

Bush Fire Assessment Report

Proposed Subdivision

Redleaf, Orange

Prepared for:
Landcom

July 2025

REPORT DETAILS	
Project Number	24142
Project Name	Redmond Place Subdivision
Project Address	3 Redmond Place, 154 Lone Pine Avenue, and 5255 Mitchell Highway, Orange
Client	Landcom
Prepared by	Erika Dawson
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Executive Summary

Table 1: Executive Summary

Item	Response
Street Address	3 Redmond Place, 154 Lone Pine Avenue, and 5255 Mitchell Highway, Orange
Real Property Description	Lot 6 DP 1031236, Lot 1 DP 153167, Lot 200 DP 1288388
Local Government Area	Orange
Proposed Development	Subdivision
Planning for Bushfire Protection (PBP) Classification of Development	Subdivision
Referral to RFS required	Yes ☒ No ☐ (Integrated Development for s.100B BFSA) (clause 4.14 EP&A Act Council assessment for development that complies with PBP)
Compliance with PBP	Acceptable Solutions Yes ☒ No ☐ Performance Solution Yes ☒ No ☐

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1 Introduction

1.1 Purpose

This Bush Fire Assessment Report (BFAR) has been prepared to support a Development Application (DA) for the subdivision of Lot 6 DP 1031236, Lot 1 DP 153167, Lot 200 DP 1288388, known as 3 Redmond Place, 154 Lone Pine Avenue, and 5255 Mitchell Highway, Orange.

The DA is to be lodged with Orange City Council and will require referral to the NSW Rural Fire Service for a Bush Fire Safety Authority (BFSA) as part of the DA assessment process. This report has been prepared in accordance with *Planning for Bush Fire Protection 2019* (PBP) to provide sufficient information for both approval authorities.

1.2 The Development

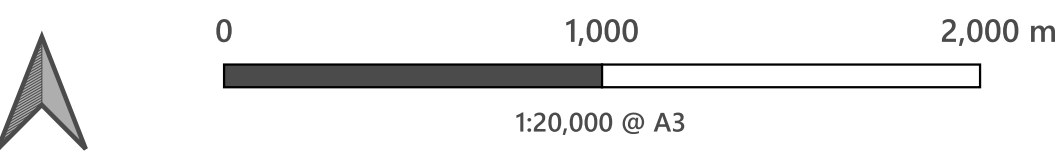
The proposed development involves the subdivision of the site to cater for approximately 330 future dwellings. The DA also includes associated works such as bulk earthworks, vegetation removal, construction of new roads, installation of utilities and the creation and embellishment of a new open space network. The development will deliver a new residential neighbourhood that will increase and diversify housing options within Orange and will be known as 'Redleaf'.

Plans of the development are provided in **Appendix A**. Cross sections for the proposed road network are provided in **Appendix B**. Landscaping Plans for the development are provided in **Appendix C**.

1.3 The Site

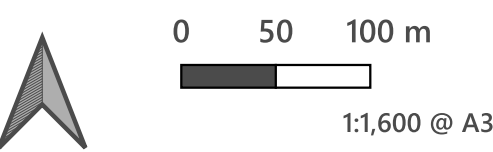
1.3.1 Location

The subject site is comprised of Lot 6 DP 1031236, Lot 1 DP 153167, Lot 200 DP 1288388 which are located on the western side of the Mitchell Highway at the southern entrance to Orange. The location of the site is shown in **Figure 1** and an aerial image in **Figure 2**.



Source: NSW Spatial Services
Ref: 24142

Figure 1: Site Location



Source: NearMap; NSW Spatial Services
Ref: 24142

Figure 2: Site Aerial

1.3.2 Site Details

Lot 6 has an area of 2.283 hectares. It contains the existing heliport and hangar building. It is otherwise used for grazing and predominantly grassland vegetation apart from the planted gardens and tree around the hangar building.

Lot 1 has an area of 10 acres 0 roods and 16 1/2 perches, which converts to 4.088 hectares. It is used for grazing and contains grassland vegetation.

Lot 200 has total area of 17.84 hectares, provided over four (4) separate part lots. The largest part lot has an area of 15.09 hectares and is located fronting the Mitchell Highway, between Redmond Place and Brabham Way. It contains predominantly grassland vegetation with scattered trees. The corridor along the highway is managed vegetation, with a row of poplar trees along the dividing fence, other rows of planted trees, and one garden bed area with trees. It has a drainage line that traverses the southeastern corner of this part lot.

The second largest part lot has an area of 2.32 hectares and is located fronting the Mitchell Highway, between Brabham Way, Dairy Creek Road and Lot 1 DP 1296295. It comprises predominantly grassland vegetation, with a row of poplar trees toward the eastern boundary with the highway and two pockets of trees to the east of the row of poplars. A drainage line runs generally north to south, located to the west of the row of poplar trees.

