


Draft Amendments to Penrith Development Control Plan 2014

Orchard Hills Precinct – Stage 1



October 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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Draft Amendments to Penrith Development Control Plan 2014

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DRAFT AMENDMENTS TO PENRITH DEVELOPMENT CONTROL PLAN 2014

DISCLAIMER: Options are being considered by the Department of Planning, Housing and Infrastructure (the Department) as to how to give effect to the development control plan (DCP) clauses, once final. This draft DCP could either be made by Penrith City Council, as an amendment to the existing Penrith DCP 2014 (i.e. as it is currently drafted), or as a stand-alone DCP finalised by the Planning Secretary which would complement the existing Penrith DCP 2014 (and prevail in the event of inconsistency).

AMENDMENT 1

VOLUME 1 TABLE OF CONTENTS

Insert a table of contents for the new section E19 Orchard Hills Stage 1.

AMENDMENT 2

VOLUME 1 SECTION A INTRODUCTION

Section 1.8 table of amendments

Amendment No.	Chapter	Change	Adopted by Council	Date of commencement
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Insert the following at the end of the table

INSERT NUMBER	E19 Orchard Hills Stage 1	Introduce precinct specific controls for Orchard Hill Stage 1	INSERT DATE	INSERT DATE
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AMENDMENT 3

VOLUME 2 SECTION E KEY PRECINCTS

Insert at the end of the list of key precincts

- E19 Orchard Hills Stage 1

AMENDMENT 4

VOLUME 2 SECTION E KEY PRECINCTS

Insert the following section

E19 ORCHARD HILLS STAGE 1

Table of Contents

19.1	Introduction	1
19.1.1	Land to Which This Chapter Applies	1
19.1.2	Aims of this Chapter	2
19.1.3	Objectives	2
19.1.4	Relationship to other plans and documents	2
19.2	Vision	3
19.3	Desired Future Character	3
19.4	Development Intent and Outcomes	5
19.5	Infrastructure Sequencing and Development Staging	7
19.6	Transport and Street Network	8
19.6.1	Street Network	8
19.6.2	Pedestrian and cycle network	23
19.7	Public Domain	24
19.7.1	Public Art	24
19.8	View Corridors	25
19.9	Biodiversity and Riparian Corridors	26
19.10	Bushfire Management	28
19.11	Stormwater Management	28
19.12	Flood Risk Management	31
19.13	Aboriginal Heritage	32
19.14	Noise and Vibration	33
19.15	Development in Proximity to the Defence Establishment Orchard Hills	34
19.16	Design and Built Form	35
19.16.1	Front setbacks and wall heights	35
19.16.2	Side and Rear Setbacks	38
19.16.3	Minimum Site Frontage	39
19.16.4	Floor to Ceiling Heights	39
19.16.5	Building design	40
19.16.6	Residential Development on Sloping Land	42
19.16.7	Active Street Frontages	44
19.16.8	Landscaping and Deep Soil	45
19.16.9	Communal Open Space	46
19.16.10	Private Open Space	47
19.16.11	Vehicular Access and Basement Entries	47
19.17	Controls for Industrial Development	48

19.18	Subdivision Controls.....	48
19.19	Earthworks and Retaining Walls.....	50
19.20	Tree Canopy.....	51
19.21	Access and Parking.....	55
Appendix A – Noise Buffer Areas.....		57

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19.1 Introduction

19.1.1 Land to Which This Chapter Applies

This chapter applies to the land bound in black in **Figure E19.1** and is known as Orchard Hills Stage 1.

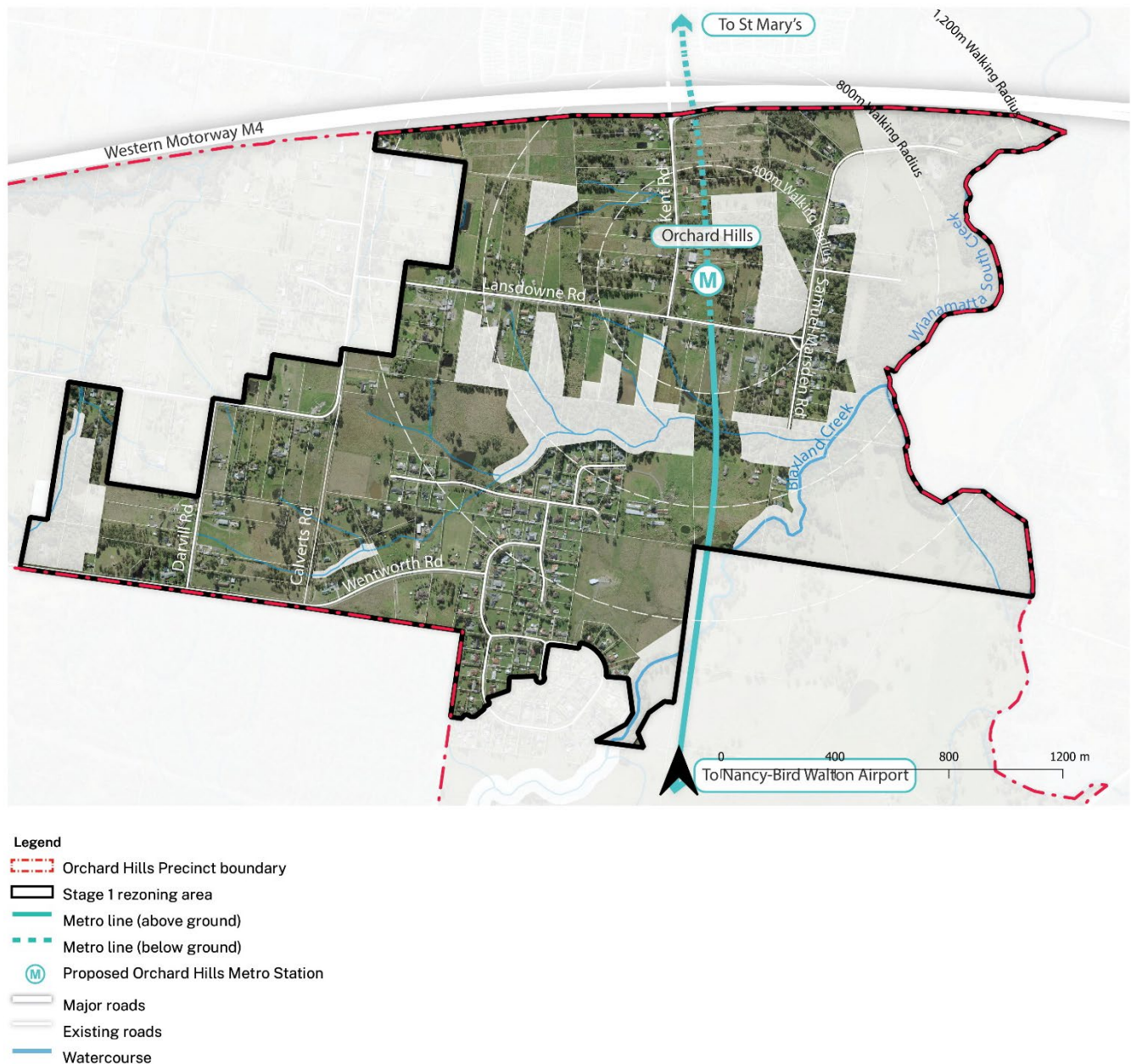


Figure E19.1 Land to which this section applies is shown within the area outlined in black

19.1.2 Aims of this Chapter

The aims of this chapter are to:

- a) support the objectives of Penrith Local Environmental Plan 2010
- b) facilitate the sustainable and orderly urban development of Orchard Hills Stage 1.

19.1.3 Objectives

The objectives of this chapter are to ensure:

- a) A hierarchy of connected neighbourhoods focused around the Orchard Hills Town Centre that provide a variety of employment, housing types and densities, and open spaces to meet the needs of the new communities.
- b) The road network provides efficient and attractive tree-lined streets, with an emphasis on pedestrian and bicycle priority, and access to public transport.
- c) The development of a transit-oriented, diverse, attractive and inviting local centre around Orchard Hills Station that is a desirable place to live, work and recreate, with excellent transit amenity.
- d) Development occurs in an appropriate sequence with adequate supporting infrastructure.
- e) Protection, restoration and maintenance of biodiversity and natural ecosystems.
- f) Water quality and stormwater flow are improved and managed through water-sensitive urban design, on-site measures and detention basins where required.
- g) Risk from flooding, bushfire, drought and urban heat is reduced, managed or mitigated.

19.1.4 Relationship to other plans and documents

This chapter must be read in conjunction with any environmental planning instrument applying to the land, any relevant contributions plan or Planning Agreement and the relevant parts of this DCP.

In the event of any inconsistency between this chapter and another provision in this DCP, the requirements of this chapter prevail.

Where a specific issue is not addressed in this chapter, reference should be made to relevant parts of this DCP.

19.2 Vision

Orchard Hills is a resilient community that is embedded in and inspired by its natural landscape. The seamless integration of waterways, Cumberland Plain Woodland, ridgelines and iconic views to the Blue Mountains allows the community to connect with the Country around them. New development and public spaces have been designed with these unique elements in mind and to reinforce the area's identity.

Nestled within retained Cumberland Plain Woodland, the mixed-use local centre is the urban focus of the Orchard Hills Precinct (Precinct) and has set the scene for future development across the wider Precinct. The centre is at the heart of the new community, providing community facilities and services like child care and health centres, great places to shop and socialise, and accessible housing for a diverse and vibrant community. Orchard Hills Station is the gateway to jobs and services in Bradfield, St Marys and Penrith, and to markets and destinations further afield, via the new Western Sydney Airport.

As Orchard Hills has grown organically over time, smaller neighbourhood centres have established to serve the daily needs of their local community and offer opportunities for social connection. The network of walking, cycling and public transport options means that the community can safely and sustainably access these centres within a 15-minute walk or bike ride from their home.

New neighbourhoods continue to welcome diverse communities who can access homes that fit their needs – whether this is the type or size of home, or the type of tenure arrangement. As new neighbourhoods develop, the network of open space and urban tree canopy is extended to maximise the place making opportunities, achieve urban cooling, and contribute to the NSW Government's commitment to Net Zero by 2050.

19.3 Desired Future Character

Development is to respond to the desired future character for each area in **Figure E19.3**.

Orchard Hills Town Centre (Stage 1A)

The Orchard Hills Town Centre is a mixed-use urban neighbourhood that serves as the local centre for the broader Precinct, and the hub for social connection. It is anchored by Orchard Hills Station, which offers access to high-frequency transport connections to employment locations across the Western Parkland City.

This new urban centre is the focus for the community, providing a range of retail, community, and commercial uses at lower levels of mixed-use buildings to create active and engaging streets, with residential apartments above to maximise the number of people living within easy walking distance to public transport, shops and services. The Town Centre is designed to be accessible and inclusive, and is a safe space for people of all ages, abilities and cultural backgrounds.

Orchard Hills Station is the focus of this neighbourhood, with a retail high street, new public domain, and new plaza spaces forming the heart of the new centre. The well-designed, compact, vibrant and walkable mixed-use centre supports the highest density in the Precinct, with shop-top high rise apartment buildings and landmark towers, concentrated around the station, and the new east-west main street.

The main street is a mixed use active spine that is activated by a full line shopping centre, community facilities and green space in the west, and the station arcade, entry and greenspace in the east. Kent Road is a Place Street, prioritising people, integrating with a network of fine-grain streets and laneways in the local centre.

High density residential apartments that surround the town centre, within a 5-minute walk of the station create a compact, active, and walkable centre. To the north, light industrial and urban services provide opportunities for local jobs and services close to the town centre.

New open space and public domain areas will provide space and amenity for residents, workers and visitors to enjoy. Set amongst significant Cumberland Plain Woodland and expansive green space, the Orchard Hills Town Centre offers the highest level of services and amenity including connections to regional open space in the adjacent Wianamatta-South Creek parklands, a higher order retail offering and district-scale community and sporting facilities.

Residential Fringe (Stage 1B)

On the fringe of the new Orchard Hills Town Centre, is a predominately residential neighbourhood providing a variety of housing types within walking and cycling distance to the town centre and Orchard Hills Station.

This neighbourhood supports the role and function of the town centre, providing increased housing and greater housing diversity within 10 minutes walking distance of the centre. New housing includes mid-rise apartment buildings closer to the centre, transitioning to low rise apartments, terraces and townhouses further from the station.

A new school will become the focal point for the community, supported by new parks and open space and significant bushland areas providing opportunities for recreation, play and connection. The school and parks are co-located and connected to the community by walkable streets with diverse housing options to create a compact and inclusive neighbourhood.

Urban services land in the north provides opportunities for local jobs and services close to homes, while creating a buffer to the motorway to the north to boost residential amenity.

Residential Parklands (Stage 1C)

To the south of Orchard Hills Town Centre, a low-rise medium density residential neighbourhood is defined by its landscape of ridgelines and creeks, and a network of local parks and riparian corridors. This neighbourhood includes a prominent ridgeline and a culturally significant high point

(the highest point in the Precinct), which provides important views and outlook across the landscape, in all directions.

A new district level park, Hill Top Park, is located on the high point to provide opportunities for community gathering, recreation and shared views and connects to a network of elevated parks and open space throughout the neighbourhood to ensure diversity and variety. Part of the existing community 'The Vines' forms part of this neighbourhood.

As the land slopes away from the ridgeline, mid-rise apartments and medium density housing are concentrated around areas of high amenity such as new parks and neighbourhood centres to maximise housing diversity and homes with walking distance to local services.

19.4 Development Intent and Outcomes

A. Objectives

- a) To ensure that development occurs in a coordinated manner consistent with the Vision, Desired Future Character and Orchard Hills Stage 1 Indicative Layout Plan (ILP)

B. Controls

1. Development is to be consistent with the Vision and Desired Future Character of this chapter and undertaken generally in accordance with the Indicative Layout Plan (ILP) as shown in **Figure E19.2** subject to compliance with the objectives and development controls of this chapter and other relevant provisions of this DCP.

Stage 1 Area

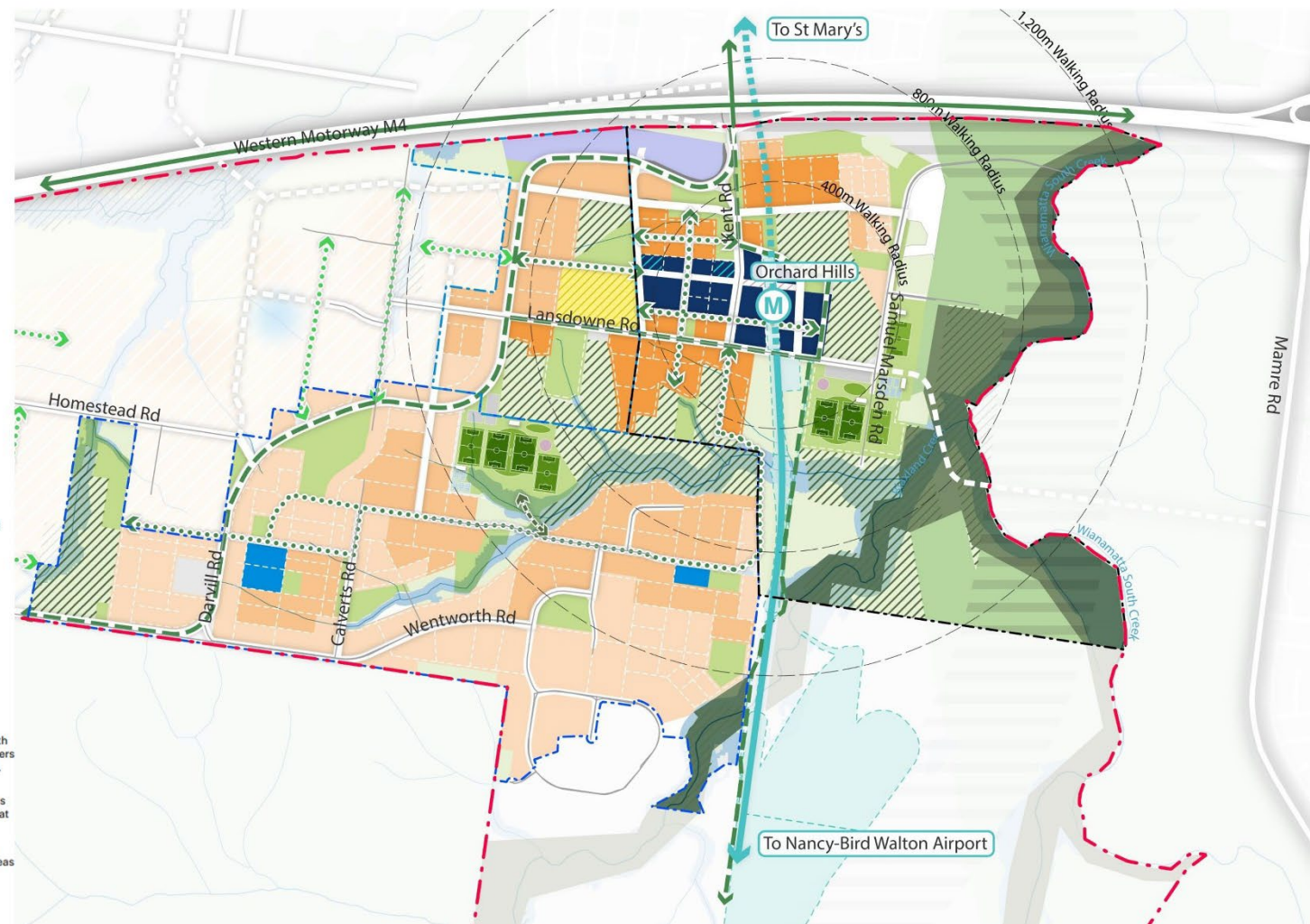


Figure E19.2 Indicative Layout Plan

19.5 Infrastructure Sequencing and Development Staging

A. Objectives

- a) To ensure that development proceeds in an orderly and efficient sequence, aligned with the efficient delivery of necessary supporting infrastructure.

