

Redmond Place, Orange Urban Design Report

We acknowledge the Wiradjuri people as the Traditional Custodians of this place.

We honour Elders past and present, whose profound knowledge systems can teach us much about how we care and design for Country.

Rev	Issue	Date	By	Checked
A	Draft	30.05.24	SL/RB	SB/KS
B	Draft	08.06.24	SL/RB	SB/KS
C	Draft	13.06.24	SL/RB	SB/KS
D	Draft	28.06.24	SL/RB	SB/KS
E	Draft	27.06.24	SL/RB	SB/KS
F	Draft	01.07.24	SL/RB	SB/KS
G	Draft	02.07.24	SL/RB	SB/KS

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1.0 Introduction and Context

1.1 Introduction



Subject Site. The site comprises three lots identified in Table 2.

Figure 1 - The Site

Site information

The Site is located on the southeast fringe of Orange, the largest city in the Central West Region. It is adjacent to the suburb of Glenroi, 4.4km from Orange City Centre and approximately 3.2km from Orange train station.

The Site has a significant frontage along Mitchell Highway (A32) which runs from east to west from the M4 Motorway in Greater Sydney connecting through Penrith, Katoomba, Bathurst to Orange. The site is intended to be the first line of housing on entry to Orange.

The Site lies on the southern side of Redmond Place, bounded by Bathurst Road / Mitchell Highway (on the northeast), Lone Pine Avenue (on the west) and Dairy Creek Road to the south. It is surrounded by a mixture of land uses with low density residential to the west, retail and large format retail to the north, rural farmland to the south and east, as well as a kart racing track on the opposite side of the Mitchell highway.

The Site is approximately 24.2 Ha in size and is currently vacant, except for a structure that previously housed an emergency services helicopter hangar.

Table 2 - The Site

Legal description	Address	Area
Lot 1 DP 153167	154 Lone Pine Avenue	4.10 ha
Lot 6 DP 1031236	3 Redmond Place	2.28 ha
Lot 200 DP 1288388	5255 Mitchell Highway	17.85 ha
Total		24.23 ha

The land is owned by Orange City Council, who will remain owners throughout the course of the project. Landcom and Orange City Council have signed a Project Delivery Agreement, with Landcom leading the planning proposal to rezone the land for residential use.

The Planning Proposal

The planning proposal is to amend Orange Local Environmental Plan 2011 to rezone the site to facilitate delivery of a residential precinct in accordance with a prepared Masterplan.

The objectives of the Masterplan are to:

- + increase the supply of land to facilitate housing through the creation of lots to support a sustainable, innovative and affordable community.
- + promote housing diversity through supporting a diverse mix of product, including houses and townhouses.
- + increase the supply of land for affordable housing by delivering at least 20% of all residential dwelling sites for affordable housing managed by a community housing provider.
- + develop a climate resilient, healthy and inclusive place, at the forefront of environmental and social sustainability.

Definitions/explanations of common terms

Low density housing is single detached dwellings and secondary dwellings.

Medium density housing includes a range of housing forms including dual occupancies, townhouses, terraces and manor housing.

Affordable housing is housing for very low to moderate income households. Generally speaking, affordable housing is priced below market pricing so that a household is spending no more than a specified proportion of its income on rent. This is generally set at 30% of the household's gross income. Affordable housing is available to everyone who meets the eligibility criteria.

Introduction

Context

Redmond Place is a new residential neighbourhood to be developed in collaboration with Landcom and Orange City Council.

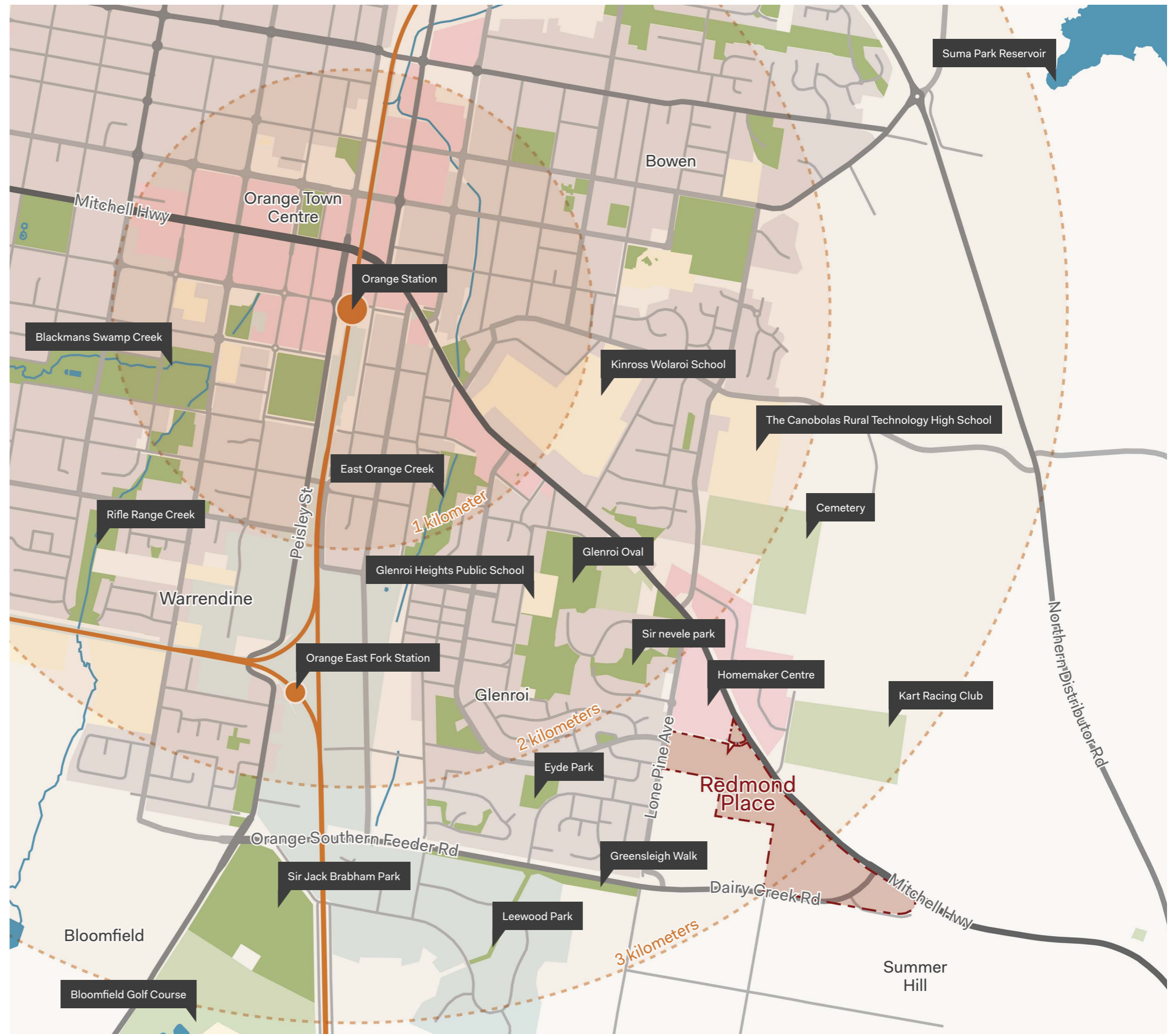
"Landcom is working with Orange City Council to create a new residential neighbourhood that will increase and diversify housing options for this growing regional city.

The project will unlock 24.2 hectares of Council-owned land at Orange's eastern entrance to deliver 300+ homes with a mix of housing types including single dwellings, duplexes, town houses and low-rise apartments - providing people with greater choice and affordability.

Redmond Place will cater to various household sizes and incomes, with at least 20% of homes to be set aside as Affordable Housing.

The project will be designed with innovation, sustainability and liveability in mind, aiming to set the standard for contemporary new housing in Orange and Central West NSW."

- Landcom, *Welcome to Redmond Place*



2.0 Site Analysis




2.1 Open Space and Social Infrastructure Analysis Diagrams

Redmond Place will neighbour the suburb of Glenroi which contains a wide range of open space and social infrastructure offerings.

Glenroi has varied parks and sporting facilities as well as a primary school, three early childhood education and care facilities and two community centres.

Legend

Open Space Typologies

-  Public Green Open Space
-  Semi-Public Green Open Space
-  Sports Pitch

Park Amenity

-  Sports Fields
-  Skate Park
-  Playground
-  Basketball Courts
-  Walking Paths
-  Informal Lawn Areas
-  Shade Trees
-  Mountain Views
-  Picnic Shelter
-  Young Trees



2.2 Ecology

Analysis Diagrams

Prior to clearing for agricultural use, the Redmond Place project site would have been home to the Central Tableland Clay Apple Box Grassy Forest and the Southern Tableland Grassy Box Woodland.

GIS mapping of extant vegetation communities by NSW Government Department of Planning and Environment shows that both of these communities still exist in nearby parkland.

Field work undertaken by OzArk has located small scattered pockets of native vegetation within the site boundary. OzArk also identified 6 notable habitat features on site.

Legend

Pre Clearing Vegetation

- Central Tablelands Red Stringybark Grassy Forest
- Central Tablelands Dry Slopes Stringybark-Box Forest
- Southern Tableland Grassy Box Woodland
- Central Tableland Clay Apple Box Grassy Forest

Extant Vegetation

- Central Tablelands Red Stringybark Grassy Forest
- Central Tablelands Dry Slopes Stringybark-Box Forest
- Southern Tableland Grassy Box Woodland
- Central Tableland Clay Apple Box Grassy Forest

OzArk Ecological Findings

- Native Vegetation
- Habitat Features

Biodiversity Features

- Biodiverse Riparian Land



2.3 Climate & Winds

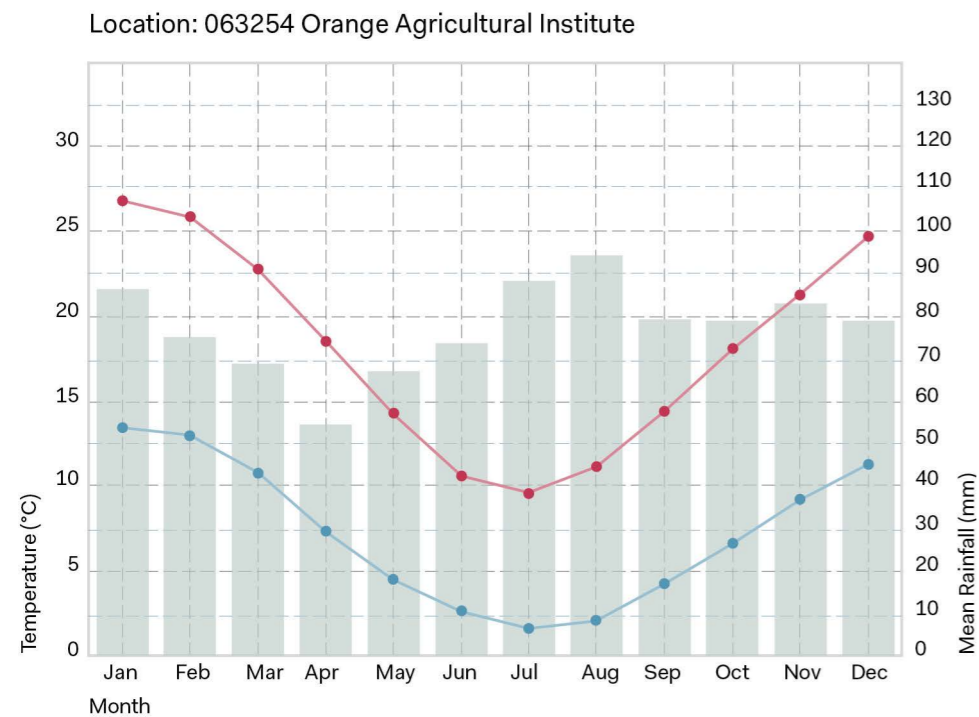
Analysis Diagrams

Orange has a cool temperate climate, experiencing warm Summers and cold wet Winters.

Wind direction and speed information collected at Orange Agricultural Institute indicates Orange receives gentle Easterly breezes in the Summer and a mix a powerful Westerly gusts and Southerly breezes in the Winter.

High temperatures peak in January at an average of 26.6 °C and lows dip down in July to an average of 1.6 °C.

Average rainfall peaks in August at 94.0mm with an annual average of 925.7mm.



Data collected by the Australian Government Bureau of Meteorology
 Accessed Tue 30 Jan 2024 14:25 PM AEDT

Legend

- Mean Maximum Temperature
- Mean Minimum Temperature
- Rainfall

Rose of Wind direction versus Wind speed in km/h (01 Jan 1976 to 11 Aug 2023)

Custom times selected, refer to attached note for details

ORANGE AGRICULTURAL INSTITUTE

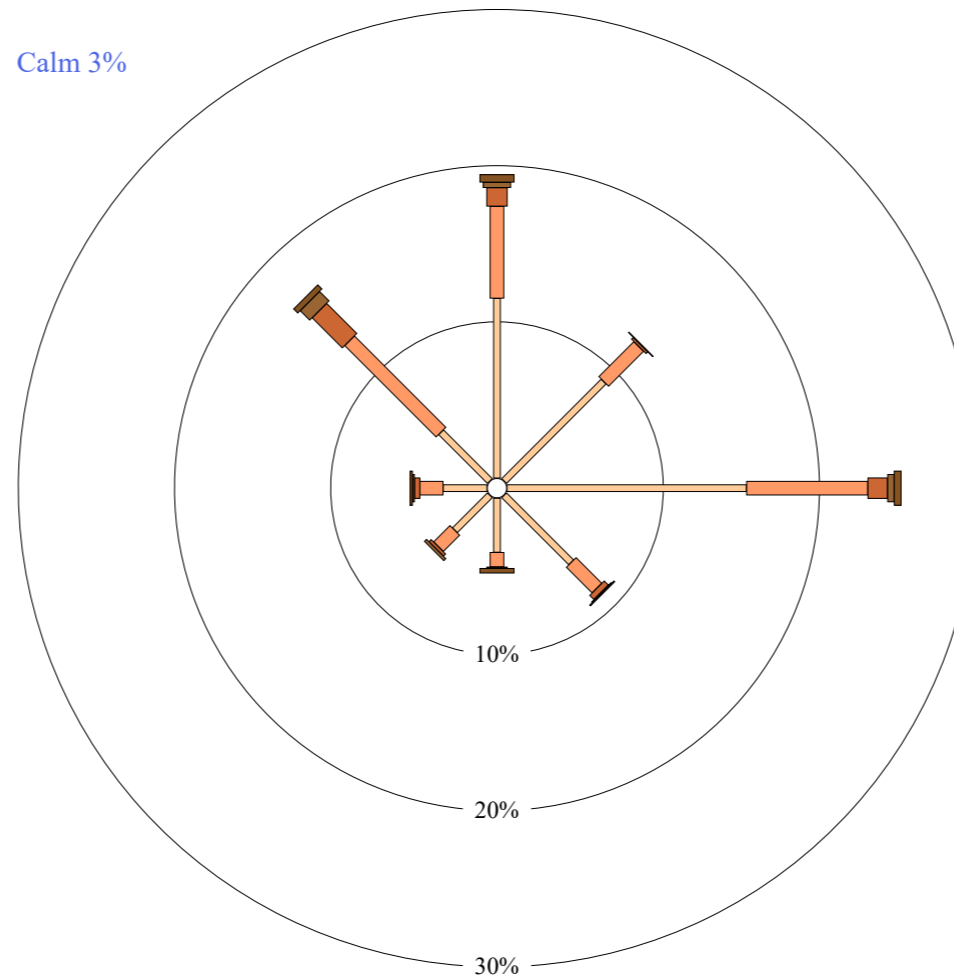
Site No: 063254 • Opened Jan 1966 • Still Open • Latitude: -33.3211° • Longitude: 149.0828° • Elevation 922m

An asterisk (*) indicates that calm is less than 0.5%.

Other important info about this analysis is available in the accompanying notes.

