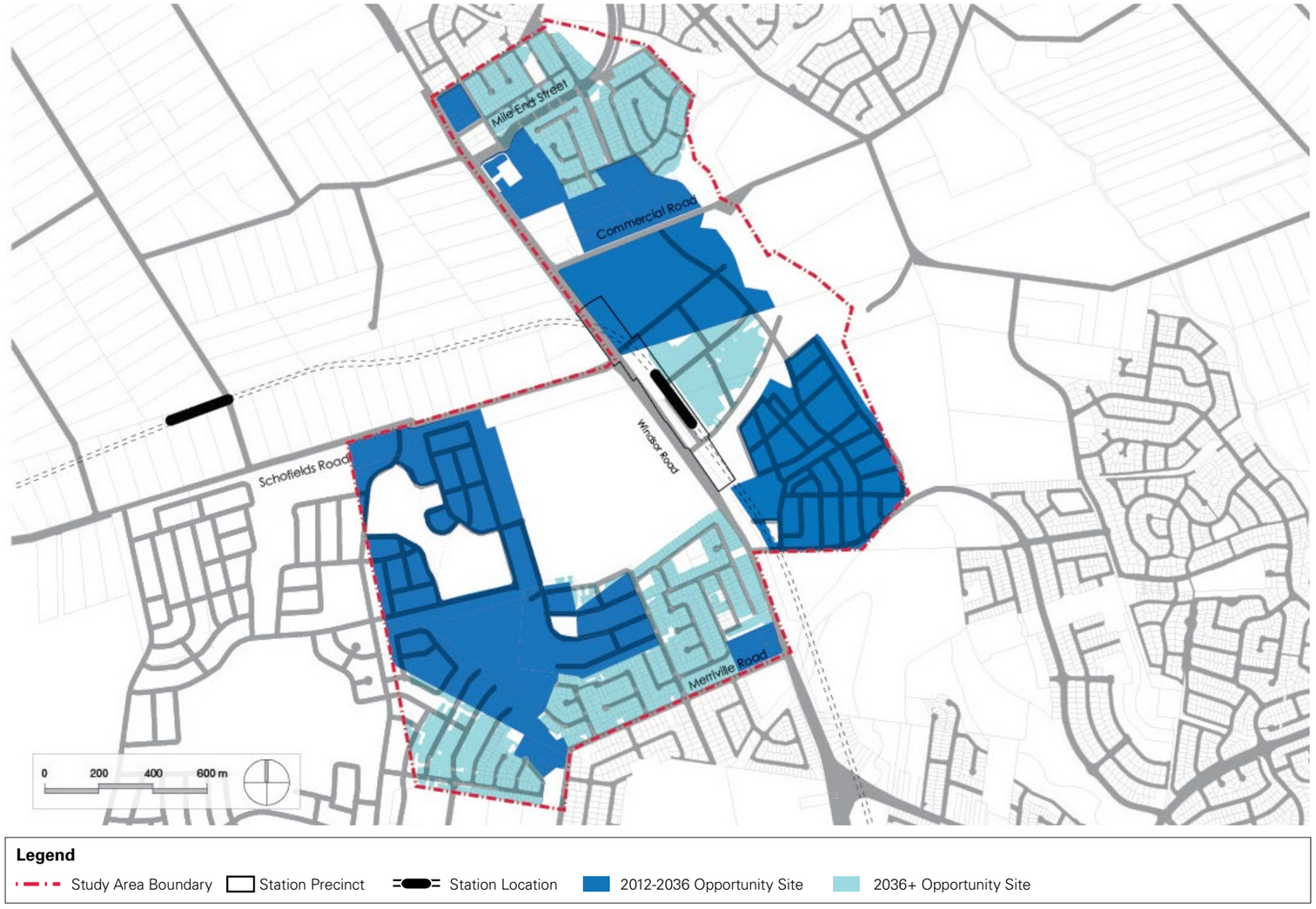
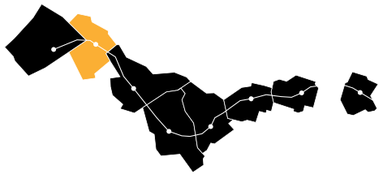


Figure 18: Opportunity Sites within the Study Area



4.2 PROJECTED GROWTH UNDER EXISTING CONTROLS

Under the existing planning controls contained within the *The Hills Local Environmental Plan 2012*, the opportunity sites within Rouse Hill have a variety of land use, height, floor space and minimum lot size controls applied to them.