The next largest part lot has an area of 3,269m² and is located adjacent to the highway directly to the north of Redmond Place. It contains managed vegetation and buildings associated with the driver revivor facilities.

The smallest part lot has an area 1,033m². it is located on the southwestern corner of the intersection of Brabham Way and Dairy Creek Road. It contains grassland vegetation.

The site is predominantly zoned R1 General Residential, three (3) small areas zoned RE1 Public Recreation and a small section zoned SP2 Infrastructure (Sewerage System) under *Orange Local Environmental Plan 2011* (LEP) as shown in **Figure 3**. Surrounding the site, the land to the:

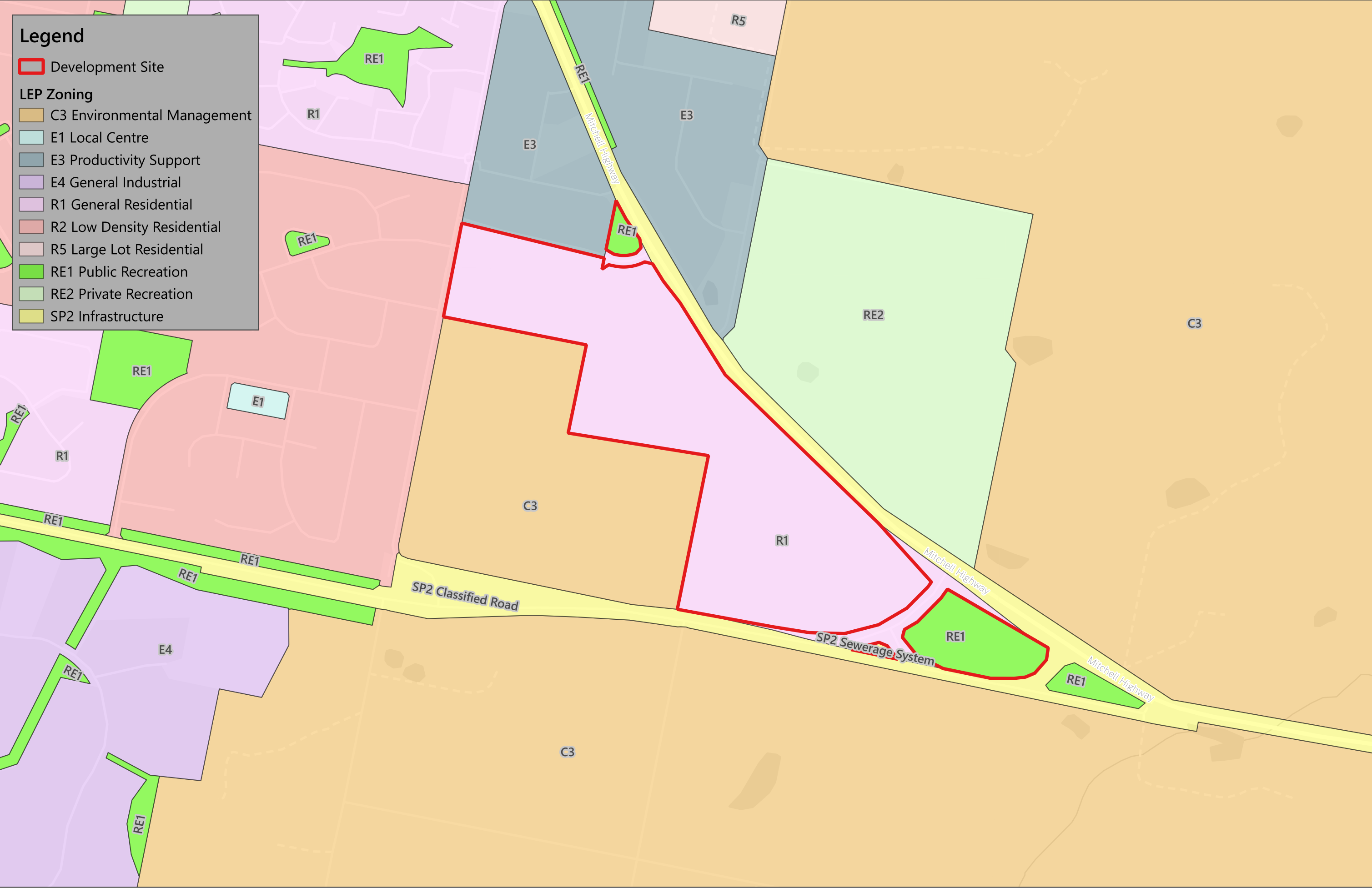
- north and northeast is zoned E3 Productivity Support,
- east is zoned RE2 Private Recreation,
- south east and south is zoned C3 Environmental Management, and
- west is zoned R2 Low Density Residential.