B Controls

1. The sequencing of development is to be generally in accordance with the Development Staging Plan as shown in **Figure E19.3**, with area 1A first, 1B second and 1C third and is to align with current and planned utilities capacity, including available water and electricity capacity in each stage. Where development in a later stage is proposed as out of sequence, the applicant is required to demonstrate, to the satisfaction of the consent authority, that arrangements have been made for all essential services and infrastructure to be provided when required and at no additional cost to government (including the relevant Council and the NSW Government) and utilities authorities.
2. Supporting infrastructure required to service the development proposal is to demonstrate anticipation of future development adjacent to and linked to the site. The provision is to ensure that any disruption to new roads and services is minimised for future development.
3. Each development application within each stage of development is to demonstrate sufficient capacity or provision of infrastructure necessary to service the development. This includes, but is not limited to:
 - a) Electricity
 - b) Water and wastewater
 - c) Stormwater drainage
 - d) Traffic and transport infrastructure

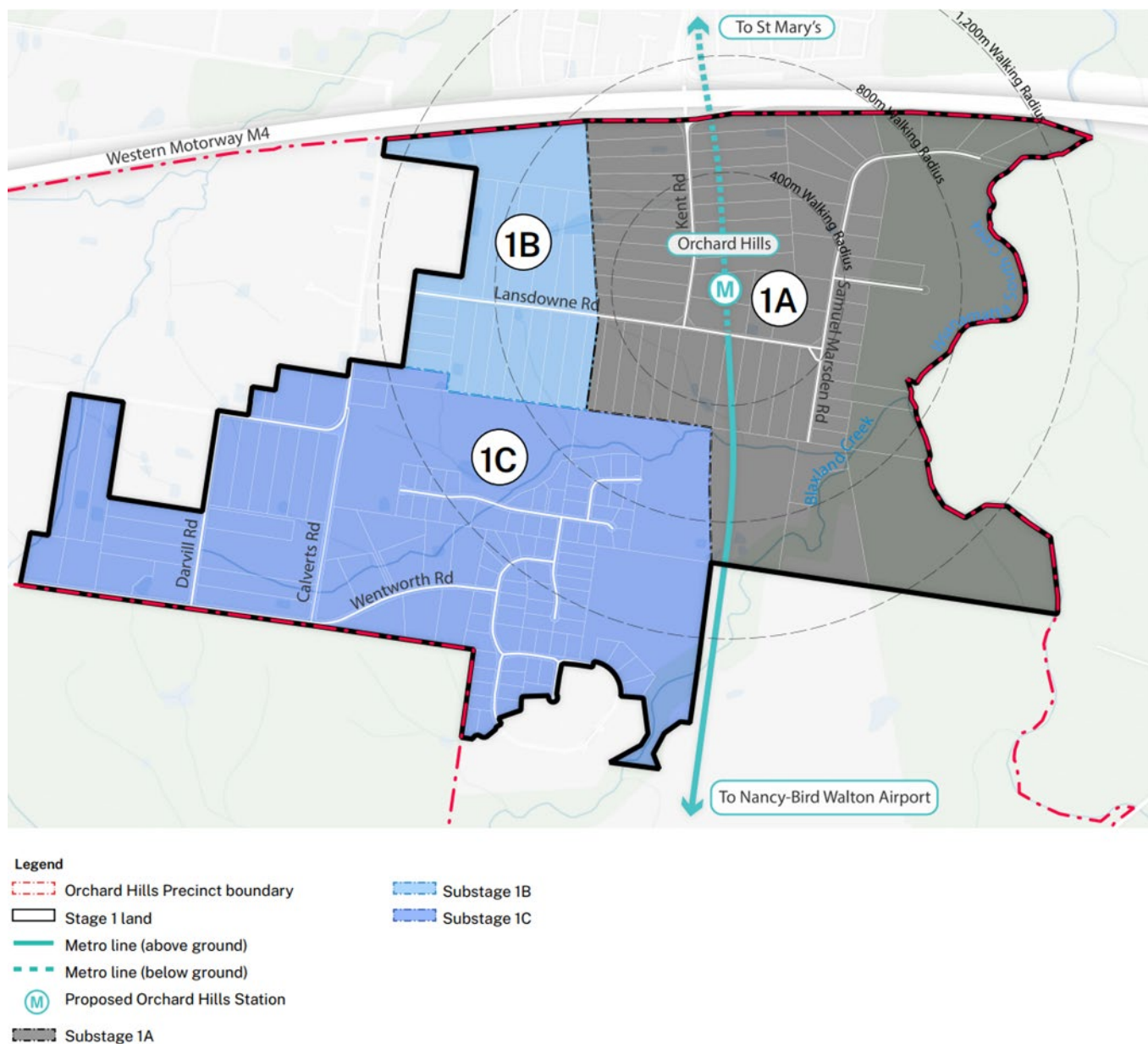


Figure E19.3 Development Staging Plan

19.6 Transport and Street Network

19.6.1 Street Network

A. Objectives

- To establish a clear road hierarchy and permeable network of streets that promote safe, efficient and sustainable movement for all users, including pedestrians, cyclists, public transport, and private vehicles.

- b) To encourage street types that accommodate multiple activities and with a hierarchy that responds the location and function of the street.
- c) To maximise opportunities for tree canopy cover and street tree plantings in all streets.
- d) To ensure the location and design of streets protects view lines and responds to landscape features and topography.
- e) To ensure that the development of Orchard Hills is based on a coordinated, integrated hierarchy of streets that connect people and places within the Precinct to people and places beyond the Precinct.
- f) To ensure sufficient carriageway and verge widths are provided to allow streets to perform their designated functions within the street network and to support street tree planting and landscaping.
- g) To ensure streets are designed to accommodate the needs of all users, prioritising pedestrians, cyclists and public transport users.
- h) To ensure that the street network enhances public life within Orchard Hills Town Centre through prioritisation of space within road corridors appropriate to the role and function of each street.

B. Controls

1. The street network is to be provided generally in accordance with **Figure E19.4, Table E19.1** and the relevant street cross sections shown in **Figure E19.5 to Figure E19.20**.

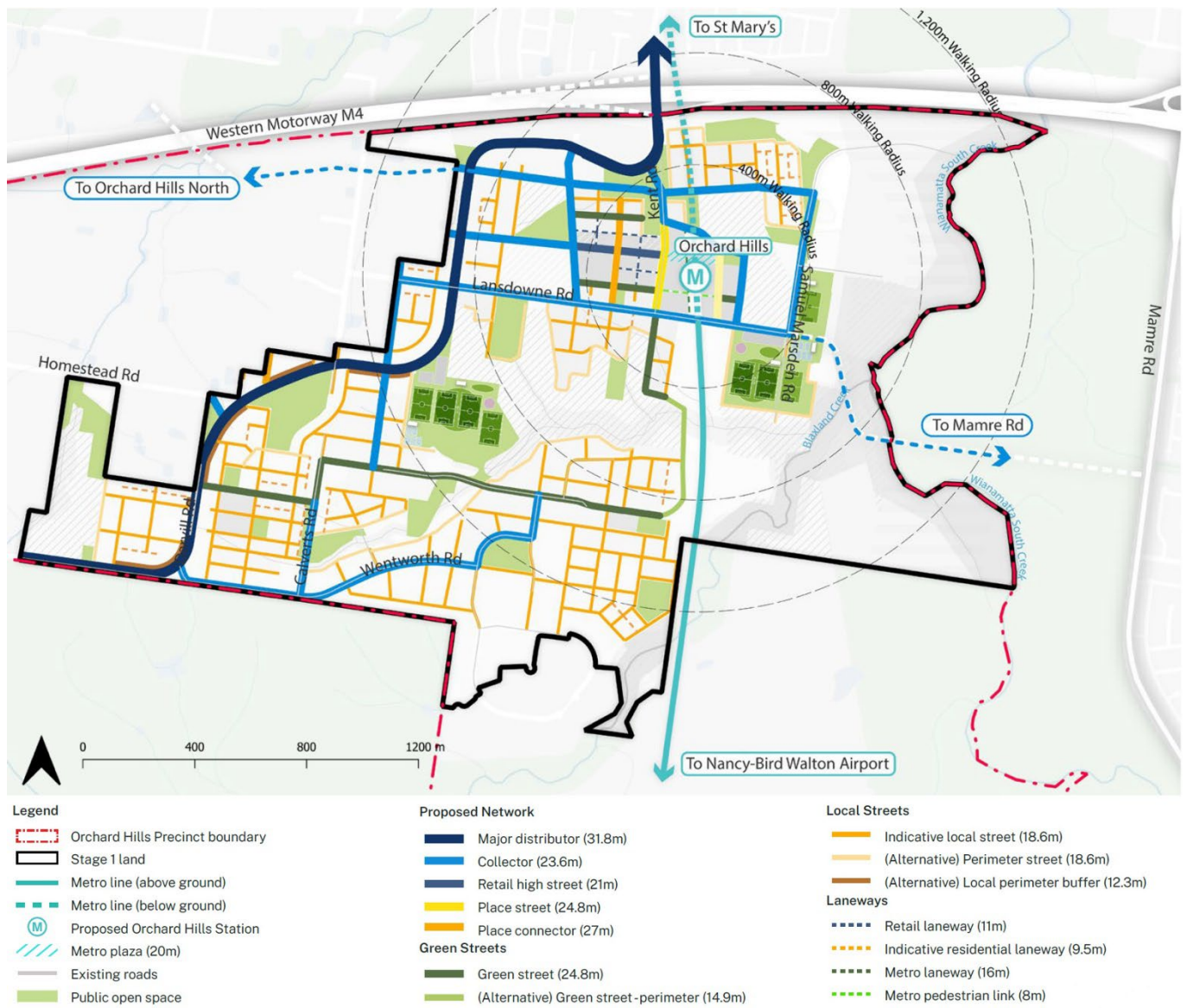


Figure E19.4 Street Network Map

2. The design and construction of streets must minimise impacts to existing vegetation, landscape features and significant view lines.
3. Partial width road construction is permitted subject to the following criteria being met:
 - a) The site(s) located opposite the proposed partial road are zoned for residential use and are not in public ownership or identified for acquisition, that is, the site(s) opposite are not zoned for Local Centre or Neighbourhood Centre, Public Recreation or Infrastructure
 - b) A minimum trafficable road width of 6.0metres is provided to cater for two-way traffic
 - c) The development potential of all adjoining allotments is maintained. The proposed development shall not, in the opinion of the consent authority, render any allotment adjoining or opposite the site of the proposed development incapable of development for

the purpose of residential development because the allotment would not meet minimum DCP or SEPP development standards

- d) The safety of all road users including service and passenger vehicles, pedestrians and cyclists is not compromised by the proposed partial road construction
 - e) The final road configuration is consistent with the pre-planned road layout and road type as shown in the Orchard Hills Stage 1 Indicative Layout Plan, **Figure E19.4** and **Table E19.1** of this DCP. Note: In some circumstances where proposed partial width roads straddle existing boundaries, the alignment of the road may need to be slightly offset to ensure the partial road is wholly contained on the applicant's land.
- 4. Where streets front public open space as identified in the Orchard Hills Stage 1 Contributions Plan, the applicant will be responsible for construction of the full width of the street. Applicants are advised to contact Council.
 - 5. Where streets front drainage land, community facilities or schools, the applicant will be responsible for construction of the full width of the street.
 - 6. Where any variation to the residential street network indicated in **Figure E19.4** is proposed, the street network is to be designed to achieve the following principles:
 - a) Establish a permeable road network based on a modified grid system.
 - b) Encourage walking and cycling and reduce travel distances
 - c) Maximise connectivity between residential areas, open space, community facilities and the Town Centre
 - d) Be informed by and sympathetically respond to the topography and retain significant vegetation
 - e) Provide frontage to, and maximise surveillance of, open space and riparian corridors
 - f) Avoid impacting views and vistas from the Hilltop Park and Blue Mountains escarpment identified in **Figure E19.22**
 - g) Demonstrate compliance with the requirements of *Planning for Bushfire Protection*, NSW Rural Fire Service.
 - h) Perimeter roads adjacent to bushland are to incorporate bus/emergency capable travel lanes and provide for Asset Protection Zones (APZ) within the road reserve.

Table E19.1: Street types

Street type	Road Reserve(m)	Verge (m)	Flex zone (m)	Travel lane (m)	Central median (m)	Pedestrian path (m)	Cycleway/ share path (m)	Planting (m)
Major distributor (bus capable)	31.8	2x6.4		2x7	5	2x1.5	2x2	2x0.6, 2x1.3 and 2x1 (Cycleway buffer)
Collector road (bus capable)	23.6	3.8, 7.8	2x2.5	7	-	2x1.5	1 x 3	2x0.6, 1.7, 1.4 and 1.3 (Cycleway buffer)
Alternative Collector road adjacent bushland (bus capable)	23.6	3.8 and 9.3	2.5	8	-	2x1.5	1 x 3	2x0.6, 2x1.7 and 2.5 (Cycleway buffer)
Place street (bus capable)	24.8	2x6.4	2x2.5	7	-	2x4 paved area		2x2.4
Green street (bus capable)	24.8	4.5 and 10.8 (linear park)	2.5	7	-	1.5	1x 4 (shared path)	0.6, 2.4 and 1.8, 5 (linear park)
Alternative Green street perimeter (bus capable, adjacent bushland)	14.9	1 and 5.9	-	8	-	-	1x 4 (shared path)	1, 0.6 and 1.3
Retail high street	21	2x5	2x2.5	6	-	2x4.6 paved area	-	2x0.4

Street type	Road Reserve(m)	Verge (m)	Flex zone (m)	Travel lane (m)	Central median (m)	Pedestrian path (m)	Cycleway/ share path (m)	Planting (m)
Place Connector	27m	5 and 6.4	5.6 (Angled parking)	2x3.5	3	1x2m	1x3.5m	2x0.6, 2.4 and 2.3
Green Street	24.8	5 and 11.3 (linear park)	1x2.5	6	-	1x2	1x 4 (shared path)	0.6, 2.4 and 2.3, 5 (linear park)
Local street	18.6	2x3.8	2x2.5	6	-	2x1.5	-	2x0.6 and 2x1.7
Alternative local street/ perimeter road (bus capable)	18.6	3.8 and 4.3	1x2.5	8	-	1x1.5	1x3.5	2x0.6, 1x1.7 and 0.2 (Cycleway buffer)
Alternative local street (Perimeter buffer)	12.3	1x3.8	1x2.5	6	-	1x1.5	-	1x0.6 and 1x1.7
Retail laneway	11	2x2.5	-	6	-	-	-	-
Residential laneway	9.5	2x1.5	-	6.5	-	-	-	-
Metro laneway	16	6 and 5.5	-	4.5 (Shared lane)	-	2.5 and 3	-	2x3
Metro pedestrian link	8	-	-	-	-	-	8 (shared path)	-
Metro Plaza	21	2x5	-	-	11	2x5 paved area	-	-

Street Cross Sections

Major Distributor road bus capable (31.8m)

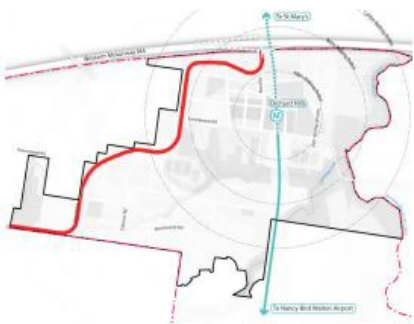
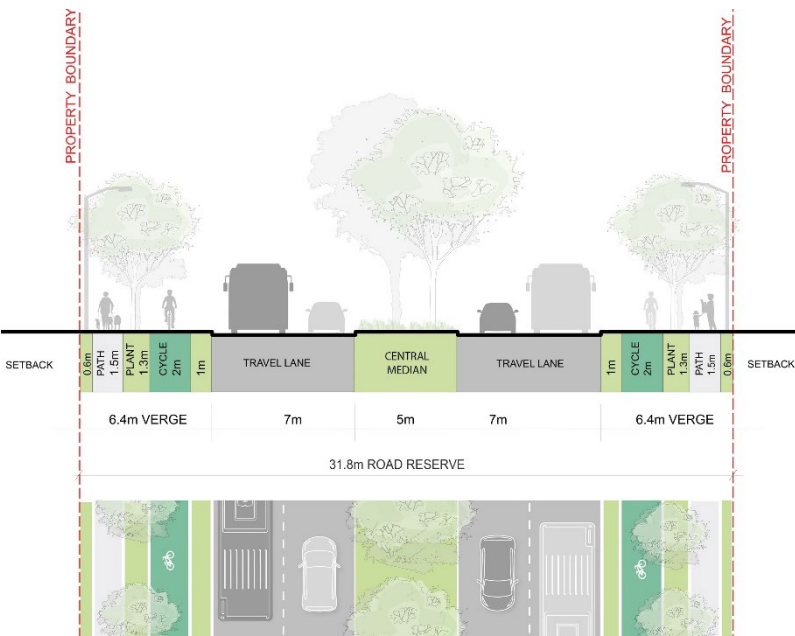


Figure E19.5 Major distributor road cross section

Collector road bus capable (23.6m)

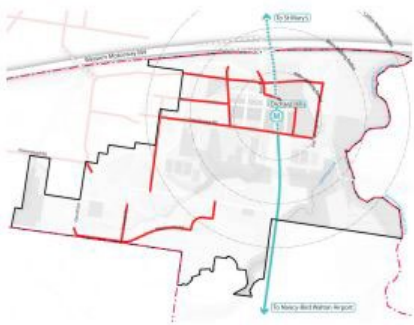
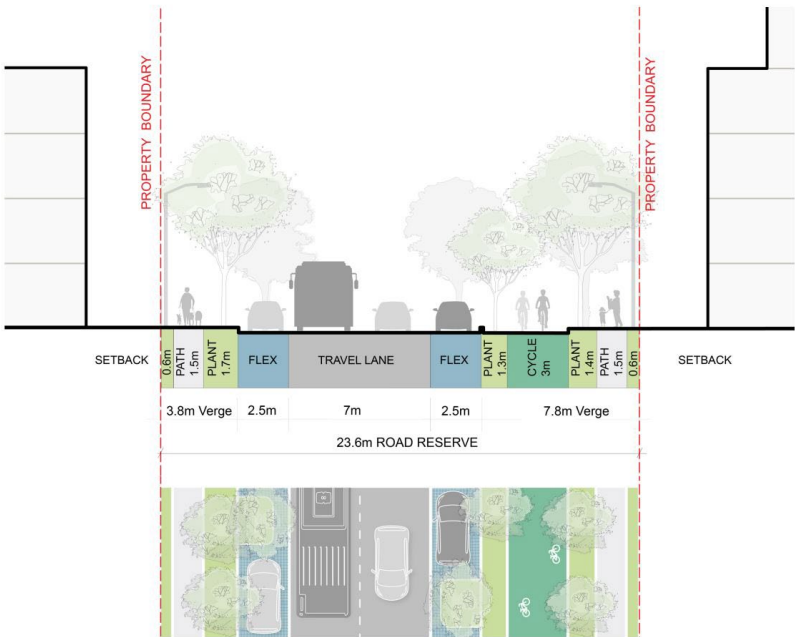


Figure E19.6 Collector road cross section

Alternative collector road adjacent to bushland (23.6)



Figure E19.7 Alternative collector road adjacent to bushland cross section

Place street (24.8m)