In the area along Windsor and Commercial Road, the current planning controls allow for buildings with employment uses and a minimum lot size of between 600 and 8,000. Within this area the governing height limit is 12m and there is an FSR control of 1:1 which will maintain the existing built form on the site.

Medium density residential is governed by controls which permit 3-storey apartment buildings on minimum lots of 1,800m2, townhouses on minimum lots of 720m2, or dual-occupancy dwellings on a minimum lot size of 600sqm. Low density residential controls permit 3-storey single detached on minimum lots of 450sqm or dual-occupancy dwellings on minimum lots of 600sqm.

An assessment of these current controls on the opportunity sites reveals that the capacity for future growth within Rouse Hill is predominantly within the residential market, assuming that mixed-use zonings do not prescribe minimum proportions of commercial floor space. The current and proposed draft controls for the Study Area could result in an additional 2,000 jobs and 500 dwellings. The assessment also reveals that parking requirements and minimum apartment sizes are restricting the supply of a variety of apartments.

The existing planning controls require some amendments to reinforce the delivery of such a significant investment in infrastructure such as the NWRL. Current controls do not promote the growth of Rouse Hill as a Major Centre, with little additional capacity for jobs and only a moderate increase in housing. Therefore, the vision and draft structure plan contained within this report will detail the desired future character of the area and proposed land uses to complement the new rail link and station.

	EXISTING CONTROLS		EXISTING CONTROLS	
	TOTAL DWELLINGS	GROWTH	TOTAL JOBS	GROWTH
2012	2,000	-	4,000	-
2036	2,500	500	6,000	2,000

Table 4.1: Projected growth in Housing and Jobs under existing controls

Rouse Hill Draft Structure Plan
5. Vision & Structure Plan

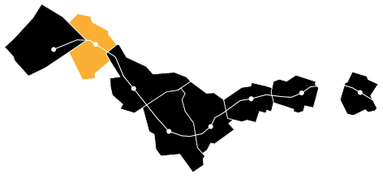
5.1 VISION FOR THE STUDY AREA

The Rouse Hill Study Area will play an important role in the NWRL corridor, as a mixed use destination. The introduction of the NWRL will enable the study area to become a major transport and retail/commercial hub for the surrounding suburbs centred on a new train station and a hub for the North West Growth Centre.

The introduction of the NWRL has the potential to transform the Study Area into a Major Centre enabling significant residential and commercial uptake in the surrounding areas. An integrated bus and cycle network feeding the NWRL station will allow Rouse Hill to serve as a major transport hub and gateway to Sydney CBD.

The Study Area will provide opportunities for increased employment and housing capacities within walking/cycling distance of the station, while ensuring the local heritage, open space network and natural environment are protected.

The NWRL will also provide opportunities to increase residential densities within walking distance of the station, involving a variety of housing types to ensure there is affordable and appropriate housing for all members of the community.



5.2 PROPOSED DRAFT STRUCTURE PLAN

The Draft Structure Plan is the framework which will guide future planning within the Rouse Hill Study Area. It is the result of assessing the natural and built elements of the Study Area and existing planning controls. It is founded on principles of providing where possible greater connectivity and strengthening links between the station and surrounding uses.

Drawing on the analysis and existing land uses, the Study Area is proposed to become a prominent retail and commercial hub for the north west. The Draft Structure Plan proposes to extend the commercial/retail area northwards to Commercial Road. Some residential uplift is proposed within the Study Area surrounding the retail and commercial core. In the area immediately surrounding the retail and commercial core the Draft Structure Plan proposes residential development comprising a mixture of 2-3 storey townhouses and 3-6 storey apartments. Beyond this, low density residential development between 1 to 2 storeys is proposed.

New links are proposed in locations within the Study Area where they will increase connectivity and permeability. These links could be either pedestrian and of vehicular connections.

Drawing on existing significant vegetation and parks, a green link is proposed along the Caddies Creek Riparian Corridor and at a low point close to Second Ponds Creek. These links will become significant pedestrian and recreational links between Rouse Hill, Beaumont Hills, Kellyville, The Ponds and Cudgegong Road. They will also provide significant habitat for wildlife within the Study Area.