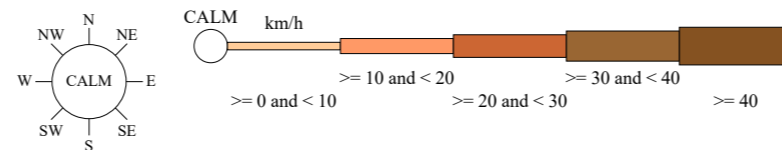
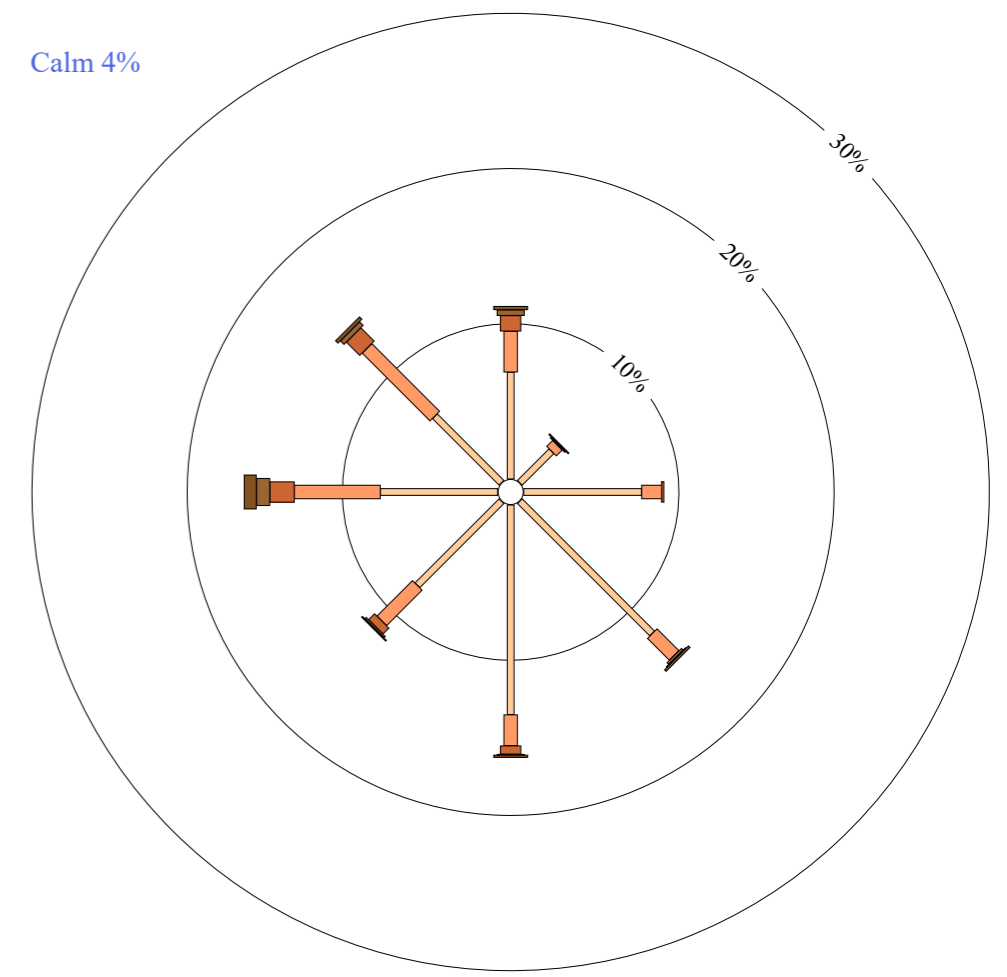
9 am Jan
 1361 Total Observations

Calm 3%



9 am Jul
 1411 Total Observations

Calm 4%













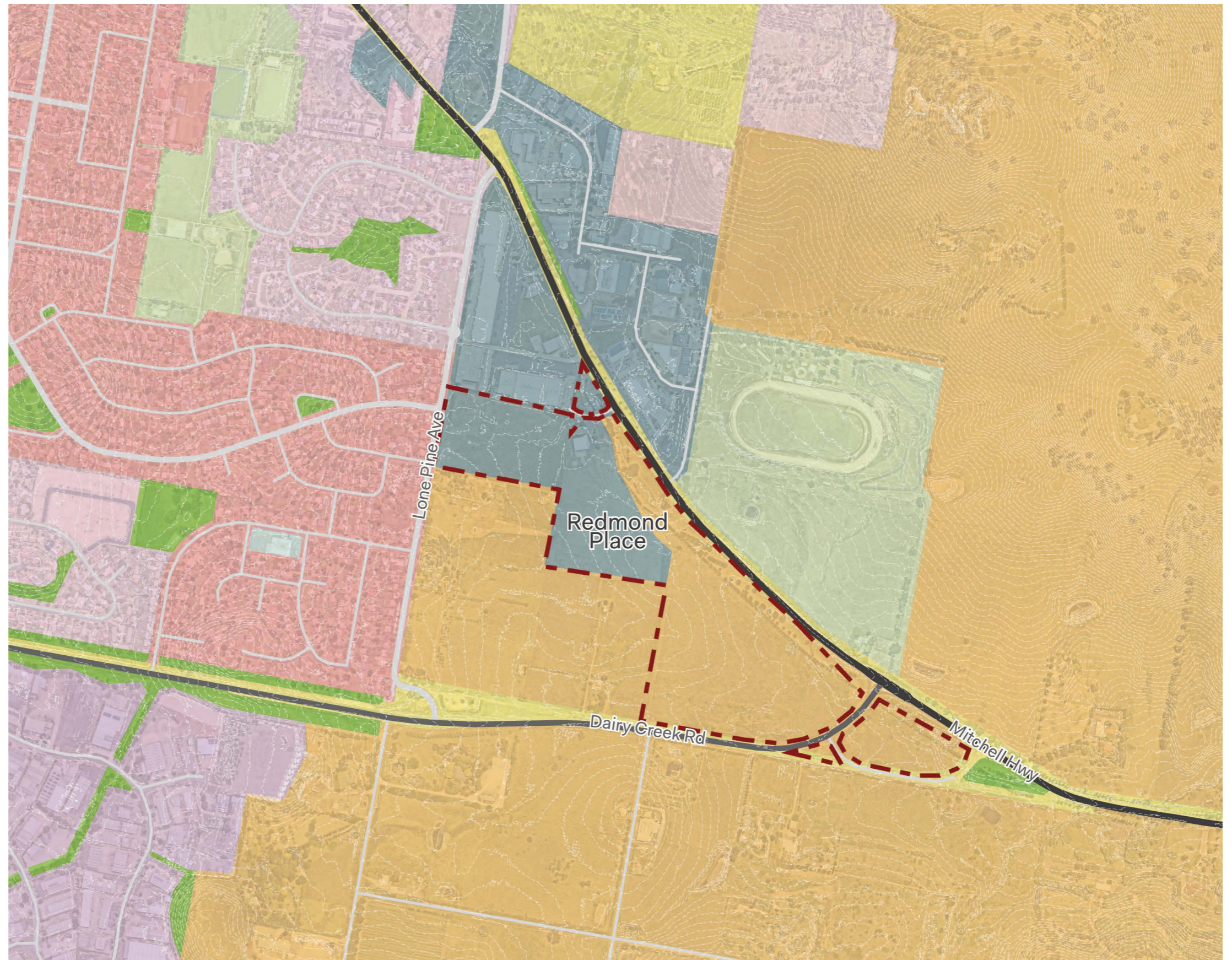
Copyright © Commonwealth of Australia 2023 . Prepared on 11 Aug 2023
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 Contact us by phone on (03) 9669 4082, by fax on (03) 9669 4515, or by email on climatedata@bom.gov.au
 We have taken all due care but cannot provide any warranty nor accept any liability for this information.

2.4 LEP Zoning Analysis Diagrams

The Redmond Place project site is currently zoned as E3 Productivity Support in the North West and C3 Environmental Management in the South East.

Legend

	E1 Local Centre
	E3 Productivity Support
	E4 General Industrial
	C3 Environmental Management
	R1 General Residential
	R2 Low Density Residential
	R5 Large Lot Residential
	RE1 Public Recreation
	RE2 Private Recreation
	SP2 Infrastructure

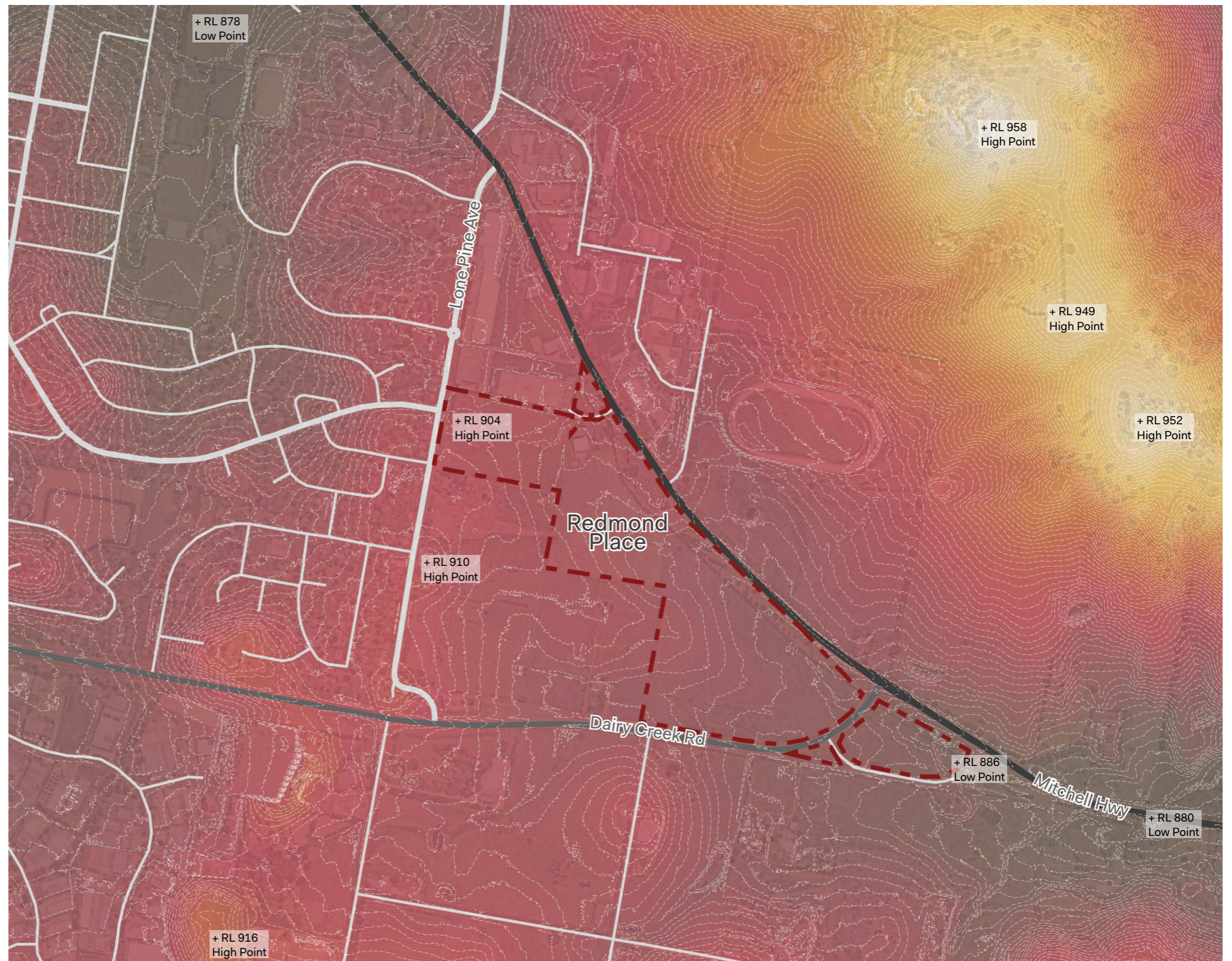
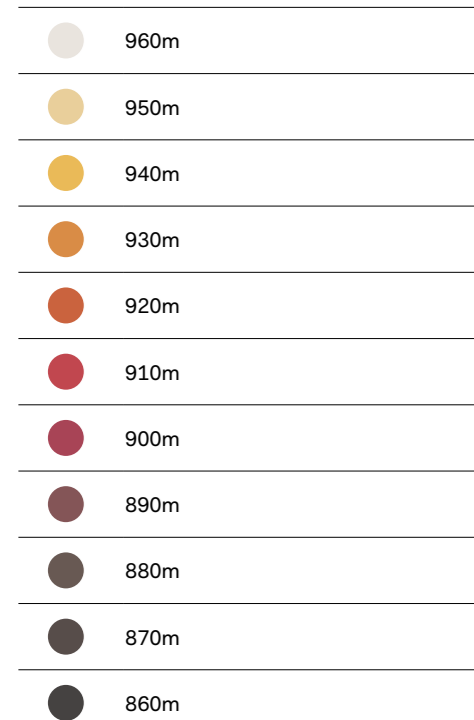


2.5 Topography Analysis Diagrams

Redmond Place slopes gently downwards from the high point on Lone Pine Avenue in the North West to the shallow valley along the edge of Mitchell Highway in the South East.

The Site's high point sits at RL 904.00 and the site falls away to a low point of RL 886.00. Three tall hills can be seen to the East reaching up to RL 958.00.

Legend

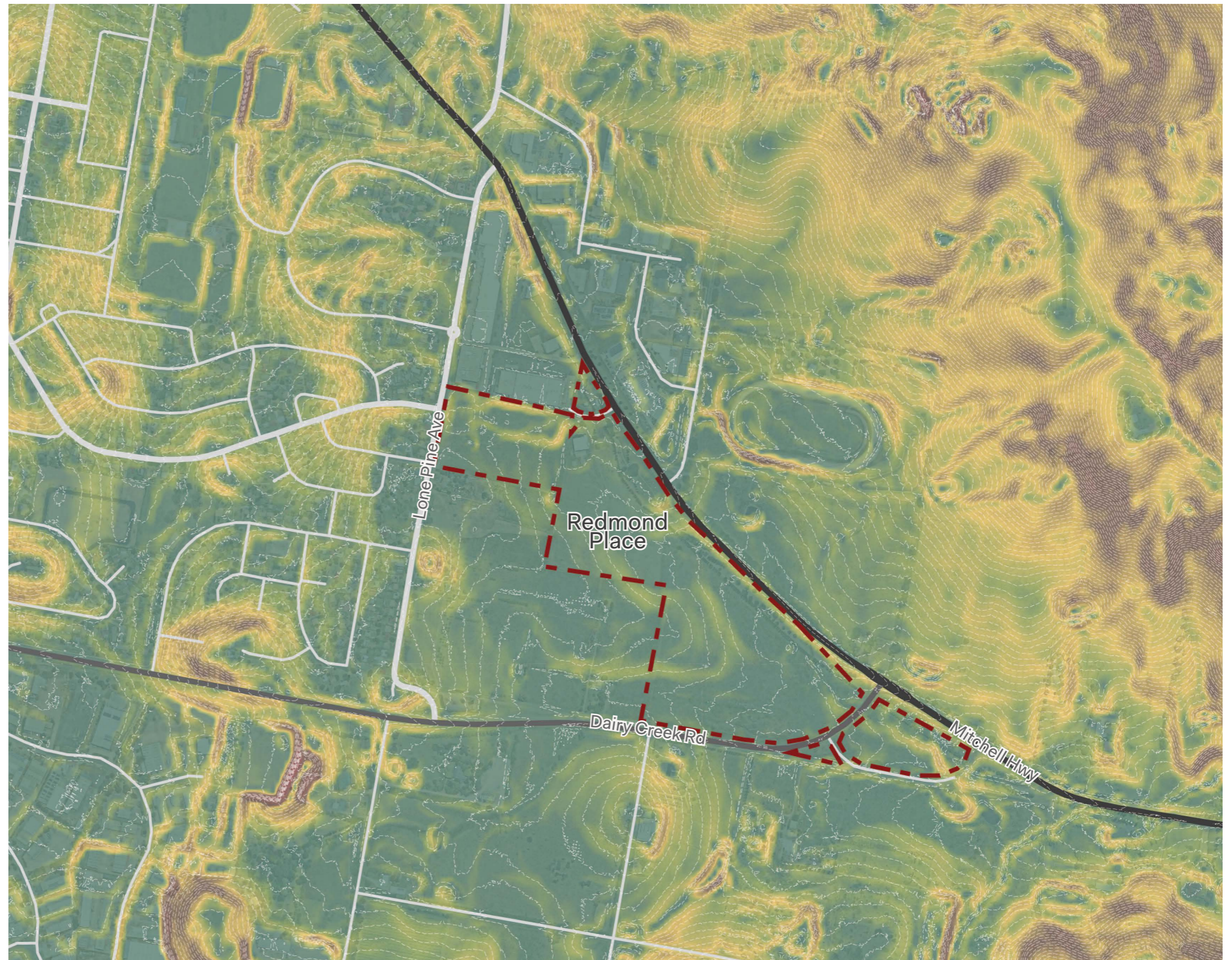


2.6 Slope Analysis

Analysis Diagrams

Redmond Place has a gradual slope down to the South East, falling at a grade greater than 1:50 in most places.

Steeper sections of the site have falls ranging between 1:10 and 1:20, most notably the valley to the edge of Mitchell High Way.



Legend

- > 1:50
- 1:20 - 1:50
- 1:10 - 1:20
- 1:5 - 1:10
- < 1:5

2.7 Heritage items

Analysis Diagrams

Desktop research and a site walk has been conducted by OzArk to locate Aboriginal and historic items within the study area and surrounds.

Searches did not return any heritage items within the study area, however LEP listed items are adjacent:

Name of Database Searched	Date of Search	Type of Search	Comment
National and Commonwealth Heritage Listings	17/1/24	Orange LGA	No places listed on the National or Commonwealth databases are located within or near the study area.
State Heritage Listings	17/1/24	Orange LGA	No state listed items are located within or near the study area.
Local Environment Plan (LEP)	17/1/24	Orange LEP of 2011	No locally listed items are located within the study area. LEP item #I355 and LEP item #I113 border the southern portion of the study area.

- + The Old Dairy building in Lot 200 DP1288388 has been assessed as having local heritage values. Due to the item's significance to the local community, the building and its immediate surrounds should be preserved.
- + The memorial gardens in the Gateway Park have social values for the local community and should be preserved.
- + The heritage curtilages of item I113 (Lot 2 DP1087281) and item I355 (Lot 7 DP793145) should be preserved.
- + Consideration should be made to include appropriate screening along the northern boundary of Lot 2 DP1087281.



Items of local heritage listed on the Orange LEP close to the study area (OzArk Historic Heritage Assessment Report)

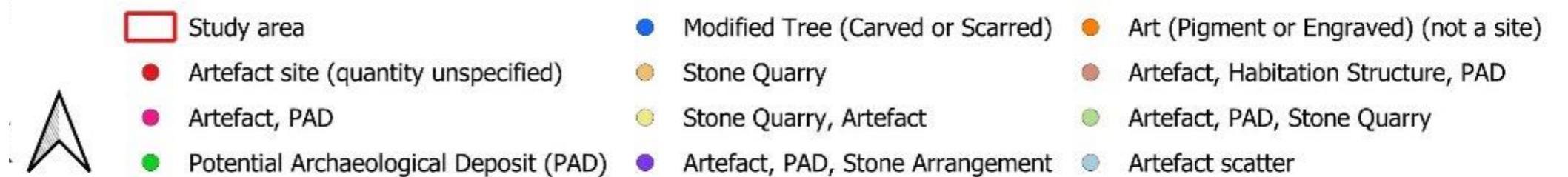
Legend



LEP Listed Item Curtilage

2.8 Aboriginal Heritage Analysis Diagrams

- + A search of the Aboriginal Heritage Information Management System completed on 17 January 2024 shows there are no previously recorded Aboriginal sites within or near the study area.
- + No Aboriginal sites or areas of archaeological sensitivity were identified during the survey, nor was there any information indicating that sites or other specific cultural heritage values may be present. The field survey was completed on 13 February 2024.