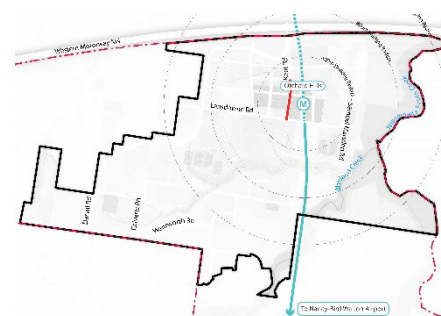
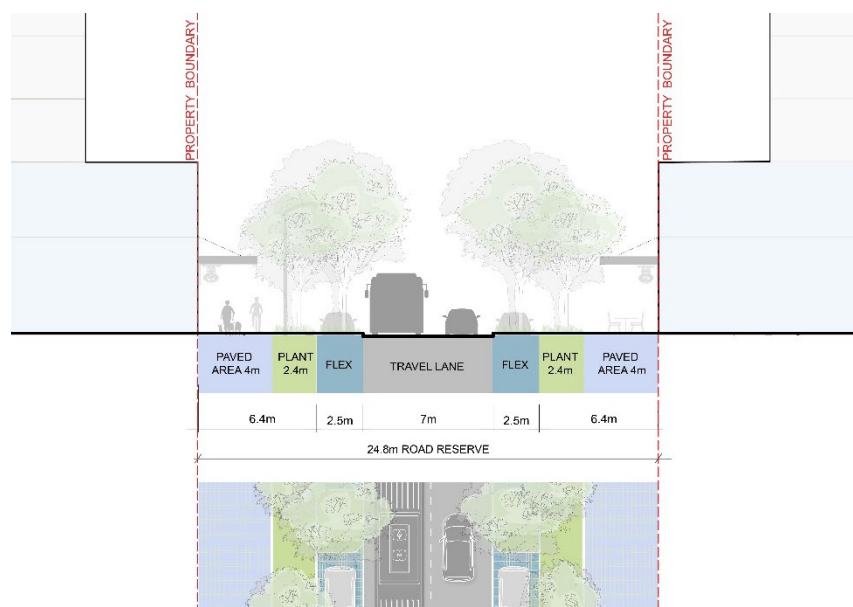


Figure E19.8 Place street cross section

Green street – bus capable (24.8m)

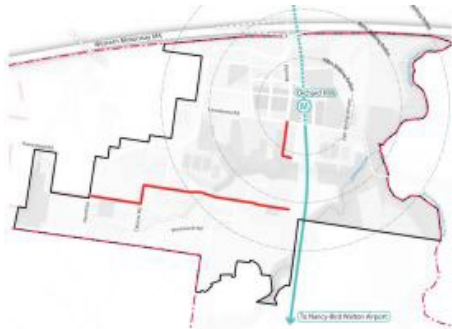
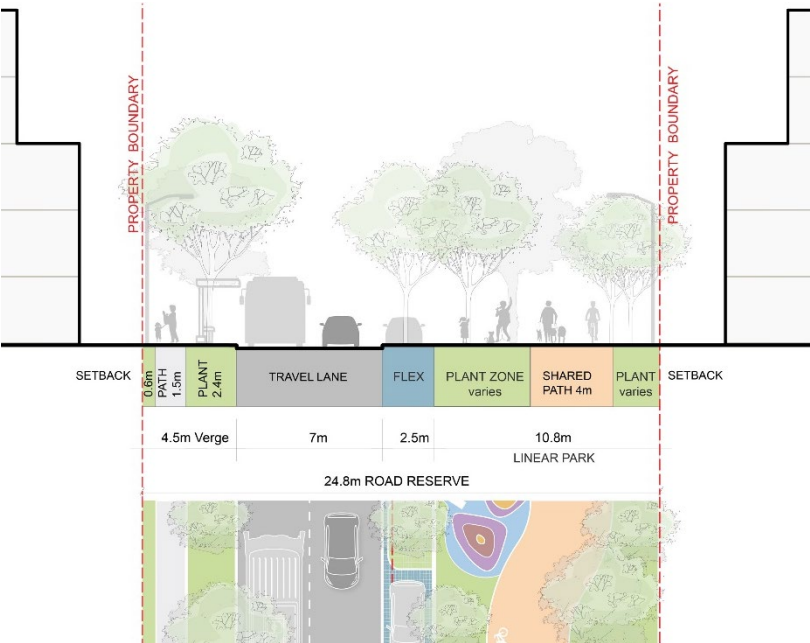


Figure E19.9 Green street – bus capable cross section

Alternative green street perimeter adjacent to bushland – bus capable (14.9m)

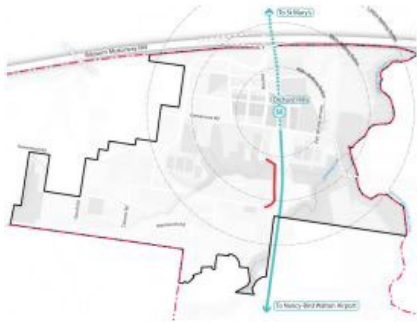
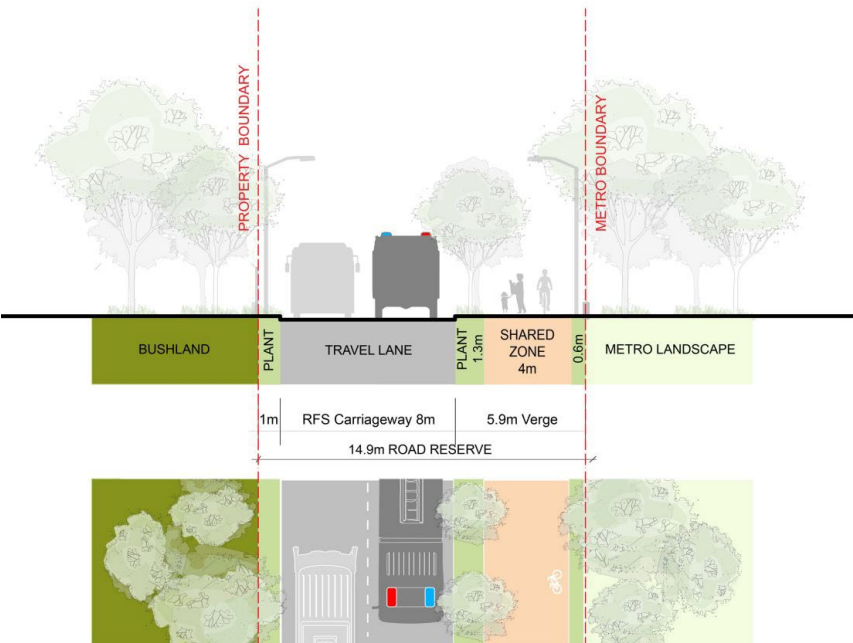


Figure E19.10 Alternative green street perimeter road (bus capable; adjacent to bushland) cross section

Retail high street (21m)

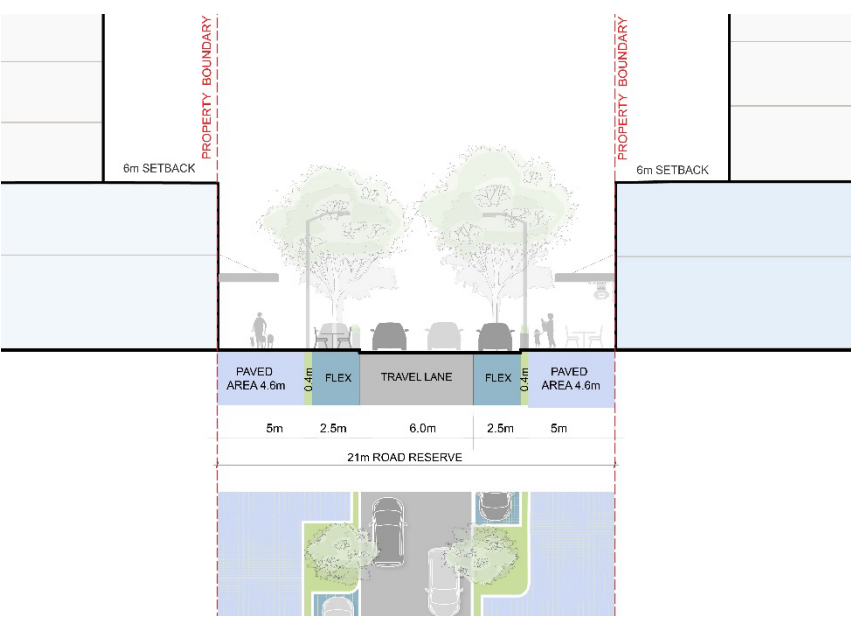


Figure E19.11 Retail high street cross section

Place connector (27m)

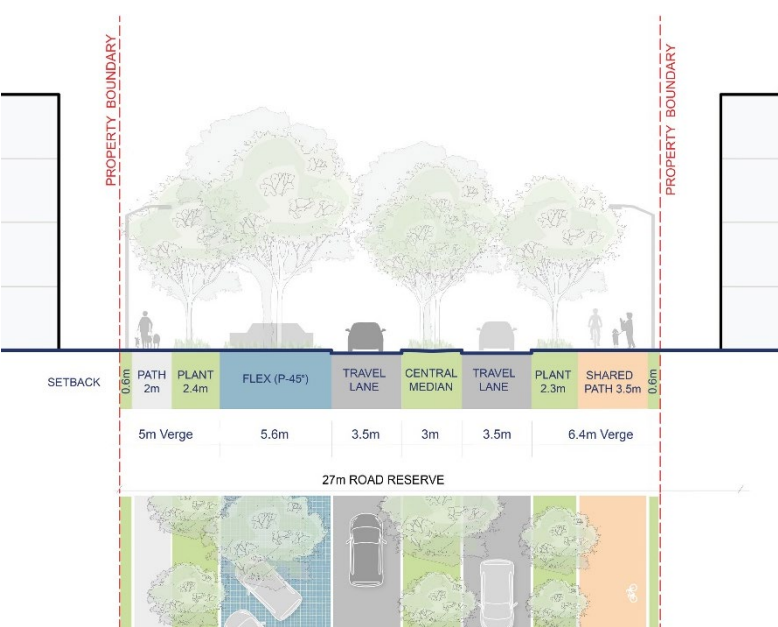
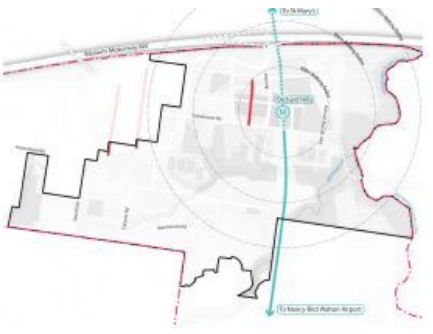
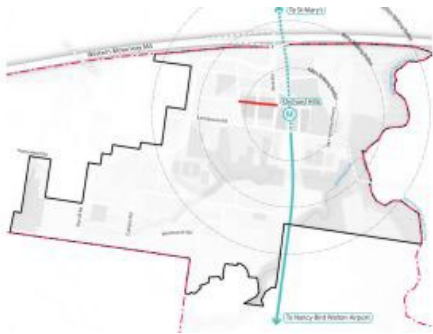


Figure E19.12 Place connector cross section



Green street (24.8m)

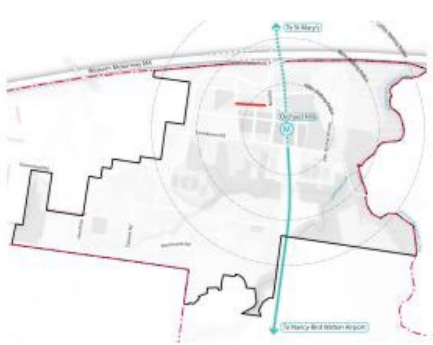
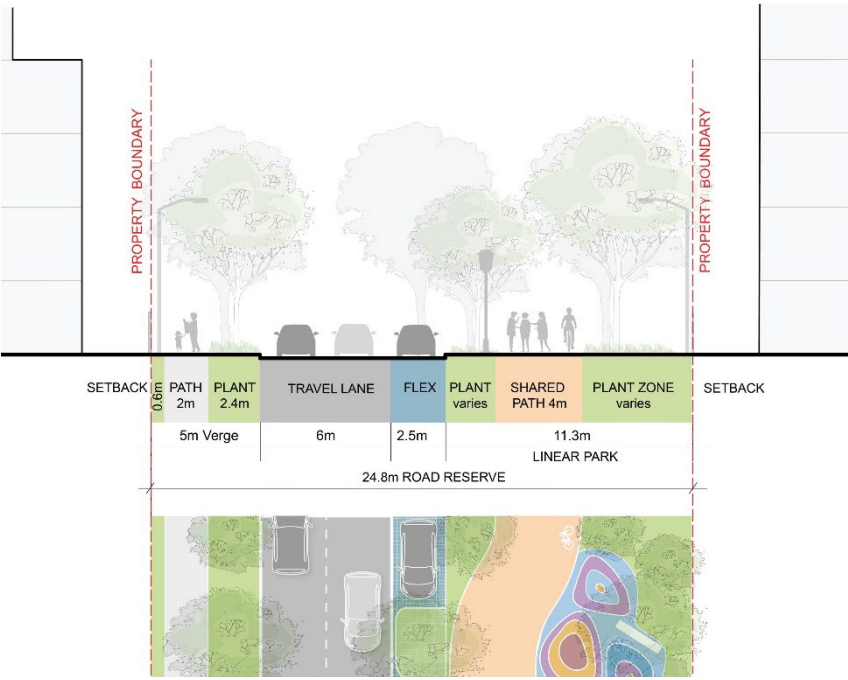


Figure E19.13 Green street cross section

Local street (18.6m)

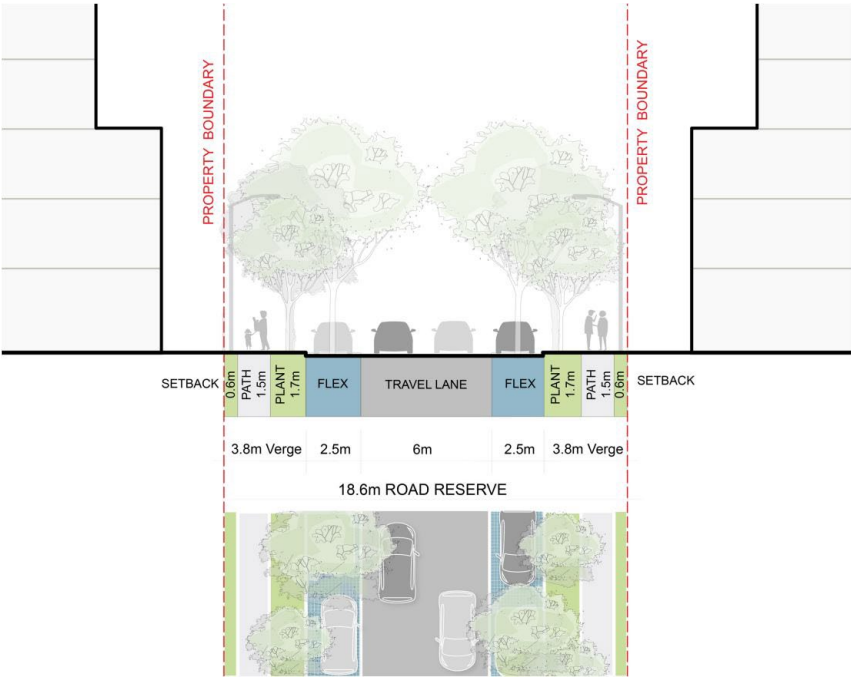


Figure E19.14 Local street cross section

Alternative local street – perimeter road bus capable (18.6m)

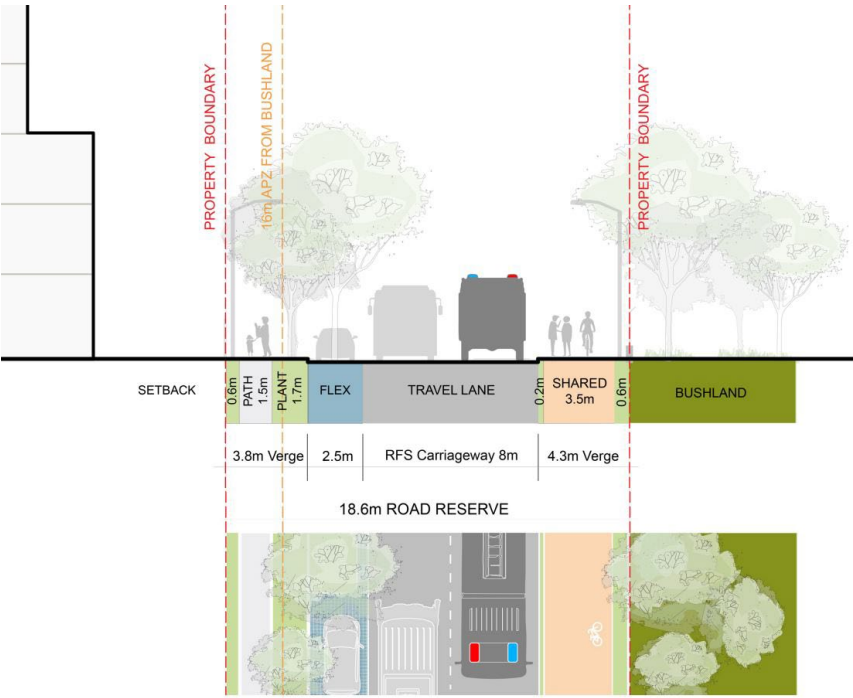


Figure E19.15 Alternative local street – perimeter road cross section

Alternative local perimeter buffer (12.3m)

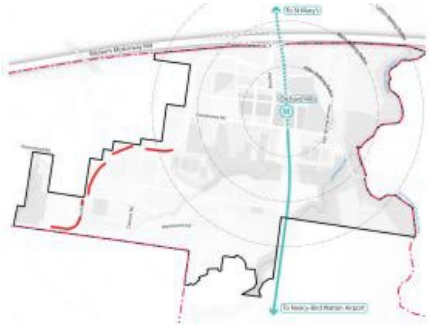
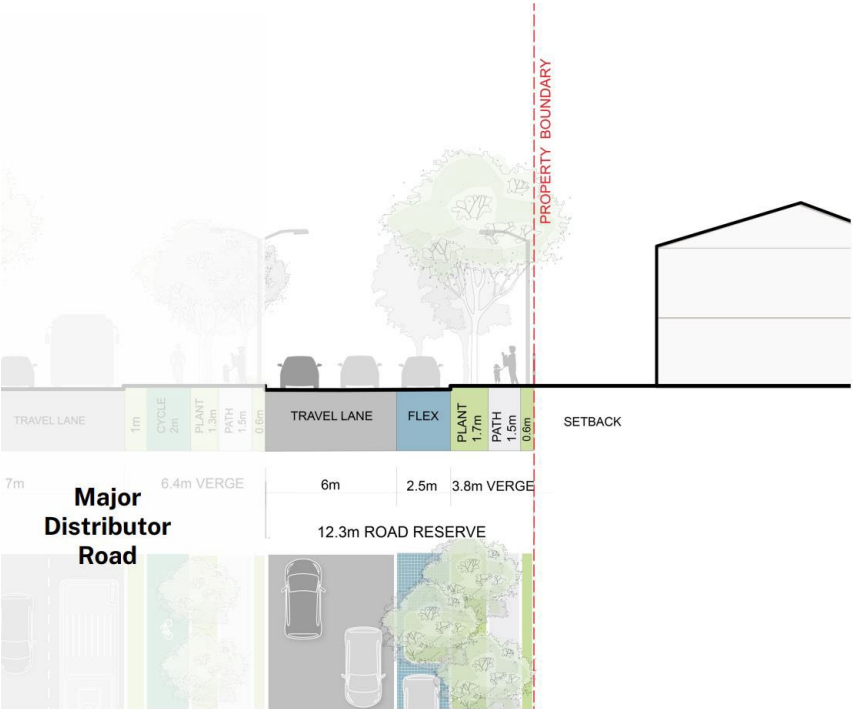