The primary public domain initiative nominated within the Rouse Hill Draft Structure Plan is the upgrade of the streetscapes in and around the proposed station precinct. The creation of new, and widening of, existing footpaths, provision of barrier-free access and introduction of attractive and appropriate street furniture will be required to reinforce the NWRL and a new station at Rouse Hill.

Upgrading the public domain of Rouse Hill can be achieved through a number of initiatives:

1. The creation of open space linkages, streets and connections between transport, new and existing housing and open space, particularly a major pedestrian/ cycle green pathway along the Caddies Creek riparian corridor and within the water detention area located within The Ponds development that connects to the Second Ponds Creek riparian corridor.

2. The protection of existing green spaces within the Study Area which form part of the Rouse Hill identity, such as the Caddies Creek riparian corridor and water detention area located within The Ponds development.

3. The provision of additional urban plazas, parks and open spaces for the amenity of existing and future residents and workers, particularly within the station precinct.

4. A new major mulit-modal transport interchange, that would create a hub for rail and bus services.

A Public Domain Strategy will be required to detail the delivery of the above initiatives and guide the broader character of the public domain within the Study Area. This Strategy will address a legible hierarchy of streetscapes, treatment of open spaces and plazas, preservation of ecological corridors, pedestrian and cycling linkages, built form response to public and private open space, signage and wayfinding, street furniture, lighting and public art. Rouse Hill Centre. Commercial Road and Mile End Road are proposed to be secondary roads.

Gateway or entry demarcation points are proposed along Windsor Road at major road intersections with Schofields, Commercial and Mile End Road. These are likely to take the form of a change in streetscape or defined built form.

To complement the introduction of the NWRL to the study area a number of transport, movement and accessibility initiatives will need to be delivered to ensure safe and attractive movement to, from and within the Study Area.

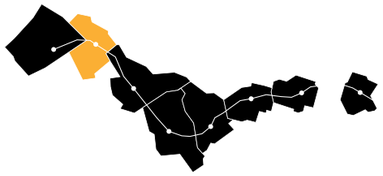
Within Rouse Hill, the key connectivity issue is pedestrian access across Windsor Road and to the proposed station location. The anticipated growth within the Draft Structure Plan and increased activity around the new station will require a number of signalised crossings to provide safe and attractive pedestrian and cycle access to the station from the south.