Location of previously recorded AHIMS sites in relation to the study area
(OzArk Archaeological Technical Report)

2.9 Active/ Public Transport Network Analysis Diagrams

Orange is an ideal place for walking and riding. Most people who live close to the city centre can walk or ride within 20 minutes to their local shops, school or work. Orange is also fairly flat, with wide shaded streets that are very distinctive to this city.

- Orange Active Travel Plan, Orange City Council

The Orange Active Travel Plan of 2016 states that in the 2011 census only 1% of Orange residents report commuting by bus, 5% walk and 90% commute by car.

Corresponding to this low uptake of bus use, bus services to the area surrounding Redmond Place are infrequent mostly running between 6:30 am and 6:30 pm, with some later services on Thursdays and Fridays.

Legend

TFNSW Bus Network

- Bus Stop
- Bus Route
- Limited Service Bus Route
- 581 Route Number

Proposed Bicycle Network (Orange Active Travel Plan, Orange City Council)

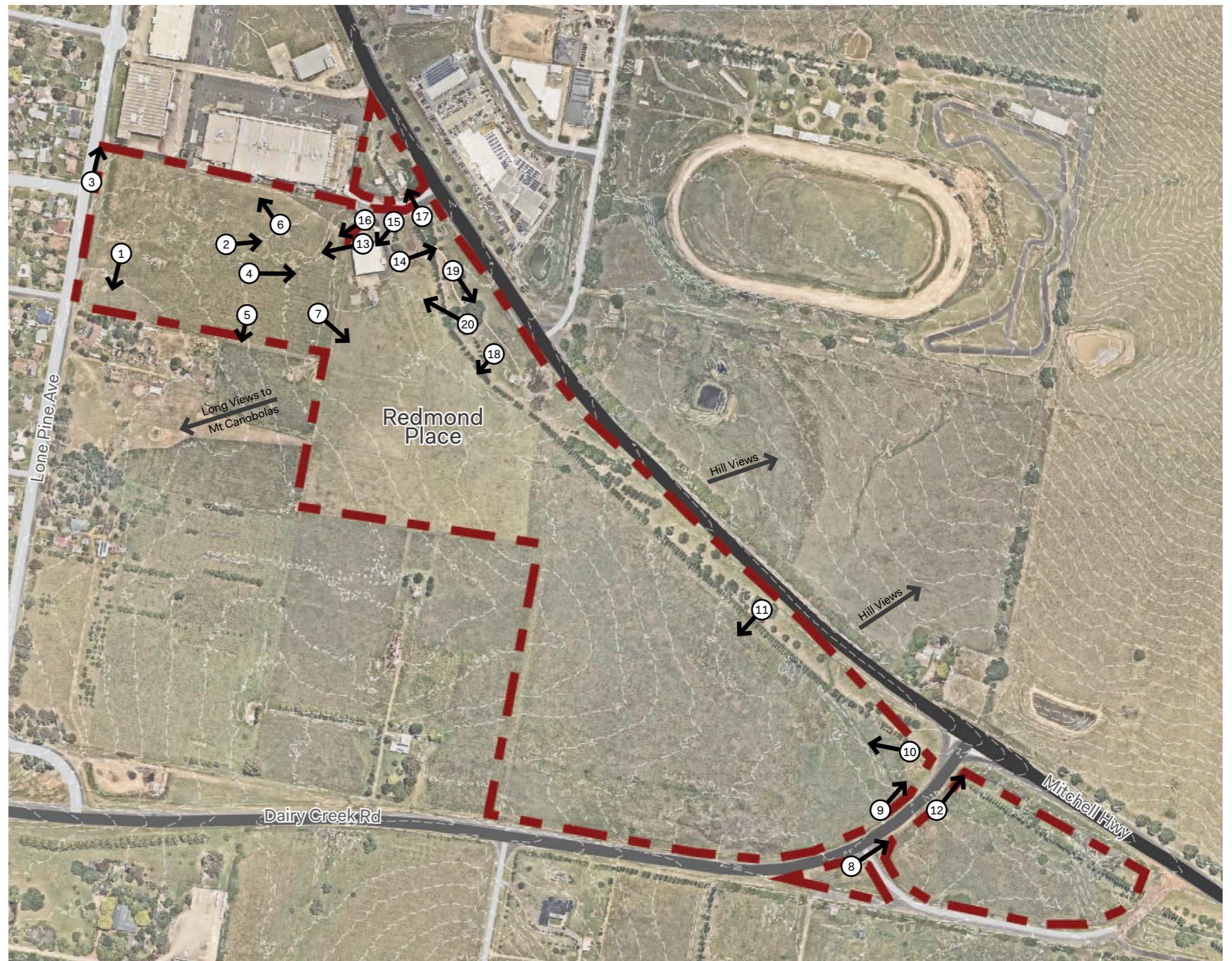
- Shared pedestrian/cycleway
- Designated on road cycleway
- Proposed shared pedestrian/cycleway
- Proposed on road cycleway



2.10 Views Analysis Diagrams

Views from the Redmond Place project site are largely defined by the strong avenue of poplars along the Eastern boundary, grassy meadows to the South and East and distant mountains to the west.

The avenue of poplars frame views in and out of the site creating a unique sense of place as they shake their leaves in the breeze. The site contains many distinctive features including large boulders, the hangar building in the North East and the historic dairy building by the Mitchell High Way.



2.11 Views
Analysis Diagrams



Views

Analysis Diagrams



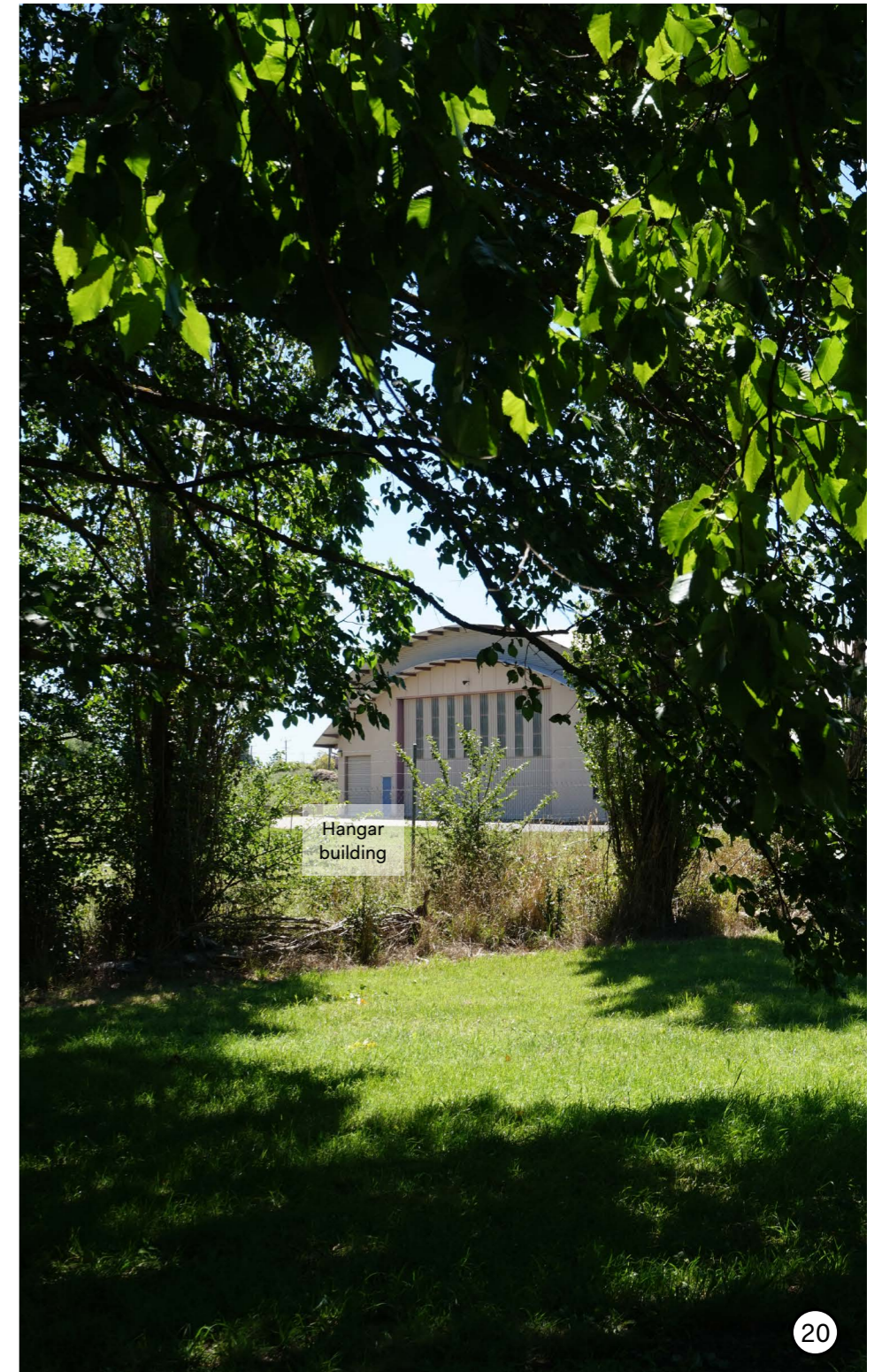
Views

Analysis Diagrams



Views

Analysis Diagrams



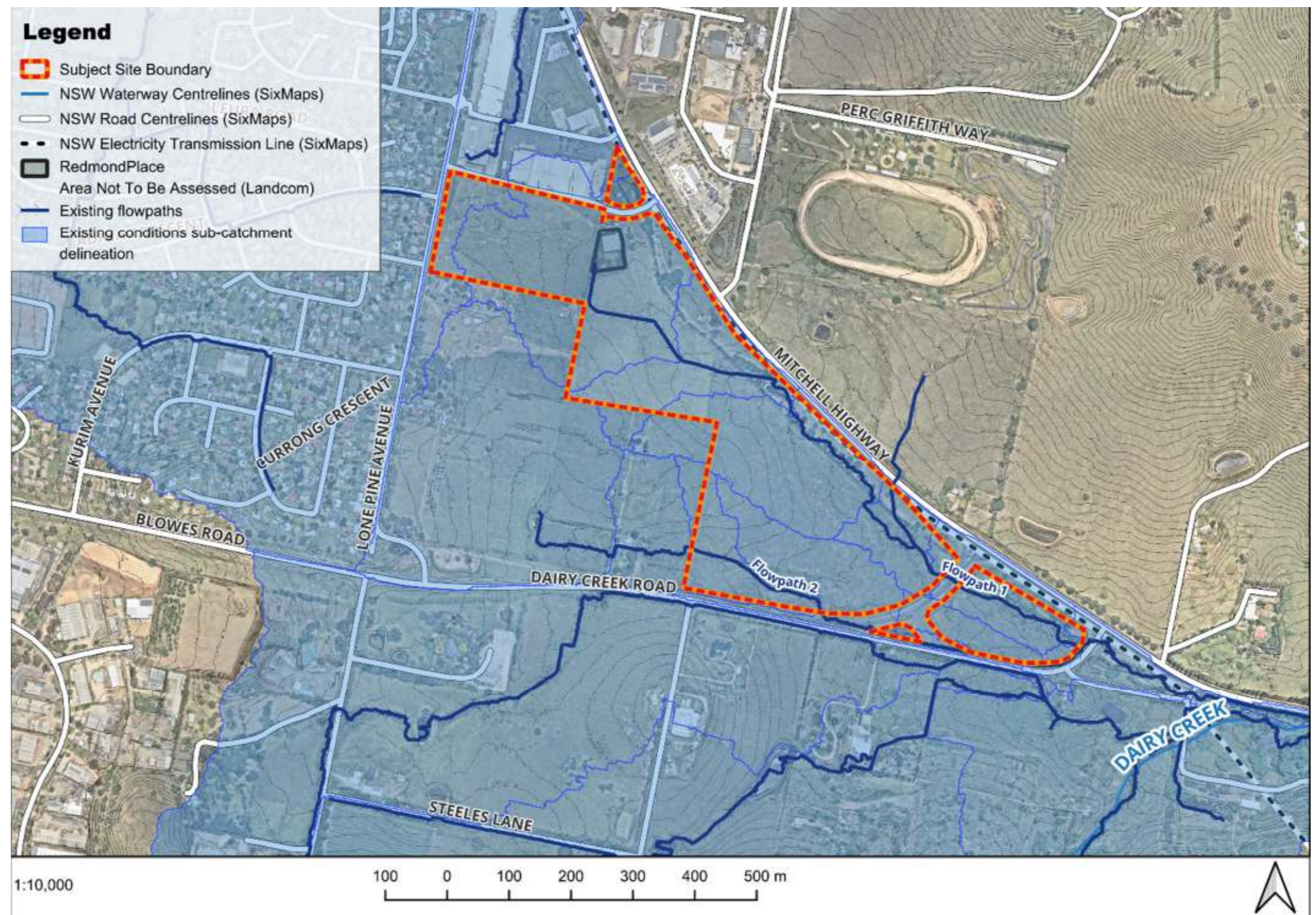
2.12 Stormwater Analysis Diagrams

The Redmond Place Water Cycle Management and Flood Impact Assessment (Colliers 2024) identifies a number of constraints and recommendations that guided the development of the Master Plan.

Recommendations included:

- + Incorporate bio-retention and detention basins.
- + Upgrade existing swale to open channel for better flow conveyance adjacent to proposed basins.
- + Incorporate open space, green space and adopt permeable pavement where possible.
- + Set aside land along the eastern boundary as a blue-green corridor / open space area for both Water Sensitive Urban Design (WSUD) and aesthetic values.
- + Place wetlands / bioretention basins within the blue-green corridor where the land is already “swampy”.
- + Depending upon flow volumes from the west, focus design of stormwater trunk drainage along the south boundary of the subject site to the southern bio-retention basin.
- + Utilise the southeast corner for flow detention
- + The stormwater infrastructure will avoid or incorporate the Poplar trees and no removal or relocation of the trees will be proposed.

Refer to the Water Cycle Management and Flood Impact Assessment for full flood and stormwater assessment.



Existing conditions flow paths and catchment delineation
(Colliers Water Cycle Management and Flood Impact Assessment)

2.13 Bushfire Constraints Analysis Diagrams

Perimeter Roads

Provide perimeter roads at all interfaces with the remaining bushfire hazards. Within the site, based on the above assumptions, this will mean a perimeter road along the south western zig zag boundary. The Mitchell Highway and Southern Feeder Rd/Dairy Creek Road can provide the other perimeter roads.

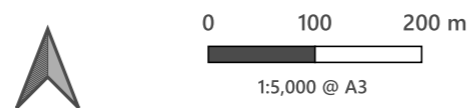
Perimeter roads need to be provided as follows:

- + Are two-way sealed roads
- + Minimum 8m carriageway width kerb to kerb
- + Parking is provided outside of the carriageway width
- + Hydrants are located clear of parking areas
- + Are through roads, and these are linked to the internal road system at an interval of no greater than 500m
- + Curves of roads have a minimum inner radius of 6m
- + The maximum grade road is 15 degrees with average grade of no more than 10 degrees
- + The road crossfall does not exceed 3 degrees
- + A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided
- + Where kerb and guttering is provided on perimeter roads, roll top kerbing should be used to the hazard side of the road



Source: NearMap; DCS Spatial Services
Ref: 23074

Figure 12: Road Network



Road Network
(Integrated Consulting Strategic Bush Fire Study)

Bushfire Constraints Analysis Diagrams

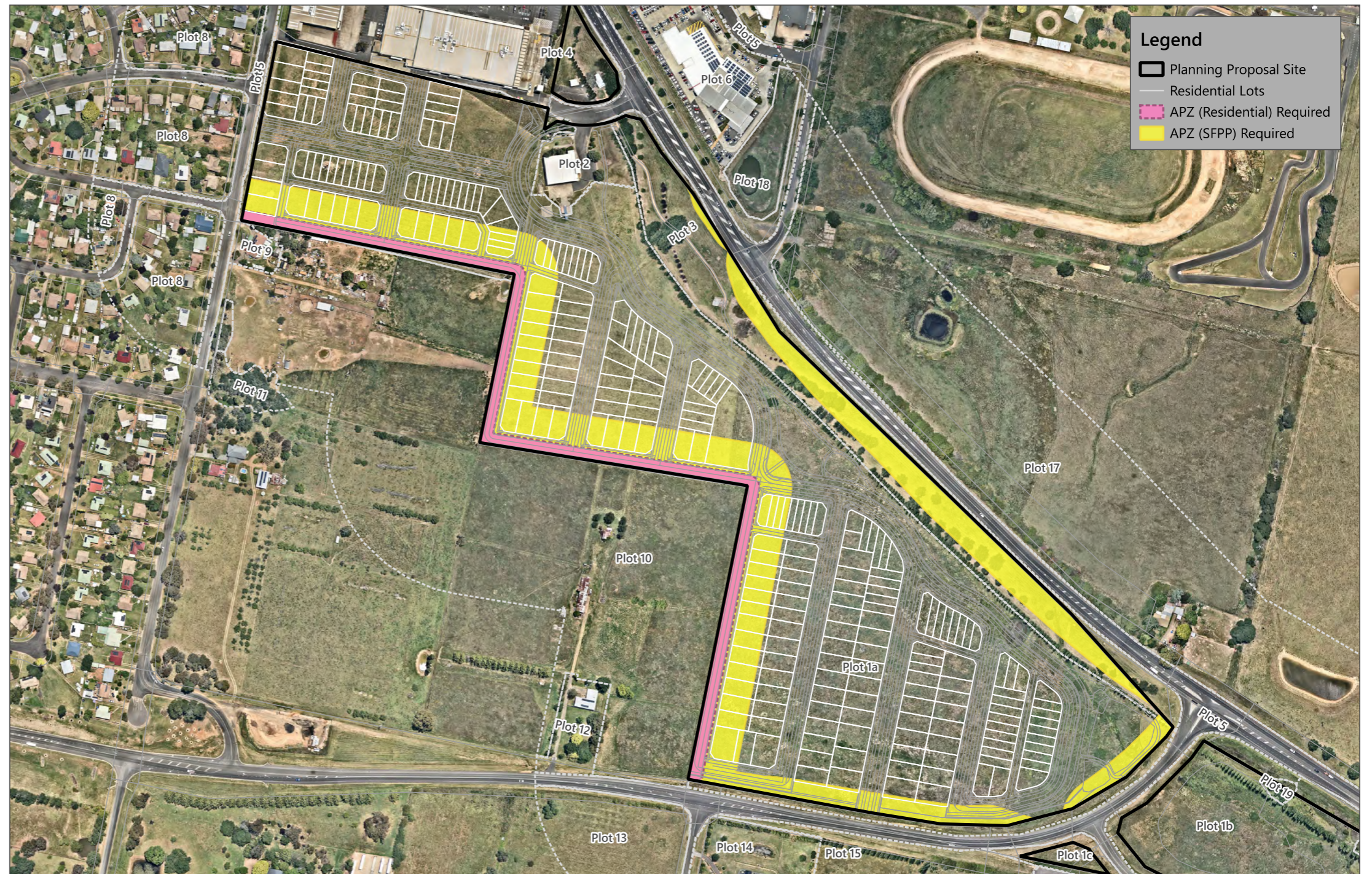
General Access Requirements and Other Non-Perimeter Road Requirements

- + Have more than one access in and out of the development
- + Traffic management devices are constructed to not prohibit access by emergency services vehicles
- + All roads are through roads
- + Dead end roads are not recommended, but if unavoidable, are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end
- + Minimum 5.5m carriageway width kerb to kerb
- + Parking is provided outside of the carriageway width
- + Hydrants are located clear of parking areas
- + Roads are through roads, and these are linked to the internal road system at an interval of no greater than 500m
- + Curves of roads have a minimum inner radius of 6m
- + The road crossfall does not exceed 3 degrees
- + a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided

Asset Protection Zones (APZ)

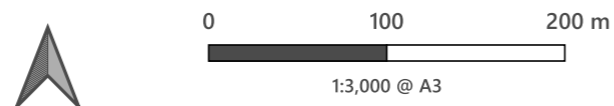
APZs are to be provided at the interfaces with the remaining bushfire hazards. This is shown on the preliminary constraints map.