Figure E19.16 Alternative local perimeter buffer road cross section

Retail laneway (11m)

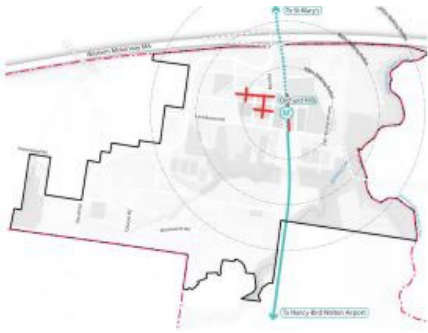


Figure E19.17 Retail laneway cross section

Residential laneway (9.5m)

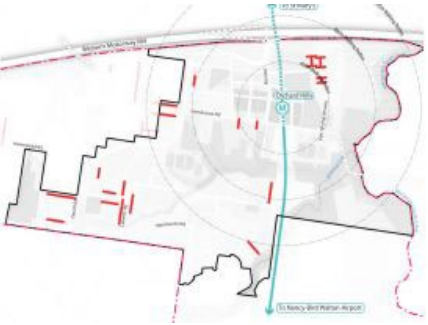
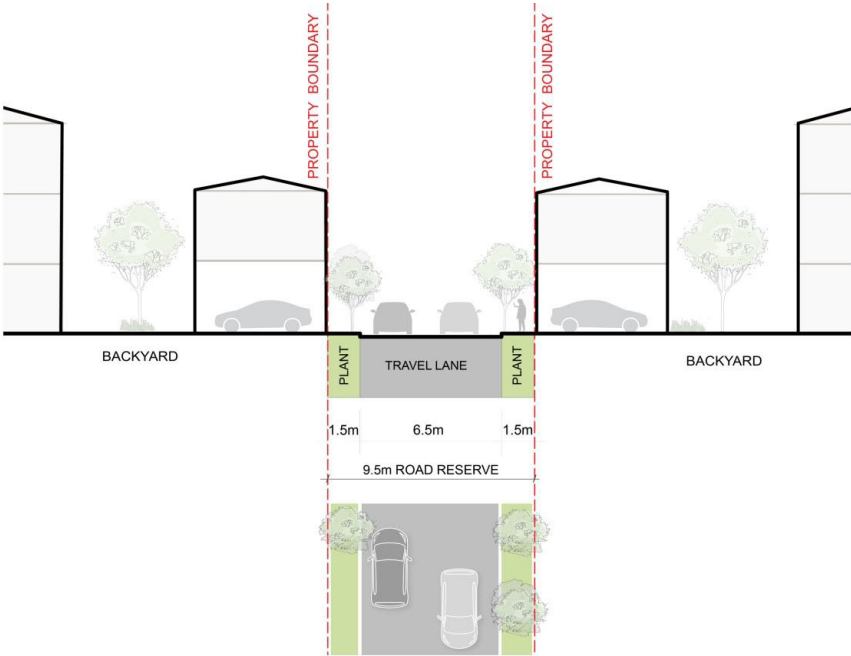


Figure E19.18 Residential laneway cross section

Metro laneway (16m)

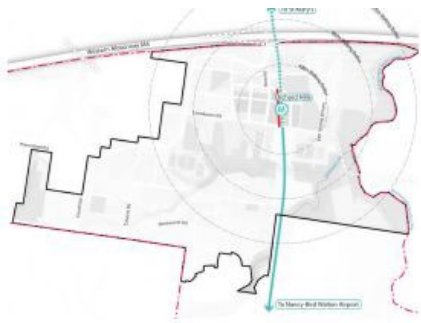


Figure E19.19 Metro laneway cross section

Metro pedestrian link (8m)

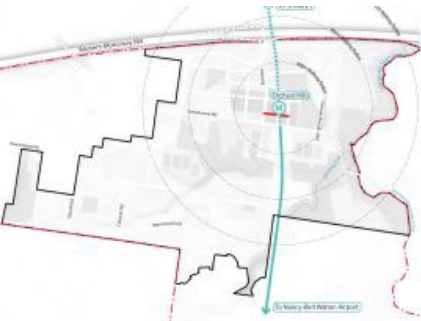
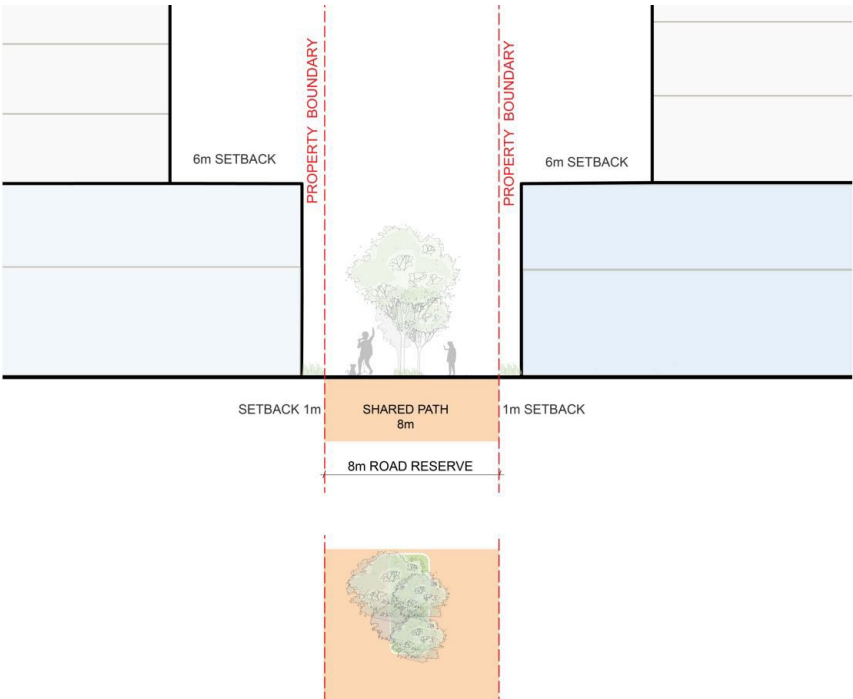


Figure E19.20 Metro pedestrian link cross section

Metro Plaza (21m)

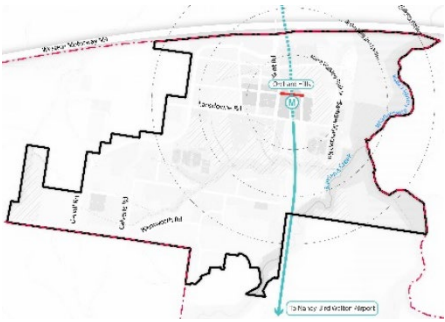
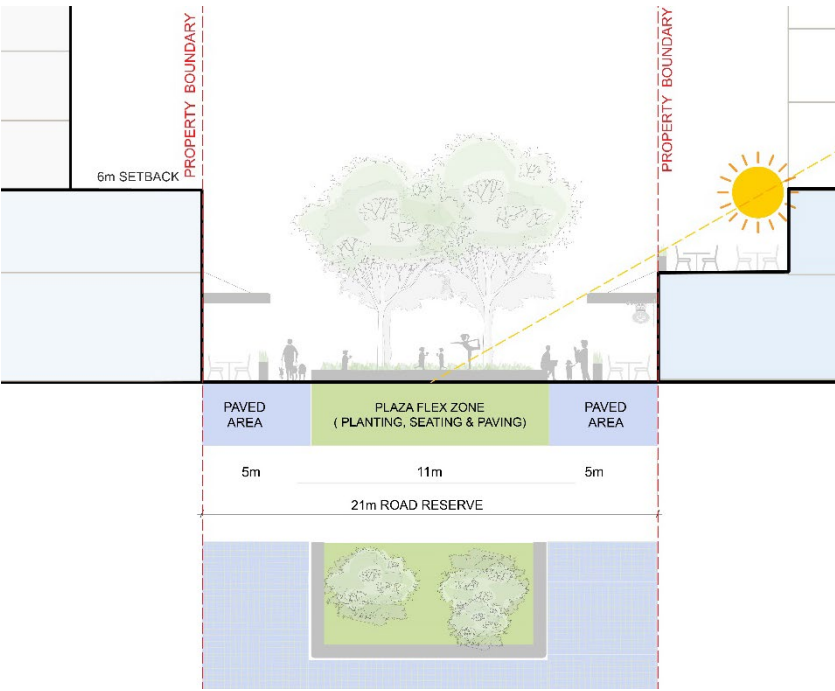


Figure E19.20a Metro plaza cross section

Metro Station Street (26m)

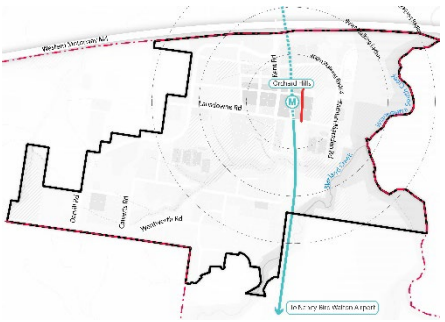
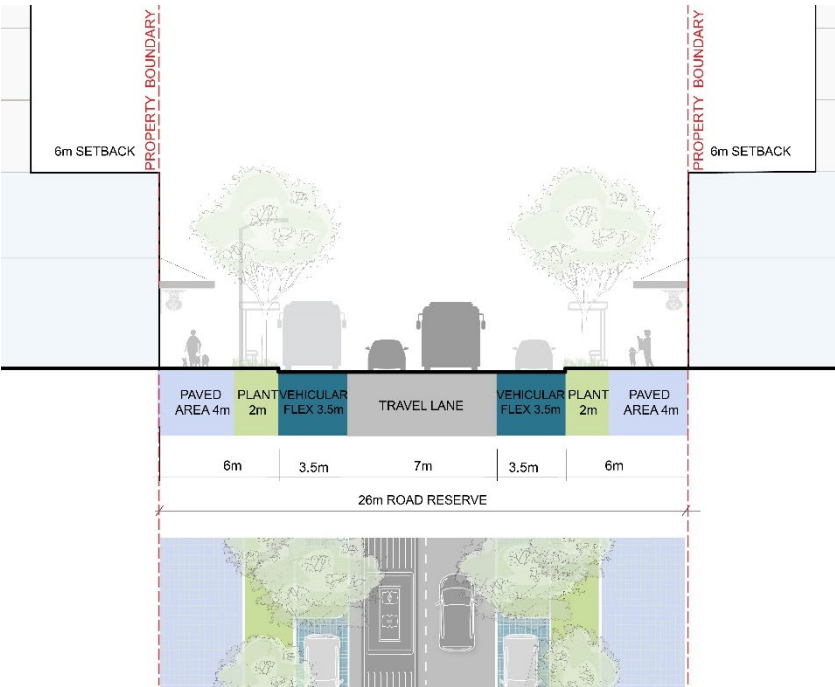


Figure E19.20b Metro station street cross section

19.6.2 Pedestrian and cycle network

A. Objectives

- a) To provide a convenient, efficient, and safe network of pedestrian and cycleway paths to and from shops and centres, public transport, schools, community facilities, open space areas and key focal points in the Precinct.
- b) To integrate pedestrian paths and cycleways into the design of new and upgraded streets, open spaces and passive recreation areas.

B. Controls

- 1. Pedestrian and cycling paths are to be provided in accordance with **Figure E19.21** and relevant street cross sections shown in **Figure E19.5** to **Figure E19.20**.
- 2. Pedestrian and cyclist crossings shall be provided at all intersections and mid-blocks, with clear signage, adequate visibility and lighting.
- 3. Private through site links are to be provided within development blocks that have a dimension greater than 90m.
- 4. Pedestrian and cycle routes and facilities in public spaces are to be safe, well lit, clearly defined, functional and accessible to all.
- 5. Pedestrian paths, cycle routes and facilities are to be designed to be fully accessible by all in terms of access points and gradients, in accordance with Australian Standard *AS 1428:1-4 Design for access and mobility* and relevant Austroads Guidelines.

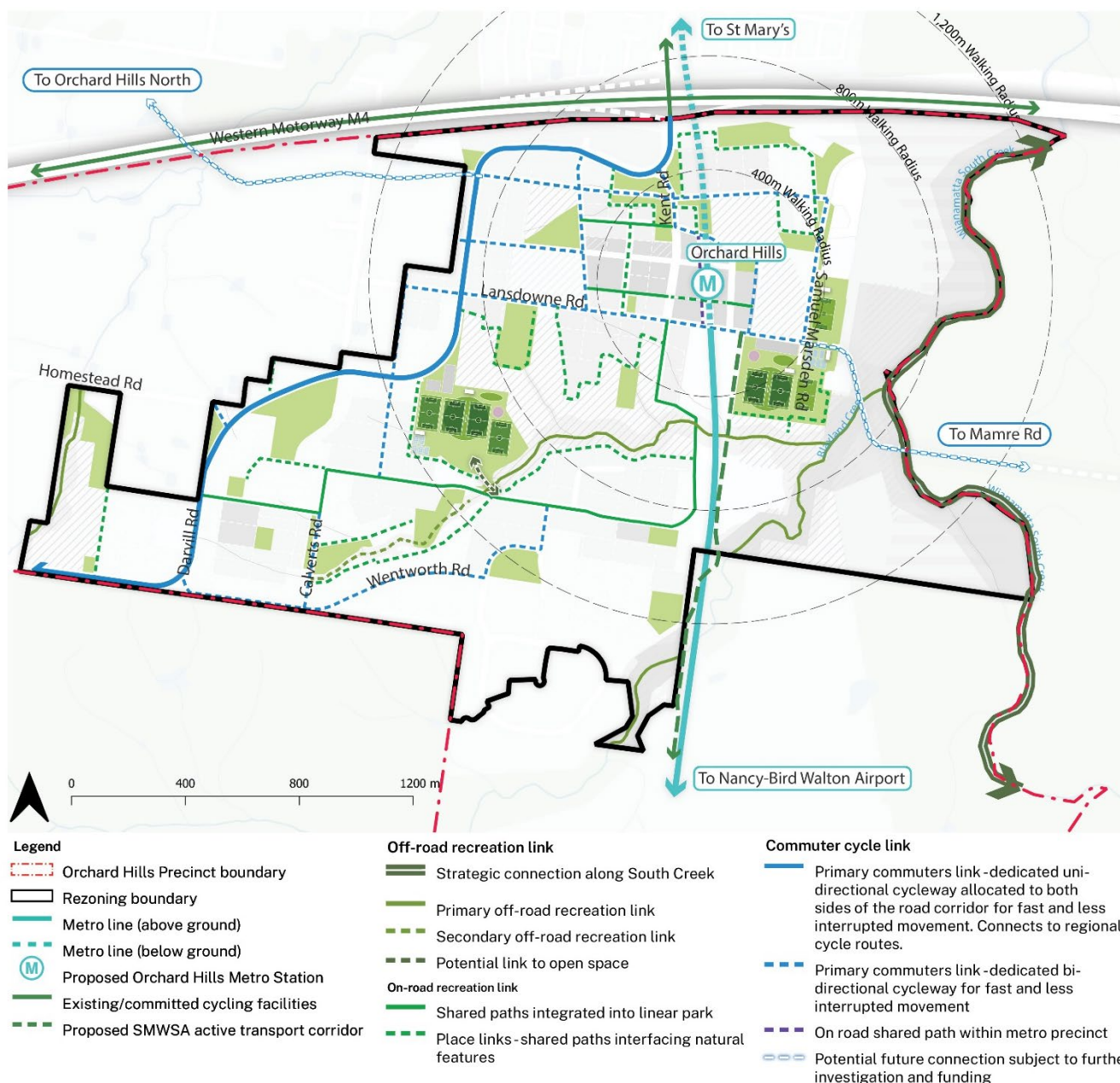


Figure E19.21 Pedestrian and Cycle Path Map

19.7 Public Domain

19.7.1 Public Art

A. Objectives

- To facilitate the inclusion of public art which creates a sense of place and contributes to a safe and vibrant community.
- For public art to increase legibility of a space by offering memorable markers that assist with wayfinding in the environment.

B. Controls

1. Where required, development must deliver public art in accordance with chapter C8 Public Domain.

19.8 View Corridors

A. Objectives

- a) To ensure the location and design of new streets and open space protects important views to high points, including the new Hilltop Park and Blue Mountains escarpment.
- b) To ensure development considers and retains significant view lines and key view corridors.

B. Controls

1. This section must be read in conjunction with chapter C1 Site Planning and Design of this DCP.
2. Development is to be located and designed to minimise impacts on views to and from Hilltop Park as indicated in **Figure E19.22** and to the Blue Mountains escarpment.
3. The location and design of new streets must retain and enhance key view corridors to the Hilltop Park and Blue Mountains escarpment.

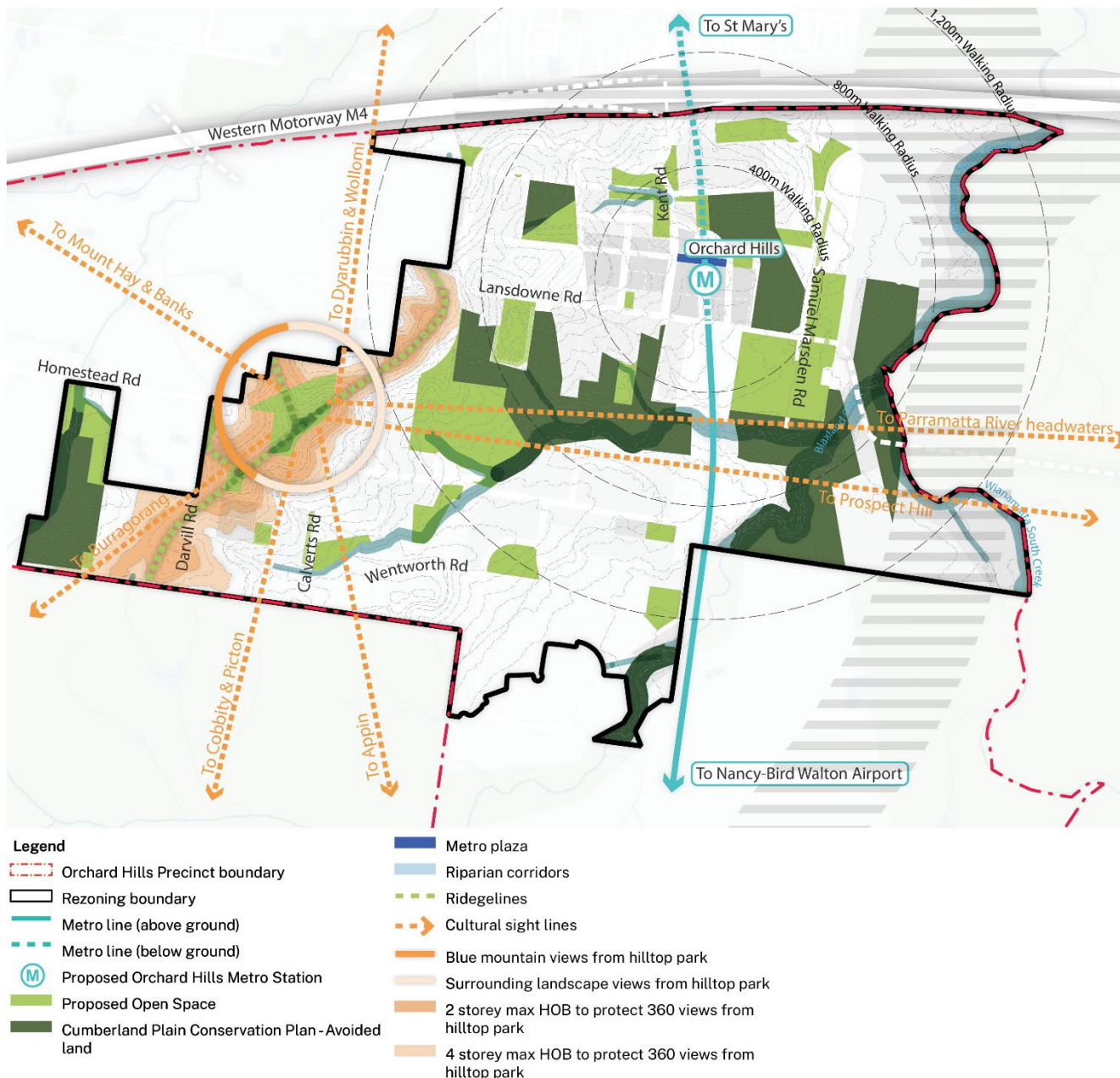


Figure E19.22 Protection of views around Hilltop Park

19.9 Biodiversity and Riparian Corridors

A. Objectives

- a) To ensure important natural features inform development of the Precinct.
- b) To protect, restore and enhance the environmental values and functions of the environmental biodiversity areas, watercourses and riparian corridors and open space.