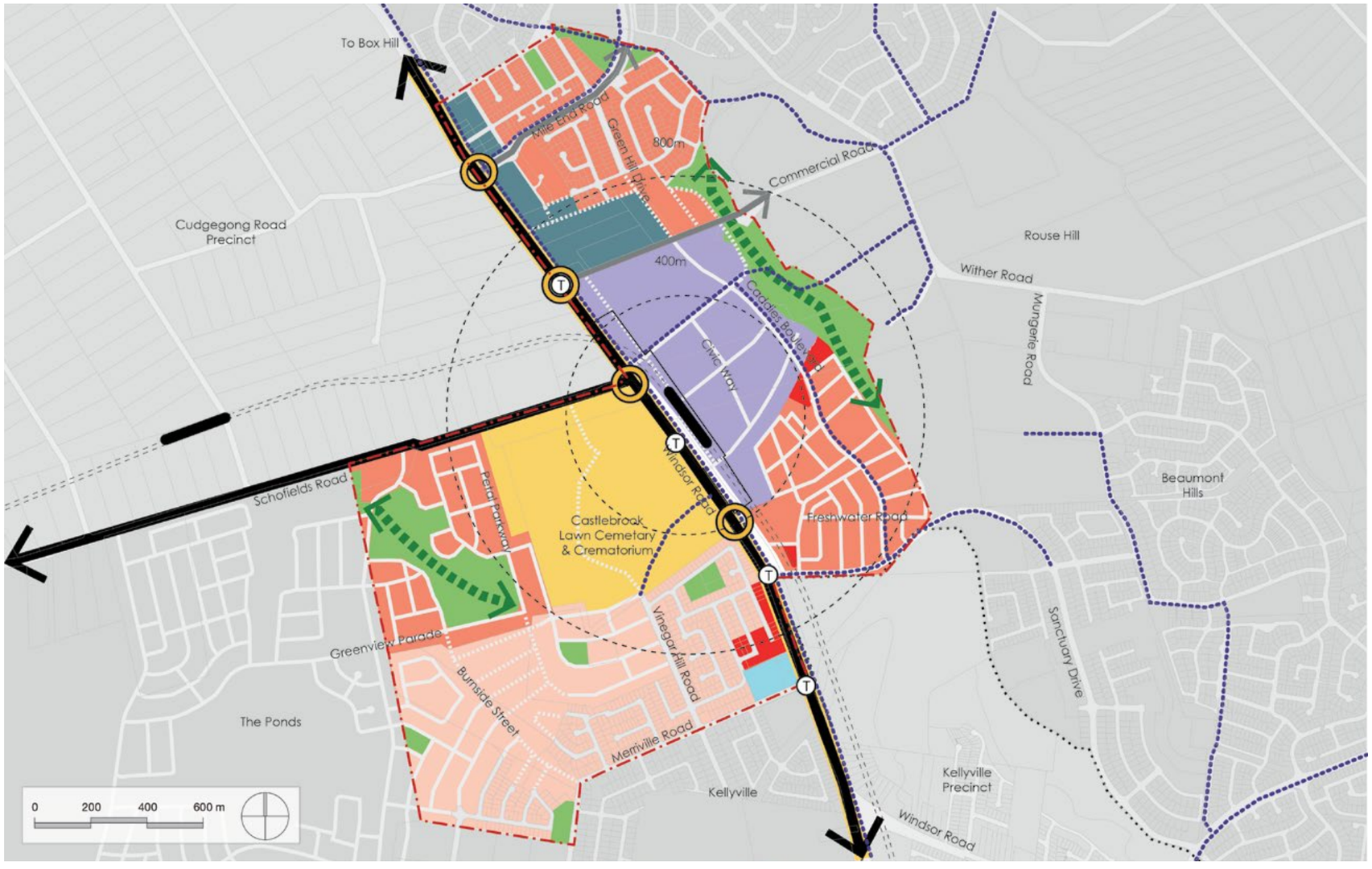
Complementing this will be the upgrade of existing connections and provision of new connections linking the Rouse Hill Centre with the northern employment area and the broader road network within Rouse Hill.

Local road widening may also be required within the station precinct to accommodate commuter parking and increased movements associated with the introduction of a new rail station at Rouse Hill. These requirements are to be determined through further investigations by the relevant government agencies and authorities.

It is proposed that the Station Precinct will include:

- Provision of kiss and ride spaces, bicycle parking, taxi spaces and bus bays at the proposed station.
- The Rouse Hill station will be integrated with the proposed revised bus interchange layout which comprises a linear bus interchange, a northern extension of the T-Way across Rouse Hill Drive immediately to the east of the Rouse Hill Drive / Windsor Road intersection, provision of north and south bus layovers, bus access to and from the T-Way and Windsor Road via the Rouse Hill Drive and White Hart Drive intersection for prescribed movements.
- Pedestrian access across the T-Way carriageway midway between the offset bus bays via a zebra crossing.
- Provision of a pedestrian crossing across Tempus Street at Market Square to facilitate pedestrian access from the town centre to the station precinct.
- Extension of the T-Way across Rouse Hill Drive towards Commercial Road to facilitate travel to the north for buses to service the extension of the Rouse Hill Town Centre, Rouse Hill residential areas, Annangrove Road Light Industrial area and beyond to Box Hill as development of that area progresses.





Legend

- Study Area Boundary
- Station Precinct
- Station Location
- Primary Road
- Secondary Road
- Cycle/Pedestrian Link
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Special Use
- Mixed Use
- Existing Local Centre
- Employment
- Open Space
- Green Link
- Indicative Link
- Gateway
- T-way Stop

Figure 19: Draft Structure Plan for the Rouse Hill Study Area

5. Vision & Structure Plan

5.3 FUTURE PRECINCT CHARACTER

The following diagrams and images demonstrate the desired future character for the sites which may contribute to the growth of Rouse Hill in the future.

Station Precinct

Objectives: To provide a precinct that contains a flexible mix of active uses that integrate with the Town Centre's existing character, while also providing a regional transport interchange (for bus, rail, taxi and kiss and ride) of high amenity and accessibility.

