

Department of Planning, Housing and Infrastructure

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Schedule Nine Riverstone East – Stage 3

Blacktown City Council Growth Centre Precincts Development Control Plan 2010

February 2024





Acknowledgement of Country

The Department of Planning, Housing and Infrastructure acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land, and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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Schedule Nine Riverstone East – Stage 3

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1 Introduction

1.1 Name and application of this Schedule

This Schedule forms part of the Blacktown City Council Growth Centre Precincts Development Control Plan 2010 (BCC Growth Centre Precincts DCP).

This Schedule applies to all development on the land shown in **Figure 1**: Land application map.

This Schedule and related amendments to the BCC Growth Centre Precincts DCP give effect to the provisions of the BCC Growth Centre Precincts DCP for land within the Riverstone East – Stage 3 Precinct (precinct) as shown on the Land Application Map.

1.2 Structure of this Schedule

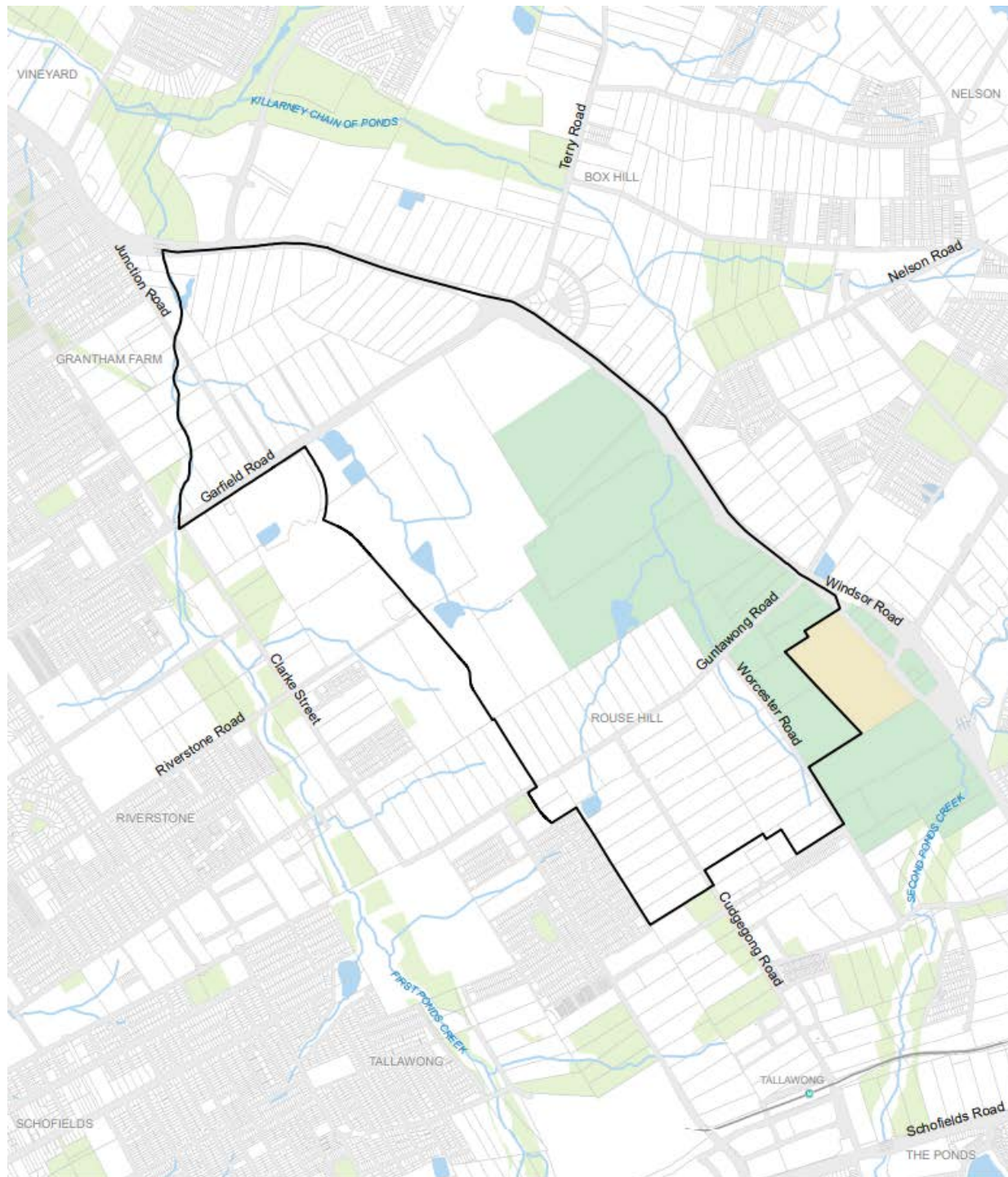
This Schedule should be read in conjunction with and in addition to the BCC Growth Centre Precincts DCP. This Schedule provides additional and/or amended controls applicable to this precinct. In the event of an inconsistency between this Schedule and the BCC Growth Centre Precincts DCP, this Schedule takes precedence. **Table 1** summarises the structure of this Schedule.

Table 1: Structure of schedule

Part	Summary
Introduction	Identifies the land to which the Schedule applies.
Notification	Identifies situations where Blacktown City Council needs to refer development applications to relevant agencies.
Subdivision planning and design	Establishes an overall vision and Indicative Layout Plan for the future development of the precinct. Provides precinct specific figures that support the controls in Part 2 Precinct Planning Outcomes of the BCC Growth Centre Precincts DCP in relation to the Riverstone East – Stage 3 Precinct.
Development in Residential Zones	Provides additional objectives and controls for neighbourhood and subdivision design across the precinct.
Site specific controls	Specific objectives and controls for specific locations within the precinct.

Additional notes are provided throughout this document. These notes are not part of the formal provisions of the DCP but are intended to provide additional guidance and explanation of the

provisions. If further guidance is required on the interpretation of provisions in the DCP, readers should refer to the definitions or contact the consent authority for advice.



Land application map

- Riverstone East Stage 3
- Metro station
- Metro alignment
- Watercourse
- Waterbody
- Road corridor
- Cadastre © NSW Spatial Services
- Open space
- Rouse Hill Regional Park
- Rouse Hill House and Farm



Figure 1: Land application map

2 Notification

Blacktown City Council shall refer development applications (including subdivisions) to relevant agencies where an agency has an interest or role in the proposal, such as where a school site is identified on the ILP, the application will be referred to the Schools Infrastructure NSW

3 Subdivision planning and design

3.1 Vision

Riverstone East Stage 3 will support the sustainable development of housing to meet the needs of a well-connected and diverse community, supported by local facilities and infrastructure. A diverse range of affordable housing is catered for as well as the provision of larger lots to achieve a green canopy target on both public and private land.



Figure 2: Indicative residential character

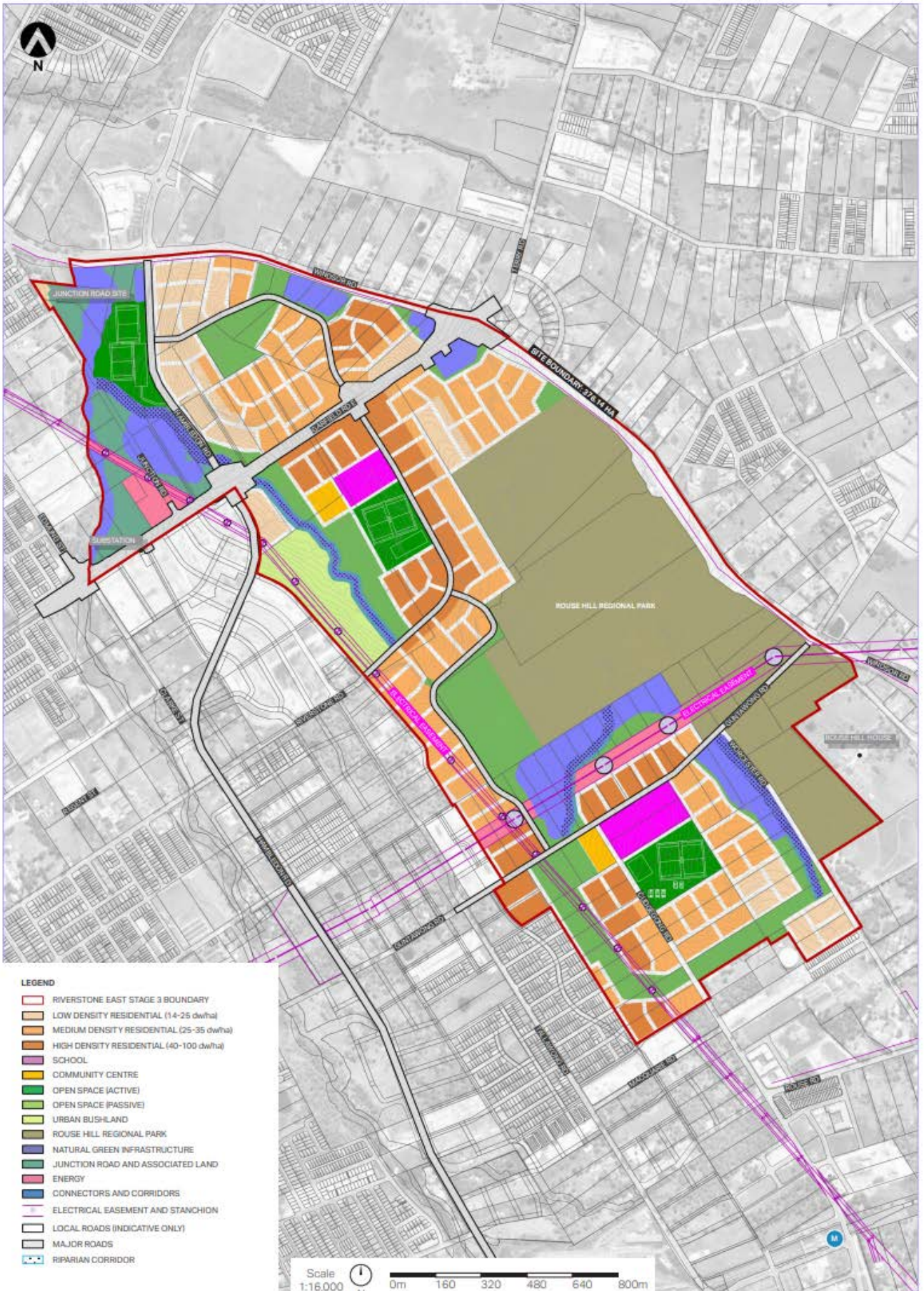


Figure 3: Indicative layout plan

3.2 Referenced Figures

The following referenced figures and controls support the objectives, controls and design principles in Part 2 – Precinct Planning Outcomes in the BCC Growth Centre Precincts DCP.

3.2.1 Flooding and water cycle management

Refer to Section 2.3.1 of the BCC Growth Centre Precincts DCP – Flooding and water cycle management.

Additional Controls

1. In addition to the controls in 2.3.1 of the BCC Growth Centres Precincts DCP the following controls apply to development applications involving the erection of a building:
2. Development applications relating to the development of land at or below the *flood planning area* are to demonstrate:
 - a. whether the land is within a low, medium or high flood risk area,
 - b. whether the proposed building materials are flood compatible,
 - c. whether the building is structurally adequate to withstand the likely impacts of flood water, including buoyancy forces,
 - d. whether the buildings are sited in the optimum position to avoid flood waters and allow evacuation,
 - e. whether the orderly and safe evacuation of people from the development can be achieved,
 - f. whether proposed structures or the filling of land are likely to affect flood flows,
 - g. whether earthworks required to maintain the capacity of the floodplain and flood flow velocities will impact on soil salinity and soil stability,
 - h. the potential impact of the development, including earthworks, on native vegetation, and
 - i. For the repair or replacement of lawfully erected residential or commercial development, *habitable floor* levels should be at or above the *flood planning level*, however Council will consider each application on its merits having regard for the proposed use of the building, the existing floor levels and flood behaviour.
3. For recreation or non-urban uses:
 - a. all permanent structures are to have flood compatible building components and flood compatible building methods up to and including the flood planning level,
 - b. an engineer's report is to be provided certifying that the permanent structures can withstand the forces of floodwater, debris and buoyancy up to and including the flood planning level. In the case of alterations or additions to an existing development, the structure to be certified is that which is proposed to be newly constructed, and

- c. the minimum surface level of open car parking spaces, carports or garages, shall be as high as practical. The driveway providing access between the road and parking space shall be as high as practical and generally rising in the egress direction.