- c) To protect remnant vegetation to preserve threatened flora and fauna species and threatened ecological communities and provide additional pockets of native vegetation that inter-connects with the open space areas.
- d) To develop land consistent with the required outcomes of the Cumberland Plain Conservation Plan.

B. Controls

1. Development is to be designed to retain existing bushland and fauna habitats, including where corridors and linkages are determined as habitats.
2. Existing native vegetation in riparian corridors is to be protected and corridors revegetated to provide habitat and movement for flora and fauna species. Strahler Order 1 watercourses on land identified as *certified urban capable land* in the *State Environmental Planning Policy (Biodiversity and Conservation) 2021* with a catchment area of less than 15 hectares may be re-constructed and/or piped, providing stormwater modelling demonstrates the pipe and street network is capable of accommodating flows up to and including the 1% AEP with allowance for climate change storm event.
3. Development applications on land identified as *certified urban capable land* in the *State Environmental Planning Policy (Biodiversity and Conservation) 2021* are required to demonstrate how the development is consistent with the *Cumberland Plain Conservation Plan Mitigation Measures Guidelines*, NSW Department of Planning and Environment.
4. Development applications outside of land identified as *certified urban capable land* in the *State Environmental Planning Policy (Biodiversity and Conservation) 2021*, and where an assessment finds that there is likely to be a significant effect on threatened species, are to include a Biodiversity Development Assessment Report (BDAR), with reference to the specific requirements under the *Biodiversity Conservation Act 2016*.
5. Development applications on land that contain a riparian corridor are to include a Vegetation Management Plan (VMP) that demonstrates consistency with the management and rehabilitation actions of the *Orchard Hills Precinct Plan Riparian Vegetation Management Strategy*, Biosis APEM Group, 12 July 2024 or other relevant strategy or requirements adopted by Council.

19.10 Bushfire Management

A. Objectives

- a) To minimise the risk to life, property and the environment in the event of a bushfire, including the lives of emergency personnel.
- b) To ensure that all development on bushfire prone land makes adequate provision for access for emergency personnel, vehicles and equipment.
- c) To balance the risk of bushfire to life and property with the other aims, objectives and controls in this section, including the need to protect and enhance existing vegetation.

B. Controls

- 1. A Bushfire Assessment Report, prepared in accordance with *Planning for Bushfire Protection* published by the NSW Rural Fire Service, must accompany all development applications on land identified as bushfire prone land.
- 2. Asset Protection Zones must be consistent with the Cumberland Plain Conservation Plan Mitigation Measures Guideline.
- 3. Asset Protection Zones for development on certified urban capable land must be located wholly on certified urban capable land.
- 4. Asset Protection Zones must not encroach on to riparian corridors, public open spaces Cumberland Plain Conservation Plan “avoided lands”

19.11 Stormwater Management

The Precinct is part of the Wianamatta-South Creek system, an intermittent waterway that is sensitive to changes in flow and water quality. Protection and restoration of creek health, ecology and biodiversity is a key policy for future development and delivery of the Blue-Green Infrastructure Network in the catchment. By improving and maintaining waterway health we can optimise environmental outcomes and promote healthy and resilient communities.

Waterway objectives (flow and water quality) have been established for the protection of waterways in the Wianamatta-South Creek catchment (refer to the *Wianamatta-South Creek Stormwater Management Targets* (2022)), in line with the Western Parkland City District Plan and NSW Government *Risk-based Framework for considering Waterway Health Outcomes in Strategic Land-use Planning Decisions* (2017). In addition, the NSW Government has prepared technical notes and guidance documentation on the modelling parameters and software packages that can be used to

demonstrate compliance with these objectives and the controls below (refer to the *Technical Guidance for Achieving the Wianamatta-South Creek Stormwater Management Targets (2022)*).

A. Objectives

- a) To protect, maintain or restore waterway health within Wianamatta-South Creek and its tributaries by managing development impacts.
- b) To ensure the waterway objectives (flow and water quality) for Wianamatta-South Creek are achieved.
- c) To ensure integrated land use and water cycle management outcomes.
- d) To ensure the design and delivery of infrastructure, servicing and development is sustainable through encouraging the use of recycled water, optimising stormwater management and maximising efficiency in the use of potable water.
- e) To safely and effectively convey stormwater flows from urban areas to the existing waterways or stormwater treatment infrastructure.
- f) To protect groundwater quality and availability.
- g) To consider whole of life costs and ease of maintenance in water planning.

B. Controls

- 1. Development is to deliver the waterway objectives (flow and water quality) as set out in the Wianamatta-South Creek Stormwater Management Targets (2022) and Technical guidance for Achieving Wianamatta South Creek Stormwater Management Targets (2022).
- 2. Detention basins and treatment areas are to be located outside the 1% AEP with allowance for climate change flood extent and in line with the locations identified in **Figure E19.23**.
- 3. Where temporary detention basins are required, these are to be constructed and maintained by the developer until such time as the ultimate operational detention basins are in place. Developers will be required to connect temporary basins to the operational detention basins.
- 4. Stormwater management plans are to be prepared for development applications to demonstrate how the quantity and quality of urban run-off as a result of development will be managed.
- 5. All development is to incorporate water sensitive urban design (WSUD).
- 6. A WSUD strategy is to be submitted as part of any subdivision development application in accordance with Council's Water Sensitive Urban Design Policy December 2013.

7. The design and mix of WSUD infrastructure shall consider ongoing operation and maintenance. Subdivision applications must include a detailed lifecycle cost assessment and maintenance plan for WSUD measures.
8. Stormwater detention is to reduce post development flows to less than pre-development levels at key comparison locations. It should be demonstrated that there will be no increase in runoff from the site as a result of the development under all durations for all storm events up to and including the 1% AEP with allowance for climate change.
9. Erosion control and bank stabilisation measures are to be incorporated within the riparian corridor where required.
10. Development must not significantly adversely impact soil salinity or sodic soils and shall balance the needs of groundwater dependent ecosystems.
11. Where development is not serviced by a reticulated recycled water scheme at least 80% of its non-potable demand is to be supplied through allotment rainwater tanks.
12. Development shall make provision for future connection to a reticulated recycled water scheme by:
 - a) Bringing a purple pipe for recycled water to the boundary of the development
 - b) Designing water reticulation systems within the development to standards appropriate for future connection to a reticulated recycled water system.

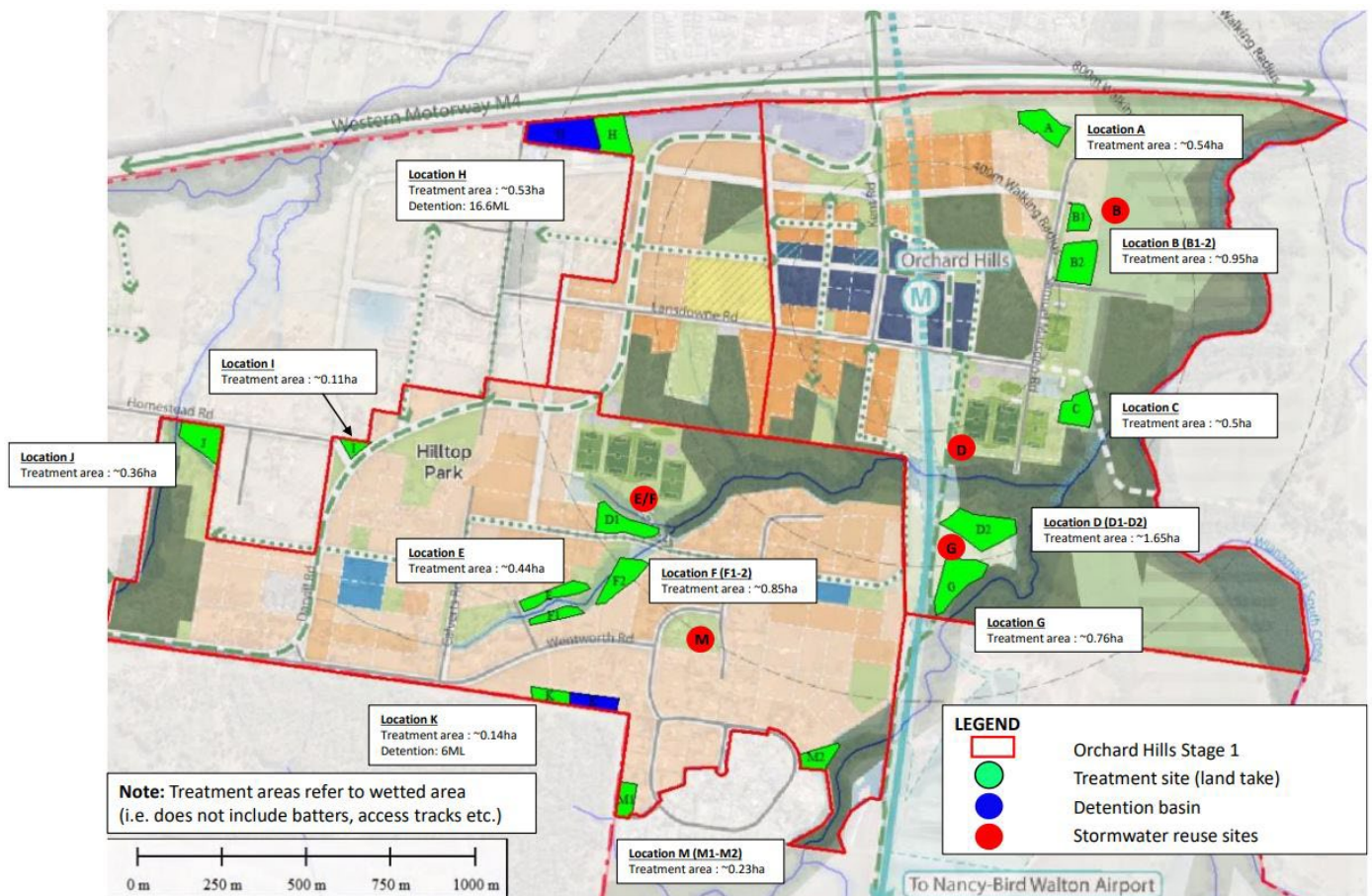


Figure E19.23 Stormwater treatment areas and basin locations

19.12 Flood Risk Management

A. Objectives

- a) To ensure development in the floodplain is consistent with the NSW Flood Prone Land Policy and principles in the NSW Government Flood Risk Management Manual.
- b) To ensure floodplain risk management minimises the potential impact of development on the aesthetic, and ecological values of waterways.
- c) To ensure development does not alter flood behaviour resulting in significant adverse impacts to surrounding properties, land uses and infrastructure.
- d) To enable safe occupation and evacuation of flood prone land.
- e) To ensure development is compatible with flood hazard and flood behaviour.
- f) To avoid significant adverse or cumulative impacts on flood behaviour and environment.

B. Controls

- 1. A comprehensive Flood Impact Risk Assessment (FIRA) (prepared by a qualified hydrologist and hydraulic engineer) is to be submitted with development applications on land within the flood planning area.
- 2. Development applications are to address the objectives and controls contained in section 3.5 Flood Planning of Part C3 Water Management of this DCP. For the Orchard Hills Stage 1 certain terms in section 3.5 Part C3 are amended as per **Table E19.2**.

Table E19.2 Amended flood related terms for Orchard Hills Stage 1

Term in Section 3.5 Flood Planning of Part C3	Amended term to be applied to Orchard Hills Stage 1
1% AEP	1% AEP with allowance for climate change
1:100 year Average Recurrence Interval (100 year ARI)	1:100 year Average Recurrence Interval (100 year ARI) with allowance for climate change
Flood planning level – 1% AEP (100 ARI) plus 0.5m	Flood planning level – 1% AEP (100 ARI) with allowance for climate change plus 0.5m

19.13 Aboriginal Heritage

A. Objectives

- a) To ensure Aboriginal cultural heritage is identified, protected and community understanding is enhanced.
- b) To maintain access to identified Aboriginal cultural heritage (including scarred trees) for Aboriginal people so that connection and conservation can continue.
- c) To maintain connections between cultural landscape features and identified elements of Aboriginal cultural heritage within the Precinct and the surrounding area.

B. Controls

- 1. An Aboriginal Cultural Heritage Assessment Report, prepared by a suitably qualified professional, must be submitted with subdivision development applications on land that exhibits areas of high and medium archaeological potential as identified in the Aboriginal Archaeological Assessment prepared by Extent Heritage, July 2024.
- 2. A subdivision development application on any land that contains a known item of Aboriginal cultural value must be submitted with the following:

- a) An Aboriginal Heritage Interpretation Plan. The Plan must be prepared in accordance with the relevant guidelines from the Heritage Council of NSW and in consultation with Council and the relevant Aboriginal stakeholders
 - b) Where landscaping works are proposed, a Concept Landscape Plan must be prepared by a suitably qualified person and in consultation with Council and the relevant Aboriginal stakeholders.
 3. Naming of local roads, parks and recreation areas are to feature reference to local Aboriginal culture and occupation of the land where relevant. The selection of names and locations should be identified in consultation with Council and the relevant Aboriginal stakeholders.
 4. Any development application within land that contains a known Aboriginal cultural heritage site and/or areas of moderate and moderate–high archaeological potential must consider and comply with the requirements of the *National Parks and Wildlife Act 1974* and related guidelines.
-

19.14 Noise and Vibration

A. Objectives

- a) To minimise the impact of existing and future noise and vibration sources on surrounding land uses.

B. Controls

1. Development applications are to address the objectives and controls contained in Part C12 Noise and Vibration of this DCP, as relevant.
2. Road traffic noise: The siting and design of developments on land sited on, or within, Road Noise Buffer presented in Appendix A must be assessed for road noise impact in accordance with the Development Near Rail Corridors and Busy Roads – Interim Guideline (2008) and, where appropriate, incorporate any recommendations into the design of the development.
3. Rail noise and vibration: The siting and design of developments on land sited on, or within, 20 m of the Metro rail corridor or Rail Noise Buffer presented in Appendix A must be assessed for rail noise and vibration impact in accordance with the Development Near Rail Corridors and Busy Roads – Interim Guideline (2008) and, where appropriate, incorporate any recommendations into the design of the development.
4. Industrial Noise: The siting and design of developments on land sited on, or within, Resource Recovery Centre and Metro Stabling and Maintenance Facility Noise Buffer presented in Appendix A must be assessed for industrial noise impact in accordance with the EPA's Noise

Policy for Industry and, where appropriate, incorporate any recommendations into the design of the development.

5. Noise Impact Assessments are to be undertaken by a suitably qualified acoustic consultant to demonstrate that the impact of noise and vibration from the noise source will not significantly impact upon the future occupants of the development and will achieve relevant internal noise criteria.
6. Developments located within Defence Safeguarding Boundary presented in Appendix A must have regard to the potential impact on amenity due to the use of explosives at DEOH.

19.15 Development in Proximity to the Defence Establishment Orchard Hills

A. Objectives

- a) To ensure building design responds to the security requirements of the Defence Establishment Orchard Hills.
- b) To minimise overlooking of sensitive operations undertaken in the Defence Establishment Orchard Hills site.

B. Controls

1. Any development applications proposing the construction of a building over 22m are to be referred to Department of Defence for comment.
2. Any habitable floor area of apartments orientated towards the Defence Establishment Orchard Hills site (and not obstructed by another building), shall incorporate design features on windows, balconies, decks and other features that prevent overlooking into the Defence Establishment. These measures may include (but not limited to) fixed screen/louvres, glass blocks, frosted glass, blade, vertical fins, offset vent windows and the like.
3. Any above ground public or private external communal open space orientated towards the Defence Establishment Orchard Hills site (and not obstructed by another building), is to incorporate fixed screening devices, or other similar measures to prevent overlooking into the Defence Establishment
4. No public access is to be provided to areas of buildings which provide a vantage point to overlook the Defence Establishment Orchards Hills. This includes limiting roof access to authorised maintenance staff only, no opening windows for windows which are south facing and not obstructed by another building and no public access to external structures such as

platforms, staircases or balconies that would allow for the installation of listening devices or provide views to the Defence Establishment.

19.16 Design and Built Form

19.16.1 Front setbacks and wall heights

A. Objectives

- a) To define the street edge and key corners and provide definition between buildings and the public domain.
- b) To establish consistent setbacks to streets and public spaces to create a quality public domain, streetscape character and comfortable pedestrian environment.
- c) To provide sufficient setbacks for active uses at ground level, including building entries, outdoor dining, weather protection, seating and pedestrian walkways.
- d) To provide unencumbered planting space for canopy trees, shrubs and groundcovers to mitigate urban heat
- e) To reduce overshadowing, bulk and visual impacts of buildings to streets and the public domain.

B. Controls

- 1. Minimum front setbacks are to be provided in accordance with **Table E19.3**.
- 2. The street setback is to be landscaped and treated in a manner that contributes to the streetscape of the area and helps mitigate urban heat.
- 3. Street wall heights are not to exceed the maximum street wall heights in **Table E19.3**.
- 4. All building levels above the street wall height are to be further setback by a minimum of 3m or in accordance with **Table E19.4**.
- 5. Setbacks above the street wall height are to be emphasised through variation in architectural features, materials, and design elements.