The site is mapped as being an Urban Release Area under the LEP mapping, as shown on **Figure 4**.

1.3.3 Environmental Significance

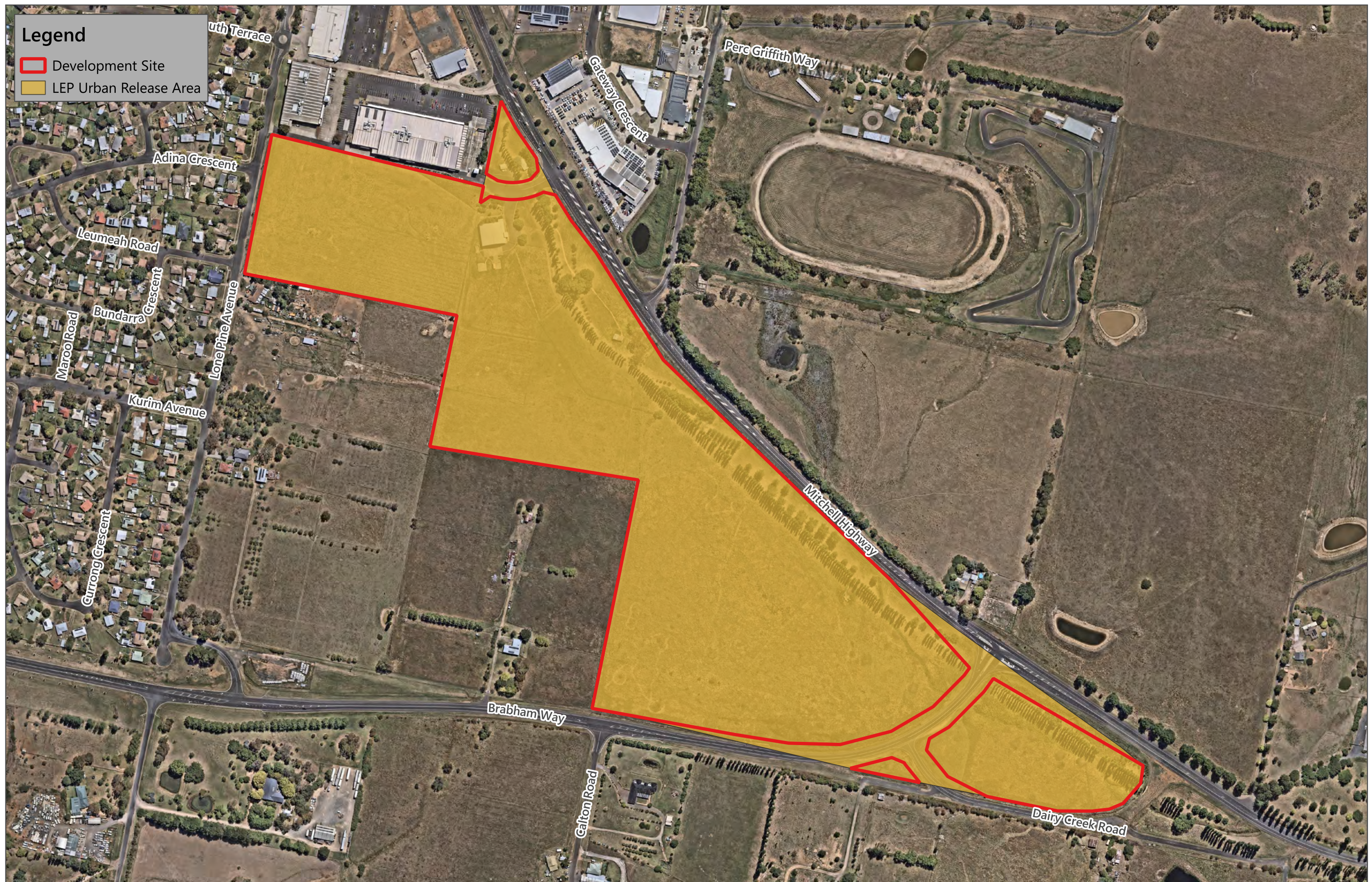
The site is mapped as being Groundwater Vulnerable under the LEP. It is also mostly mapped as being within the Drinking Water Catchment under the LEP as well, as shown on **Figure 5**.

The site is not mapped as being of biodiversity value under the Biodiversity Values Map (refer **Figure 6**).