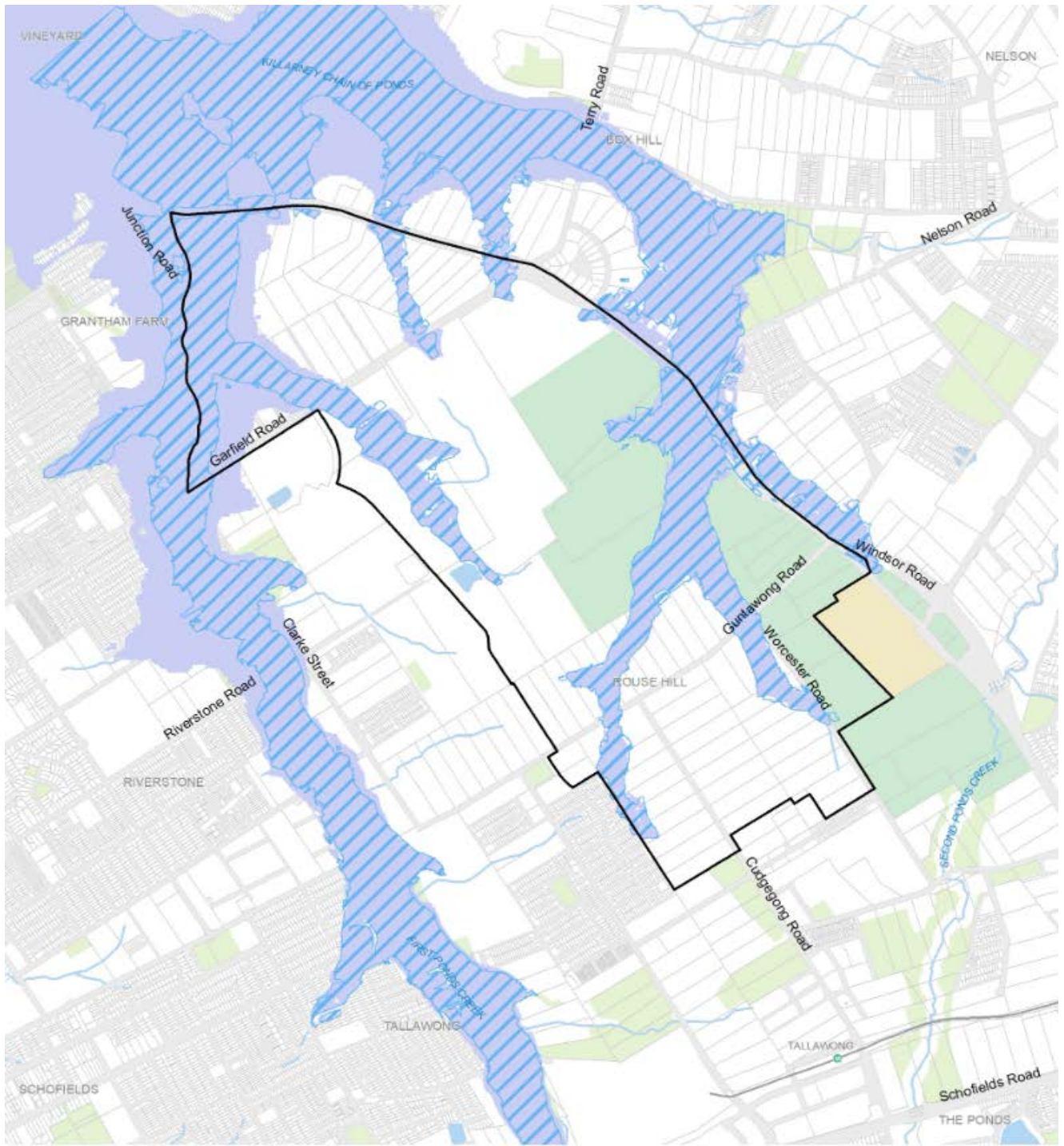
Definitions

Flood planning area means the 1% Annual Exceedance Probability (AEP) flood level plus a freeboard of 500mm.

Habitable floor means:

in a **residential situation**: includes any portion of a building designed, constructed, adapted or used for human habitation whether forming part of a dwelling or any other building and includes rumpus rooms and the like

in all **other situations**: an area used for offices, the display or sale of goods and services and/or to store valuable possessions susceptible to flood damage in the event of a flood and/or an area that is likely to be occupied frequently or for extended periods.



Flood-prone land

- Riverstone East Stage 3
- Metro station
- Metro alignment
- Watercourse
- Existing FPA
- Existing PMF
- Waterbody
- Road corridor
- Cadastre © NSW Spatial Services
- Open space
- Rouse Hill Regional Park
- Rouse Hill House and Farm

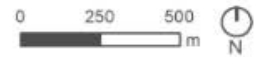


Figure 4: Flood prone land

3.2.2 Neutral or Beneficial Effect on Water Quality

The following stormwater treatment outcomes are to be incorporated into the stormwater design to achieve a neutral or beneficial effect (NorBE) on water quality:

Table 2: Recommended stormwater treatment outcomes

Treatment Measures		Description
On lot measures	Rainwater tanks	Rainwater tanks are proposed on each new allotment to capture rainwater for internal and external re-use, consistent with BASIX requirements.
Streetscape Measures	Bioretention tree pits	Bioretention tree pits are proposed to treat runoff from new road areas whilst providing passive irrigation of street trees and reducing the reliance on end of line treatment measures.
End of Line Measures	Gross pollutant traps (GPTs)	GPTs are proposed on the downstream end of Precinct stormwater drainage lines prior to discharging to riparian corridors or direct to regional treatment measures. These are primary treatment measures targeting gross pollutants and coarse sediment.
	Baffle pits	Stormwater pits designed with an oil baffle are proposed immediately downstream of gross pollutant traps to capture hydrocarbons and satisfy Section 11.6.1 of Council's WSUD Developer Handbook – MUSIC Modelling and Design Guideline (2020).
	Sediment ponds	Sediment ponds are proposed as a secondary treatment measure for the two Killarney Chain of Ponds tributaries and First Ponds Creek tributary, targeting coarse to medium sediment.
	Constructed wetlands	Constructed wetlands are proposed as tertiary treatment measures for the two Killarney Chain of Ponds tributaries, targeting finer sediment and nutrients. In addition to a stormwater treatment function, the wetlands will provide significant ecological benefits via creating a habitat for a range of fauna.

Treatment Measures	Description
	<p>Bioretention basins</p> <p>Bioretention basins are proposed as tertiary treatment measures for the First Ponds Creek tributary and major Precinct drainage lines, targeting finer sediment and nutrients. For portions of the site where on-site detention is required, bioretention basins will be co-located within detention basins to minimise land take.</p>
	<p>Harvesting ponds</p> <p>Stormwater harvesting ponds are proposed at the downstream end of the major site catchments (First Ponds Creek and Killarney Chain of Ponds tributaries) and will be the main source of water for landscape irrigation of public open space and sporting fields within the Precinct. The proposed harvesting scheme will reduce stormwater runoff volumes discharging from the Precinct and will also reduce the reliance on potable water servicing. Recycled water servicing from the Rouse Hill Water Recycling Plant was considered but ultimately set aside due to the ability of the proposed stormwater harvesting measures to provide a reliable water supply and additional stormwater infrastructure requirements to provide an equivalent level of treatment without the proposed harvesting scheme in place.</p>

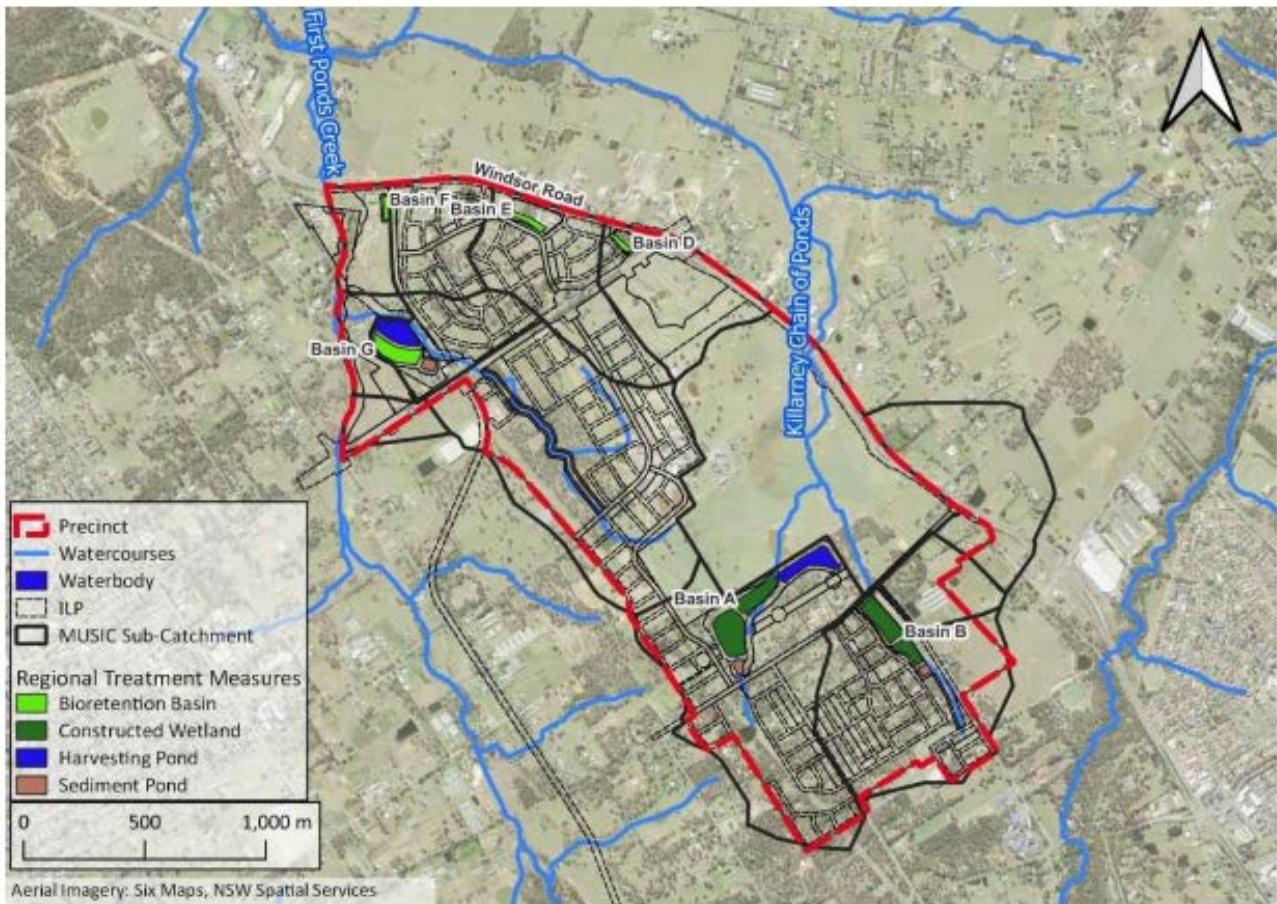
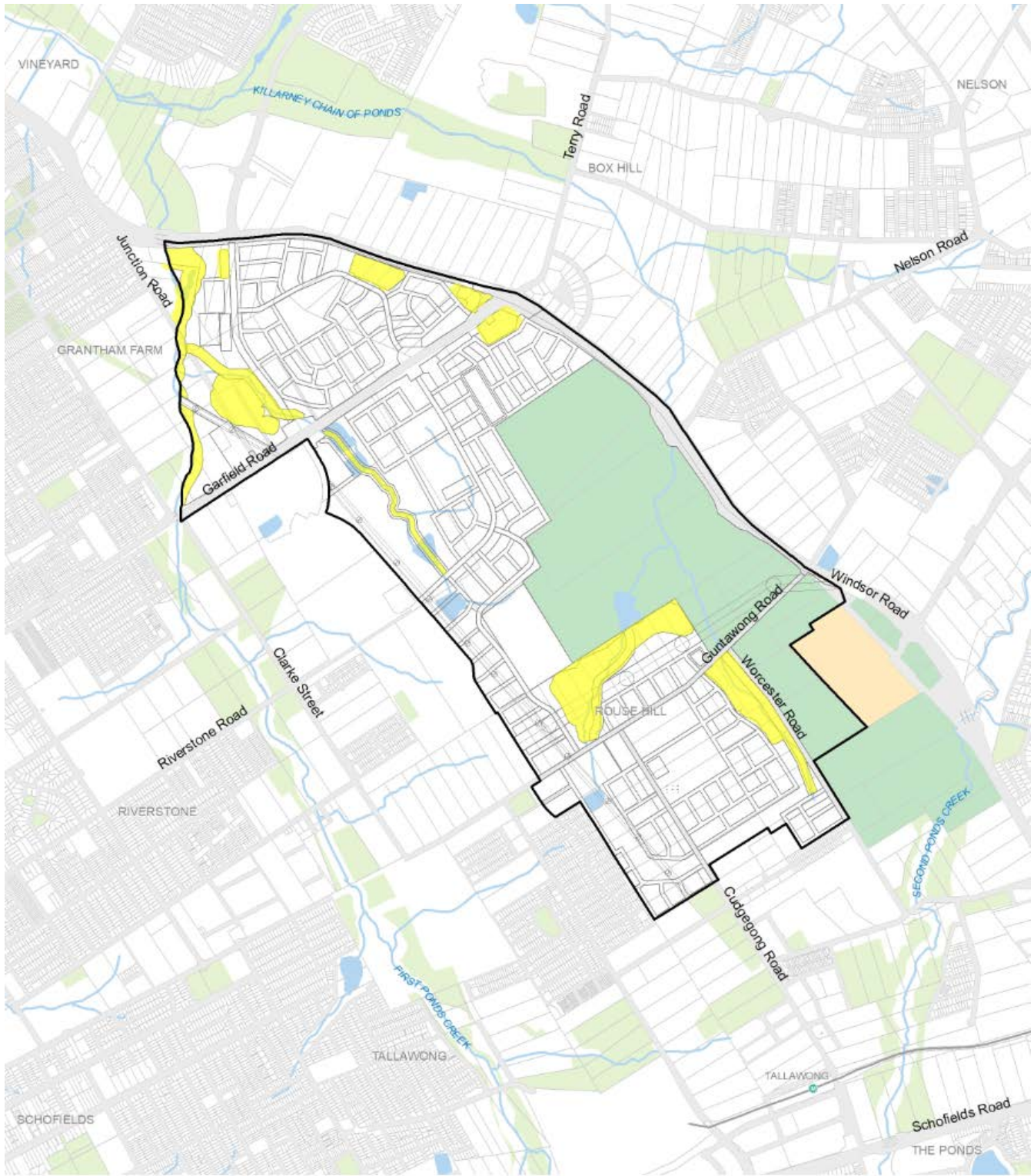