APZs are a fuel-reduced area surrounding a built asset or structure which provides a buffer zone between a bushfire hazard and an asset. The APZ includes a defensible space within which firefighting operations can be carried out. The APZ can contain the perimeter road.



Source: NearMap; DCS Spatial Services
Ref: 23074

Figure 10: APZs Required on Site



Asset Protection Zones
(Integrated Consulting Strategic Bush Fire Study)

3.0 Visioning

3.1 Community Consultation

Establishing a Vision

Process

Multiple engagement methods were used during the engagement process. The process commenced with an online survey conducted jointly by Orange City Council and Landcom, which asked residents of Orange about their housing needs and aspirations.

A pop-up event was held by the sala4D and Landcom team, on the 10th of February, 2024 in the Orange City Centre. This event engaged with about 60 people, providing an opportunity to share information about the project, invite the community to attend the workshops, and ask them to share what they feel is special about Orange.

The sala4D team then conducted two community workshops on the 13th of February, 2024, with the aim of understanding the values of the community. These values were elicited through creating a safe environment for communication and by using a variety of methods to engage participants. It is important that all attendees feel that they have agency in the process.

Notes from the consultation are detailed in the following section. The information gathered gives the design team a sound background of community preferences, ideals and values for the new residential precinct.

Recognising that workshops and pop-ups only capture a small section of the community, sala4D, in conjunction with Orange City Council, also carried out an online survey that ran for 15 days, after the workshops.

Establishing a Vision

The results from the range of consultation techniques used reveal consistent, shared community values for the future neighbourhood at Redmond Place.

Based on the findings from the community consultation, the following guiding principles have been developed for use in the Redmond Place Masterplan. They form a useful rationale that grounds the project in the values of the community and provides a basis for future design stages.

Guiding principles

- + **ACTIVE:** Provide opportunities for children's play and for youth to be active
- + **CONNECTED:** Provide path networks and amenities for walking and riding during the day and night
- + **COMMUNITY:** Provide community amenities including gardens and a place to meet
- + **NATURAL:** Utilise the natural assets to provide natural parks with wetlands
- + **TREES:** Include trees in streets and open space to provide shade, colour and character
- + **HOUSING CHOICE:** Provide diverse housing options, including multi-storey housing
- + **SHOPS:** Provide basic amenity through access to local shops
- + **PUBLIC TRANSPORT:** Design to encourage good public transport connections and ease of use

Vision

“Redmond Place is the future of sustainable living in Orange, with housing choices for people at every stage of life.

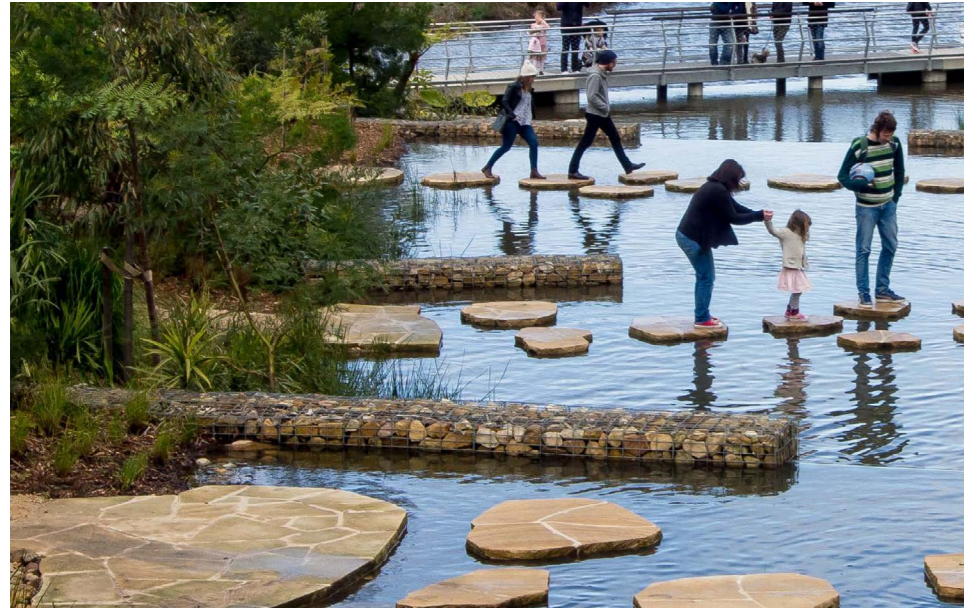
An inclusive, safe and well-connected community, nestled within parklands and tree lined streets. A neighbourhood designed to foster opportunities for the community to learn, grow and evolve together”.



Redmond Place community consultation session

3.2 Project Principles

Through considering the heard community values alongside project objectives, Landcom and Orange City Council propose a set of project principles to guide design and delivery of Redmond Place.



Connecting with Country

Prioritise Country and support the sharing of traditional stories and knowledge

Actions

- + Engage with First Nations stakeholders
- + Incorporate designing with Country principles
- + Respect and regenerate the land and waterways

Active & Healthy

Provide opportunities for play, exercise and healthy living for people of all ages and disabilities

Inclusive & Welcoming

Foster a sense of belonging and community, with places that bring people together

Actions

- + Provide public amenity in the form of community facilities and open space
- + Create a community focal point around the existing hangar building
- + Design a place that is safe and equitable for all

Heritage & Culture

Celebrate the history and beauty of the heritage landscape

Actions

- + Use landscape to reinforce the site as a gateway to Orange, with open space concentrated along the eastern edge of the site
- + Retain the memorial planting and poplar avenue along Mitchell Highway
- + Front housing onto the eastern open space, avoiding rear fences to the Highway

Project Principles



Housing Choice

Provide diverse housing options, including medium density and affordable housing

Actions

- + Provide a range of housing typologies and price points
- + Provide a minimum of 20% affordable housing
- + Consider a small number of apartments
- + Provide a range of medium density housing types as a 'proof of concept' for regional areas
- + Consider local housing types and character in developing housing typologies
- + Locate density where there is greater amenity



Connected & Safe

Create safe, walkable and beautiful streets that connect people to homes, open spaces and public transport

Actions

- + Invest in streets as a key structuring element of the master plan
- + Create streets and connections that are safe, comfortable and direct for pedestrians, with ample street tree canopy cover
- + Use trees to define key streets and avenues, with a mixture of natives and deciduous exotics that reflect both the local environment and Orange as the 'Colour City'
- + Ensure streets support multiple modes of transport



Natural Landscape & Waterways

Design with nature by working with natural systems for water management and biodiversity conservation by providing new parks, wetlands and tree-lined streets

Actions

- + Achieve a minimum 5 Star Green Star Communities rating
- + Incorporate best practice water treatment throughout the project, and make a feature of water treatment corridors and basins
- + Maximise canopy cover and understorey vegetation
- + Provide local and biodiverse planting

3.3 Connecting with Country

Overview

Connecting with Country embraces an intention that is based on deep engagement with Aboriginal and/or Torres Strait Islander stakeholders and creatives. It aims to activate an authentic voice to draw out knowledge, protocols, history, culture and the contemporary stories of Aboriginal and Torres Strait Islander communities, for interpretation from the beginning to the end of projects. The objective is transformational design thinking informed by Aboriginal and Torres Strait Islander worldviews.

Balarinji has partnered with Oculus to embrace the opportunity Redmond Place presents to embed an understanding and sense of Country into urban and landscape design. This will contribute to a supportive community that provides housing diversity, is environmentally regenerative and is an aesthetically pleasing gateway to Orange.

Stakeholder Engagement

Stakeholder engagement is a fundamental process in developing this Connecting with Country Framework for the Redmond Place project. A key pillar of Balarinji's cultural design methodology is collaborative engagement with local Aboriginal and Torres Strait Islander groups through authentic, thorough and ongoing consultation.

Balarinji met with 8 community members with a connection to Orange and the surrounding area. A cross-section of community members were consulted, with a particular focus on community-nominated elders and leaders with strong connections to the area. These consultations gathered the Aboriginal and Torres Strait Islander narrative for the project area. This consultation process has brought out some specific stories and knowledge but most importantly has prioritised key outcomes and themes from a community perspective.

Key Design Themes and Recommendations

Through consultation with the locally connected Aboriginal community, five key design themes were identified for integration into the Redmond Place project.

The Redmond Place Connecting with Country Framework provides recommendations for how each theme might be integrated. A co-design process was used to construct these recommendations. They draw from responses from the local Aboriginal community during stakeholder consultations, a close analysis of GANSW's Connecting with Country Framework, and desktop research of the Aboriginal history of the site. Refer to the Connecting with Country Framework for further information.



SAFE AND ACCESSIBLE HOUSING

Community highlighted that when Aboriginal and Torres Strait Islander People have access to safe and accessible housing, they are able to thrive in other areas of their lives, including education, employment, health, personal relationships and cultural practice.

A variety of dwelling types enable this by ensuring families of all sizes and stages in life are catered to.



CREATING COMMUNITY

Creating a strong sense of community in a new housing development promotes well-being, cooperation, and a feeling of belonging. For Aboriginal and Torres Strait Islander People, Country is what provides belonging and purpose.

The project team is adding value to Redmond Place by incorporating Country and the stories of Country into communal spaces, including playgrounds, youth spaces and wetland areas.

Key Design Themes and Recommendations, Redmond Place Connecting with Country Framework



RESTORING RESOURCE PLACES

Water is life and it provides a unique point of difference for Redmond Place. The cultural value of water and its associated resources are celebrated in design through the incorporation of a blue green corridor into the master plan. Accompanied by endemic planting, the blue green corridor nurtures traditional ecosystems, supporting the revitalisation of cultural practice (women's business in particular), Aboriginal and Torres Strait Islander businesses and contemporary food production.



GAANHA-BULA

For Aboriginal and Torres Strait Islander People, heritage includes tangible and intangible elements. Prominent landscape features, such as Gaanha-bula or Mount Canobolas, reflect thousands of years of continuous connection with Country through physical evidence of occupation, such as stone tools and rock engravings, as well as intangible oral histories and ceremonial practice. Redmond Place will acknowledge the cultural significance of Gaanha-bula by maintaining sightlines where possible and telling the story of the three feuding brothers in communal areas.



SHARED IDENTITY

By incorporating Aboriginal and Torres Strait Islander representation into Redmond Place, the urban landscape invites the broader community to appreciate the richness of Wiradjuri culture and partake in a more inclusive society. Many key figures have and continue to call Orange home, including Wiradjuri and other Aboriginal and Torres Strait Islander People who moved to the area as part of the regional resettlement scheme. Their impact can be celebrated through public art opportunities, and potentially place naming as the project progresses.

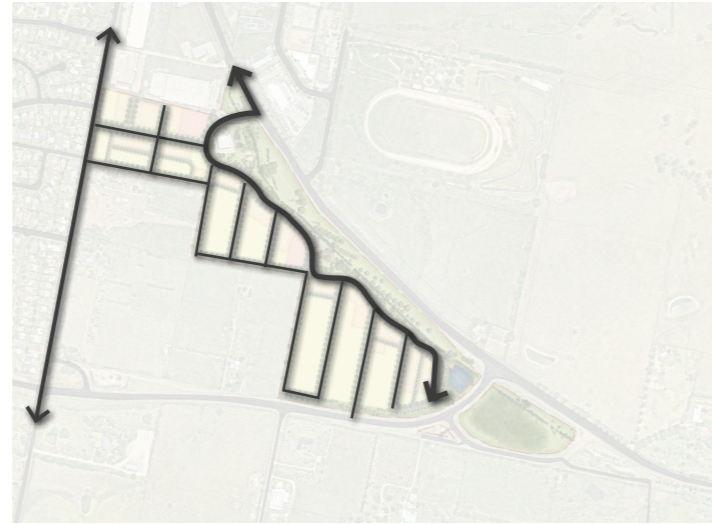
3.4 Key Moves

The following key moves respond to the intrinsic characteristics of the site and define the structure of the Redmond Place Master Plan.



Blue-green corridor

A consolidated open space corridor is provided along the eastern edge of the development that provides connected recreational and ecological amenity.



Functional grid

A functional grid of streets and lots is implemented to optimise lot efficiency, solar access and connectivity. The grid is then interrupted by a meandering park edge street along the west connecting from north to south.



Community focal points

The blue green corridor contains two community focal points; a local park in the north focused around the existing hangar building, and a central park in the middle of the development.



Density on amenity

Increased density is located facing onto open space, allowing a greater number of residents close access and views to open space while reinforcing the structure of the open space corridor with a built edge.