Source: NSW Spatial Services; SEED
Ref: 24142

Figure 3: LEP Zoning Map

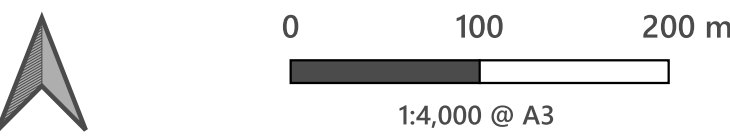


0 200 400 m

1:4,000 @ A3

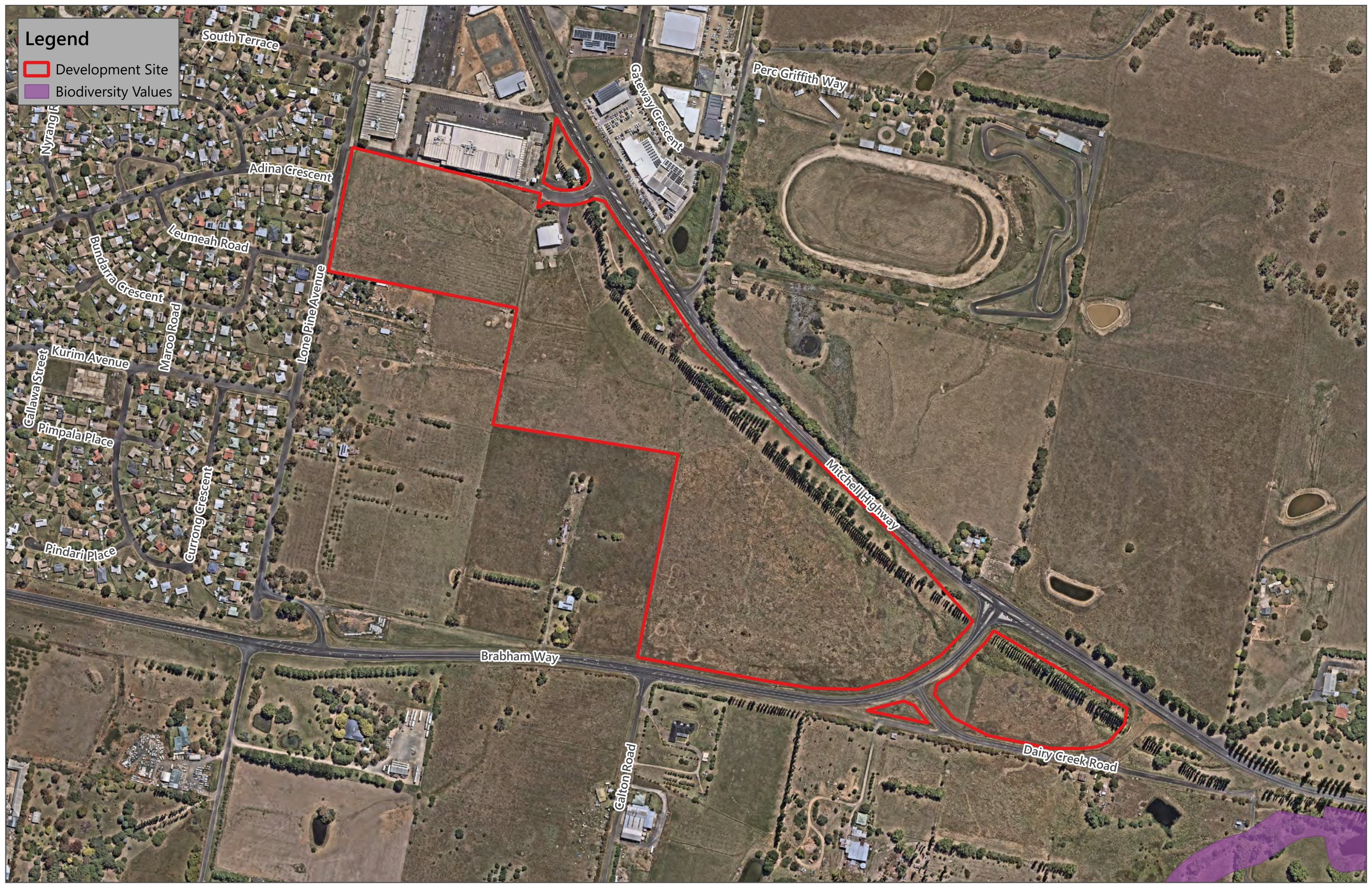
Source: NearMap; DCS Spatial Services; SEED
Ref: 24142