Figure 5: Regional treatment measures



Water and ecology management (WSUD)

- Riverstone East Stage 3
- Metro station
- Metro alignment
- Watercourse
- Drainage infrastructure
- Waterbody
- Road corridor
- Cadastre © NSW Spatial Services
- Open space
- Rouse Hill Regional Park
- Rouse Hill House and Farm



Figure 6: Water sensitive urban design

3.2.3 Areas of potential salinity

Areas identified with potential salinity risks are mapped in Figure 3-4. Refer to Section 2.3.2 of the BCC Growth Centre Precincts DCP – Salinity and soil management for controls.

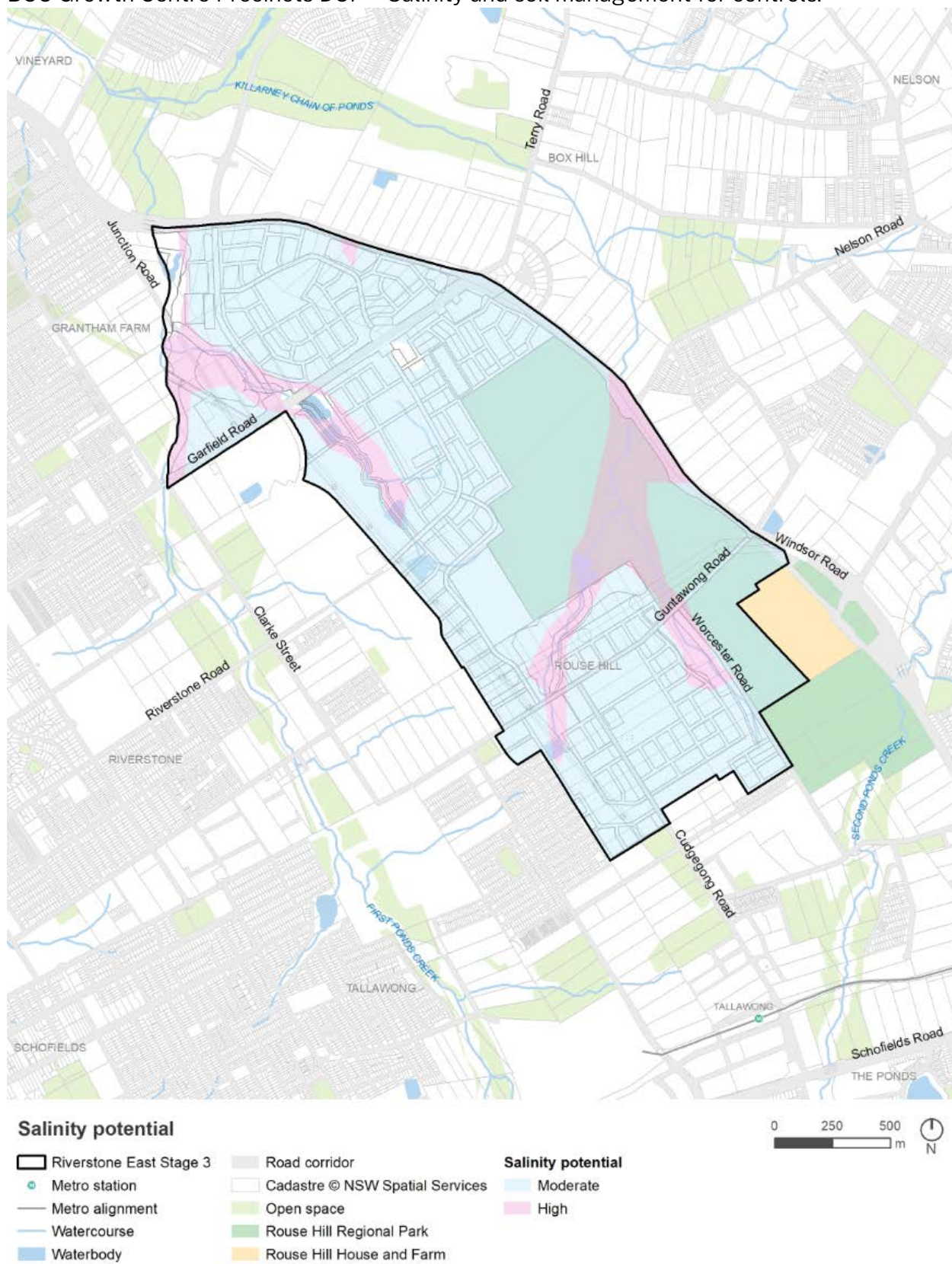


Figure 7: Areas of potential salinity

3.2.4 Indigenous and non-Indigenous heritage

Refer to Section 2.3.3 of the BCC Growth Centre Precincts DCP – Aboriginal and European heritage.

General

Additional Objectives

1. Incorporate walking tracks within recreational reserves and interpretive signage throughout the precinct.
2. Minimise impacts on Aboriginal heritage particularly within and alongside riparian corridors.
3. Protect additional heritage items: Box Hill Rummery House, Tyburn Priory Church, Windsor Road and extension of Rouse Hill Estate at Worcester Road.

Indigenous heritage

Additional Controls

1. Applications for subdivision and building, and/or ground distribution works must undertake survey and archaeological testing for Aboriginal cultural heritage.
2. Where works uncover items that may be Aboriginal cultural heritage, the applicant is to consult with the Environment and Heritage Group within the Department of Planning and Environment to determine an appropriate course of action.
3. In order to ensure that a person who undertakes activities that may harm potential Aboriginal objects exercises due diligence, a due diligence assessment will be required for those activities in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales. Where an impact may occur on an Aboriginal object, investigations to support an AHIP application are to be undertaken in consultation with the relevant Aboriginal stakeholders.
4. A subdivision development application is to detail opportunities for ongoing consultation and interpretation of Indigenous and non-Indigenous heritage values. Interpretation of the Indigenous and non-Indigenous heritage is suggested via the naming of new streets and parks after significant early landowners in the area and to commemorate the Aboriginal history within and occupation of the precinct.

Rummery House Remains

Additional Controls

1. If any development or other ground disturbing works are to be undertaken at this location (refer to Figure 4), further historical archaeological assessment and investigation must be undertaken to determine whether remains associated with the potential Rummery House are present, and if

so, to assess their nature and condition. This investigation must take the form of a Statement of Heritage Impact.

2. If associated archaeological remains are present and these have been preserved at a high level of integrity, these should be preserved in situ if possible. Such preservation is likely to require restrictions on development in the affected area.
3. Existing view lines between the probable location of the former house, and the existing Box Hill Inn, should be conserved as far as possible.

Box Hill Inn Stable Remains

Additional Controls

1. If any development or other ground disturbing works are to be undertaken at this location (refer to Figure 4), further historical archaeological assessment and investigation should be undertaken to determine whether remains associated with the Box Hill Inn Stable are present, and if so, to assess their nature, extent and significance. This investigation must take the form of a Statement of Heritage Impact.
2. If associated archaeological remains are present and these have been preserved at a high level of integrity, these should be preserved in situ if possible.
3. Existing view lines between the probable location of the former house and the existing Box Hill Inn should be conserved as far as possible.

Windsor Road

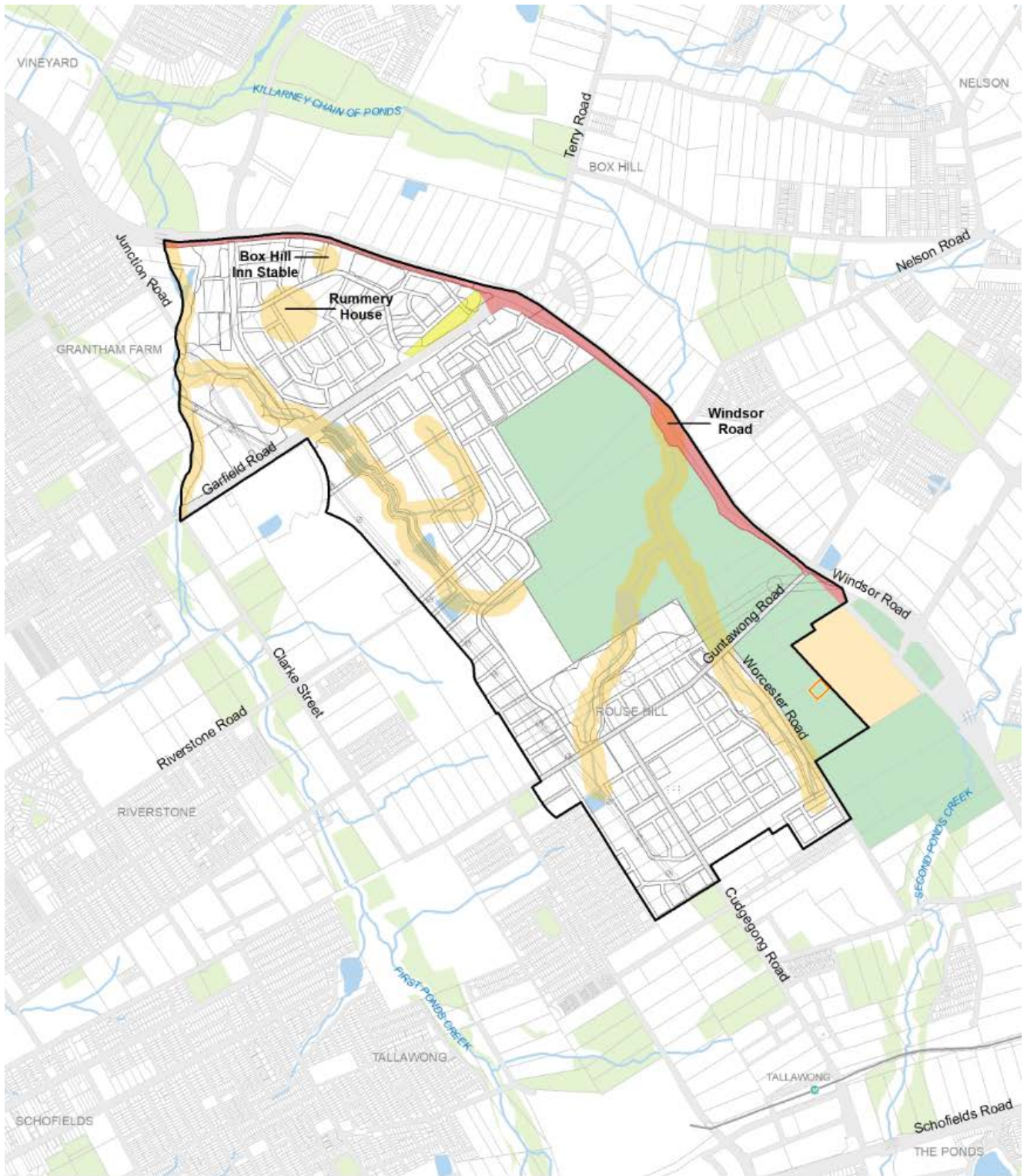
Additional Controls

1. If any development or other ground disturbing works are to be undertaken within the length of Windsor Road between the south of Guntawong Road and Junction Road, as mapped on Figure 7, further historical archaeological assessment and investigation should be undertaken to determine whether unknown remains associated with the Windsor Road are present, and if so, their nature and condition are to be assessed. This investigation must take the form of a Statement of Heritage Impact.