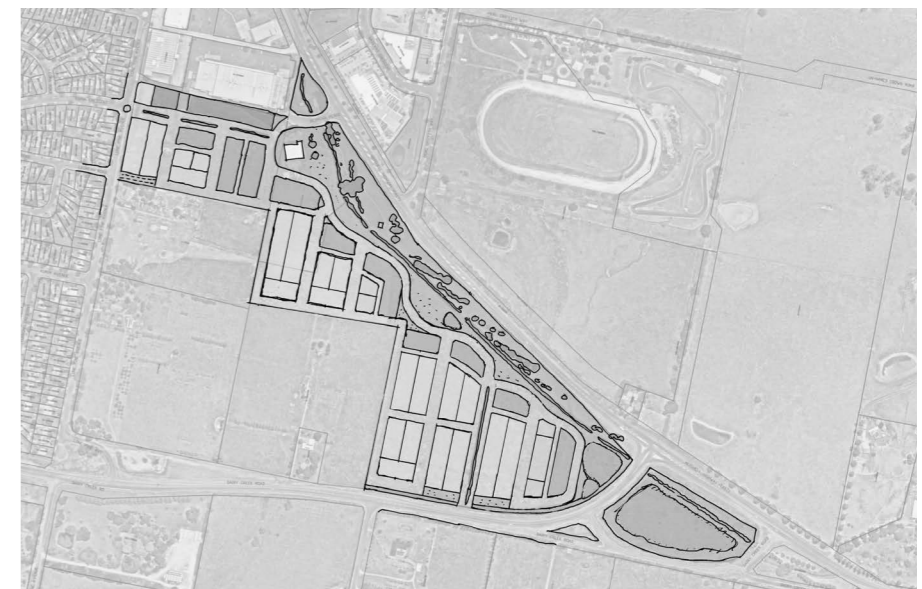
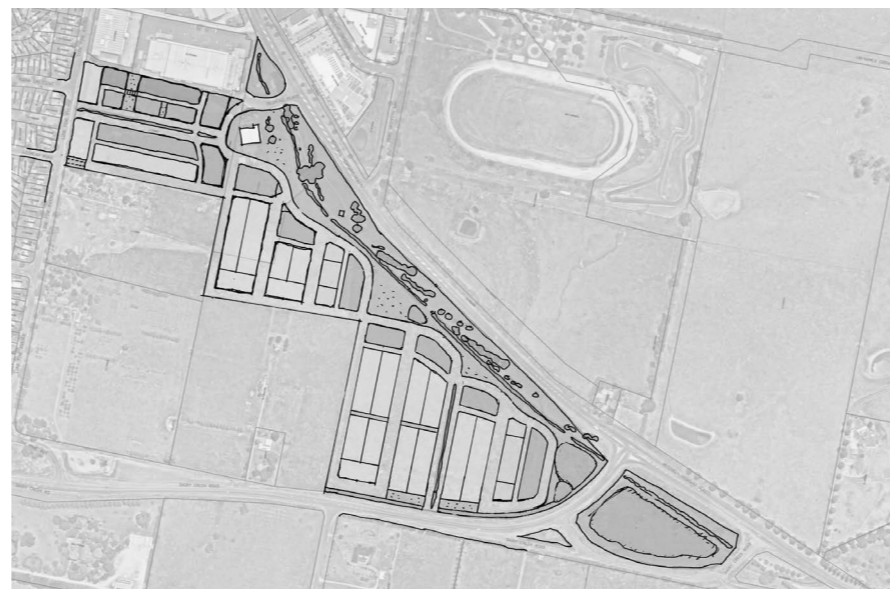
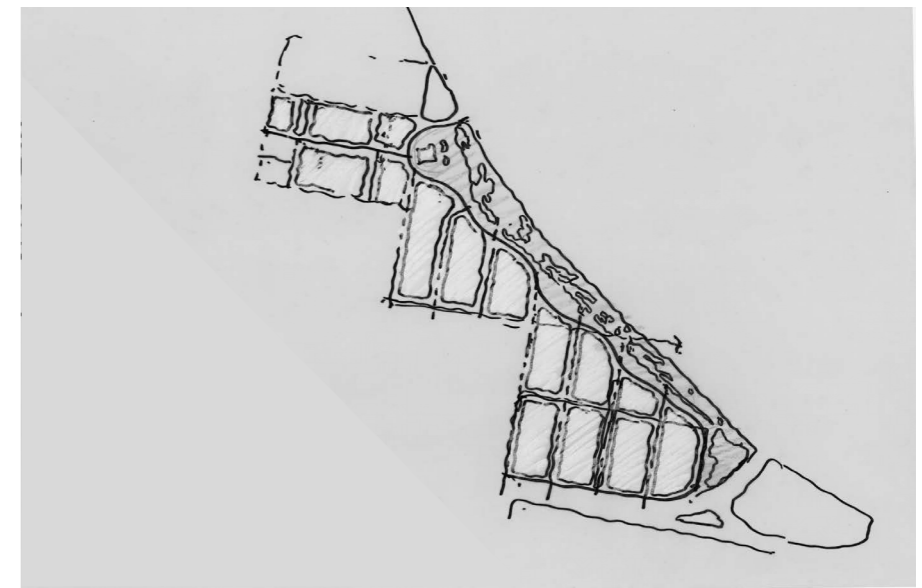
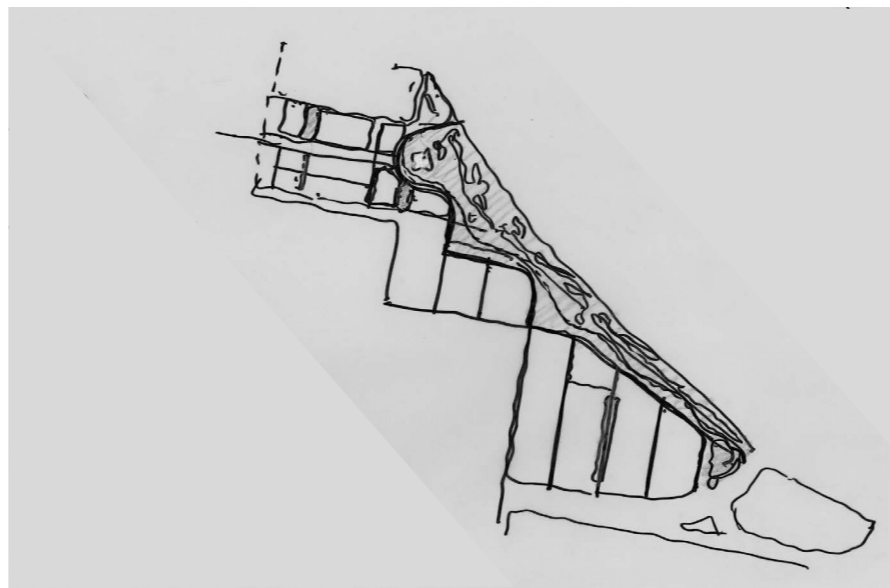
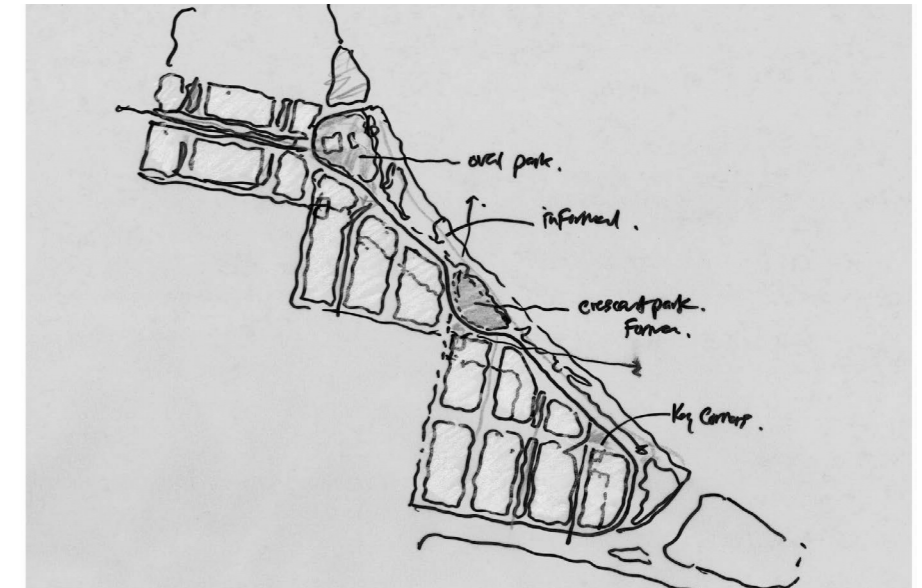
3.5 Design Process

The master plan is the result of a comprehensive design process.

The initial site analysis combined with community consultation and visioning provided a starting point for design. Having this as a basis of design ensured an authentic and site responsive plan that is reflective of its place, both physically, and as part of the future Orange community.

From here, the design team worked closely with Orange City Council and Landcom to develop the master plan through an iterative process of design options, testing and workshops.

Initial design principles and structural layout were also presented and discussed with Landcom's Design Review Panel, providing valuable peer review and input that shaped the direction of the master plan.



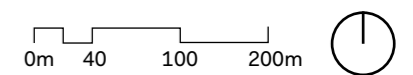
Initial sketch concepts for Redmond Place

4.0 Master Plan

4.1 Master Plan

Legend

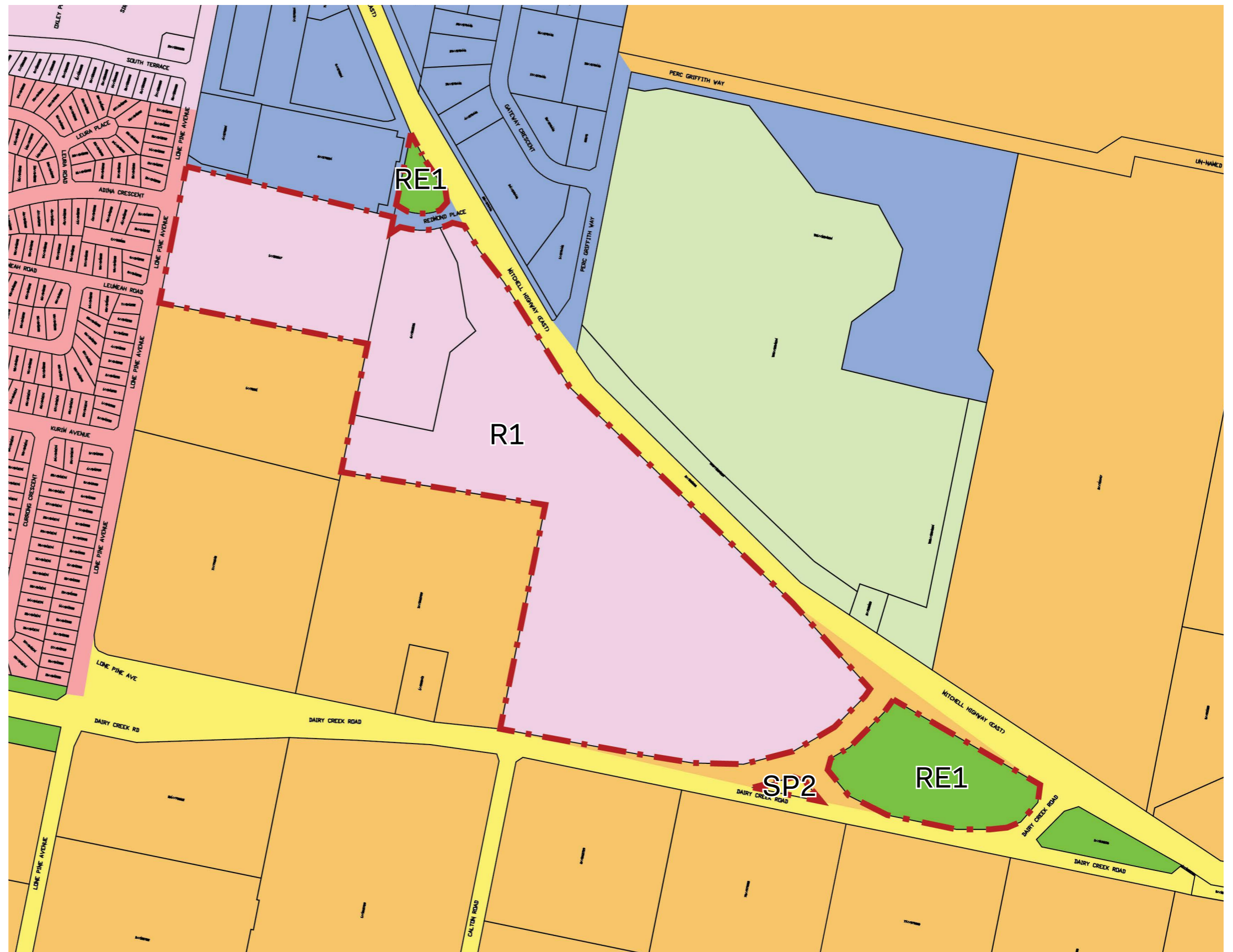
1	Homemaker precinct
2	Northern Entry Street
3	Existing picnic shelter and toilet block
4	Hangar building
5	Northern park
6	Central park
7	Stormwater basins
8	Southern entry street
9	Drainage swale
10	Wetland
11	Sewer pump station
	Open Space
	Low Density Lots
	Medium Density Lots
	Low Rise Apartments
	Site Boundary



4.2 Planning Proposed Zoning

The proposal seeks to amend the Land Zoning Map as it applies to the Redmond Place precinct to align with the masterplan. The proposal seeks to rezone land zoned E3 Productivity Support and C3 Environmental Management as follows:

- + R1 General Residential, for the parts of the precinct proposed for residential development
- + RE1 Public Recreation for the land to be set aside for public open space and recreation
- + SP2 Infrastructure for the land where the sewer pump is to be located



Legend

- E3 Productivity Support
- C3 Environmental Management
- R1 General Residential
- R2 Low Density Residential
- RE1 Public Recreation
- RE2 Private Recreation
- SP2 Infrastructure

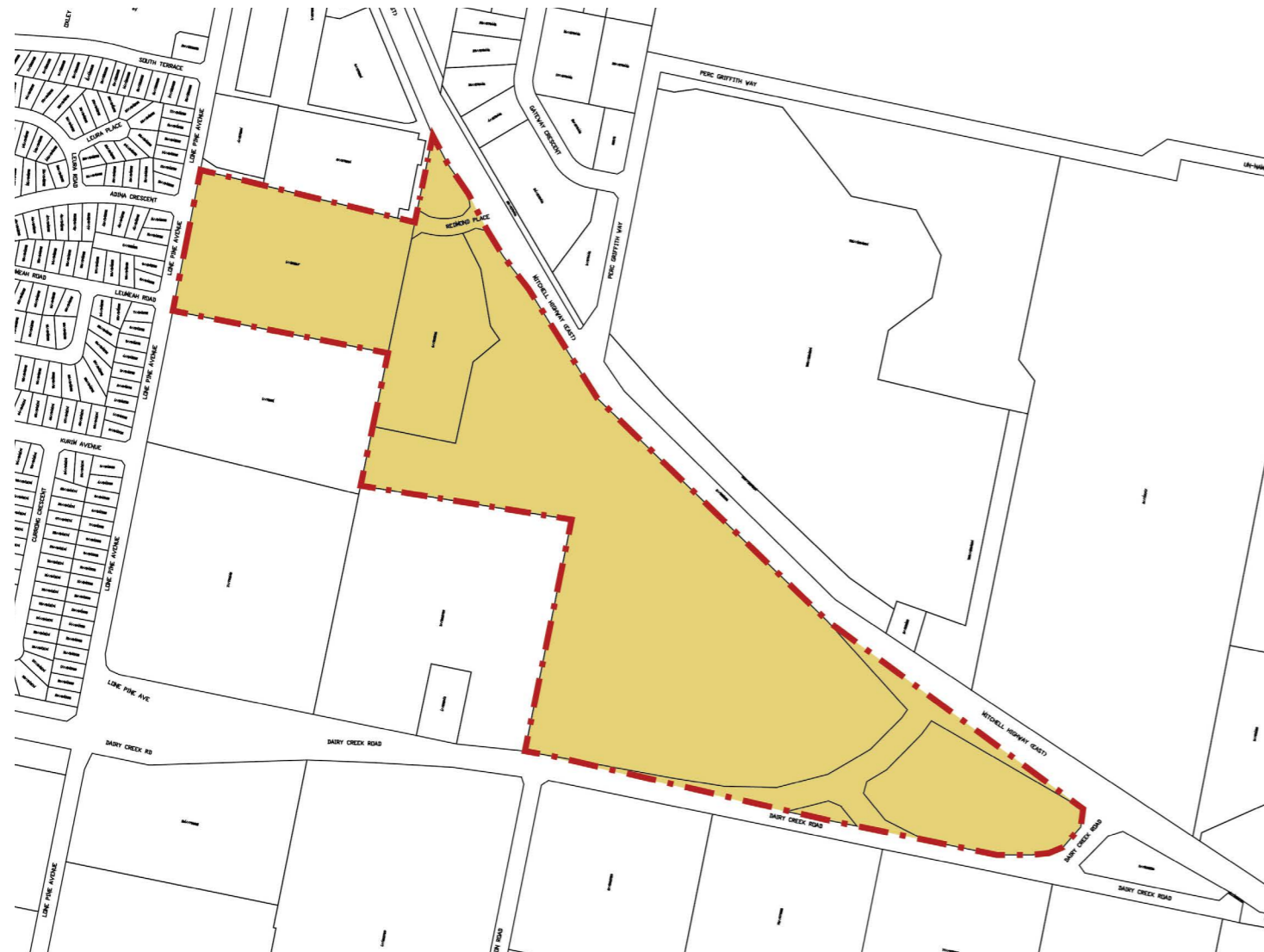
Planning

Proposed Urban Release Area

The Urban Release Area Map is proposed to be amended to identify Redmond Place Orange as an 'Urban Release Area'. This will mean that Part 6 Urban release areas will apply to the land.

It is proposed to add an additional clause to Part 6 of the Orange Local Environmental Plan 2011. This clause would apply specifically to the Redmond Place Urban Release Area. The intention of the clause is to ensure that development of the precinct includes public open space, and the public open space provides for stormwater management and improvements to stormwater quality.

The clause will require that development consent for a future subdivision can only be granted if a minimum area of 3 ha of land within the R1 General Residential zone is set aside for open space. The purpose of this is to provide recreational areas and is designed to ensure stormwater management and improvements to stormwater quality in accordance with the master plan. This will ensure that the linear open space indicated in the master plan is provided.



Proposed Additional Permitted Uses

The proposal seeks to add additional permitted uses to the land on which the hangar is located. This will allow for flexibility in the future use of this land.

The following additional uses are proposed for the land identified on the map below:

- + Artisan food and drink industry
- + Creative industry
- + Function centre
- + Market

The hangar can provide a community gathering space, providing opportunities for people to come together, meet each other and form social connections with their neighbours and community. The proposed R1 General Residential zone will apply to the land where the hangar is located. This zoning permits a range of uses including community facilities and recreation facilities (indoor) which can encourage community gathering. Providing additional permissible uses will allow for flexibility in the future use of the hangar building.



4.3 Aerial Views

Aerial Views 01



Views
Aerial Views 02



Views
Aerial Views 03



Views
Aerial Views 04








4.4 Water Sensitive Urban Design

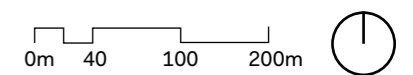
The following water quality control assets are proposed for implementation within the development:

- + Distributed rainwater tanks – for collection of runoff from roofs and re-use of water for irrigation and household use
- + End-of-line bioretention systems for capture of finer sediment and treatment of nutrients

Legend

-  Bioretention basins
-  Standing water (wetland)
-  Storm water swale
-  Detention basin
-  Site Boundary

- 600m² B01
- 2630m² WL01
- 500m² B02
- Storm Water Swale
- Detention Basin



Water Sensitive Urban Design
Southern Wetland





Artist's impression only

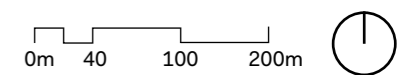
4.5 Open Space

The residential development site is proposed to include approximately 5.3ha (excluding water bodies and drainage infrastructure) of future open space, including:

- + A linear open space along Bathurst Road/Dairy Creek Road, including the proposed:
 - Neighbourhood Park with a community and family focus
 - Village Green with a youth focus
 - 2 pocket parks
 - Boardwalks and gathering space at the southern wetland
 - A shared path loop connecting the parks and wetland area
 - Potential for three fitness stations along the loop track
- + 1 pocket park fronting Lone Pine Avenue

Legend

-  Open Space included as part of the residential development (5.3ha)
-  Site Boundary



Open Space
Linear Open Space



Artist's impression only

Open Space Northern Park

The Northern Park will have a family and community focus, with opportunities for play, gathering, recreation and community events.