Figure 4: LEP Urban Release Area



Source: NearMap; DCS Spatial Services; SEED
Ref: 24142

Figure 5: LEP Environmental Significance



0 200 400 m



1:4,500 @ A3

Source: NSW Spatial Services; NearMaps; SEED
Ref: 24142

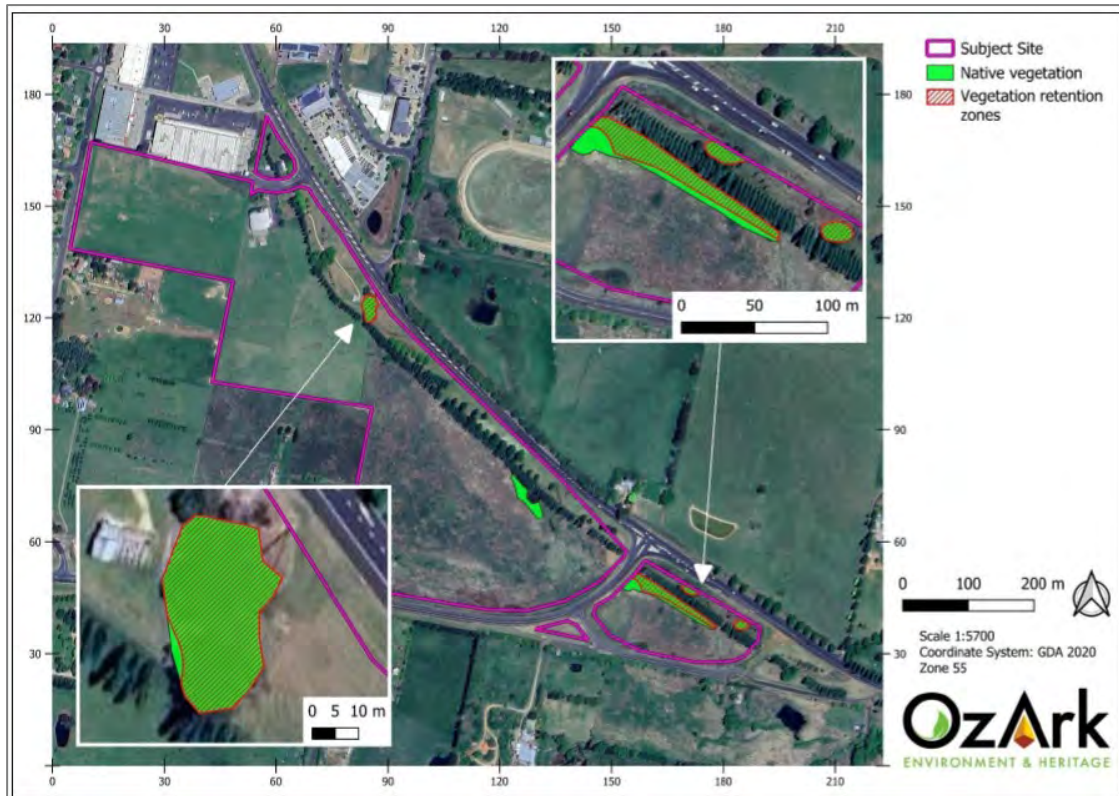
Figure 6: Biodiversity Values Map

1.3.4 Threatened Species

A Biodiversity Assessment Report (BAR) has been prepared for the development by OzArk Environmental & Heritage. The assessment determined that a Biodiversity Development Assessment Report (BDAR) is not required as the development is not likely to significantly affect threatened species, as defined by section 7.2 of the *Biodiversity Conservation Act 2016*.

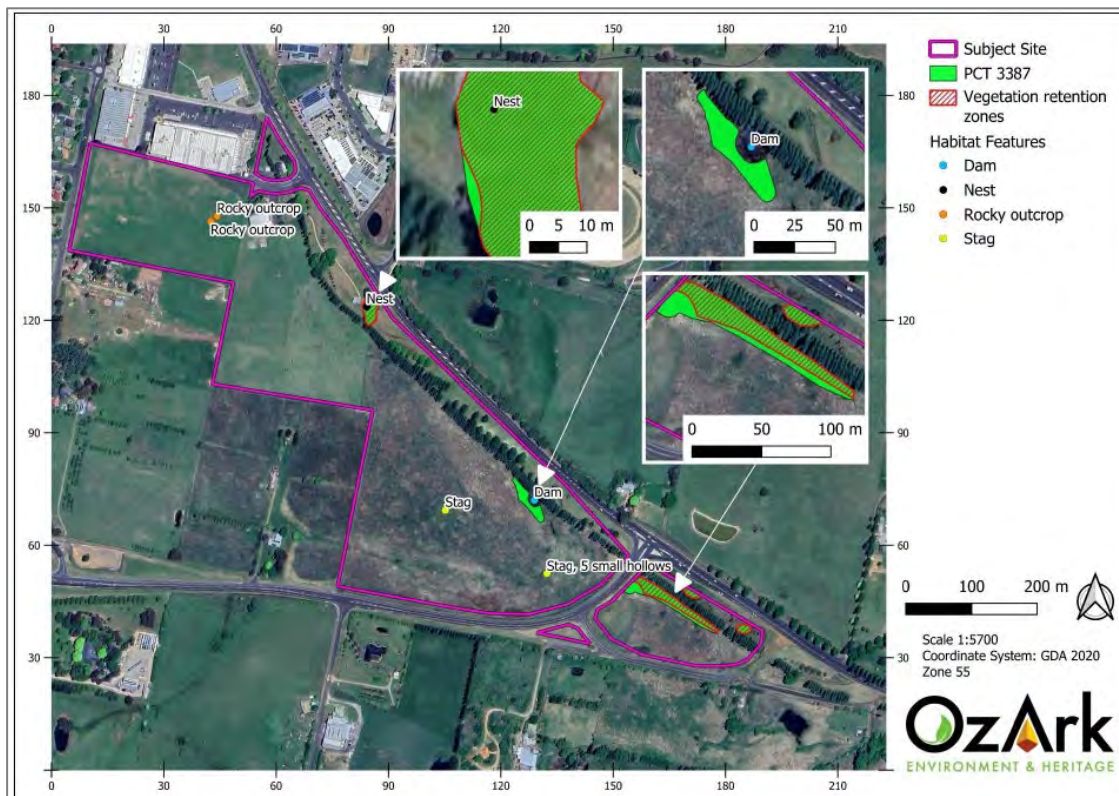
The BAR determined that:

- 0.46ha of native vegetation is present on the subject site, which comprises PCT 3387 – Central West Creekflat Grassy Woodland. The development will impact 0.17ha of this PCT (refer **Figure 7**).
- No Threatened Ecological Communities (TEC) were identified on site.
- No recognised Key Fish Habitats were identified on site.
- One stag (standing dead tree) with no hollows and one stag containing five small hollows are likely to be impacted by the proposal (refer **Figure 8**).
- None of the target fauna species were observed within the subject. However, one threatened mammal species was recorded within the subject site: the Grey-headed Flying-fox (listed as vulnerable under the BC and EPBC Acts). Two individuals were observed roosting within the planted Poplar trees located directly west of the intersection of Brabham Way and Mitchell Highway (refer **Figure 9**). It is understood these trees will be retained. No additional threatened fauna species were recorded during the field/targeted surveys. Based on the proximity of past records, habitat requirements, and the results of the field survey, 24 threatened and/or migratory fauna species were assessed as having a moderate-to-high likelihood of occurring at the subject site. Tests of significance have been conducted for these species under the BC, and/or EPBC Act; these tests concluded that the proposal would not result in a significant impact to any threatened fauna species.
- Sixty-three flora species were detected during the field surveys. No flora species or populations listed as threatened under the BC or EPBC Act were observed. Given the short duration of the field survey, and the lack of targeted flora surveys, the non-detection of threatened flora species cannot be considered as confirmation of their absence. Based on the proximity of past records, habitat requirements, and the results of the field surveys, three threatened flora species were assessed as having a moderate-to-high likelihood of occurring at the subject site. Tests of significance have been conducted for these species under the BC and EPBC Act; these tests concluded that the proposal would not result in a significant impact to any threatened flora species (OzArk Environment & Heritage 2025).



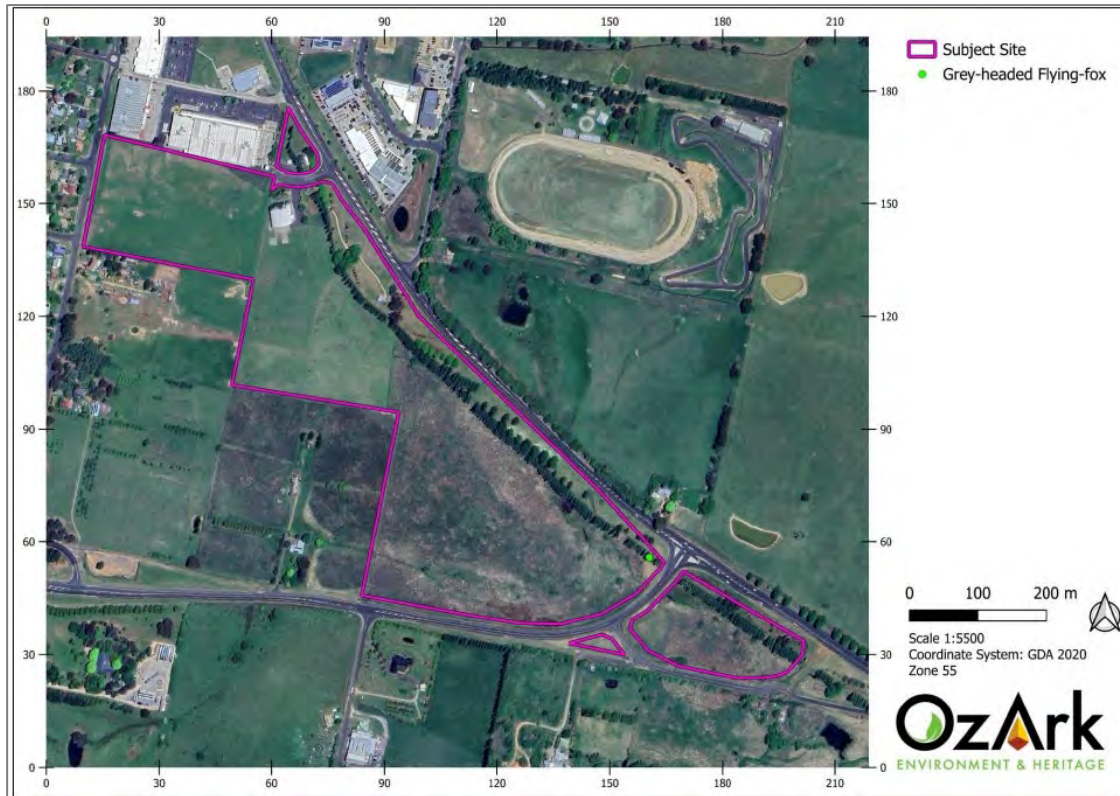
Source: (OzArk Environment & Heritage 2025)