Character: It is anticipated that under the vision and draft structure plan this precinct could accommodate retail and residential uses that would compliment the character of the local area and that are carefully designed to integrate into the existing streetscape. This precinct would also provide residents with direct access to the new rail link and station that would be located above ground.

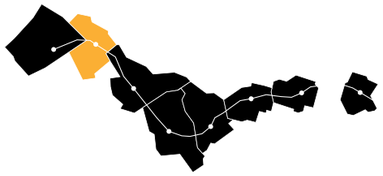
Figure 20: Proposed Location of Station Precinct

Public Domain and Open Space

Objectives: To provide attractive new open spaces of high amenity for the public and to enhance existing spaces.

Character: The draft structure plan identifies green open spaces and engaging public spaces for residents that are accessible and safe. They should be landscaped appropriately to integrate with the existing character of the area. The Cemetary will remain as is, with additional linkages through it.

Figure 21: Proposed Location of Public Domain and Open Space



Local Centres

Objectives: To provide for the retail needs of a growing community.

Character: It is anticipated that under the vision and draft structure plan this precinct could accommodate local centre retail on sites that are carefully designed to integrate into the existing neighbourhood character and streetscapes and surrounding land uses.

Figure 22: Proposed Location of Local Centre

Employment

Objectives: To provide for the employment needs of a growing community and to provide jobs within close proximity of the station and associated uses.

Character: It is anticipated that under the vision and draft structure plan this precinct could accommodate bulky good retail uses on sites that are carefully designed to integrate into the existing streetscape and surrounding character, including Rouse Hill Town Centre and residential land uses.

Figure 23: Proposed Location of Employment Area

Rouse Hill Draft Structure Plan
5. Vision & Structure Plan

Low Density Dwellings

Objectives: To provide for the housing needs of a growing community and to provide a variety of housing types within close proximity of the station and associated uses.

Character: It is anticipated that under the vision and draft structure plan that this precinct will evolve to become a mixture of single detached dwellings and dual occupancies. Public domain improvements will integrate the Study Area with surrounding sues, including pedestrian/cyclist links across Old Windsor Road, and with the Cudgegong Road Study Area to the north.

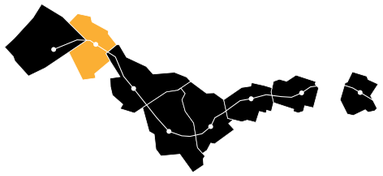
Figure 24: Proposed Location of Low Density Dwellings

Low/Medium Density Townhouses

Objectives: To provide for the housing needs of a growing community and to encourage an increased residential density in areas with direct access to the new rail link and station.

Character: It is anticipated that under the vision and draft structure plan that this precinct could accommodate a mixture of townhouses and multi-dwelling housing where the site is an appropriate size to deliver a high level of amenity for the existing and future residents.

Figure 25: Proposed Location of Low/Medium Density Living



Medium Density Apartment Living

Objectives: To provide for the housing needs of a growing community and to encourage an increased residential density in areas with direct access to the new rail link and station, as well as an enhanced public domain.

Character: It is anticipated that under the vision and draft structure plan that this precinct could accommodate multi-dwelling housing only where the site is an appropriate size to deliver a high level of amenity for the existing and future residents. This could comprise of 3-6 storey apartment buildings, carefully master planned around communal open spaces and incorporating landscaped setbacks to existing streetscapes.

Figure 27: Proposed Location of Medium Density Dwellings

High Density Apartment Living

Objectives: To provide for the housing needs of a growing community and to encourage an increased residential density in areas with direct access to the new rail link and station.

Character: It is anticipated that under the vision and draft structure plan that this precinct could accommodate multi-dwelling housing only where the site is an appropriate size to deliver a high level of amenity for the existing and future residents. This could comprise of 7-12 storey apartment buildings, carefully master planned around communal open spaces and incorporating landscaped setbacks to existing streetscapes. Higher tower forms may be considered on a merit basis within close proximity of the station.

Figure 28: Proposed Location of High Density Dwellings

Areas Expected to Remain Unchanged

Within the Study Area there are areas and sites which are expected to remain largely unchanged through the delivery of the NWRL and the Structure Plan.

This is due to a number of factors including existing uses, varying degrees of constraints, connectivity, accessibility and market demand.