Legend

1	100m ² community garden
2	600m ² playground, ages 0-12
3	Hangar building with plaza curtilage
4	Hangar parking retained
5	Open lawn
6	Picnic shelter
7	Shared pedestrian / cycle path
8	Existing poplars retained
9	Existing dairy building picnic shelter
10	Exercise station
	Site Boundary



Open Space
Northern Park



Artist's impression only

Open Space Central Park

The Central Park will have a youth focus, providing a hangout and recreation space for teenagers and young adults. The park elements noted below may be considered as part of this space.

Legend

1	Exercise station
2	Half basketball court
3	Sports practice wall / handball court
4	Youth play equipment
5	Open lawn
6	Picnic shelters
7	Bioretention basin
8	Shared pedestrian / cycle path
9	Existing poplars retained
	Site Boundary



Open Space
Central Park



Artist's impression only

4.7 Connecting with Country Opportunities

The Master Plan builds in the opportunities identified in the Connecting with Country Framework Report as identified in the adjacent plan. These opportunities, along with others identified in the Framework Report, will add a richness, authenticity and functionality to Redmond Place for all residents and visitors.

Legend

Safe and Accessible Housing

- 1 Diverse housing options - apartments
- 2 Diverse housing options - medium density
- 3 Diverse housing options - low density

Creating Community

- 4 Potential for community use of refurbished hangar building
- 5 Youth and play spaces
- 6 Community amenities - shelters and small gathering spaces
- 7 Lighting to streets and public places

Restoring Resource Places

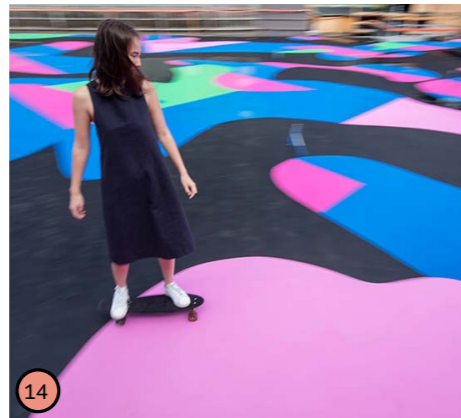
- 8 Endemic planting across parks and open space
- 9 Celebrate water on site - wetlands and bio retention basins with opportunity for education / interpretation
- 10 Celebrate water on site - opportunity to provide viewing deck and small gathering space adjacent to southern wetland
- 11 Community Gardens

Gaanha-bula

- 12 Sightline to Gaanha-bula retained in northern open space. Opportunity for wayfinding / storytelling signage and interpretation in plaza area.

Shared Identity

- 13 Artwork opportunity - northern park plaza and playground
- 14 Artwork opportunity - central park hardspace / walls
- 15 Artwork opportunity - sculptural installation at wetland as interpretation / entry marker



Connecting with Country View to Gaanha-bula/Mt Canobolas

The view to Gaanha-bula from the northern park is to be maintained where possible and highlighted through planning controls restricting the heights of housing within this view corridor, ensuring the public retains views of this primary landscape feature from within public space.



Artist's impression only

4.8 Street Network Overview

Streets are vital public infrastructure that help to connect places and create opportunities for social interaction and community building. Streets are for everyone; pedestrians, cyclists, public transport and private vehicles.

'Green streets' with enhanced tree planting in the north and south of the site define the entries to Redmond Place, connecting perimeter streets into the development and providing direct views and access to the primary open space corridor.

An unbroken public edge to the linear park is provided by the Park Street, meandering from north to south in contrast to the strict grid of local streets. Laneways are provided to support a diversity of housing density and typologies, as well as enabling enhanced streetscapes through the removal of driveways in key locations.

Footpaths will be provided to both sides of the majority of streets, with a shared path network further supporting active transport.

All streets will be characterised by tree planting within verges on both sides of the street and within the median when a median occurs. They will be visually dominated by a mix of beautiful, large tree species of primarily introduced origins, with endemic species where practical.

Shade from the trees will provide a comfortable walking and cycling environment. In addition, the trees will also provide protection from wind and separation from traffic.

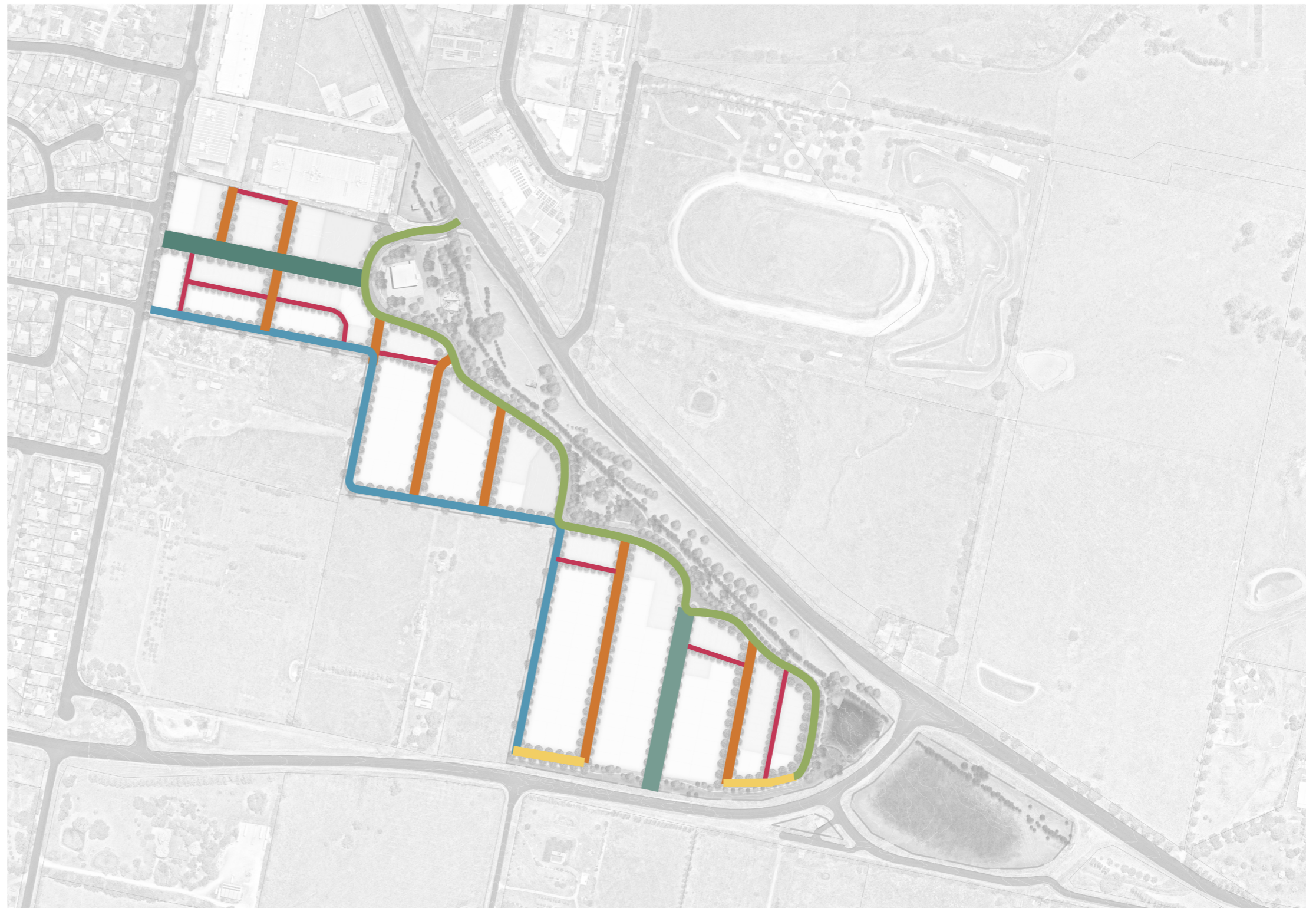


Street Network

Streets Types

Legend

- Local Street
- Park Street
- Northern Entry Street
- Southern Entry Street
- Interface Street
- Southern Interface Street
- Laneway



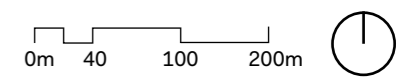
Street Network

Indicative Bus Route



Legend

	Existing bus route
	Existing bus stop
	Proposed bus route
	Proposed indicative bus stop location



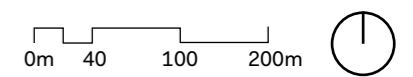
Street Network

Active Transport



Legend

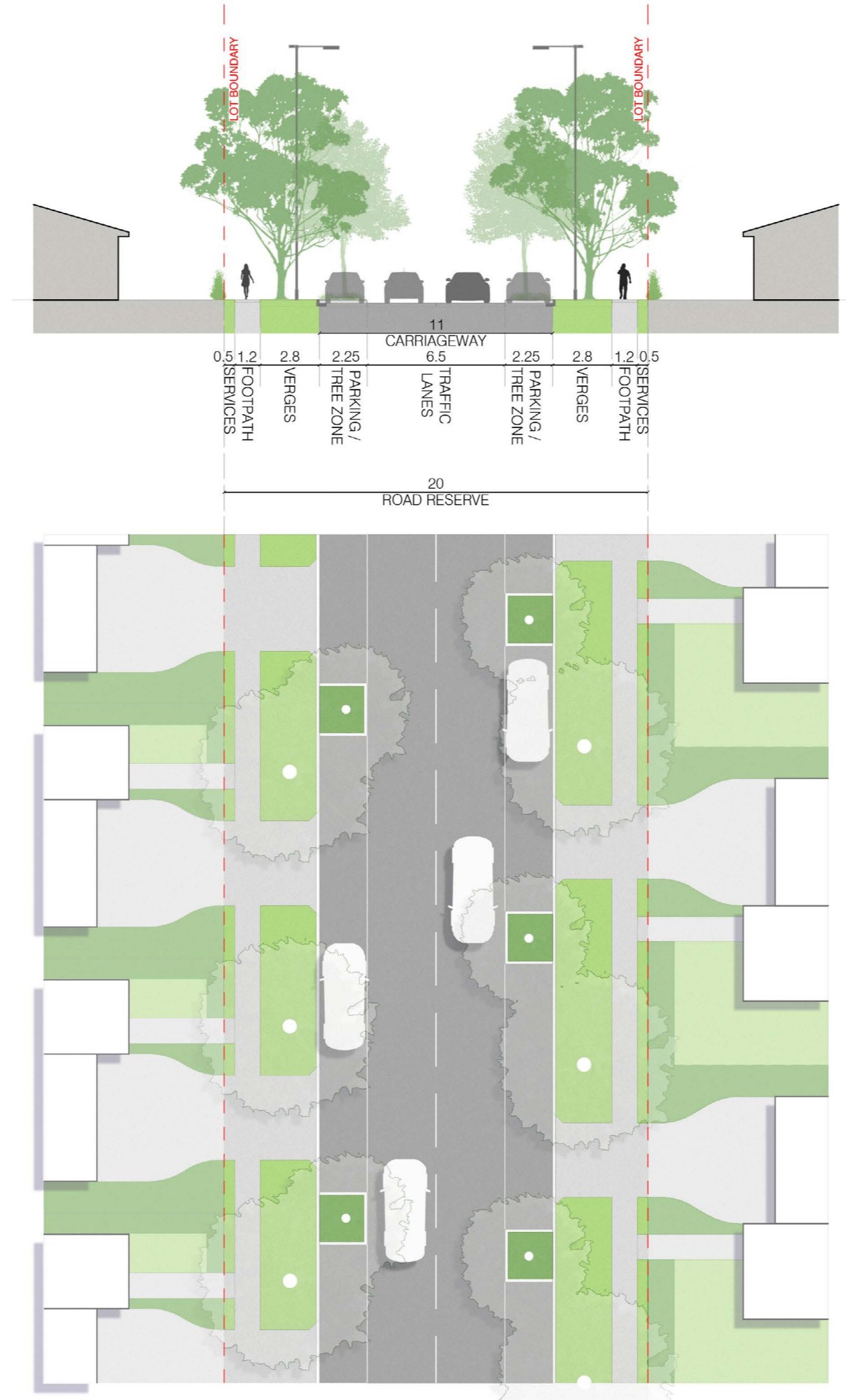
- Footpath to both sides of street
- Footpath to one side of street
- Indicative dedicated pedestrian crossing
- Existing/ previously proposed on road cycleway (Orange City Council (2012), Orange City Bicycle Plan 2012-2017 (chapter 6))
- Proposed shared path
- Proposed on road cycleway
- Park path



Street Network

Local Street

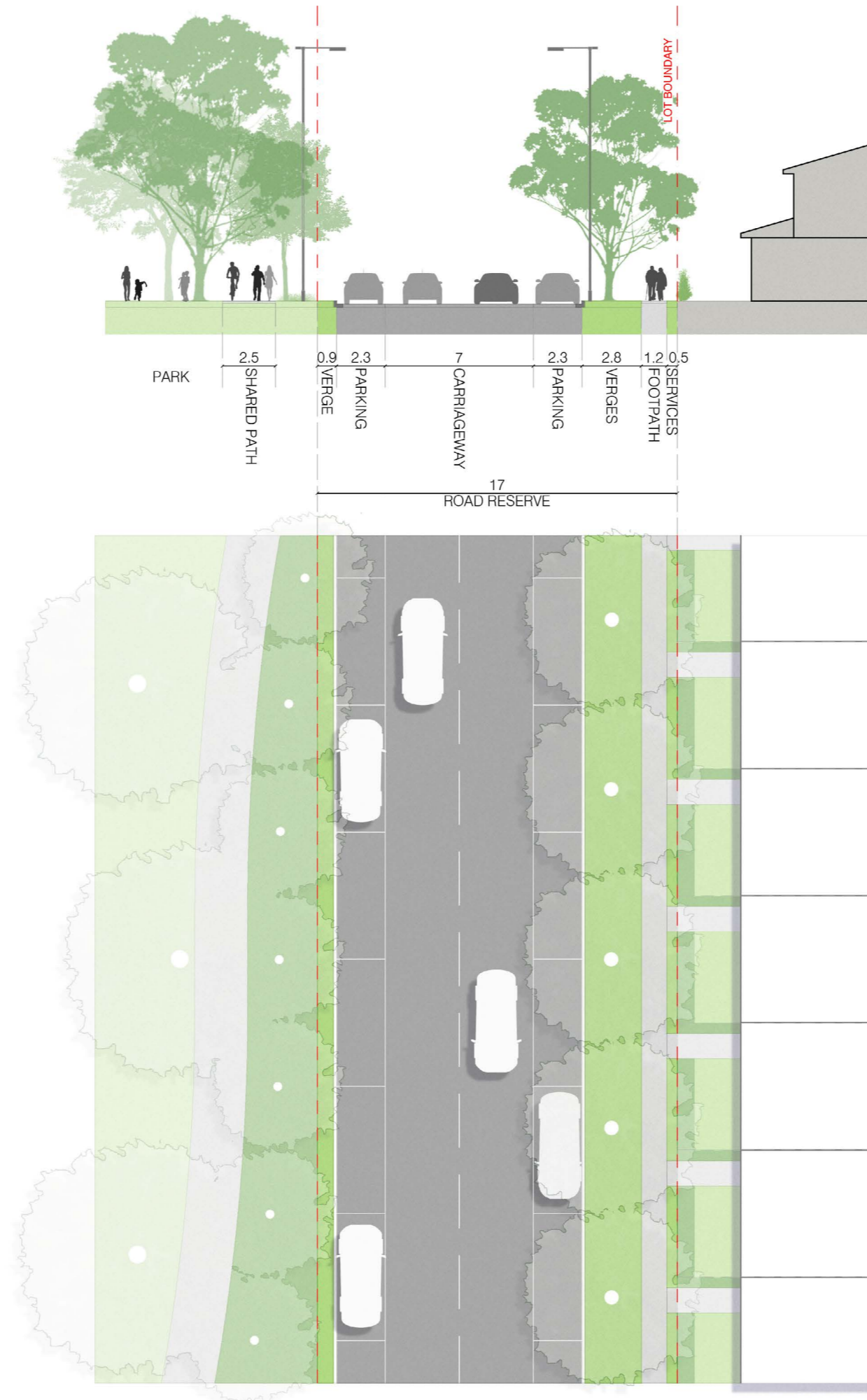
- + Trees in carriageway to be considered, subject to available room and distances between driveways