Rouse Hill House Curtilage Extension

Additional Controls

1. Any proposed development within the proposed Rouse Hill House curtilage extension mapped at Figure 4 is subject to a heritage impact assessment, either by way of assessment specific to the proposed development, or a more general document such as a conservation management plan. This would allow the potential for heritage impact to be avoided or minimised.

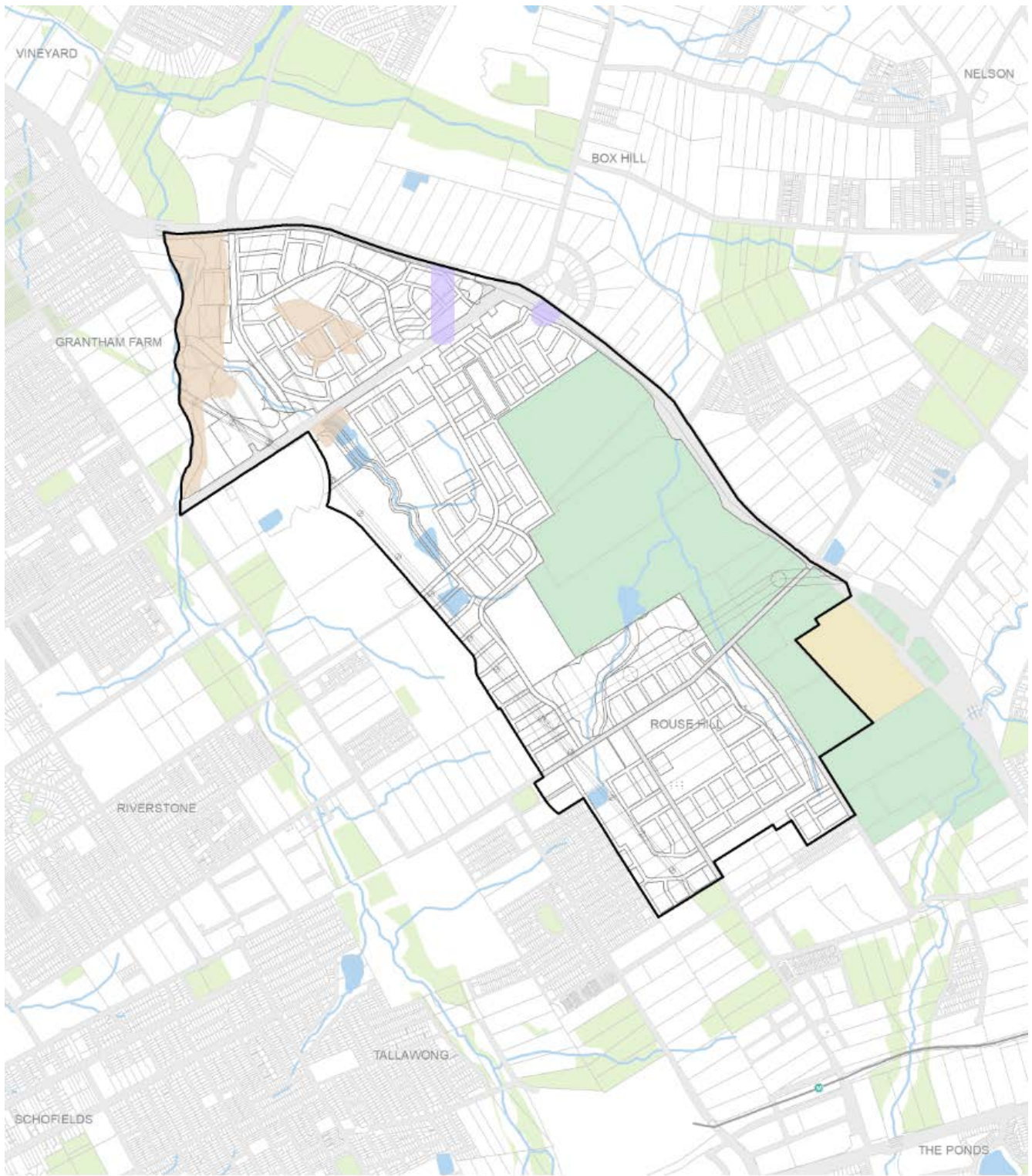


Heritage items

- Riverstone East Stage 3
- Metro station
- Metro alignment
- Watercourse
- Waterbody
- Road corridor
- Cadastre © NSW Spatial Services
- Open space
- Rouse Hill Regional Park
- Rouse Hill House and Farm
- Recommended revised curtilage of Rouse Hill House Estate - Stock yard
- High potential for archaeological remains
- Medium potential for archaeological remains
- Tyburn Priory



Figure 8: Non-Indigenous heritage items



Aboriginal cultural heritage

- Riverstone East Stage 3
- Metro station
- Metro alignment
- Watercourse
- Moderate archeological potential
- High archeological potential
- Waterbody
- Road corridor
- Cadastre © NSW Spatial Services
- Open space
- Rouse Hill Regional Park
- Rouse Hill House and Farm

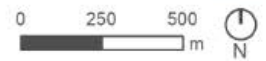


Figure 9: Aboriginal cultural heritage

3.2.5 Native vegetation and ecology

Refer to Section 2.3.4 of the BCC Growth Centre Precincts DCP – Native vegetation and ecology and Appendix B – Riparian protection area controls.

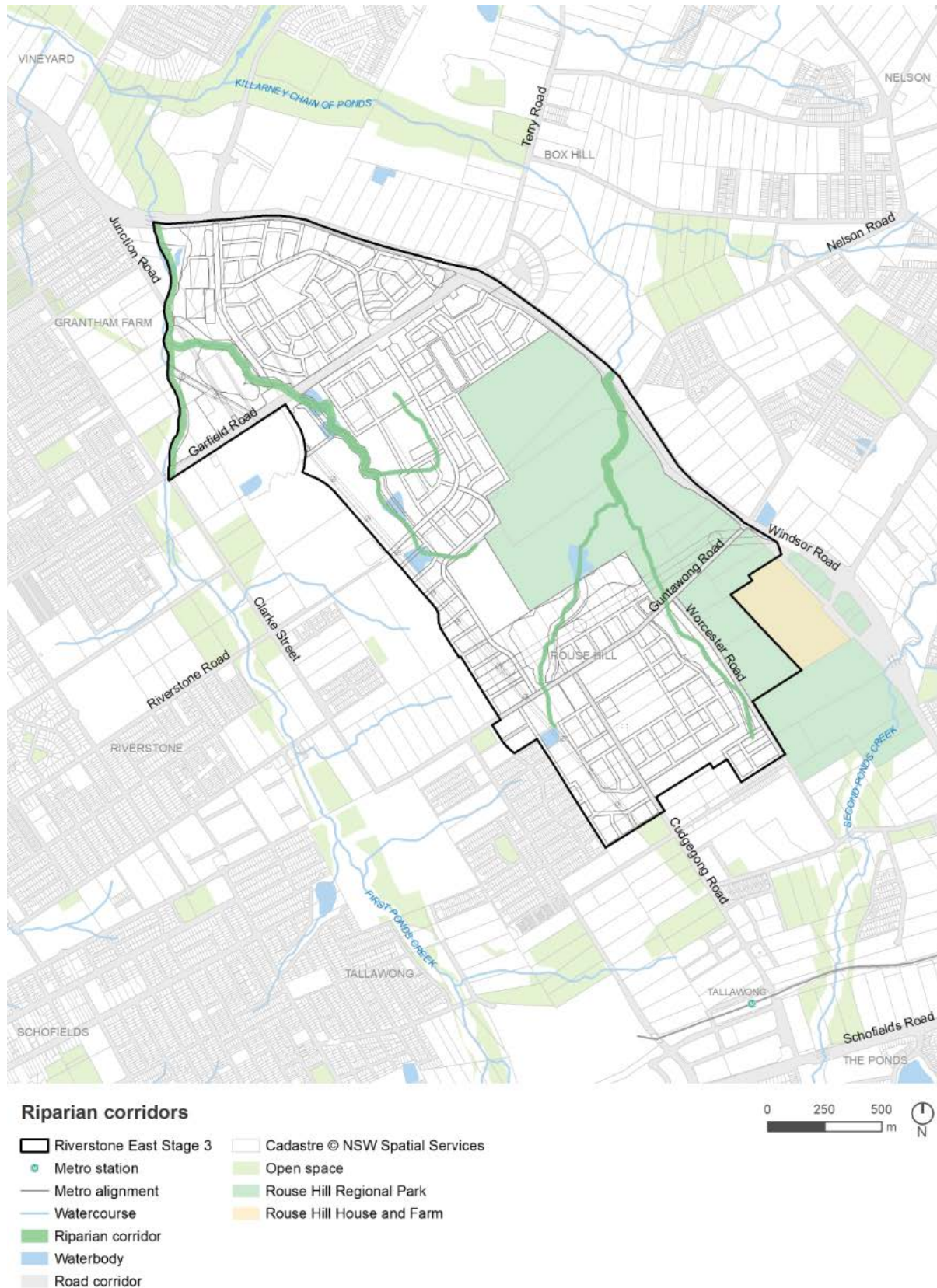


Figure 10: Waterway and riparian corridors

3.2.6 Bushfire risk and asset protection zones

Refer to Section 2.3.5 of the BCC Growth Centre Precincts DCP – Bushfire hazards management.

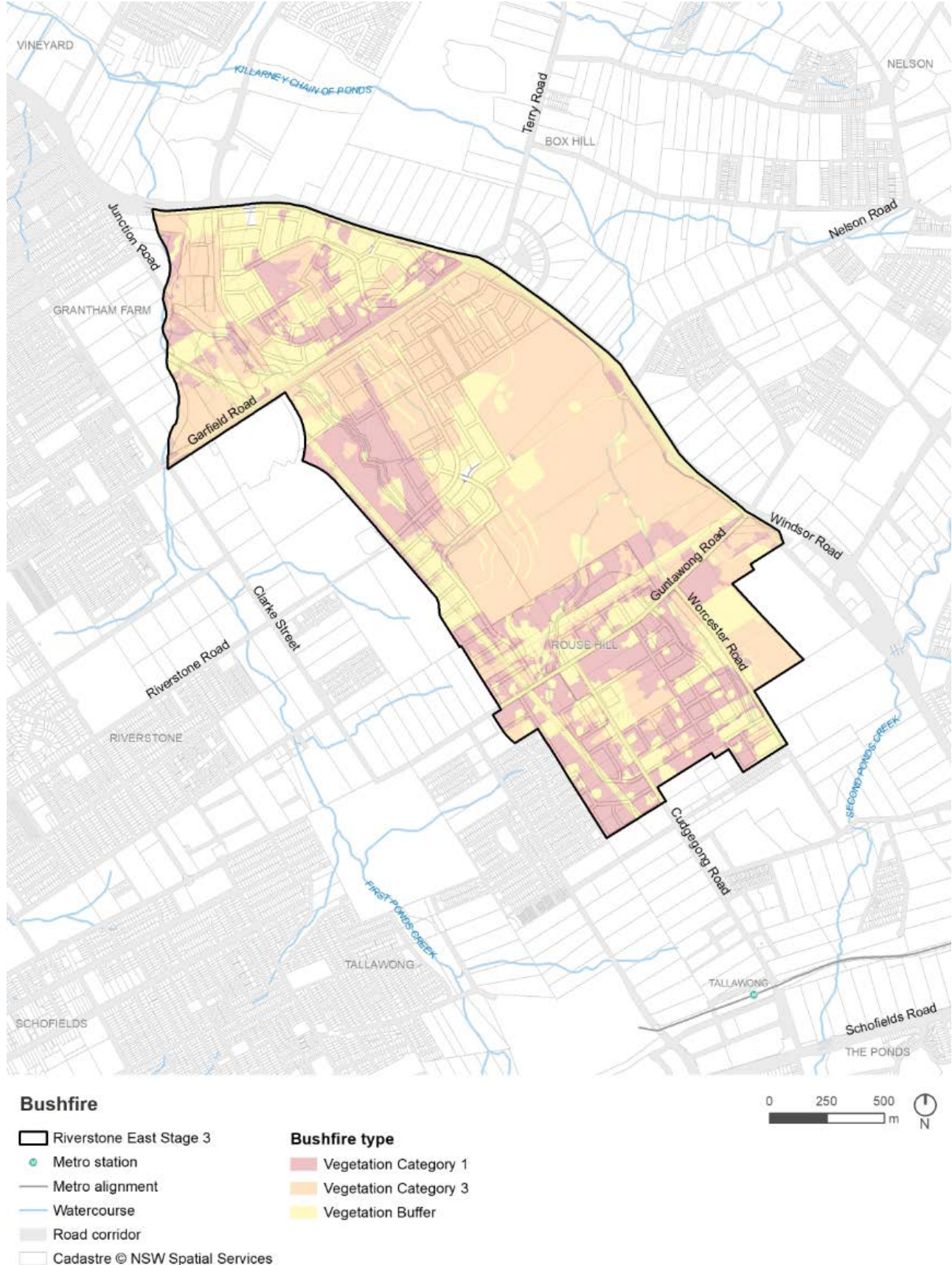


Figure 11: Bushfire Risk

3.2.7 Site contamination

Refer to section 2.3.6 of the BCC Growth Centre Precincts DCP – Site contamination applies to the sites mapped on Figure 12.