Figure 7: Native Vegetation and Retained Native Vegetation



Source: (OzArk Environment & Heritage 2025)

Figure 8: Plant Community Types and habitat features confirmed within the subject site.



Source: (OzArk Environment & Heritage 2025)

Figure 9: Location of the Grey-headed Flying-fox recorded during the field surveys

1.3.5 Indigenous Heritage

An Archaeological Technical Report (TAR) was prepared by OzArk Environment & Heritage as part of the recent Planning Proposal for the site. The TAR included:

- a search of the Aboriginal Heritage Information Management System completed on 17 January 2024, which showed there are no previously recorded Aboriginal sites within or near the study area.
- A field survey, undertaken by OzArk Archaeologist, Tenae Robertson with Doug (Ian) Sutherland representing Orange Local Aboriginal Land Council on 13 February 2024.

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 TAR recommended:

- The proposal may proceed at the study area without further archaeological investigation provided the activities are confined to within the assessed study area, as this will eliminate the risk of harm to Aboriginal objects potentially present within adjacent landforms. If the scope of the proposal changes, additional survey may be required to ensure Aboriginal cultural values are not impacted, if present.
- If during subdivision works, however, Aboriginal objects are noted, all work should cease and the procedures in the Unanticipated Finds Protocol (Appendix 2) must be followed.
- The Unanticipated Skeletal Remains Protocol (Appendix 3) must be followed if suspected human skeletal remains are encountered.
- Inductions for work crews should include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts (Appendix 4) and are aware of the legislative protection of Aboriginal objects under the National Parks and Wildlife Act 1974 (OzArk Environment & Heritage 2024).

1.4 Legislative Framework

1.4.1 Bush Fire Safety Authority

Subdivision of land, that could lawfully permit residential purposes, within a bush fire prone area requires a Bush Fire Safety Authority (BFSA) to be obtained under section 100B of the *Rural Fires Act 1997* (RF Act).

Clause 45 of the *Rural Fires Regulation 2022* specifies the requirements for any application for a BFSA. These requirements have been addressed within this report and a checklist provided in **Appendix D** outlining where each requirement has been specifically addressed.

1.4.2 Bush Fire Prone Land

The site is designated as bush fire prone land in accordance with Section 10.3 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). As shown in **Figure 10** the site is mapped as being within the Category 3 Vegetation and buffer.