Street Network

Park Street

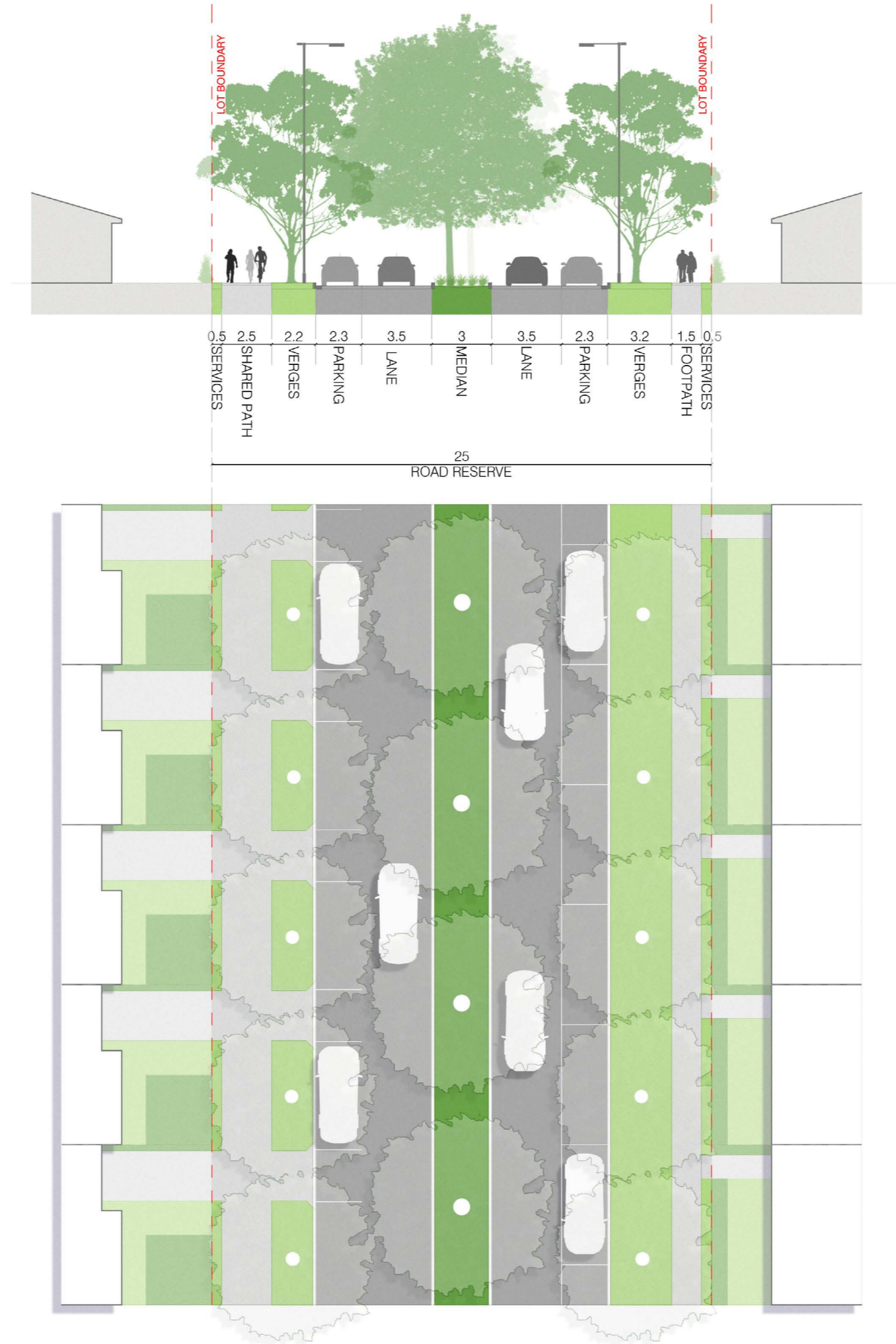
- + Verges incorporated into park to reduce reserve width
- + Bus route (partial)



Street Network

Northern Entry Street

- + Create an avenue / green link to open space
- + Opportunity for WSUD in median
- + Bus route



Street Network
Northern Entry Street

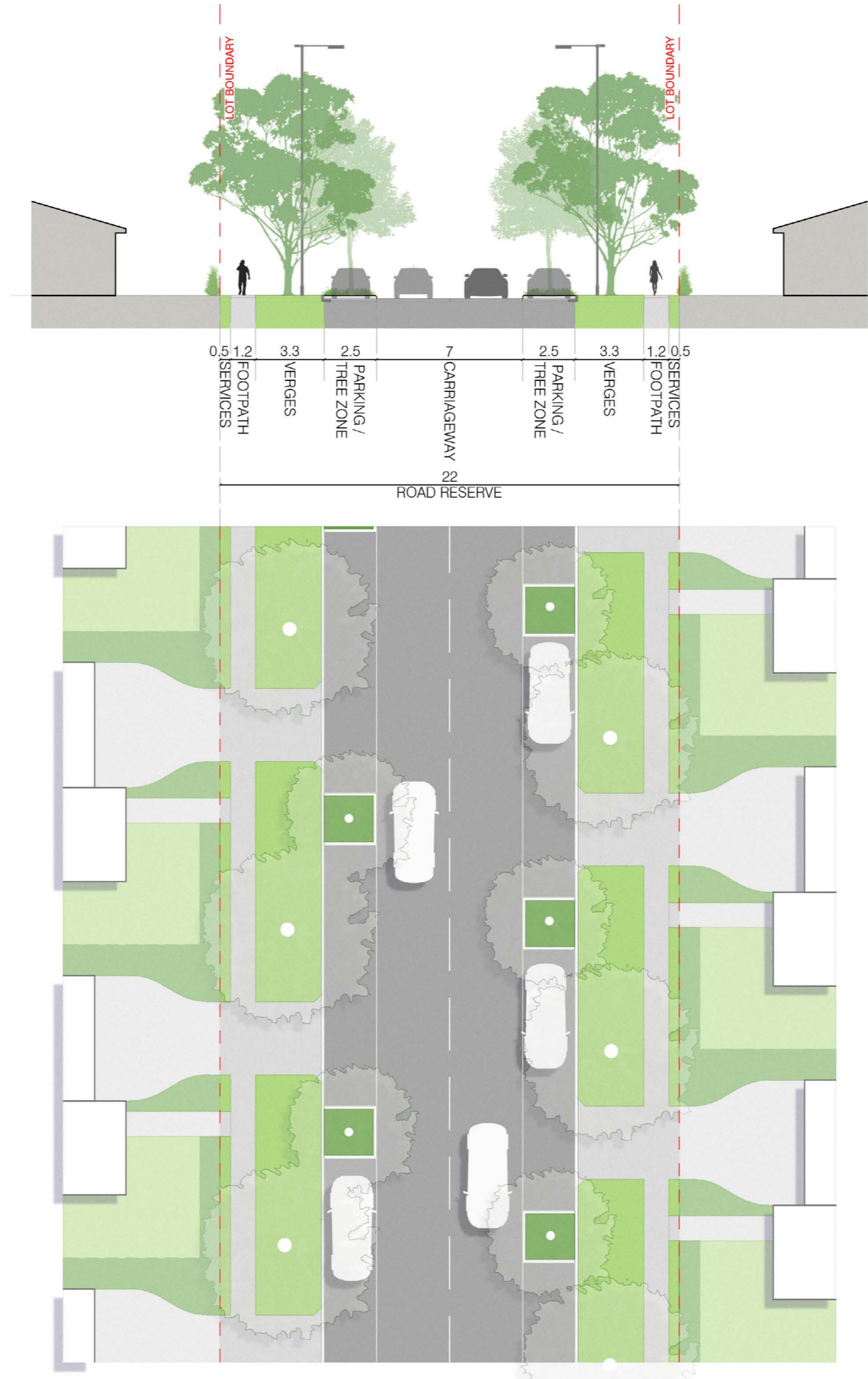


Artist's impression only

Street Network

Southern Entry Street

- + Create an avenue / green link to open space
- + Trees in carriageway to be considered against available room and distances between driveways
- + Footpath both sides and consider trees in parking zones
- + Bus route



Street Network
Southern Entry Street



Artist's impression only

Street Network Interface Street

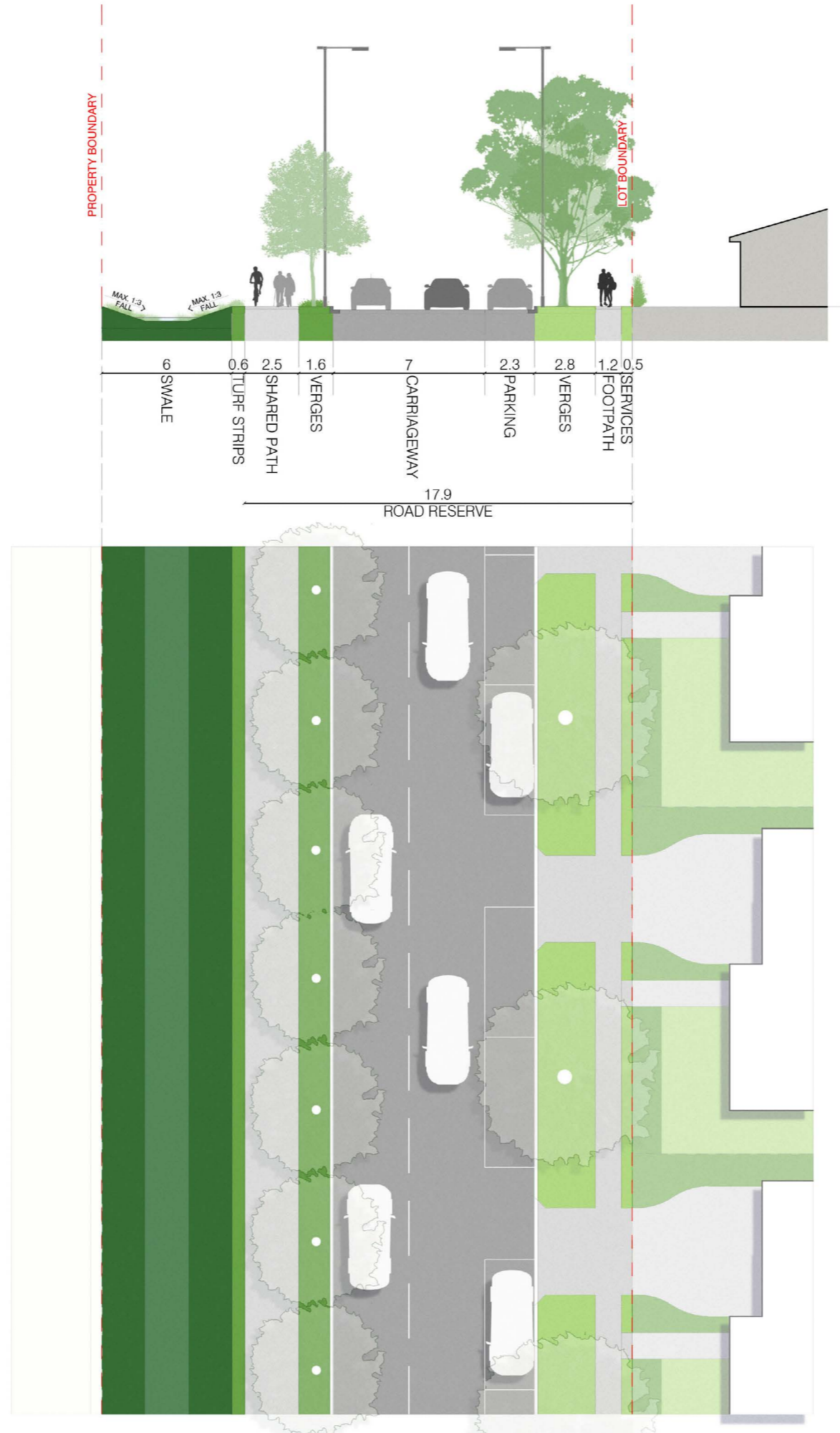
- + 3m landscape verge/strip vs boundary with planting to meet APZ requirements
- + 8m 2-way carriageway with no designated parking.
- + 8m road + 3m verge = 11m APZ
- + Reduced tree canopy within APZ



Street Network

Southern Interface Street

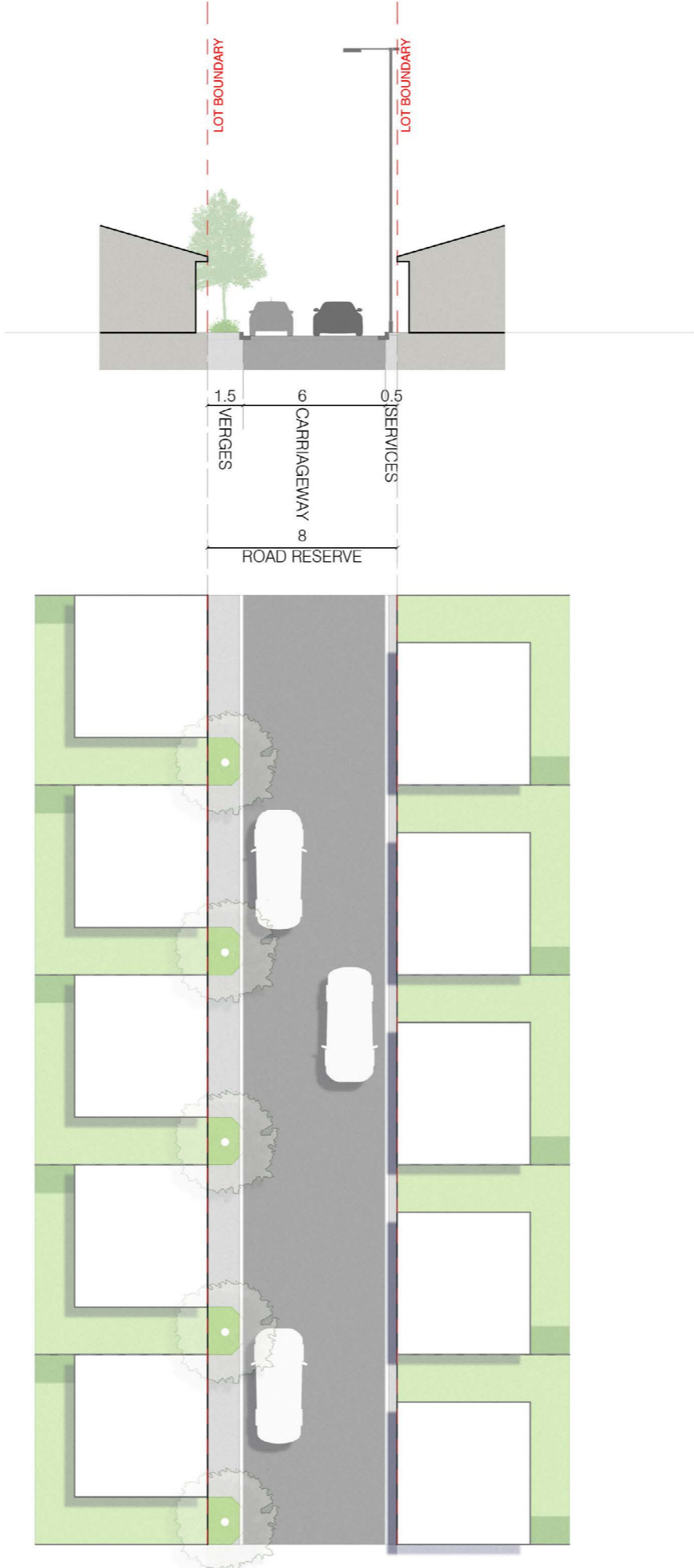
- + Parking on northern side only
- + 2.5m shared path connects into open space
- + 6m swale along southern boundary



Street Network

Laneway

- + Laneways to act as shared pedestrian / vehicle zones



View
Entry from Redmond Place



Artist's impression only

4.9 Trees and Vegetation Overview

Tree Strategy

New trees and planting across Redmond Place will increase biodiversity, visual amenity and shade, and define the character of the development. Tree planting across public and private space is to be maximised in order to significantly increase the overall canopy cover for the site and its associated benefits.

Tree species selection is to be consistent with the Orange Street Tree Master Plan (Orange City Council, 2012).

The selection of species shall take into account of a number of factors including:

- + Climate/microclimate
- + Size requirements/constraints
- + Form
- + Endemic / exotic
- + Density of foliage
- + Growth rate
- + Availability
- + Maintenance (i.e. leaf fall, fruit drop) and safety (branch drop)
- + Cultural interpretation and Connecting with Country

To maintain a strong connection to place, a focus on locally endemic species shall be selected in conjunction with exotic species that provide vibrant seasonal and colour variations in support of Orange as the 'Colour City'.

Street tree species include a mix of native and exotic species, selected for qualities including scale, form, shade and sense of place.

Landscape setbacks within private lots will typically use small exotic deciduous species such as that will provide shade in summer and solar access in winter as well as displaying contrasting foliage and flowers to those of the endemic evergreens.