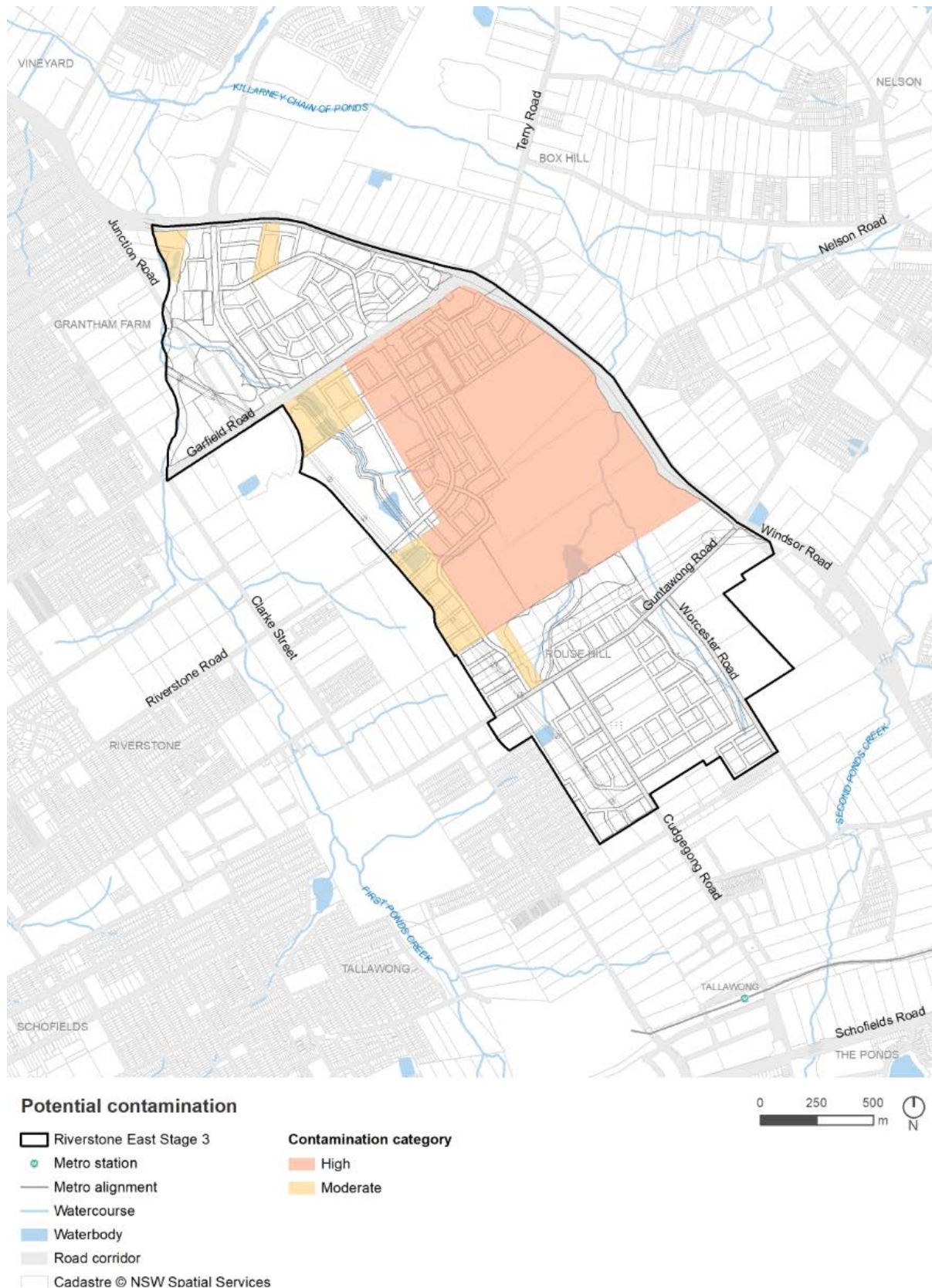


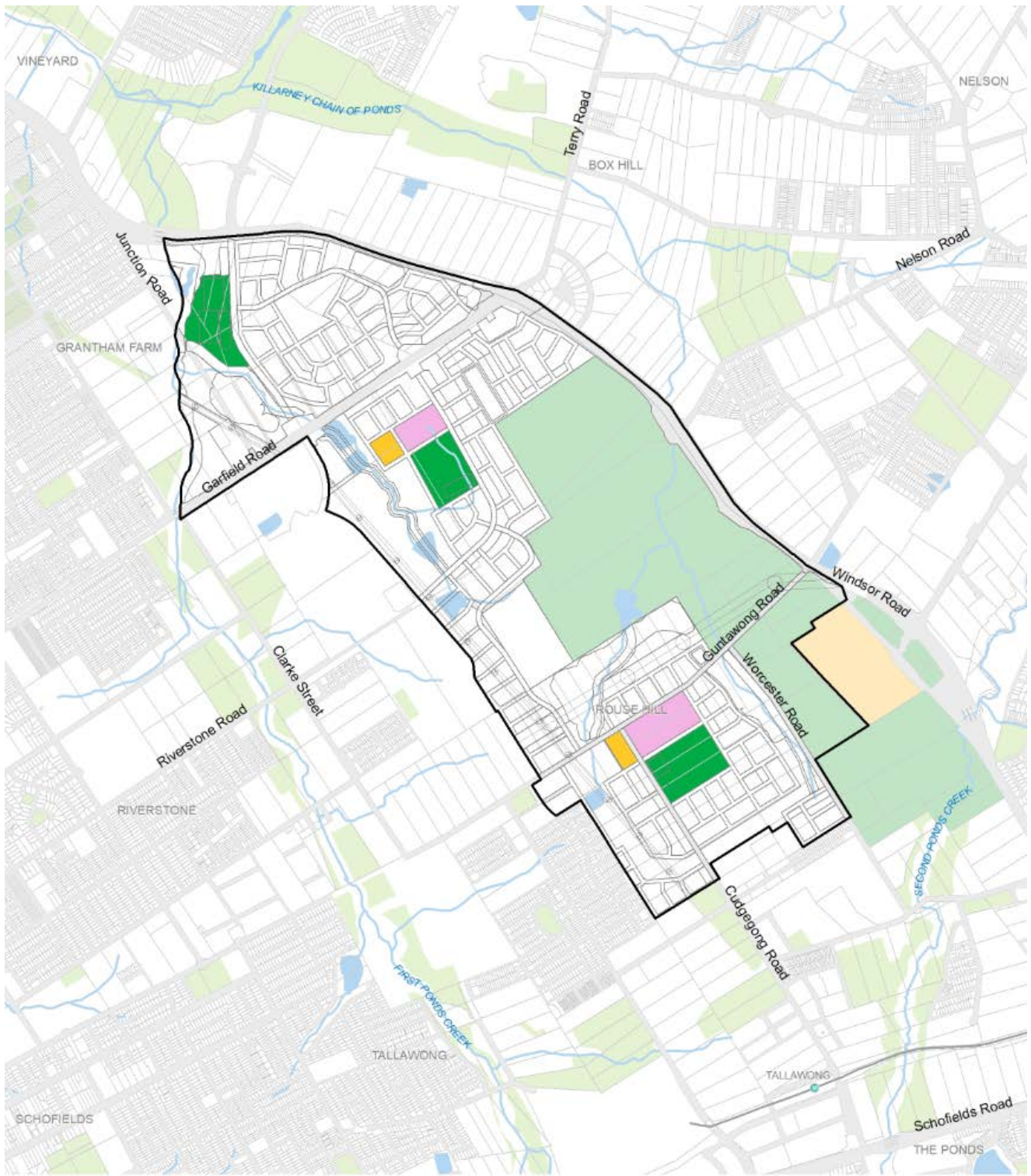
Figure 12: Site contamination

3.2.8 Open Space, Community Facilities and Recreational networks

The referenced figures below support the objectives, controls and design principles for the subdivision planning and design in Part 3 of the BCC Growth Centre Precincts DCP as indicated in Figure 13: Open space network and Figure 14: Community facilities in relation to Section 3.0 Neighbourhood and Subdivision Design of the BCC Growth Centre Precincts DCP



Figure 13: Open space network



Community facilities

- Riverstone East Stage 3
- Metro station
- Metro alignment
- Watercourse
- Community centre
- School
- Open space (active)
- Waterbody
- Road corridor
- Cadastre © NSW Spatial Services
- Open space
- Rouse Hill Regional Park
- Rouse Hill House and Farm



Figure 14: Community facilities

4 Development in Residential Zones

This part provides additional controls to those set out in Part 3 – Neighbourhood and subdivision design of the BCC Growth Centre Precincts DCP.

4.1 Residential Structure

Stage 3 will accommodate a range of housing typologies from single dwellings, townhouses and dual occupancies to apartments up to a maximum of 3,600 dwellings. A combination of controls including maximum density provisions and maximum building heights are set out in the Riverstone East Stage 3 Precinct Plan and will achieve the following objectives.

Additional Objectives

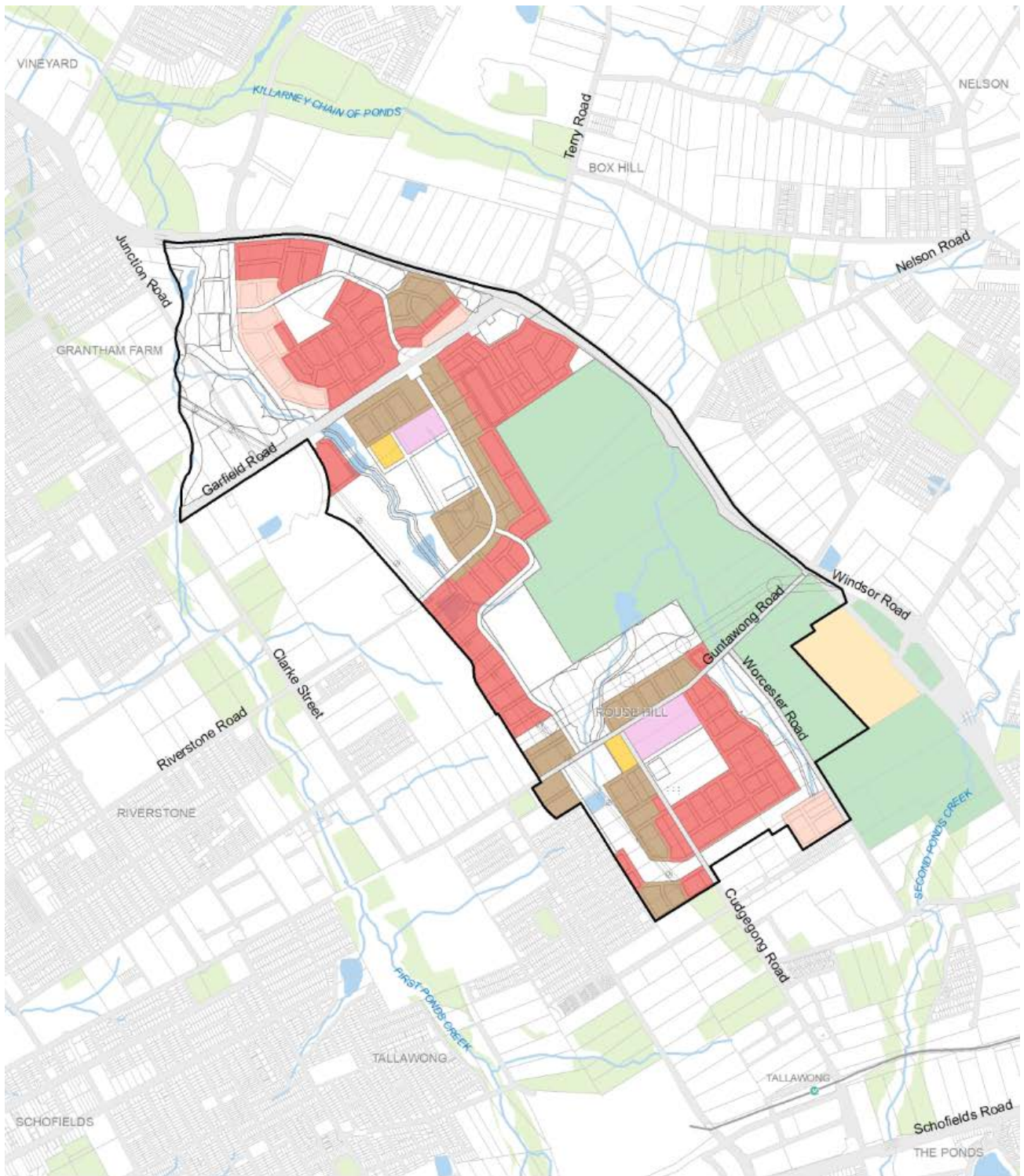
1. Planned infrastructure is designed and implemented consistent with demand
2. A range of housing products can be delivered including affordable housing.
3. Larger lots are appropriately located and where possible adjoining riparian corridors
4. Lots greater than 600sqm should provide an appropriate and sensitive transition between larger lots and medium density products, and in steeper areas.
5. Protect and preserve middle-distance views onto the Riverstone East Precinct and distant views towards the Blue Mountains from Rouse Hill House and respond to Designing with Country requirements to maintain open areas adjacent to creeks

Additional Controls

1. The precinct is to be developed in accordance with the residential structure shown at Figure 14 and the maximum density and height provisions established in the Precincts-Central River SEPP.
2. Medium density development along Guntawong Road is co-located with community uses, in proximity to wetlands and connected to Rouse Hill Regional Park.
3. The roofing material for a dwelling house and attached development must be of a colour that has a solar absorptance of 0.7 or less.