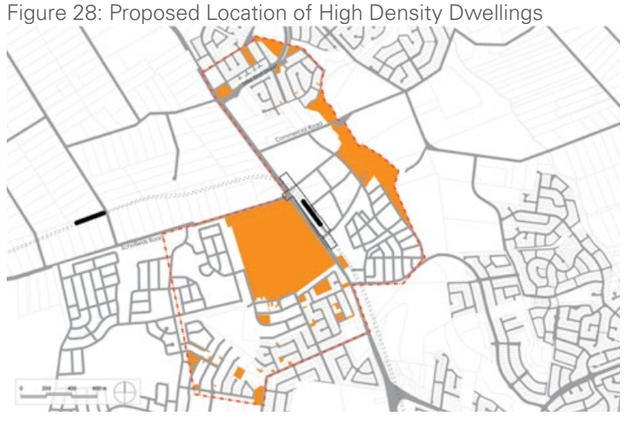


Figure 29: Areas Expected to Remain Unchanged

Rouse Hill Draft Structure Plan
5. Vision & Structure Plan

5.4 PROJECTED GROWTH

Calculating Projected Growth

The projected growth is a calculation of the amount of residential and employment development that is expected to take place in the Study Area. The projected growth calculations take into consideration the following factors:

- **Development on Opportunity Sites.** Development is projected to occur on the opportunity sites identified in Section 4.1 of this report.
- **The Proposed Future Character and Built Form.** The Draft Structure Plan identifies the future desired character and built form for areas within the Study Area. These character/building types have been applied to the opportunity sites.
- **Assumptions.** A series of assumptions related to the different development types have been applied to calculate the land areas required for each built form. Details can be found in the North West Rail Link Corridor Strategy.
- **Demand.** The amount, and rate of development is influenced by market demand for different types of development within the Study Area. Market demand is determined by 'take-up' or 'realisation' rates, which reflect market conditions and has been informed by a high-level feasibility analysis. In Rouse Hill, due to the high level of amenity and quality of life afforded within the Study Area at present and the added accessibility delivered by the North West Rail Link, the take up realisation rate is considered to be 100% for housing and 100% for employment. Take-up/realisation rates have been identified for each development type and these have been used in the projected growth calculations.

Projected Growth in the Study Area

The outcome of these projected growth calculations is provided in the tables below. Total opportunity site area within the Study Area equates to approximately 106 Hectares.

Application of the proposed land uses and typologies within the Draft Structure Plan will result in a total capacity for an additional **950** dwellings by 2036. The demand analysis suggests that all of the capacity for housing is likely to be realised within the Rouse Hill Study Area.

The proposed Draft Structure Plan will result in an additional employment capacity of **3,500** jobs by 2036. Similarly, the demand analysis suggests that all of the capacity for employment is likely to be realised within the Rouse Hill Study Area

RESIDENTIAL

TYPE OF HOUSING	DWELLINGS IN 2012		DWELLINGS IN 2036		GROWTH
	TOTAL	%	TOTAL	%	TOTAL
SINGLE DETACHED	1,800	90%	2,200	75%	400
TOWNHOUSE	0	0%	50	2%	50
3-6 STOREY APARTMENT	200	10%	400	13%	200
7-12 STOREY APARTMENT	0	0%	300	10%	300
TOTAL DWELLINGS	**2,000**	**100%**	**2,950**	**100%**	**950**

Table 5.1: Projected Residential Growth in Rouse Hill under the Draft Structure Plan

EMPLOYMENT

TYPE OF JOBS	JOBS IN 2012		JOBS IN 2036		GROWTH
	TOTAL	%	TOTAL	%	TOTAL
COMMERCIAL	0	0%	1,500	20%	1,500
RETAIL	2,000	50%	4,000	53%	2,000
BULKY GOODS	2,000	50%	2,000	27%	0
INDUSTRIAL	0	0%	0	0%	0
TOTAL JOBS	**4,000**	**100%**	**7,500**	**100%**	**3,500**

Table 5.2: Projected Employment Growth in Rouse Hill under the Draft Structure Plan

Demand Analysis

A high level demand analysis has been undertaken to ascertain the demand for potential development scenarios on opportunity sites within the Study Area. The analysis:

- Assessed the proposed future desired character and built form, including densities, as proposed under the Draft Structure Plan, against market conditions and demand; and
- Identified take-up/realisation rates for each land use within the Study Area, which informed the calculation of projected growth.