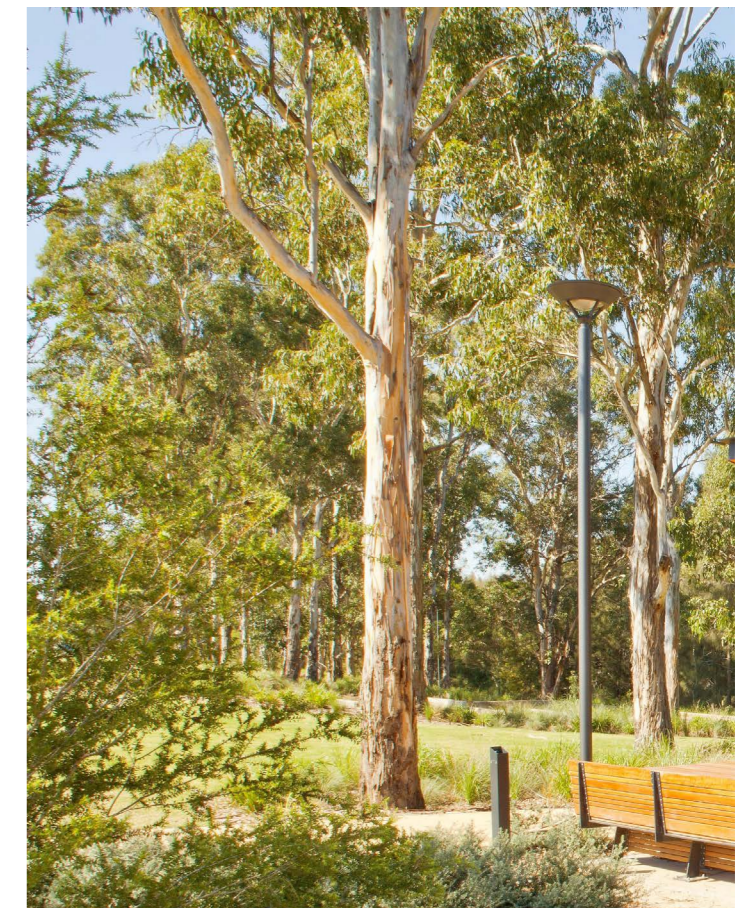
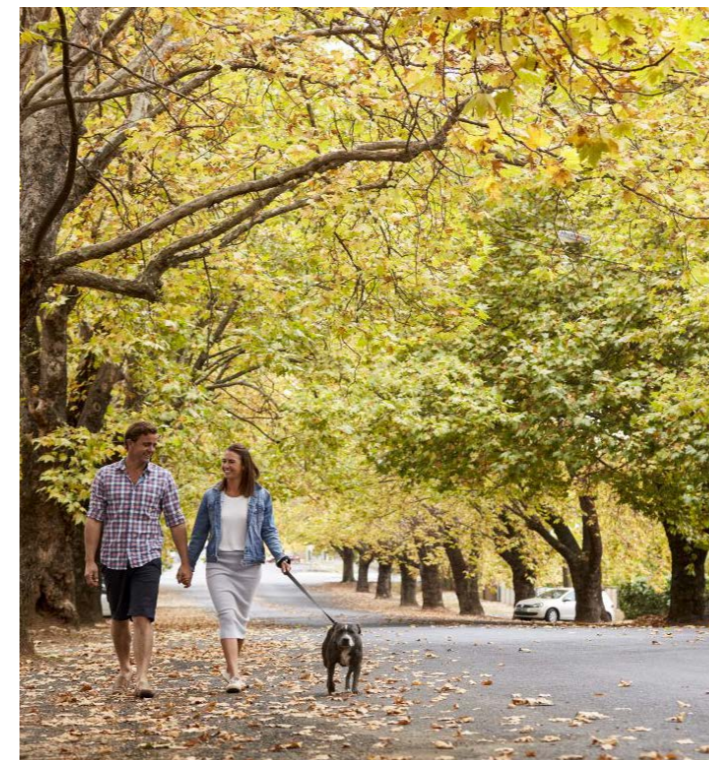
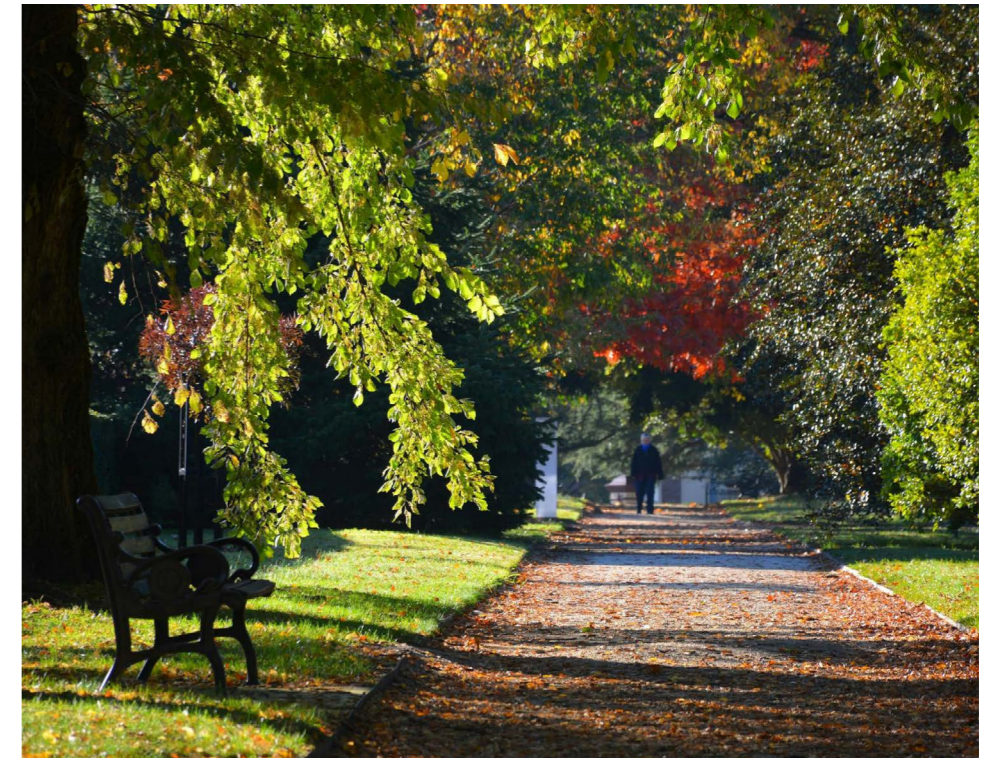
Tree species within open space will include a mix of large endemic trees for scale and shade, smaller endemic evergreen shade trees and select use of exotic deciduous trees for accent.

Refer to the Selecting & Planting Trees and Management Strategies sections of the Orange Street Tree Master Plan for further information and guidance.

Understorey Planting

Endemic species for the bioretention basins and wetland area are to be used as they are ideally suited to the local microclimate, create habitat for birds and micro fauna, and do not require high fertiliser input. These plants may include a selection of wetland edge vegetation, such as wildflowers, sedges, rushes and shrubs. Their root systems enhance infiltration, maintain or even augment soil permeability, provide moisture redistribution, take up nutrients and sustain diverse microbial populations involved in bio-filtration.

Other low level plant species used throughout the development will enhance the vibrancy and amenity of the public domain through their flowers and foliage. These shrub and ground cover planting also provide habitat for local birds and insects that contribute to the ecology of the precinct. A predominantly endemic plant palette will be used within the public open spaces.



Trees and Vegetation Indicative Species List

Parks and Open Space

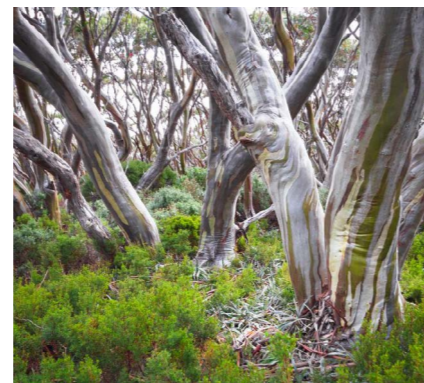
- + *Acacia elata*, Cedar Wattle
- + *Acer platanoides* 'Crimson King', Purple Norway Maple
- + *Acer platanoides*, Norway Maple
- + *Aesculus hippocastanum*, Horse Chestnut
- + *Calocedrus decurrens*, Incense Cedar
- + *Casuarina glauca*, Swamp She Oak
- + *Cedrus deodara*, Deodar Cedar
- + *Cercis canadensis*, Forest Pansy
- + *Cupressus sempervirens* 'Stricta', Tuscan Cypress
- + *Eucalyptus melliodora*, Yellow Box
- + *Eucalyptus pauciflora*, Snow Gum
- + *Eucalyptus viminalis*, Manna Gum
- + *Fagus sylvatica*, European Beech
- + *Juglans nigra*, Black Walnut
- + *Juniperus virginiana*, Eastern Red Cedar
- + *Liquidambar styraciflua*, Liquidambar
- + *Liriodendron tulipifera*, Tulip Tree
- + *Magnolia x soulangeana*, Saucer Magnolia
- + *Melaleuca decora*, White Feather Honey Myrtle
- + *Melaleuca linariifolia*, Snow in Summer
- + *Picea abies*, Norway Spruce
- + *Picea pungens*, Spruce
- + *Populus simonii*, Simon's Poplar
- + *Prunus x amygdalo-persica*, Almond-Peach
- + *Quercus coccinea*, Scarlet Oak
- + *Quercus ilex*, Holm Oak
- + *Quercus palustris*, Pin Oak
- + *Quercus robur*, English Oak
- + *Sequoia sempervirens*, Coastal Redwood
- + *Thuja occidentalis*, Northern Whitecedar
- + *Tilia x europaea*, Lime Tree

Street Trees

- + *Acer buergerianum*, Trident Maple
- + *Acer palmatum*, Japanese Maple
- + *Acer platanoides* 'Crimson King', Purple Norway Maple
- + *Acer platanoides* 'Crimson Sentry', Upright Purple Norway Maple
- + *Acer platanoides*, Norway Maple
- + *Acer rubrum*, Red Maple
- + *Acer saccharinum*, Silver Maple
- + *Acer x freemanii*, Autumn Blaze Maple
- + *Callistemon citrinus*, Crimson Bottlebrush
- + *Callistemon salignus*, White Bottlebrush

- + *Callistemon viminalis*, Weeping Bottlebrush
- + *Eucalyptus bridgesiana*, Apple Box
- + *Eucalyptus cineria*, Argyle Apple
- + *Eucalyptus crebra*, Narrow leaved iron bark
- + *Eucalyptus sideroxylon*, Mugga Ironbark
- + *Fraxinus americana*, White Ash
- + *Fraxinus excelsior* 'Aurea', Golden Ash
- + *Fraxinus x 'Raywoodii'*, Claret Ash
- + *Hakea salicifolia*, Willow-leaved Hakea
- + *Lagerstroemia indica*, Crepe Myrtle
- + *Liquidambar styraciflua*, Liquidambar
- + *Liriodendron tulipifera*, Tulip Tree
- + *Livistonia australis*

- + *Malus tschonoskii*, Pillar Crabapple
- + *Parrotia persica*, Persian Ironwood Tree
- + *Pistacia chinensis*, Chinese Pistachio
- + *Populus simonii*, Simon's Poplar
- + *Prunus persica*, Peach
- + *Pyrus calleryana* 'Capital', Capital Callery Pear
- + *Quercus coccinea*, Scarlet Oak
- + *Quercus palustris*, Pin Oak
- + *Quercus robur* 'Fastigiata', Cypress Oak
- + *Tilia cordata*, Small Leafed Lime
- + *Tilia x europaea*, Lime Tree
- + *Ulmus parvifolia*, Chinese Weeping Elm
- + *Zelkova serrata*, Japanese Zelkova



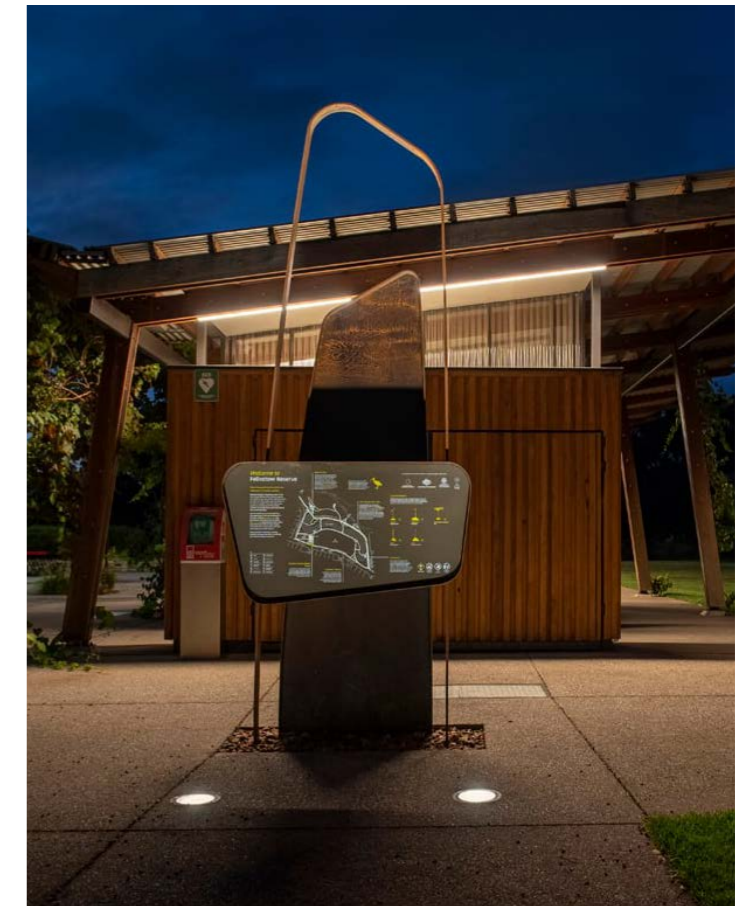
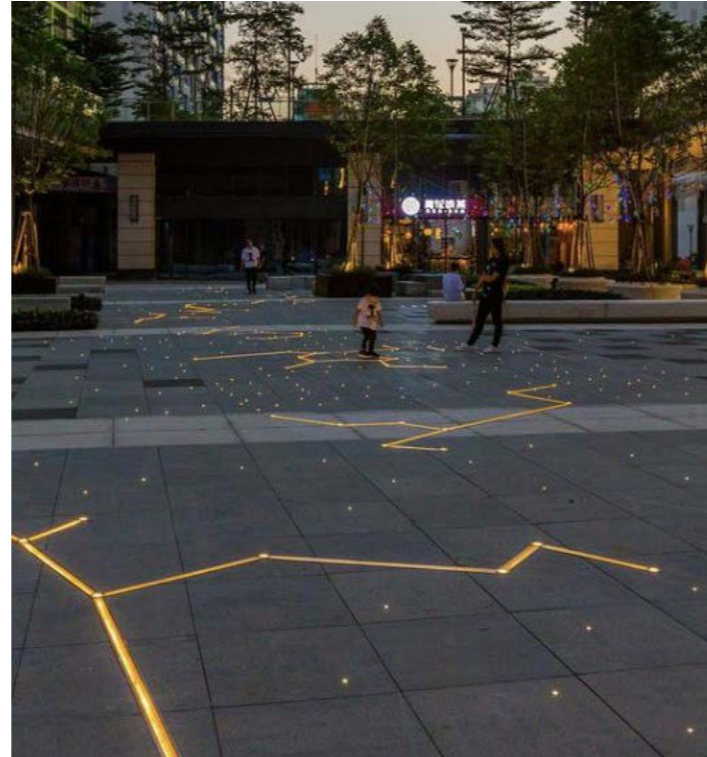
4.10 Lighting Overview

A well-designed public domain is safe, legible and functional for vehicles and pedestrians during both day and night. An overall lighting strategy is key to providing a usable public domain after dark.

Lighting provision to the shared path and public open space corridor in particular will be critical to ensuring a safe and active neighbourhood.

Considerations and strategies for Redmond Place lighting:

- + Provide lighting for streets and key pedestrian routes and spaces, giving particular attention to vehicle/ pedestrian conflict points.
- + Adopt a smaller, human scale approach to lighting for key pedestrian areas.
- + Avoid unnecessary light pollution.
- + Consider a range of lighting options, such as poles, bollards, wall-mounted, strip lighting and feature / sculptural lighting as suited to the application.
- + Use lighting to highlight key elements of the public domain.
- + Provide additional lighting in areas available to night time activities such as around the hangar building.
- + Consider solar panels and solar light fittings for public domain lighting.
- + Explore opportunities to provide feature lighting to key public domain elements or natural features.



4.11 Housing Typologies

Redmond Place will provide a range of housing typologies to create a diverse neighbourhood catering to a broad spectrum of potential residents.

The housing typologies can be broadly broken down into the following categories:

Apartments

Apartment buildings of up to four stories will be located adjacent to open space and provide a range of 1, 2 and 3 bedroom apartments. Apartments are to address the street, with ground floor apartments providing direct access to public footpaths.

Rear loaded medium density housing

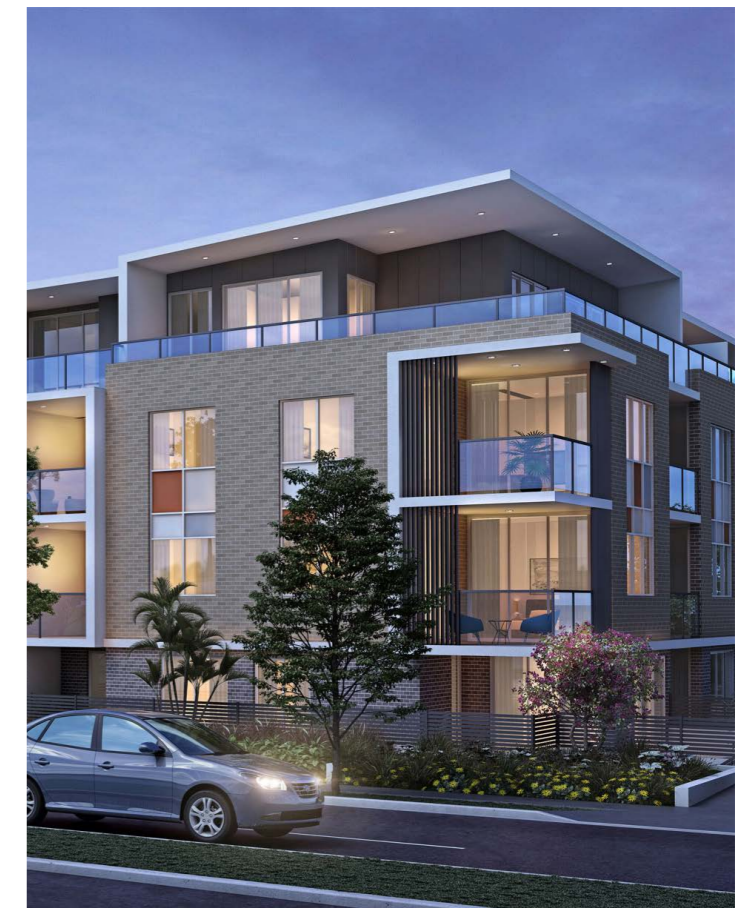
The provision of laneways within the street network allows for a narrow terrace typology (minimum 6m wide) with rear garages on the laneway. Typically fronting onto the open space corridor, the lack of front driveways and garages serves to further enhance the overall streetscape.

Front loaded medium density housing

Front loaded typologies (minimum 7.5m wide) add to the housing diversity and affordability. The design of this typology can contribute to the streetscape through landscaped front setbacks and reduced driveway / garage widths where appropriate.

Low density housing

Detached dwellings will make up the remainder of the residential housing at Redmond Place, providing housing choice more typical of the existing housing provision across Orange's suburbs. These lots provide greater opportunity for greening within private gardens and a more open streetscape.

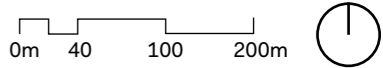


Housing

Housing Typologies

Legend

- Apartments
- Medium Density
- Low Density



4.12 Indicative Staging and Yield

	Stage 1A	Stage 1B	Stage 2	Stage 3	Total
Apartments	-	-	29	37	66
Medium Density lots (215m ² average lot size)	37	16	26	51	130
Low Density lots (422m ² average lot size)	30	44	37	23	134
Total dwellings	67	60	92	111	330



Melbourne

Wurundjeri Woi Wurrung Country
Level 2, 33 Guildford Lane
Melbourne, VIC
+61 3 9670 0699

Sydney

Gadigal Country
Level 1, 5 Wilson St
Newtown, NSW
+61 2 9557 5533

Canberra

Ngunnawal and Ngambri Country
Room 2, Pavilion Studios
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