In this clause –

solar absorptance, of roofing material, means the total incident solar radiation that is absorbed by the roofing material.



Residential structure plan

- Riverstone East Stage 3
- Metro station
- Metro alignment
- Watercourse
- Low density
- Medium density
- High density
- Community centre
- School
- Waterbody
- Road corridor
- Cadastre © NSW Spatial Services
- Open space
- Rouse Hill Regional Park
- Rouse Hill House and Farm

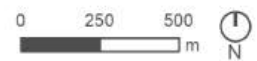


Figure 15: Residential Structure Plan

4.2 Built Form Design Controls

This part provides additional controls to those set out in Part 3 – Neighbourhood and subdivision design of the BCC Growth Centre Precincts DCP.

Table 3: Built form design controls

ELEMENT	PRINCIPLE	RECOMMENDED CONTROLS
PRIVATE REALM		
Private open space (POS)	POS should be provided to correlate to the size of the lot and minimum dimensions used to achieve useable, meaningful POS.	<p>R2 Zone (375≤420sqm)</p> <ul style="list-style-type: none"> • Minimum Principal Private Open Space (PPOS): 20 sqm • Minimum PPOS width: 4m <p>R2 Zone (420≤600sqm)</p> <ul style="list-style-type: none"> • Minimum Principal Private Open Space (PPOS): 25 sqm • Minimum PPOS width: 5m <p>R2 Zone (601+sqm)</p> <ul style="list-style-type: none"> • Minimum Principal Private Open Space (PPOS): 30 sqm • Minimum PPOS width: 6m <p>R3 Zone (Rear Loaded)</p> <ul style="list-style-type: none"> • Minimum Principal Private Open Space (PPOS): 20 sqm • Minimum PPOS width: 4m <p>R3 Zone (Front Loaded)</p> <ul style="list-style-type: none"> • Minimum Principal Private Open Space (PPOS): 25 sqm • Minimum PPOS width: 4m

ELEMENT	PRINCIPLE	RECOMMENDED CONTROLS																																									
Tree Canopy	Tree canopy coverage within POS should be provided to correlate with the residential dwelling typology and contribute to reaching wider a precinct target of 40% tree canopy.	<table border="1"> <thead> <tr> <th colspan="6" data-bbox="528 259 1358 309">Tree Canopy Aims</th> </tr> <tr> <th data-bbox="528 309 600 353"></th> <th colspan="4" data-bbox="600 309 1193 353">Residential</th> <th data-bbox="1193 309 1358 353">Open Space</th> </tr> </thead> <tbody> <tr> <td data-bbox="528 353 600 495" rowspan="2">Lots</td> <td data-bbox="600 353 746 443">Detached dwellings</td> <td data-bbox="746 353 877 443">Attached dwellings</td> <td data-bbox="877 353 1024 443">Multi-dwelling</td> <td data-bbox="1024 353 1193 443">Apartments</td> <td data-bbox="1193 353 1358 495" rowspan="5"> Minimum 45% canopy (< 5ha) Target applies only to areas outside courts and sports fields </td> </tr> <tr> <td data-bbox="600 443 746 495">20-30%*</td> <td data-bbox="746 443 877 495">15-25%*</td> <td data-bbox="877 443 1024 495">20-30%*</td> <td data-bbox="1024 443 1193 495">15-20%*</td> </tr> <tr> <td data-bbox="528 495 600 539"></td> <td colspan="4" data-bbox="600 495 1193 539" style="text-align: center;">*Varies with lot size</td> </tr> <tr> <td data-bbox="528 539 600 792" rowspan="2">Streets</td> <td colspan="3" data-bbox="600 539 1024 629">Existing (10-20m reserve)</td> <td data-bbox="1024 539 1193 629">New (12-20m Reserve)</td> </tr> <tr> <td data-bbox="600 629 746 792">Overhead power 40%</td> <td colspan="2" data-bbox="746 629 1024 792">Underground power 50%</td> <td data-bbox="1024 629 1193 792">Underground power 70%</td> </tr> <tr> <td data-bbox="528 792 600 920">Zoning</td> <td colspan="4" data-bbox="600 792 1193 920">(R1, R2, R3, R4) (including streets) 40%</td> </tr> </tbody> </table>	Tree Canopy Aims							Residential				Open Space	Lots	Detached dwellings	Attached dwellings	Multi-dwelling	Apartments	Minimum 45% canopy (< 5ha) Target applies only to areas outside courts and sports fields	20-30%*	15-25%*	20-30%*	15-20%*		*Varies with lot size				Streets	Existing (10-20m reserve)			New (12-20m Reserve)	Overhead power 40%	Underground power 50%		Underground power 70%	Zoning	(R1, R2, R3, R4) (including streets) 40%			
		Tree Canopy Aims																																									
			Residential				Open Space																																				
		Lots	Detached dwellings	Attached dwellings	Multi-dwelling	Apartments	Minimum 45% canopy (< 5ha) Target applies only to areas outside courts and sports fields																																				
			20-30%*	15-25%*	20-30%*	15-20%*																																					
	*Varies with lot size																																										
Streets	Existing (10-20m reserve)			New (12-20m Reserve)																																							
	Overhead power 40%	Underground power 50%		Underground power 70%																																							
Zoning	(R1, R2, R3, R4) (including streets) 40%																																										
Front Setback for mature trees	Setbacks should be meaningful and achieve privacy and/or usability. Residual setbacks should be reallocated in a meaningful manner.	Rear setback reduced and redistributed into the front setback. The POS can include rear 'setback' subject to POS criteria being met.																																									

ELEMENT	PRINCIPLE	RECOMMENDED CONTROLS
Garage dominance	Garages are to be designed to allow for surveillance or activation to streets, cannot dominate the streetscape and are to enable walking.	<p>The garage width cannot be greater than 50% of the total house frontage.</p> <p>To utilise a double garage on a front-loaded lot, the lot width must be minimum: $\geq 13\text{m}$</p> <p>To utilise a single garage on a front-loaded lot, the lot width must be minimum: $\geq 8.5\text{m}$</p> <p>To utilise a single garage tandem on a front-loaded lot, the lot width must be minimum: $\geq 8.5\text{m}$</p> <p>Lots less than 8.5m must be accessed via a rear laneway and utilise a single or tandem garage arrangement</p> <p>Garage setback must be 1.5m from primary building line.</p>
Wider verges for trees	Street cross sections focus on WSUD, increased permeability and street tree planting capability to significantly improve urban cooling, sustainability and canopy cover.	<p>Verge width minimum determined by landscape architect based on species.</p> <p>The street tree planting verge should be located between the street and footpath to provide shade, pedestrian separation and allow double row of trees, assuming front setback planting.</p>
Driveway crossover for trees	Driveway crossovers allow for adequate verge width for tree planting.	Driveway crossover at verge shall be no greater than 2.5m and continue for 50% of the front setback depth.

4.3 Movement Network and Design

Refer to Section 3.4 of the BCC Growth Centre Precincts DCP – Movement network.

Additional Objectives

1. To create specific road types to serve the needs of the Precinct.
2. To create a permeable bicycle and pedestrian network throughout and beyond the precinct.
3. To allow provisions for street trees within road/street corridor that mitigate the urban heat effects

Additional Controls

1. The road network and hierarchy are to be provided generally in accordance with Figure 15.
2. Precinct-specific road and path types are to be designed with Table 4, or, if adopted by Council, the Western Sydney Street Design Guidelines.
3. The shared cycle and pedestrian network is to be provided generally in accordance with Figure 20.

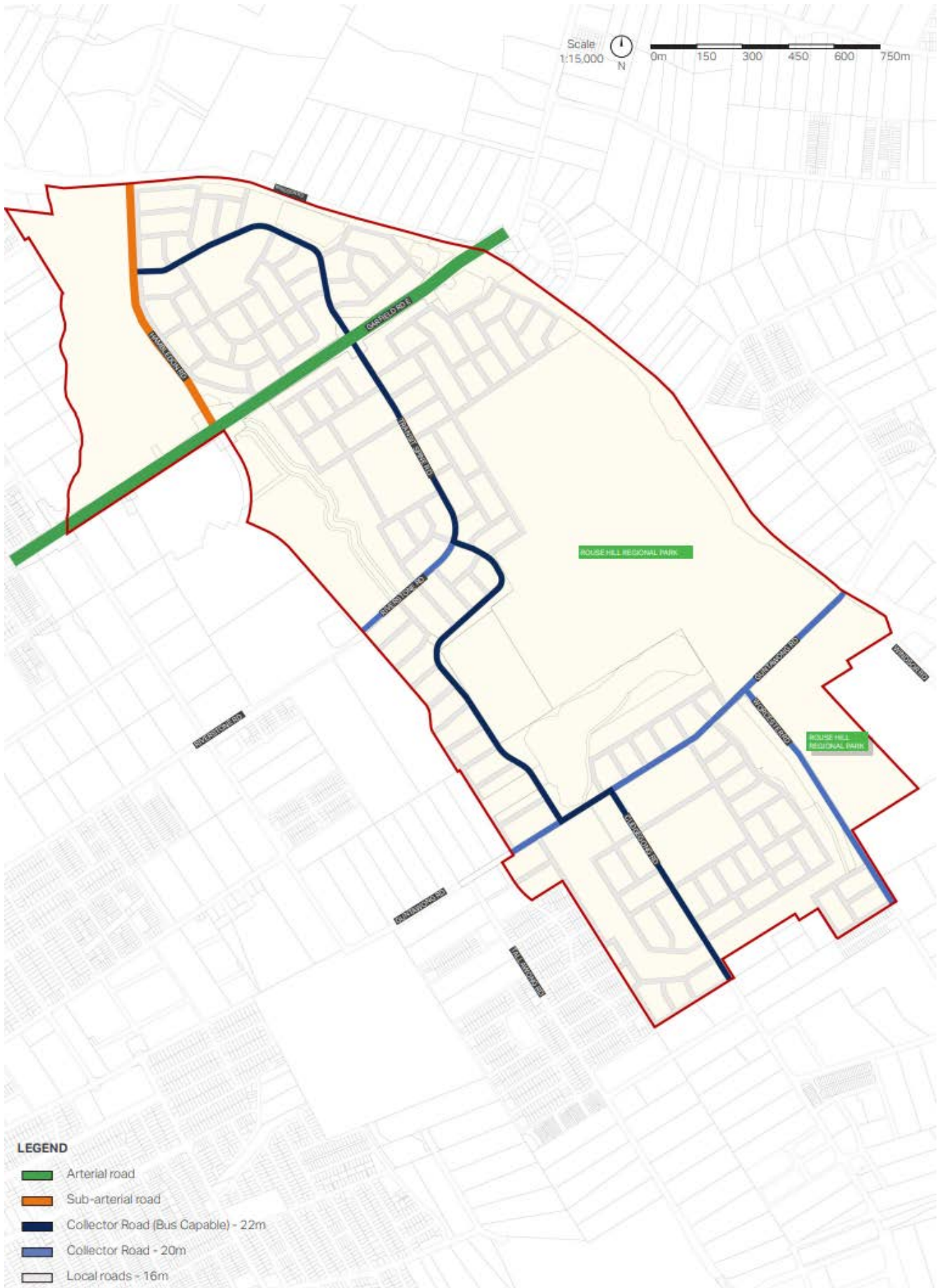


Figure 16: Precinct road hierarchy

Table 4: Road typologies

Road/Street Type	Description
Arterial	Supports major regional and inter-regional traffic movement and carry traffic directly from one region to another.
Sub-arterial	<p>Sub-arterial roads mediate between regional traffic routes and local traffic routes, and link arterial routes to town centres. Direct vehicular access to properties is generally not permitted along these roads for reasons of traffic safety and to maintain the capacity and efficiency of the road system. Shared paths are provided for pedestrian and cycle use and on-street parking is generally not permitted.</p> <p>Refer to Figure 16</p>
Collector	<p>Collector roads collect traffic from local streets and carry a higher volume of traffic, linking neighbourhoods and centres and accommodating public transport routes. Amenity and safety are to be maintained by restricting vehicular speeds through traffic-calming measures and intersection design. Intermittent parking with landscaping is permitted on both sides of the street.</p> <p>Refer to Section 3.4.1 of the BCC Growth Centre Precincts DCP – Street layout and design</p>
Bus capable collector	<p>Bus capable collector roads serve the same function as collector roads. They have the same road reserve width but feature a wider road corridor and carriage way to safely facilitate the movement of bus transport.</p> <p>Refer to Figure 17</p>
Local	<p>Local streets provide local residential access. These streets are designed to slow residential traffic in order to give priority to pedestrians and cyclists. Amenity and safety are to be maintained by introducing various traffic calming measures. On-street parking is permitted on both sides of the street.</p> <p>Refer to Figure 18</p>
Quiet-Way	<p>A quiet-way is a high-quality ‘mixed traffic’ treatment where bicycle riders travel on-road. The design philosophy of a quiet-way is that people cycling are equal road users to motor vehicle traffic. Supported by very low traffic speeds (e.g. 30km/h or lower), adequate design elements and visual cues, drivers are encouraged to reduce speed and discouraged from overtaking bike riders or other vehicles. Quiet-ways are preferred on local streets with low volumes and few heavy vehicles.</p>