Outcomes of the demand analysis:

1. **Demand for Additional Dwellings**. Future demand for additional residential development in the Study Area is estimated to be in the order of **40** dwellings per annum comprised of 32% 7-12 storey apartments, 12% 3-6 storey apartments, 5% townhouses and 42% single detached dwellings. Such demand is related to the high level of amenity and quality of life afforded within Rouse Hill, the demand for housing diversity and improved access to social, recreational and employment opportunities as a result of the North West Rail Link.

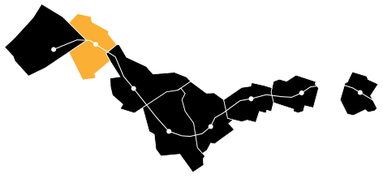
2. **Demand for Employment Lands**. Future demand for additional employment (commercial, retail, bulky goods and industrial) floorspace within the Study Area is projected to increase within the Study Area at a rate of **1,500m2** p.a. of commercial and **2,500m2** p.a. of retail whilst bulky goods will remain at present levels.

3. **Type and Location of Development.** The demand analysis supports the provision for 7-12 and 3-6 storey garden apartments and townhouses within the mixed use station precinct and within close walking distance of the new train station. These areas of residential uplift and renewal will further promote the development of the broader precinct. The analysis supports the provision for single detached development on the periphery of the Study Area. In particular, future residents will be attracted to these areas for their high levels of amenity, employment opportunities, retail, cultural and community facilities and close proximity to the train station.

   In terms of future employment generating development, the feasibility analysis supports the provision for the expansion of retail land-uses within the mixed use area around the new station to provide for the day to day needs of residents and workers and the broader regional catchment. Future retail floorspace within Rouse Hill is to be located within the mixed use station precinct and is expected to increase in line with the growth of the local population catchment.

   Rouse Hill will also provide a significant amount of employment as a major centre for the north west with a dedicated employment corridor supported by standalone and mixed-use retail floorspace.

Rouse Hill Draft Structure Plan
6. Actions and Implementation



6.1 INTRODUCTION

The Draft Structure Plans for the NWRL Station Precincts are to be considered at the strategic planning level, similar to that of the Subregional Strategies for Sydney. The Draft Structure Plans will inform, and be implemented through, appropriate zonings, amendments to built form controls and to guide the assessment of major projects and development applications within the Study Area.

To deliver the Draft Structure Plan's projected growth, zoning and planning controls for the study area will require review. Current controls, such as those relating to minimum lot size, height, and FSR constrain intensification of land use and thus should be revisited. Similarly, Development Control Plans, Section 94 Schemes and Public Domain Strategies may also need to be revised in light of the NWRL. Current parking policies and minimum apartment sizes are constricting the type and variety of dwellings being offered within the study area.

The above will be carried out in consultation with relevant agencies, stakeholders and key landholders. Other matters for consideration include public domain, transport, accessibility and infrastructure servicing.

6.2 PUBLIC DOMAIN, URBAN DESIGN & OPEN SPACE

Consideration is to be given to public domain and open space planning for the study area including:

- Streetscapes, with open space linkages and connections to transport, new and existing housing and open space,
- The need for open spaces and civic spaces,
- Preservation of ecological corridors,
- Pedestrian and cycling linkages,
- Built form response to public and private open spaces,
- Signage and wayfinding,
- Street furniture, lighting and public art.

6.3 TRANSPORT, MOVEMENT AND ACCESSIBILITY

Consideration is to be given to transport, movement and accessibility planning for the study area including:

- Safe and efficient movement to, from and within the Study Area,
- Improvements to connectivity, particularly for non-vehicular transport modes, to the new station and new centres including the identification and provision of cycle and pedestrian infrastructure along key routes within the study area,
- Identification of improvements to bus networks serving the precinct,
- Parking requirements,
- Local road widening to accommodate increased movements associated with the evolution of the Centre and future growth opportunities,
- Bus, taxi, kiss n ride interchange which is integrated with the stations.

6.4 INFRASTRUCTURE AND SERVICES

The projected growth in population and employment within the Study Area will require consideration of infrastructure networks, such as water, sewer, electricity and gas to meet projected demand.