Table E19.3 Minimum front setbacks

	Development type			
Location/ lots fronting	Low-rise medium and medium density housing (up to 3 storeys), attached dwellings, manor houses and multi-dwelling housing (R3 zone)	Residential flat building (R3 and R4 zones)	Mixed use development / shop top housing (MU1 and E1 zones)	Industrial
Major distributor (bus capable)	10m	10m	-	10m
Collector road (bus capable)	4m	3m	Zero metres	9m
Alternative collector road adjacent bushland (bus capable)	6m	6m	6m	9m
Place street (bus capable)	-	3m	Zero metres	-
Station street	-	-	Zero metres	-
Green street	4m	3m	-	-
Alternative green street perimeter (bus capable, adjacent bushland)	6m	6m	-	-
Retail high street	-	-	Zero metres	-
Station plaza	-	-	Zero metres	-
Place connector	4m	3m	Zero metres	-
Urban Services local street	-	-	-	9m

	Development type			
Local street	4m	3m	Zero metres	-
Alternative local street	6m	6m	6m	9m
Retail laneway	-	6m	Zero metres	-
Residential laneway	Zero metres (rear access garage/ fonzi flat)	-	-	-

Table E19.4 Maximum street wall heights and minimum upper level setbacks

Development type	Maximum street wall height	Upper level setback	Maximum building height
Low-rise medium and medium density housing up to 3 storeys and attached dwellings, manor houses and multi-dwelling housing (R3 zone)	N/A	N/A	Refer to Penrith LEP 2010 Height of Buildings map
Residential flat building up to 6 storeys (R4 and R3 zones)	3 storeys (12m)	3m	Refer to Penrith LEP 2010 Height of Buildings map
Residential flat building more than 6 storeys (R4 zone)	5 storeys (17m)	3m	Refer to Penrith LEP 2010 Height of Buildings map
Mixed use development / shop top housing (MU1 Zone)	2 storeys (9m)	6m	Refer to Penrith LEP 2010 Height of Buildings map

Development type	Maximum street wall height	Upper level setback	Maximum building height
Mixed use development adjacent to the Metro station plaza	2 storeys (9m)*	6m**	Refer to Penrith LEP 2010 Height of Buildings map
Shop top housing up to 6 storeys (E1 Zone)	2 storeys (9m)	3m	Refer to Penrith LEP 2010 Height of Buildings map
Development fronting a major distributor road	3 storeys (12m)	3m	5 storeys
Development fronting riparian zone bushland or open space	3 storeys (12m)	6m	5 storeys

* Street wall height is a maximum. Street wall height should also satisfy the solar access requirements to the station plaza - see Control 5 and **Figure E19.24** in section **19.16.5**

** Upper level setback is a minimum. Upper level setback should also satisfy the solar access requirements to the station plaza - see Control 5 and **Figure E19.24** in section **19.16.5**

19.16.2 Side and Rear Setbacks

A. Objectives

- To provide for variation in built form, breaks in buildings and adequate separation between buildings.
- To ensure a high level of residential amenity including privacy, ventilation, and solar access.
- To provide sufficient space for landscaping and tree plantings along the side and rear boundaries.

B. Controls

- The minimum setback from the side and rear property boundaries for residential apartment development is to comply with the requirements of the *Apartment Design Guide*, NSW Department of Planning and Environment.
- The minimum side and rear setbacks for low-rise medium and medium density housing types are to comply with chapter D2 Residential Development of this DCP.

3. Ensure side and rear building setbacks are provided in a manner that does not impede development on adjoining sites.

19.16.3 Minimum Site Frontage

A. Objectives

- a) To ensure that sites are of sufficient size to accommodate development, suitable access, and opportunities for planting of trees and landscaping within the site and in adjoining road verges.
- b) To ensure suitable vehicular and pedestrian access and parking can be accommodated on site.

B. Controls

1. Development is to achieve the minimum street frontage widths in **Table E19.5**.

Table E19.5 Minimum site frontage

	Minimum Frontage Width
Semi-detached dwellings and dual occupancies (up to 2 storeys)	12m
Multi dwelling housing and attached dwellings (up to 3 storeys)	18m
Residential flat buildings, mixed use and shop top housing – less than 5 storeys	25m
Residential flat buildings, mixed use and shop top housing – 5 storeys and above	28m

19.16.4 Floor to Ceiling Heights

A. Objectives

- a) To achieve floor to ceiling heights that provide sufficient space and flexibility to accommodate a range of uses.

B. Controls

1. Minimum floor to ceiling heights for mixed use buildings / shop top housing are:
 - a) Ground floor non-residential – 3.3m, 4m for cafés and restaurants
 - b) First floor – 3.3m
 - c) Residential levels above – 2.7m for habitable rooms, 2.4m for non-habitable rooms, 1.8m for attic spaces.
2. The minimum ground floor residential floor to ceiling height for residential flat buildings is 3.3m.

19.16.5 Building design

A. Objectives

- a) To ensure high quality architecture, design and built form outcomes which respond to and consider climate, topography, landscape, views, and interface with the public domain.
- b) To encourage buildings of an appropriate scale that contribute to and enhance the desired neighbourhood character.
- c) To provide a range of building types and architectural styles to create architectural diversity and visual interest.
- d) To ensure appropriate building lengths and articulation to reduce the bulk and scale of buildings visible from the public domain and complement the desired future character of the area.
- e) To ensure buildings are sited and designed to address the street and public domain and minimise impacts on significant views and vistas and significant changes of level at boundaries.
- f) To ensure buildings define and reinforce the street edge and enclose spaces to create a secure and protected environment.
- g) To allow sufficient sunlight access to key public spaces.

B. Controls

- 1. Buildings are to be designed to address and activate the street and/or open space, and to enhance the public domain through the inclusion of distinct and legible addresses, active uses at ground level, and the use of high quality and durable finishes and materials.
- 2. Buildings within street blocks are to vary in architectural expression, with a variety of facades, articulation, massing and design character so that the street block presents as a group of buildings rather than a singular architectural design or building.
- 3. Buildings must be designed to minimise impacts on key views through modulation of built form.
- 4. Buildings must be designed to ensure at least 50% of district- or local-level open space identified in **Figure E19.24** receives at least 4 continuous hours of direct sunlight between 9am and 3pm on the winter solstice (21 June). Note: this control is cumulative between developments.
- 5. Buildings in proximity to the Orchard Hills Station Plaza identified in **Figure E19.24** must be designed to ensure at least 50% of the plaza receives at least 3 continuous hours of direct sunlight between 9am and 3pm on the winter solstice (21 June). Note: this control is cumulative between developments.

6. Development applications are to address the objectives and controls contained in sections 14.3 Cool Colours and Materials and 14.4 Cooling through Building Design of Part C14 Urban Heat Management of this DCP.
7. Building design is to sympathetically respond to topography, with regular transitions that maximise integration between ground floor level and street level.
8. Ground floor residential apartments are to address the street and provide for direct 'front door' access from the street.
9. All building entrances are to be clearly visible from the street and designed to provide a clear transition from the street to residential interiors.
10. On corner lots, buildings are to be positioned and designed to address both street frontages.
11. Regular building breaks or articulation measures are to be provided for all buildings along the street frontage to provide articulation and modulation in form and minimise bulk and scale.
12. The maximum length of any building over 8 storeys is not to exceed 50m.
13. The maximum gross floor area at ground level for a tower above 8 storeys is 750m².
14. Building facades are to be articulated into distinctive elements with varied treatments, at a scale or grain that reflects the varied uses and levels of the building.
15. In mixed use buildings, non-residential and residential activities are to be designed to provide separate entrances, circulation, and servicing, such as loading docks.
16. Basement and vehicle entry points must not be externalised and are to be integrated into the design of buildings.
17. Low-rise medium and medium density housing development is to be designed in accordance with chapter D2 Residential Development of this DCP.

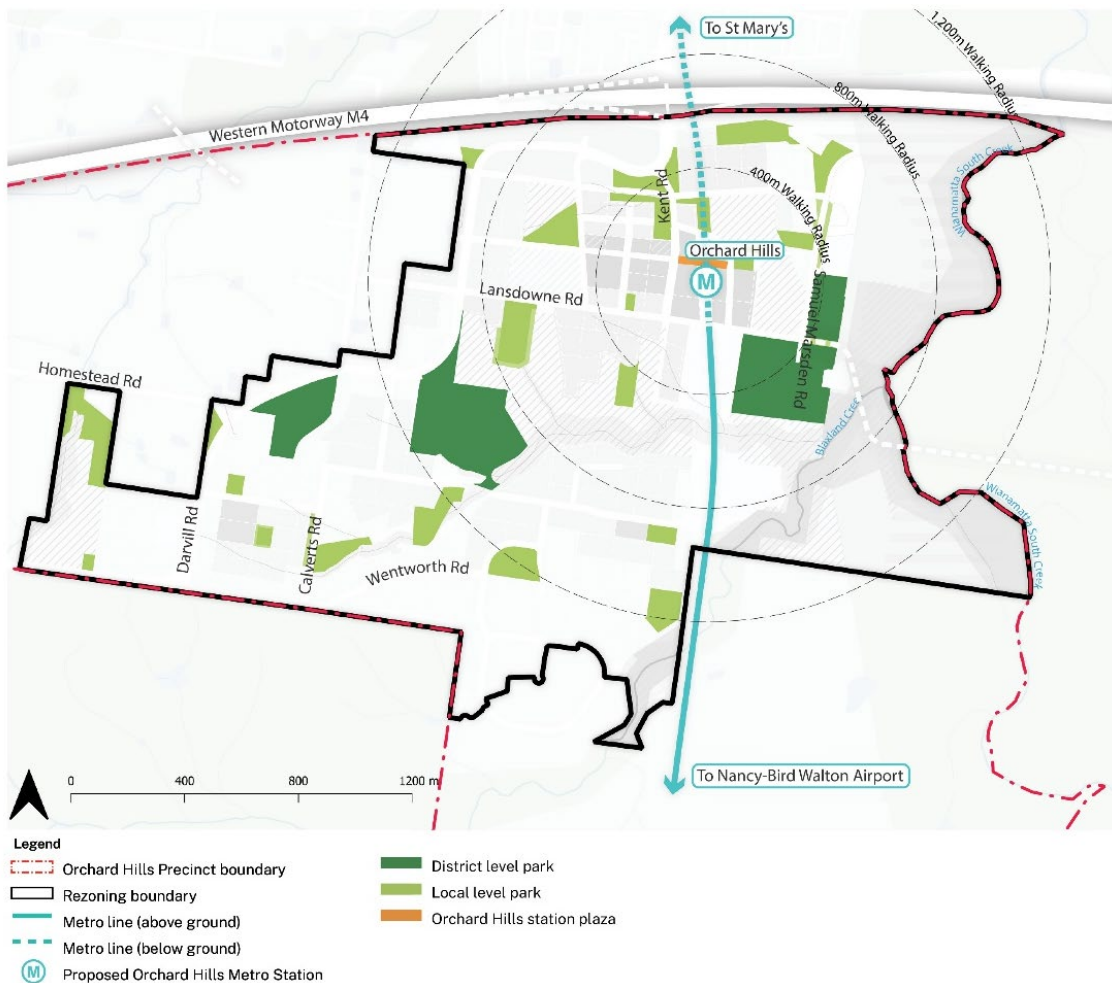


Figure E19.24 Solar access map

19.16.6 Residential Development on Sloping Land

A. Objectives

- To ensure that residential development responds to the topography of the site.
- To ensure appropriate bulk and scale of residential development on sloping sites.
- To provide good amenity for residents through high quality design of buildings and private open space.

B. Controls

- Floor levels/building platforms are to be stepped in response to the existing topography of the site.
- Development on sloping sites should avoid buildings with subterranean dwellings and apartments.

- For sites with a sloped topography, development design is to consider the design principles in Figure E19.25, Figure E19.26 and Figure E19.27

TOWNHOUSES

SLOPE - TOWNHOUSES (Perpendicular to road)

15% max slope from front to rear boundary.

Split level floor plan to incorporate slope.

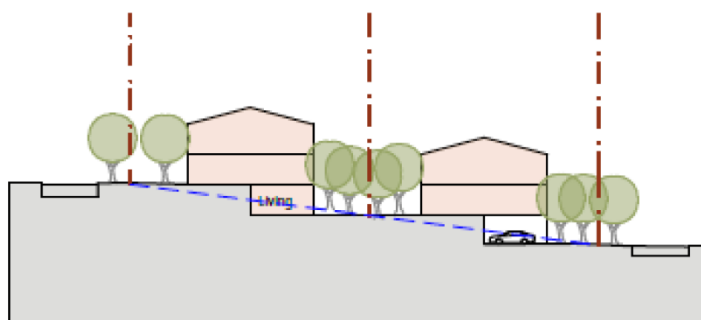
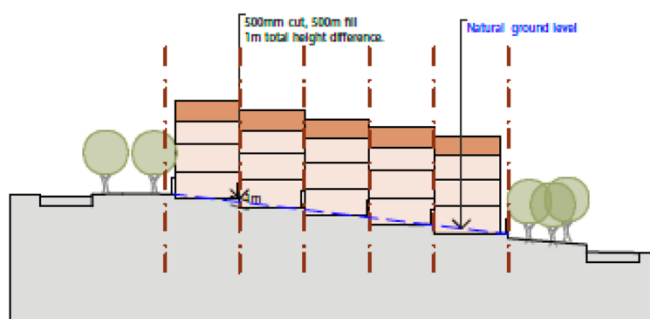


Figure E19.25 Townhouses on sloping sites perpendicular to a road

SLOPE - TOWNHOUSES (Parallel to road)

Max level difference between sites on side boundary is 1m = 2.8m fence/wall between dwellings. This should be approx 500mm cut and 500mm fill, to keep the relationship of habitable rooms close to natural ground level. Maximum height of retaining walls to public domain is 500mm.



Note: Consider the orientation of the lot. If a steep slope falls to the south it is likely that solar would be impacted on lots to the south mid-winter.

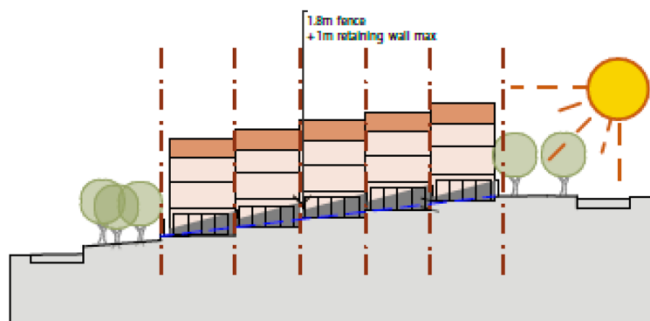


Figure E19.26 Townhouses on sloping sites parallel to a road

APARTMENTS

SLOPE - APARTMENTS

Step apartment buildings with natural ground level. Keep the level of habitable rooms close to ground level to avoid ramps & stairs.

Incorporate semi basement levels to minimise excavation.

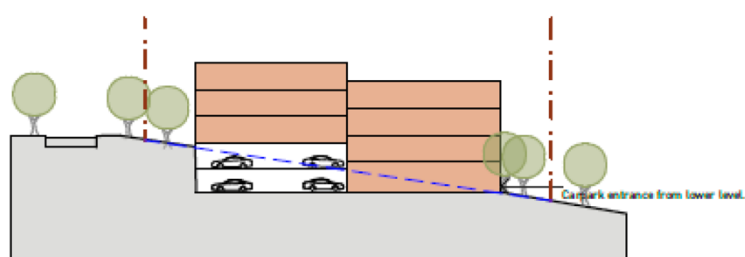


Figure E19.27 Apartments on sloping sites

19.16.7 Active Street Frontages

A. Objectives

- a) To define areas where active streets are required.
- b) To achieve active street frontages with good physical and visual connections between buildings and the street.
- c) To create vibrant streetscapes around areas of high pedestrian traffic.
- d) To promote pedestrian activity and safety in the public domain.

B. Controls

- 1. Active street frontage uses are to be located on all streets (except laneways) at the ground level of all buildings in the MU1 Mixed Use Zone and E1 Local Centre Zone as indicated in **Figure E19.28**.
- 2. Ground floor active street frontage uses must be at the same level as the adjoining footpath and directly accessible from the street.
- 3. Ground floor residential apartments are not to be located on primary active street frontages. Ground floor residential apartments may be located on secondary active street frontages subject to the apartments having direct 'front door' access from the street.
- 4. Restaurants, cafes and the like are to consider providing openable shop fronts.
- 5. Residential, commercial and retail uses on the upper floors along active street frontages must be designed to overlook the street and other public places to provide passive surveillance.
- 6. Continuous awnings are to be provided on active street frontages for all non-residential development.
- 7. On corner sites, active shop fronts are to wrap around the corner and address both street frontages.
- 8. Transparency and openings to the street are to be maximised and blank walls, fire exits and building services elements are to be minimised.
- 9. Large format stores are to be located behind other commercial frontages to ensure continuity of streetscape and to avoid blank walls or inactive frontages to the street, public open space or public plazas.
- 10. Vehicular access points should not be located on primary active street frontages or adjacent to building entry points

Note: Active street frontage uses include shop fronts; retail and service facilities with a street entrance; café or restaurants with street entrance; community and civic uses with a street entrance;

recreation and leisure facilities with a street entrance; and residential apartments with direct ‘front door’ access from the street.

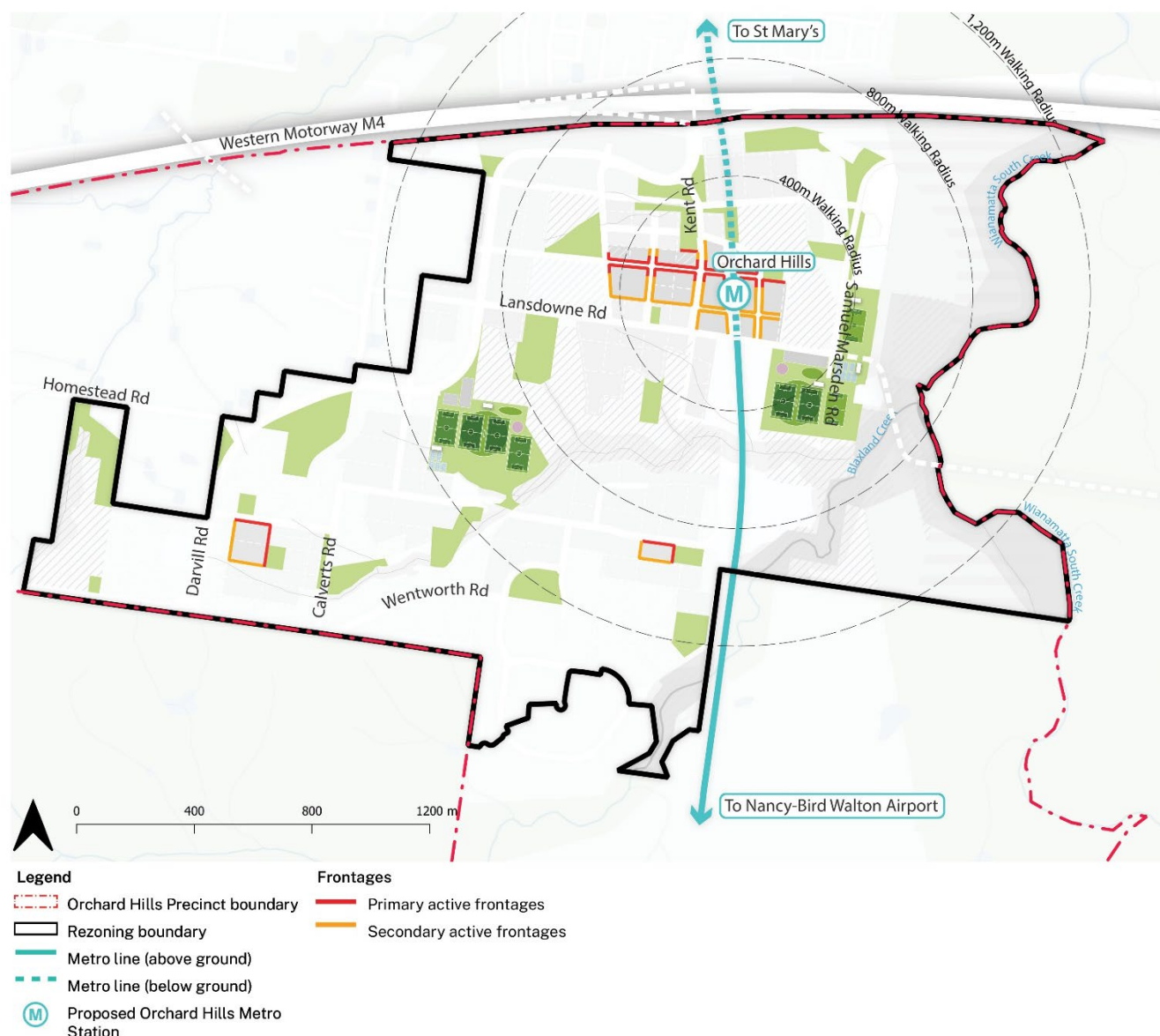


Figure E19.28 Active Street Frontages

19.16.8 Landscaping and Deep Soil

A. Objectives

- To ensure development provides landscaping and deep soil areas to ensure the optimal long term health of trees, plants, vegetation and contribute to the overall tree canopy target for the Precinct.