Road/Street Type	Description
	The design of a quiet-way is to be consistent with the local street design with those design elements and visual cues outlined above.
Rear lane	<p>Rear lanes typically provide access to developments fronting restricted access roads and to some forms of medium density developments. Rear lanes will provide access for servicing. Laneways must have splayed entrances of 3 metres to allow for garbage trucks.</p> <p>Refer to Section 3.4.2 of the BCC Growth Centre Precincts DCP - Laneways</p>
Access Street	<p>One-way street with on-street parking street and footpath on one side.</p> <p>Refer to Figure 19</p>

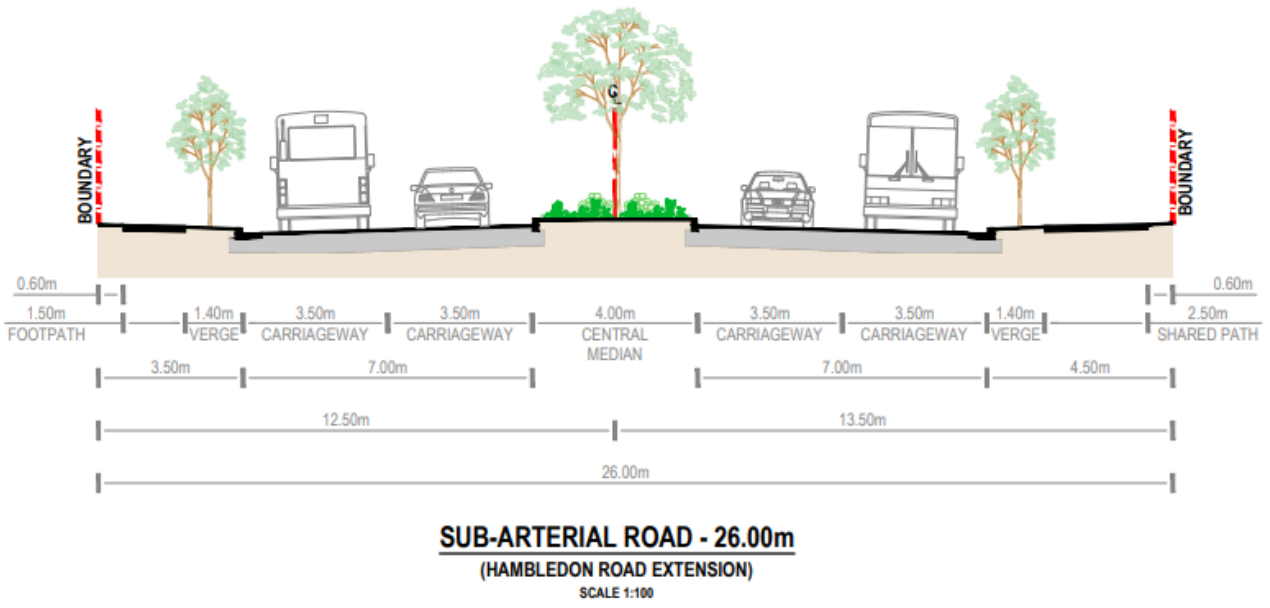


Figure 17: Sub-Arterial Road cross-section

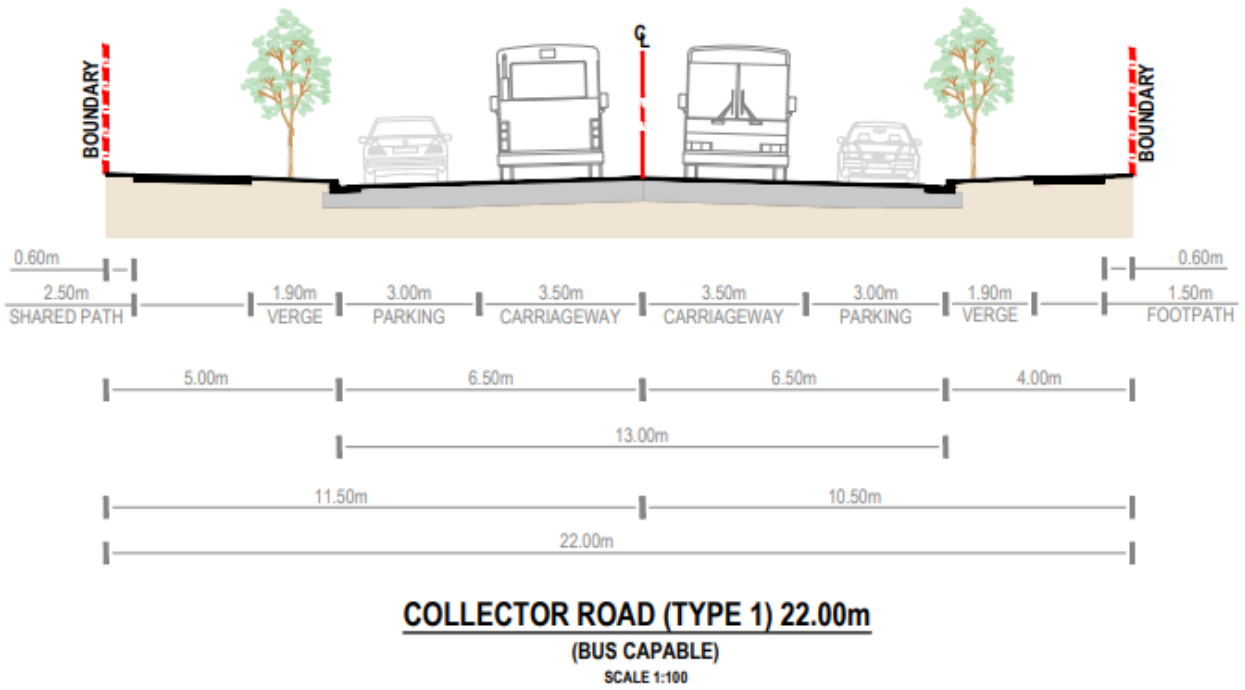
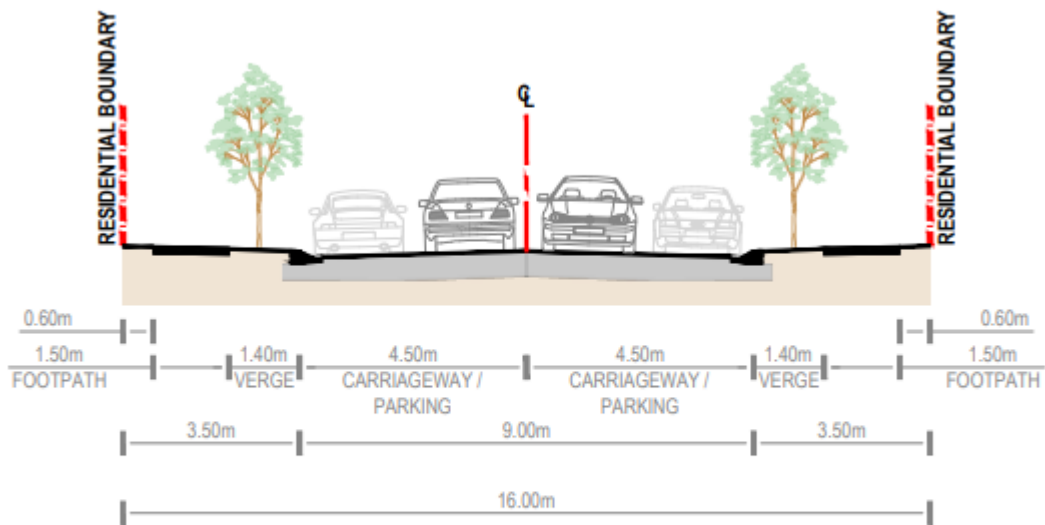


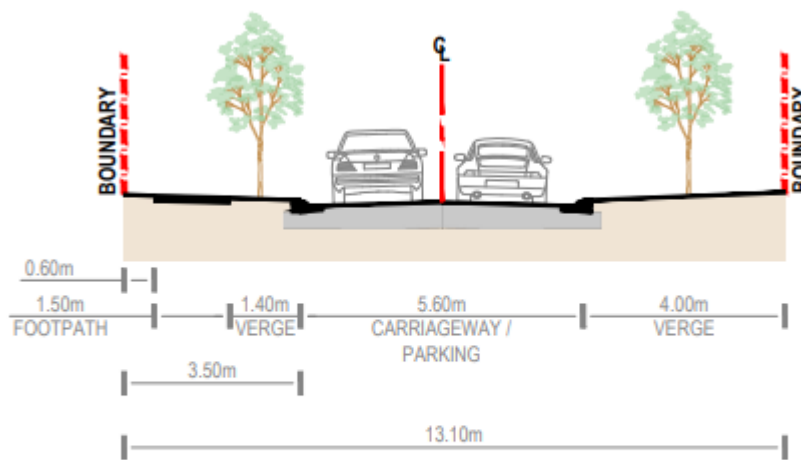
Figure 18: Bus-capable Collector Road cross-section



LOCAL ROAD (TYPE 1) - 16.00m

SCALE 1:100

Figure 19: Local Road cross-section



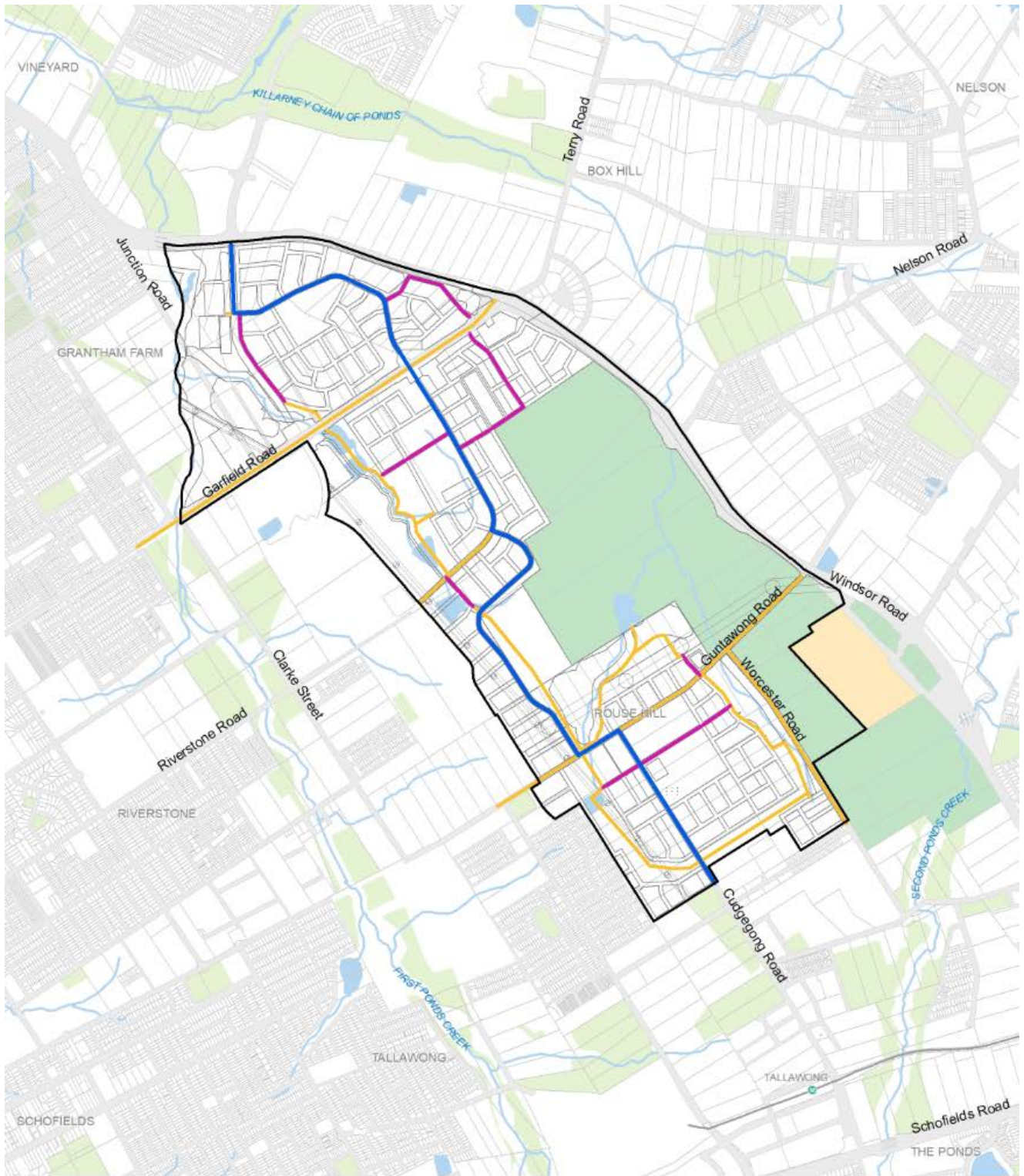
ACCESS STREET - 13.10m

(ONE-WAY)