B. Controls

1. Landscape design and minimum landscaped areas are to comply with the relevant provisions of Part D2 Residential Development of this DCP and Apartment Design Guide.
2. Development must provide deep soil areas on site in line with **Table E19.6**, at a minimum dimension of 3m x 3m. Deep soil is defined as:

Deep soil is a landscaped area connected horizontally to the soil system and local ground water system beyond and is unimpeded by any building or structure above or below ground with the exception of minor structures. Deep soil zones with a minimum dimension of 3m allows sufficient space for the planting and healthy growth of new trees that provide canopy cover and assist with urban cooling and infiltration of rainwater to the water table. Deep soil also allows for the retention of existing trees.*

** Minor structures are defined as*

- a. path, access ramp or area of paving with a maximum width up to 1.2m
- b. essential services infrastructure (such as stormwater pipes) with a maximum diameter up to 300mm
- c. landscape structures (such as lightweight fences, light poles or seating) requiring a footing with a maximum size of up to 300mm x 300mm in cross section.

The 3m dimension in deep soil refers to 3m in every horizontal direction (length and width). This means deep soil is a minimum 9m² (3m x 3m)

3. Where site conditions allow, deep soil areas should be consolidated to one location on site for effective planting, derived from local parent geology, unobstructed by structures and services and connected to the local groundwater to assist with detention of stormwater.

19.16.9 Communal Open Space

A. Objectives

- a) To provide communal open space areas for residents that facilitate social and recreational activities, shared facilities, and high amenity, privacy and sunlight.
- b) To ensure communal open space provides sufficient area for landscaping, deep soil planting and adequate soil volumes.
- c) To ensure communal open space is equally and easily accessible to all residents.

B. Controls

1. Communal open space is to comply with the provisions of chapter D2 Residential Development of this DCP and the *Apartment Design Guide*.
2. Communal open space may be located on elevated gardens or roof tops, but only where the overall location and design will meet the needs of residents.

19.16.10 Private Open Space

A. Objectives

- a) To ensure private open space is of adequate size for outdoor living to enhance resident's quality of life.
- b) To ensure private open space is sited and designed to benefit from passive surveillance and provides amenity, privacy, and sunlight.
- c) To ensure private open space, including balconies and front garden courtyards, are integrated into the overall architectural form and façade of buildings and provide a positive contribution to the character of the street.

B. Controls

1. Private open space for residential apartment development is to comply with the requirements of the *Apartment Design Guide*.
2. Private open space for other residential development types is to comply with the provisions of chapter D2 Residential Development of this DCP.

19.16.11 Vehicular Access and Basement Entries

A. Objectives

- a) To minimise pedestrian, cyclist and vehicular conflict.
- b) To ensure vehicle entries, servicing and loading areas are not located on primary streets.
- c) To ensure that the location and design of basement entries or garages are efficient, safe, and integrated into the design of the development to minimise their visual impact.

B. Controls

1. Vehicular access points for all developments are to be consolidated to minimise disruption to pedestrians.
2. Vehicular access is not to be provided along active frontages.
3. Reduce impacts of new vehicle access points on pedestrian, public transport routes and cycleways by limiting driveway crossovers on main roads.
4. For mixed use and residential apartment development, parking is to be provided in a basement or semi basement to maximise opportunities for landscaping and deep soil areas.
5. On sloping sites, basement car parking is to be designed to respond to topography to minimise cut and fill.

6. All basement entry ramps are to be located above the flood planning level.
7. Basement car parking is not to protrude more than 1m above finished ground level except at the entrance to the car park.
8. For low-rise medium and medium density housing development, driveways and garages are to be provided in accordance with the provisions of chapter D2 Residential Development in this DCP.

19.17 Controls for Industrial Development

A. Objectives

- a) To promote high quality industrial development that is designed to integrate with surrounding development.
- b) To retain existing vegetation and provide for substantial landscaping as part of new development.
- c) To ensure that development does not significantly adversely impact on the amenity of neighbouring residential development and other sensitive land uses.

B. Controls

1. Development on land zoned E3 Productivity Support is to comply with the provisions in Part D4 Industrial Development or Part D5 Other Land Uses of this DCP, as relevant.

19.18 Subdivision Controls

A. Objectives

- a) To provide for a range of lot sizes that caters for a diversity of housing and employment opportunities.
- b) To ensure lots are oriented and suitably dimensioned to enable buildings to appropriately address streets, open spaces and the public domain.
- c) To ensure lots are appropriately oriented and dimensioned to minimise or mitigate amenity and environmental impacts, such as overshadowing and privacy loss, from future built form and loss of significant vegetation.
- d) To ensure that development does not unreasonably restrict the orderly development of land.

B. Controls

1. Subdivision development applications are to address the objectives and controls contained in Part C11 Subdivision of this DCP except for the following:
 - a) 11.1 General Subdivision Requirements - Subdivision of Natural Resources Sensitive Land – Control b) and c)
 - b) 11.1 General Subdivision Requirements – Water Management – Control b), d) and e)
 - c) 11.1 General Subdivision Requirements - Access and Transport – Control e)
 - d) 11.3.2 Site Frontage - Controls 3 and 6
 - e) 11.3.3 Allotment Dimensions - All controls
 - f) 11.3.5 Road Design and Construction - Controls – 1) Connections between roads and 20 Road Capacity
 - g) 11.3.6 Landscaping and Site Design - Control 4
 - h) 11.3.8 Drainage - Controls 1 and 2
 - i) 11.4.1 Subdivision - Lot Standards - Control - Table C11.1 Minimum Lot Width- last row.
2. Lots are to be relatively regular in shape, irregular shaped allotments with narrow street frontages are to be avoided.
3. Subdivision design is to ensure that the subdivision layout and road design allows for connections to the existing or proposed road network on adjoining sites as well as to utilities infrastructure.
4. Lots should be orientated and aligned to:
 - a) Ensure future buildings face public roads to increase visual surveillance and to avoid streetscapes with loading docks and long blank walls
 - b) Facilitate energy efficient building design and high amenity buildings
 - c) Enable buildings to have frontage to the public domain, open space and riparian corridors.
 - d) Where practical, provide for relatively longer north/south lots and wider east/west lots in order to maximise solar access and minimise overshadowing of adjoining properties.
5. The development application must demonstrate that any overland flow across the site will be appropriately managed as part of the development and that connection by adjoining developments to the trunk drainage network will not be impeded by the development.

19.19 Earthworks and Retaining Walls

A. Objectives

- a) To minimise cut and fill through site sensitive subdivision, road layout, infrastructure and building design.
- b) To ensure that earthworks do not significantly adversely impact local drainage patterns or increase flooding impacts.
- c) To minimise the impacts of earthworks on the natural environment and on the visual character of the locality.
- d) To consider the extent of earthworks when designing building blocks and lots that minimises use of cut and fill and retaining walls.

B. Controls

- 1. Subdivision and building works are to be designed to respond to the natural topography of the site wherever possible, minimising the extent of cut and fill both during subdivision and when buildings are constructed.
- 2. The applicant is to demonstrate:
 - a) The proposed finished surface levels and gradients for the site
 - b) How the finished levels are integrated with nearby land
 - c) That the finished levels will enable the development to contribute to the achievement of the Wianamatta-South Creek waterway health targets detailed in the Integrated Water Cycle Management report for the Precinct.
- 3. All retaining walls on the boundaries of proposed lots are to be identified and proposed as part of the respective subdivision development application. As far as possible, bulk earthworks and retaining wall construction is to be completed as part the subdivision works.
- 4. All retaining walls that are proposed as part of a subdivision shall be designed by a practicing Structural Engineer and be of masonry or concrete construction.
- 5. Rear boundary retaining walls for development on slopes are not to exceed 1.5m in height.
- 6. Side boundary retaining walls for development on cross slopes are not to exceed 1.5m in height.
- 7. Where terraced retaining walls are proposed the minimum horizontal distance between each step is 2m.
- 8. Retaining walls that front a public place are to be integrated with the landscape design and to be set back by at least 2m to allow screen planting in front of the walls.

19.20 Tree Canopy

A. Objectives

- a) To encourage development that integrates existing trees and other vegetation into the planning, design, development and construction process.
- b) To ensure development provides sufficient deep soil to support healthy root system development and ensure canopy trees reach maturity.
- c) To ensure development contributes to the 40% tree canopy target set out in the *Greater Penrith to Eastern Creek Strategic Framework*.
- d) To 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 enhanced biodiversity.
- e) To ensure that opportunities for increased tree canopy cover are provided to maximise comfort and enhance the liveability, health and well-being of both the community and the environment.
- f) To recognise the importance and function of trees and other vegetation for cooling.

B. Controls

- 1. Development must provide tree planting consistent with the percentage tree canopy requirements or the tree planting rates in **Table E19.6** and tree size categories in **Table E19.7**.
- 2. Canopy cover for streets and open spaces is to be provided as per **Table E19.8**.
- 3. Tree planting is to be supported by understory planting with vegetation to be clustered to improve its cooling effect.
- 4. Tree planting should be located where there is connectivity with surrounding vegetation or a habitat "stepping stone" (i.e. small patch of vegetation/habitat 100m² or greater in size).
- 5. Development applications for subdivision are required to demonstrate the approaches and specific measures proposed in support of achieving the canopy cover targets, on both public and private land, including but not limited to, the creation of contiguous/consolidated deep soil zones within and between properties, and the location, species, and minimum pot size of proposed canopy cover trees for the following areas:
 - a) Roads (both existing and proposed) including allowing for street lighting, corners, driveways and other constraints
 - b) Areas of open space (including any areas of car parking).
 - c) Drainage basins, bushland areas and riparian corridors (existing and proposed).

- d) Future development allotments.
- 6. Development applications are to demonstrate:
 - a) The provision of new trees and retention of existing trees on the proposed development site to contribute to canopy targets.
 - b) That existing trees have been incorporated into the design and protected to enhance amenity and provide established tree canopy across the development.
 - c) Whether an efficient water source for trees has been incorporated into the development design.
 - d) Provision of sufficient deep soil zones for optimal tree health.
- 7. Applications for residential subdivision, mixed use and industrial development are to include a Tree Canopy Plan that demonstrates how the canopy cover target was calculated and how the target will be achieved and maintained.
- 8. Trees and vegetation are to be strategically located to maximise shade and reduce urban heat island effects, especially in areas with high pedestrian activity.
- 9. Tree planting is to incorporate species endemic to the Cumberland Plain where possible and appropriate.

Table E19.6 Tree Canopy, Deep Soil and Tree Planting Requirements for private land

	Minimum Tree Canopy Target (% site area)	Minimum Deep Soil (% site area)	Minimum Tree Planting Rates* in Deep Soil Area
Detached dwellings			
Less than 300m ²	20%	20%	For every 200m ² of site area, or part thereof at least one small tree
300-600m ²	25%	25%	For every 250m ² of site area, or part thereof at least one medium tree
Over 600m ²	30%	30%	For every 350m ² of site area, or part thereof at least 2 medium trees or one large tree
Attached dwellings, Dual Occupancies, Terraces (applied on each proposed dwelling)			
Less than 150m ²	15%	15%	At least one small tree

	Minimum Tree Canopy Target (% site area)	Minimum Deep Soil (% site area)	Minimum Tree Planting Rates* in Deep Soil Area
150-300m ²	20%	20%	For every 200m ² of site area or part thereof, at least one small tree
Over 300m ²	25%	25%	For every 225m ² of site area or part thereof, at least one medium tree

Multi-dwelling housing

Less than 1,000m ²	20%	20%	For every 300m ² of site area or part thereof, at least one medium tree
1,000-3,000m ²	25%	25%	For every 200m ² of site area or part thereof, at least one medium tree
Over 3,000m ²	30%	30%	For every 350m ² of site area or part thereof, at least two medium trees or one large tree

Apartments – (aligned to design guidance under Objective 3E in the Apartment Design Guide)

Less than 650m ²	15%	7%	For every 350m ² of site area or part thereof, at least 1 small tree
650-1,500m ²	15%	10%	For every 350m ² of site area or part thereof, at least 1 medium tree
Over 1,500m ²	20%	15%	For every 575m ² of site area or part thereof, at least 2 medium trees or 1 large tree

Commercial

All lots	35%	25%	For every 300m ² of site area or part thereof, at least two medium trees or one large tree
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Industrial

All lots	25%	15%	For every 400m ² of site area or part thereof, at least two medium trees or one large tree
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On-Grade Car Park

One medium tree should be planted in every fifth car parking space provided. The tree is to be in a planted zone of 13 m² – the equivalent of a car parking bay area. Trees should be evenly distributed in a chequerboard fashion to increase shading.

	Minimum Tree Canopy Target (% site area)	Minimum Deep Soil (% site area)	Minimum Tree Planting Rates* in Deep Soil Area
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*Development can meet urban tree canopy requirements by planting trees in line with the tree planting rate or by planting a combination of trees that achieve the minimum tree canopy percentage cover. The required number of trees that will meet minimum tree canopy percentage cover can be calculated by using the assumed canopy area of small, medium and large trees in **Table E19.7**.

Table E19.7 Tree size categories

Tree category	Minimum diameter spread	Minimum canopy area
Small tree	6m	28m ²
Medium tree	8m	50m ²
Large tree	12m	113m ²

Table E19.8 Urban tree canopy requirements for public land

Public domain type	Description	Canopy cover
Residential streets (12m-20m reserve)	Existing residential street with overhead powerlines	40%
	Existing residential street with underground powerlines	50%
	New residential street with underground powerlines	70%
Industrial street (20m-25m reserve)	New industrial street with underground powerlines	60%
Open space (>5 hectares)	Without sports fields/courts	45%
	With sports fields/courts	45%

19.21 Access and Parking

A. Objectives

- a) To provide sufficient, safe and secure parking for residents, workers and visitors.
- b) To encourage public transport and active transport use.
- c) To ensure development encourages and supports increased usage and demand for electric vehicles.

B. Controls

1. For areas greater than 800m walking distance from Orchard Hills Station (measured according to the nearest route ordinarily used in travelling), on-site parking for vehicles and bicycles is to be provided in accordance with the requirements of Part C10 Transport, Access and Parking of this DCP.
2. For residential development in areas within 800m walking distance of Orchard Hills Station, the maximum car and motorcycle parking rates listed in **Table E19.9** apply. Accessible car parking, car share parking, electric vehicle charging spaces and bicycle parking spaces are to be provided according to the rates listed in **Table E19.10**
3. No direct vehicular access is permitted to the Distributor Road or the M4 Western Motorway.
4. All development shall make provision for future electric vehicle charging points in off-street car parking areas, or an increased amount of electric vehicle charging points above the minimum rate specified in **Table E19.10**. Charging standards are defined by the NSW Electric and Hybrid Vehicle Plan, Future Transport 2056.
5. Travel plans are to be provided and are to include details of measures to reduce car dependency for new developments by encouraging sustainable transport modes. A Travel Plan must be submitted for:
 - a) Any residential developments containing 30 or more residential dwellings.
 - b) Any commercial or industrial developments which exceeds 3,000m² in gross floor area (GFA) or accommodates more than 50 employees.

Table E19.9 Maximum car and motorcycle parking rates for residential development within 800m walking distance of Orchard Hills Station

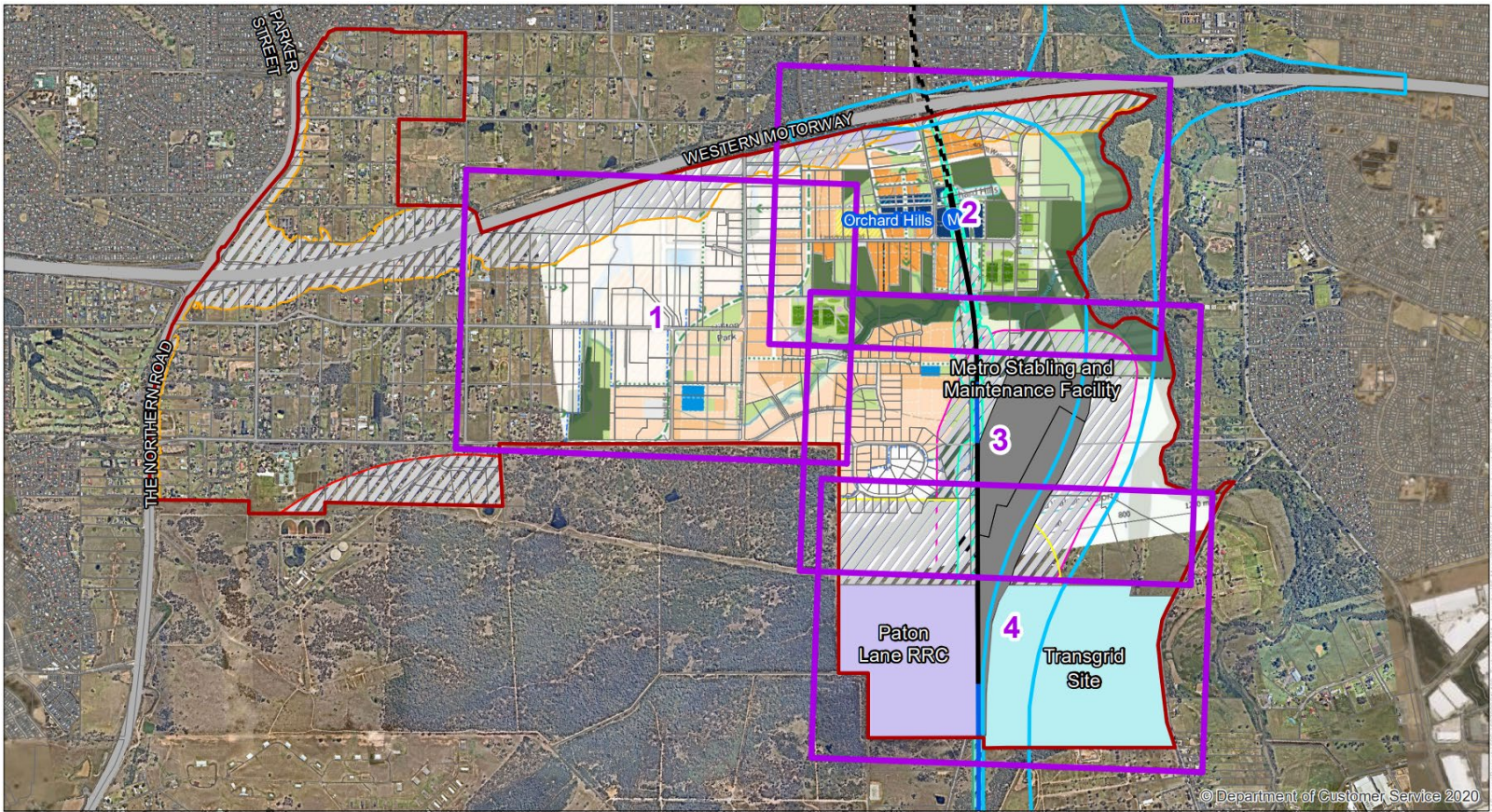
Land Use/parking type	Maximum parking rate
Detached, semi-attached dwellings, dual occupancies	1 space per dwelling

Land Use/parking type	Maximum parking rate
Multi-dwelling housing	Studio, 1 or 2 bedrooms – 1 space per dwelling 3 or more bedrooms – 1.5 spaces per dwelling Visitor – 0.25 spaces per dwelling (minimum 1 space) Provision of a car washing space if more than 4 dwellings
Residential flat buildings	Studio or 1 bedroom – 0.5 spaces per dwelling
Shop-top housing	2 or more bedrooms – 1 space per dwelling Motorcycle parking – 1 space per 10 car spaces Visitor – 1 space per 5 apartments Provision of a car washing space if more than 4 dwellings

Table E19.10 Minimum parking rates for multi-dwelling housing, residential flat buildings and shop-top housing within 800m walking distance of Orchard Hills Station

Vehicle Type	Minimum parking rate
Accessible car parking	1 space per adaptable dwelling 1 space per 20 visitor spaces
Car share spaces	1 space per 60 car spaces provided
Electric vehicle spaces including charging stations	1 space per 60 car spaces provided
Bicycle parking	1 space per dwelling (resident) 1 space per 10 dwellings (visitor)

Appendix A – Noise Buffer Areas



Orchard Hills Precinct Plan - Noise Buffer Areas

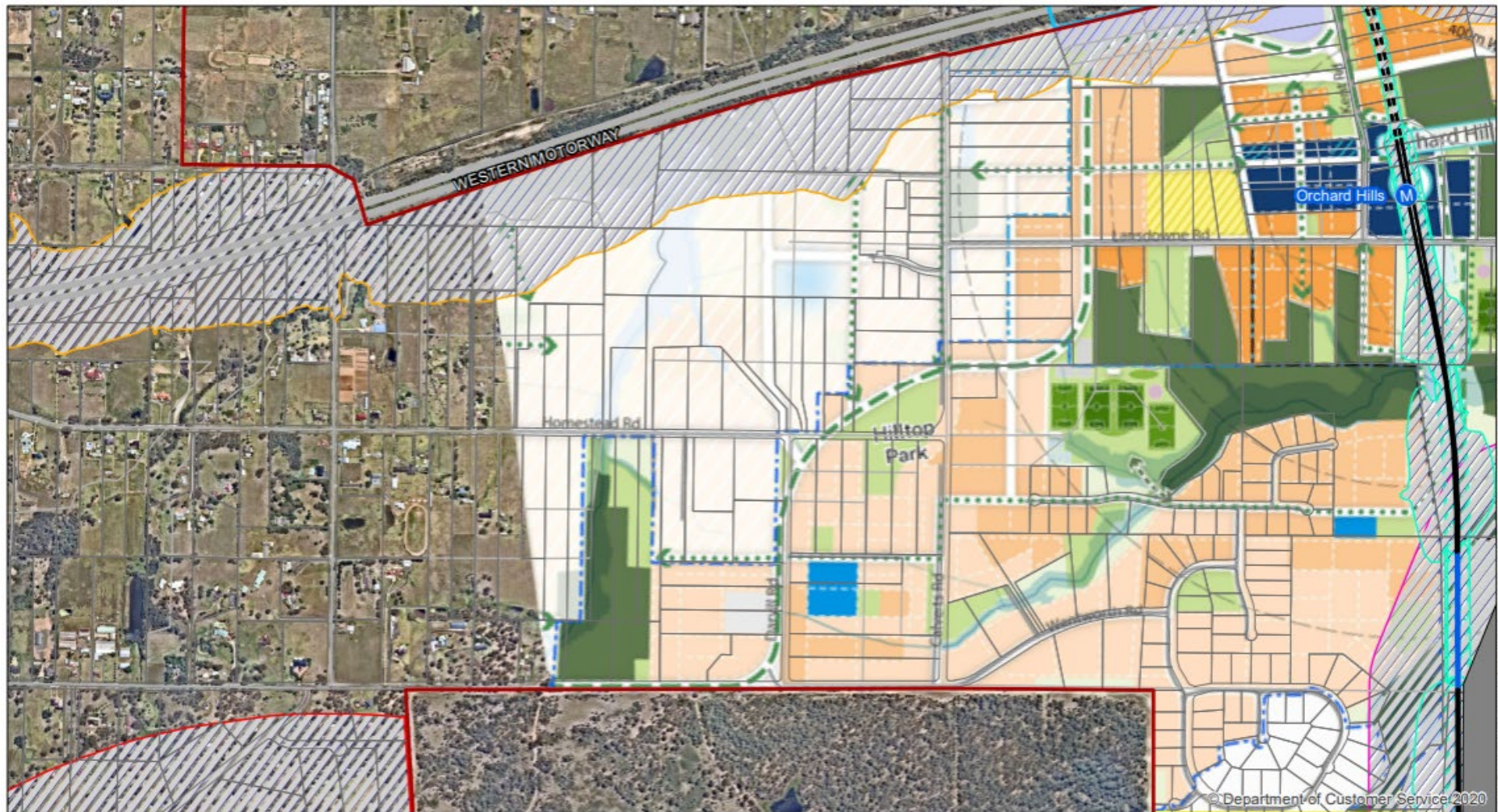


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Orchard Hills Precinct Plan - Noise Buffer Areas



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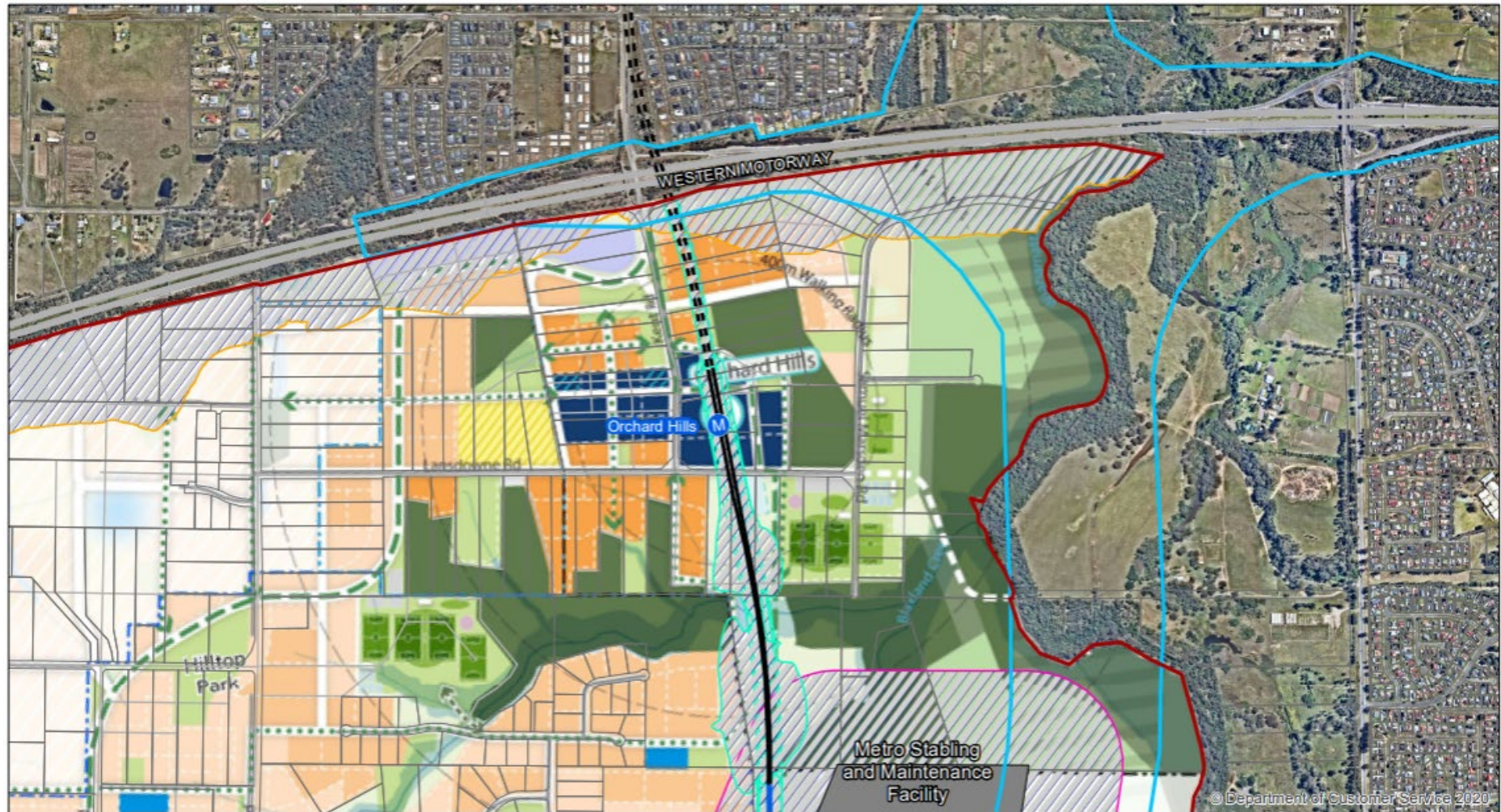
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Orchard Hills Precinct Plan - Noise Buffer Areas



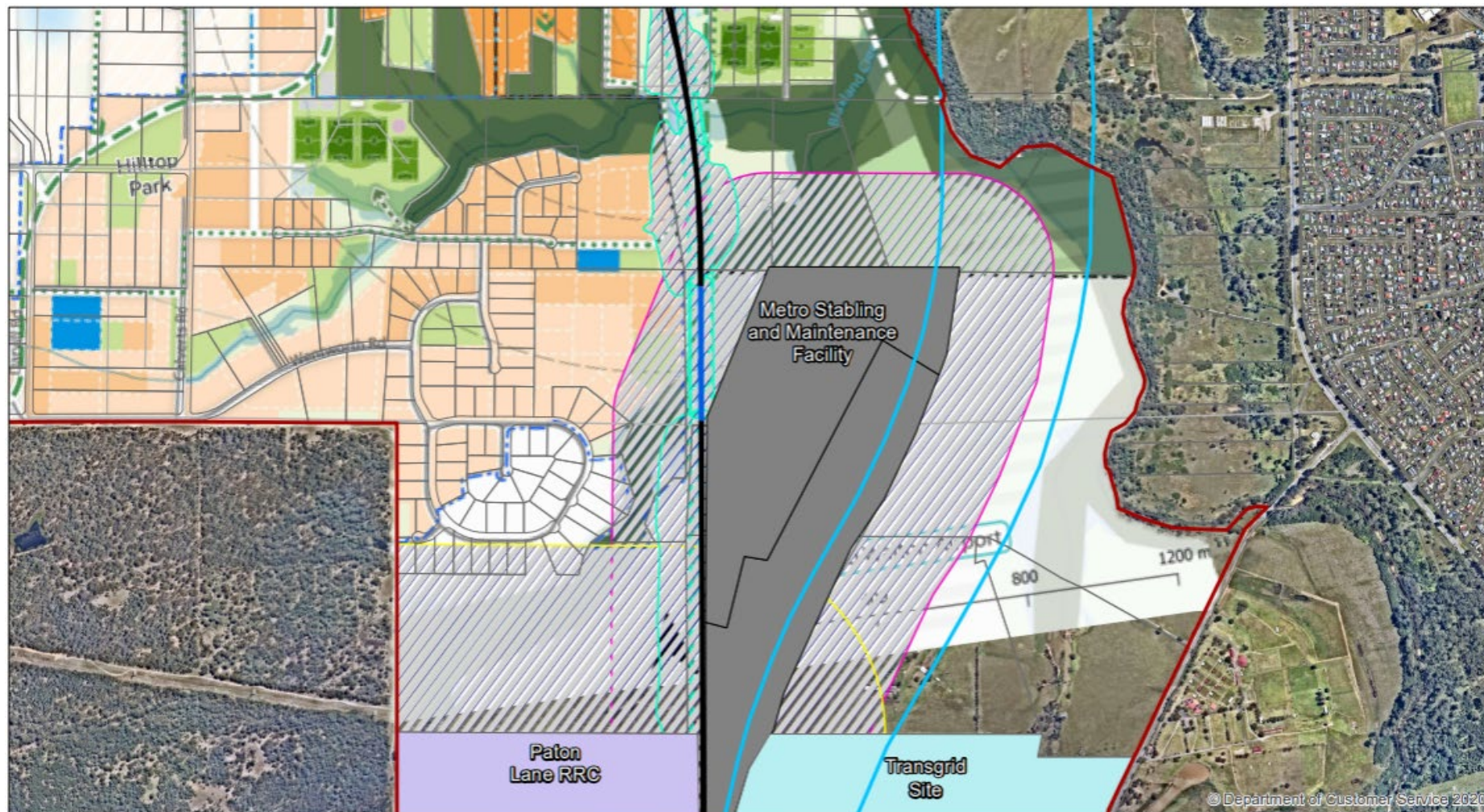
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Orchard Hills Precinct Plan - Noise Buffer Areas

- Orchard Hills investigation area
- Outer Sydney Orbital corridor

Metro Alignment

- Surface
- Tunnel
- Viaduct
- Metro Station

- Buffer - Metro Stabling and Maintenance Facility
- Buffer - Defence Noise
- Buffer - Ground-borne Rail Noise
- Buffer - Airborne Rail Noise
- Buffer - Ground-borne Rail Vibration
- Buffer - Airborne Road Noise
- Buffer - RRC Noise



0 180 360 Meters

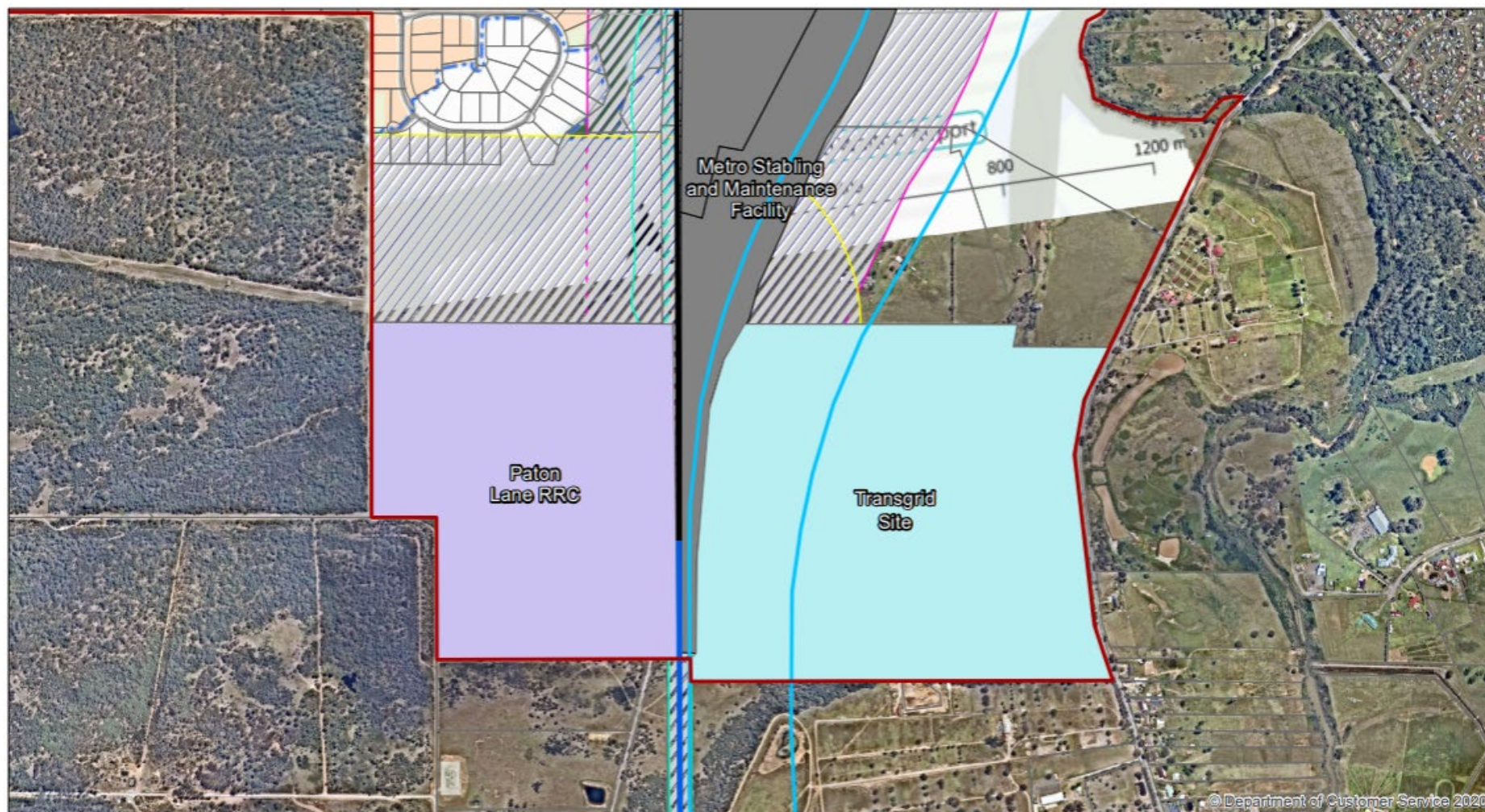
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