SCALE 1:100

Figure 20: Access Street cross-section

Note: Where roads are required to be consistent with Planning for Bushfire Protection 2019 (PBP 2019), the design of any road shall be consistent with the design standard specified in PBP 2019.



Key transport and active travel networks

- Riverstone East Stage 3
- Metro station
- Metro alignment
- Watercourse
- Transit bus spine
- Quietways
- Shareways
- Waterbody
- Road corridor
- Cadastre © NSW Spatial Services
- Open space
- Rouse Hill Regional Park
- Rouse Hill House and Farm



Figure 21: Public and active transport network

4.4 Retention and Planning of Street Trees

Objectives

1. To achieve a 40% tree canopy cover across the precinct.
2. Ensure that opportunities for increased tree canopy cover are considered and provided to maximise comfort and enhance the liveability, health and well-being of both the community and the environment.
3. Provide for new trees and, where practical, retain existing trees as landscape elements to ensure the community benefits from urban amenity, cooler neighbourhoods, improved air and water quality and to enhance biodiversity on the site.

Controls

1. Tree planting in streets and public open spaces is to be in accordance with Blacktown City Council Growth Centre Precincts DCP **Appendix D**.
2. Street trees are required for all streets. Street planting is to:
 - a) contribute to target goals for canopy cover and tree planting,
 - b) minimise risk to utilities and services and comply with Council's Engineering Design and Construction specifications for installation of appropriate root barriers,
 - c) ensure that trees are not located within the carriageway. Blister construction with kerb and guttering located in the kerbside parking lane to accommodate canopy tree planting will be supported where appropriate, and
 - d) be integrated with water management strategy to ensure that street trees thrive.
3. For clearing not covered by a biodiversity certification approval where tree removal is authorised under Clause 3.5.2 (3), trees removed must be replaced at a ratio of at least 2:1 (new to existing) to contribute to canopy cover targets.
4. When assessing development, Council should consider:
 - a) the opportunity to provide new trees, and retain existing trees on the proposed development site to contribute to canopy targets,
 - b) the proponent's approach to incorporating and protecting existing trees as part of the development design to enhance urban amenity and provide established urban canopy across the development,
 - c) whether an efficient water source for trees has been incorporated into the development design, and
 - d) provision of enough deep soil zones for trees.

4.5 Traffic – Air Quality

Objectives

1. To reduce the impact of motor vehicle related air pollution on surrounding development.

Controls

1. Development shall comply with:
 - a) minimum separation distances from the kerb as outlined in Table 5, or
 - b) where minimum separation distances are not achievable, ducted mechanical ventilation for the supply of outdoor air in compliance with AS 1668.2: *The use of ventilation and air conditioning in buildings - Mechanical ventilation in buildings* is to be provided. Mechanical ventilation outdoor air intakes must be located at least the minimum distance from the kerb specified in **Table 5**, measured in the horizontal and vertical planes from the kerb. Filtration of outdoor air must be to a minimum Australian Standard performance rating of F6 or minimum efficiency reporting value (MERV) 9.

Table 5: Minimum setback requirement

Road classification (existing or forecast)	Residential type buildings	Child care centres, hospitals, aged care facilities, schools
Motorway	30m	80m
High-volume Roads: <i>More than 60,000 annual average daily traffic (AADT); and 40,000–60,000 AADT and 5% or more heavy vehicles</i>	20m	80m
Intermediate Roads: <i>40,000–60,000 AADT; and 30,000–40,000 AADT and 10% or more heavy vehicles</i>	10m	40m
Moderate Roads: <i>20,000-40,000 AADT</i>	n/a	40m

Road classification (existing or forecast)	Residential type buildings	Child care centres, hospitals, aged care facilities, schools
High-volume intersection	30m	60m

2. Where development is proposed in the vicinity of a road that carries, or is forecast to carry, more than 20,000 AADT, development applications are to demonstrate suitable compliance with Part 4 Air Quality near busy roads of *Development in Rail Corridors and Busy Roads - Interim Guideline*, Department of Planning, 2008.
3. When roads are flanked by continuous walls of building, the air pollution from vehicles may become trapped, exposing the users of roads and buildings to higher levels of air pollution. Accordingly, developments of four storeys or more shall:
 - a) Use horizontal and vertical articulation on the street frontages
 - b) Vary roof forms between adjacent buildings

Note: It is anticipated these controls will be applicable only to development within the vicinity of Windsor Road, Garfield Road East, and Guntawong Road however prior to the lodgement of a development application the existing and forecast AADT for roads adjoining a development site should be considered and discussed with Council to determine the applicability of the above controls.

4.6 Traffic – Noise

Refer to Section 4.2.9 of the BCC Growth Centre Precincts DCP – Visual and acoustic privacy and Figure 21.

Additional Objectives

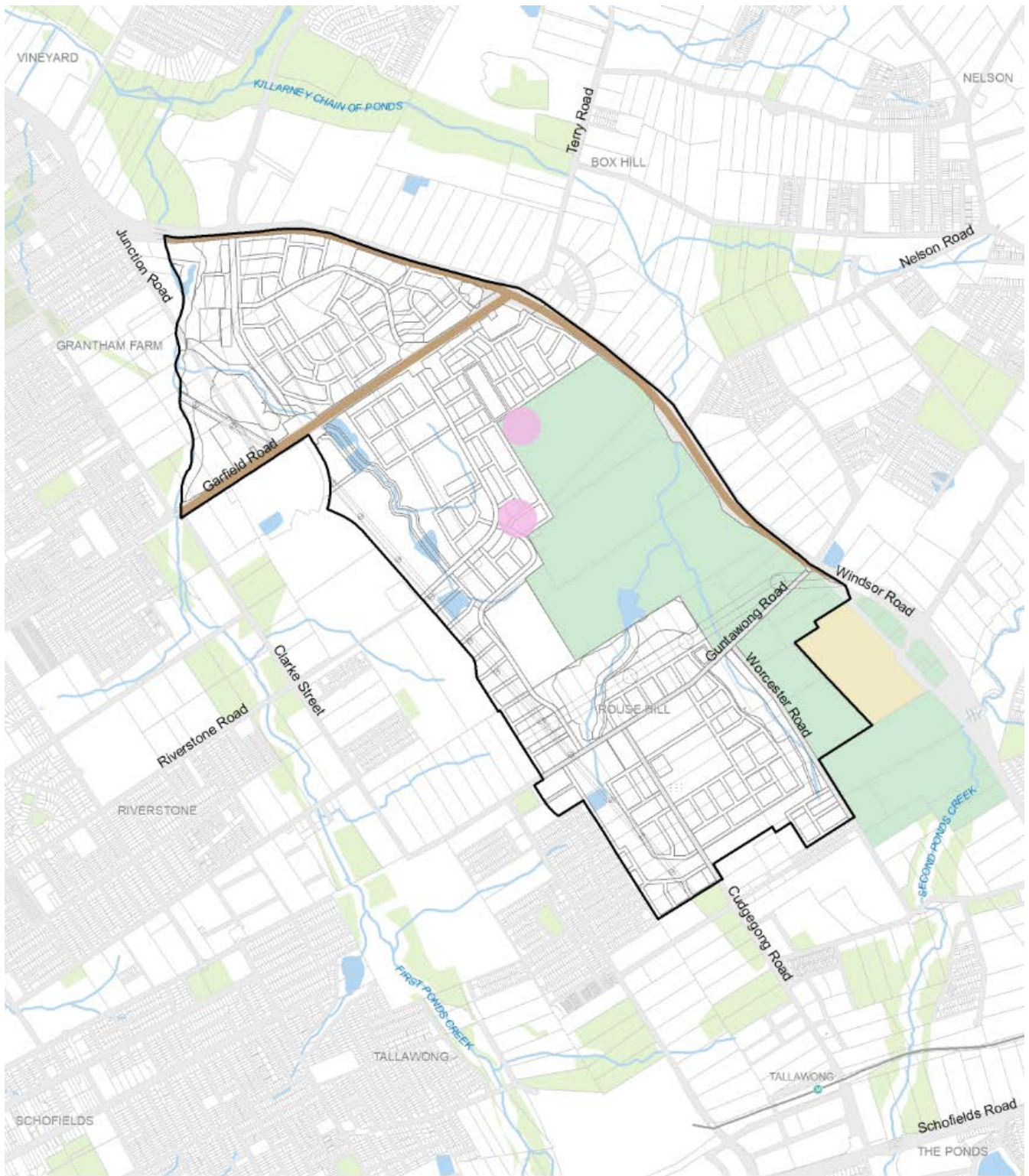
1. To minimise noise impacts in the vicinity of a road that carries, or is forecast to carry, more than 20,000 vehicles per day.

Additional Controls

1. Where development is proposed in the vicinity of a road that carries, or is forecast to carry, more than 20,000 AADT, an Acoustic Report is to be submitted with the development application demonstrating compliance with the Clause 102 of *State Environmental Planning Policy (Infrastructure) 2007* and *Development in Rail Corridors and Busy Roads - Interim Guideline*, Department of Planning, 2008. The Acoustic Report should:

- a) provide an assessment of traffic noise impacts on existing and anticipated dwelling locations and types of residential construction, and
- b) identify noise mitigation measures to be implemented at subdivision stage and/or dwelling construction stage.

Note: It is anticipated these controls will be applicable only to development within the vicinity of Windsor Road, Garfield Road East and Guntawong Road, however prior to the lodgement of a development application, the existing and forecast AADT for roads adjoining a development site should be considered and discussed with Council to determine the applicability of the above control.



Noise impact consideration

- Riverstone East Stage 3
- + Metro station
- Metro alignment
- Watercourse
- Waterbody
- Road corridor
- Cadastre © NSW Spatial Services
- Open space
- Rouse Hill Regional Park
- Rouse Hill House and Farm

- Noise contributors**
- Industrial sources (mechanical noise)
 - Traffic noise

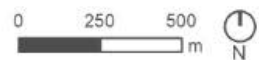


Figure 22: Noise impacts

4.7 Odour

Please see Section 2.3.7 of the BCC Growth Centre Precincts DCP for advice regarding odour assessment and control.

5 Site Specific Controls

5.1 Development adjoining or adjacent to Rouse Hill Regional Park

Objectives

1. Improve development outcomes to preserve and protect view corridors of the ridge and mountains from the forecourt of Rouse Hill House.
2. Access provided to Rouse Hill Regional Park direct from the precinct.
3. preserve middle-distance views onto the Riverstone East Precinct and distant views towards the Blue Mountains

Controls

1. Multi-storey developments are to be located appropriately within the precinct to preserve key views. Multi-storey developments should not be constructed on the highest points within the precinct, including:
 - a) on the western boundary of the extent of Rouse Hill Regional Park, and
 - b) on the western boundary of Worcester Road for 200m south from Rouse Hill Regional Park.
2. Multi-storey developments in the southern portion of the Precinct should be located on the lowest points on the western side of the main ridges and high points south of Garfield Road East and not exceed a building height of 16m.
3. Multi-storey developments throughout the precinct must be located within contours below 40m and not exceed a building height of 16m.
4. The residential interface to Rouse Hill Regional Park is to incorporate asset protection zones through a perimeter road network to manage bushfire risk.