1.4.3 Integrated Development

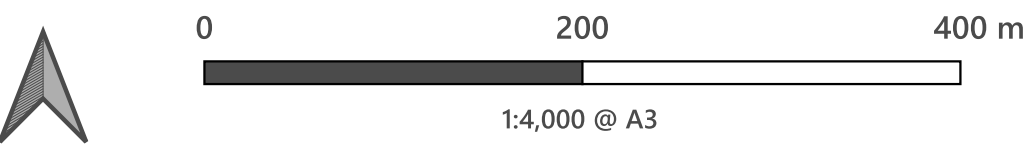
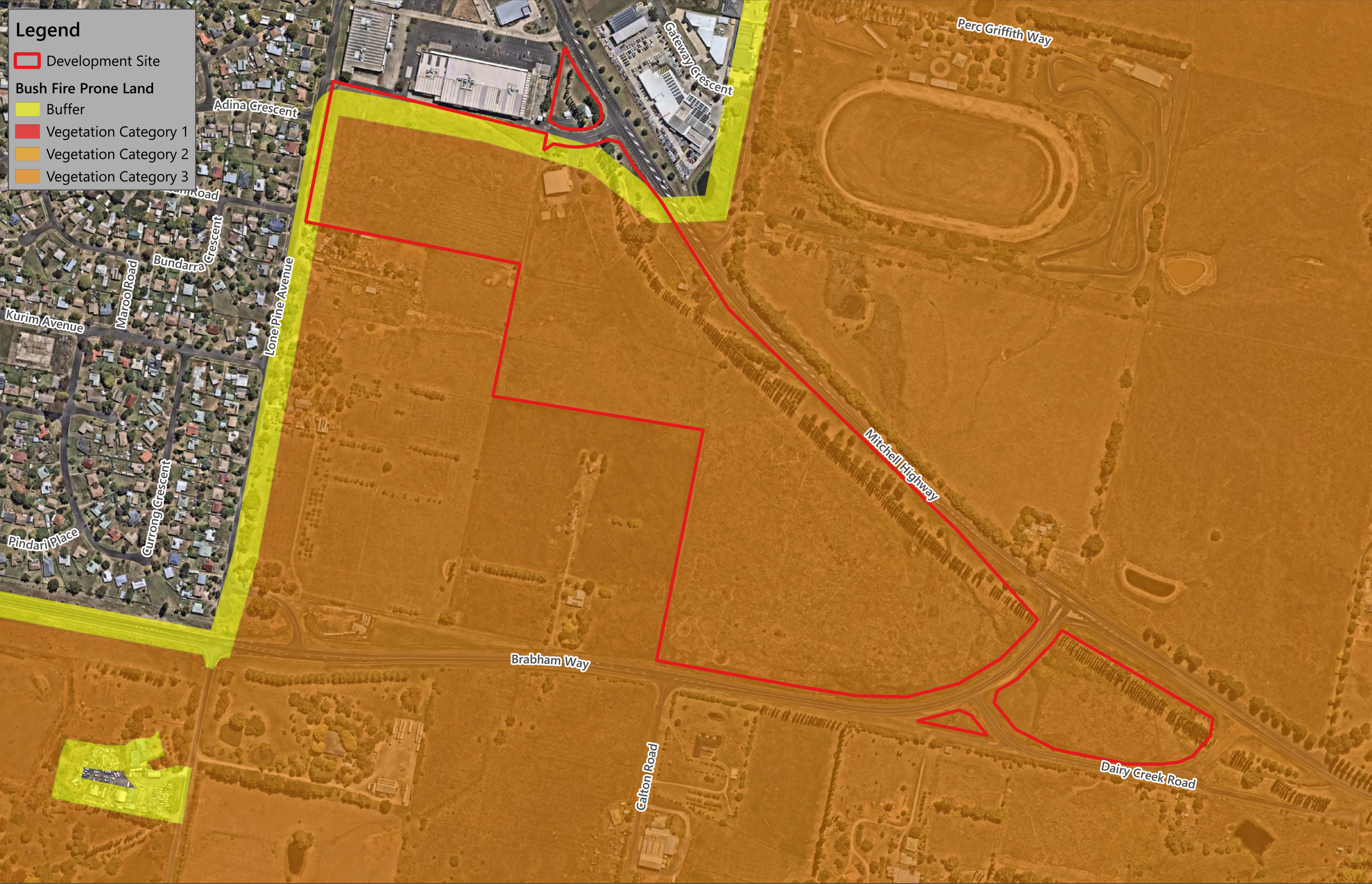
As the development requires both development consent and authorisation under Section 100B (Bushfire Safety Authority) of the RF Act in order for it to be carried out, the development becomes Integrated Development pursuant to Section 4.46 of the EP&A Act.

In this regard, Council is required to refer the DA to the NSW Rural Fire Service to obtain the BFSA before it can determine the application in accordance with Section 4.46 of the EP&A Act.

1.4.4 Planning for Bush Fire Protection

PBP applies to all DAs on bush fire prone land. As required by Section 1.4 of PBP, this report has been prepared to address the requirements of the PBP as a subdivision that could lawfully contain residential development. Specifically, the following has been addressed in this report:

- The objectives of PBP, as outlined in Section 1.1 of PBP; and
- The performance criteria of the relevant Bush Fire Protection Measures (BFPM) which are outlined in Section 5.3 of PBP.



Source: NSW Spatial Services; NSW Rural Fire Service; NearMap
Ref: 24142

Figure 10: Bush Fire Prone Land Map

2 Bush Fire Assessment

2.1 Methodology

The methodology utilised for this bush fire assessment is consistent with Appendix 1 of PBP. The following provides the required information in accordance with the methodology.

2.2 Vegetation Formations

A site inspection was carried out on 14 March 2025 of the site and land within 140m of the site (assessment area). All vegetation within the assessment area has been classified in accordance with *Ocean Shores to Desert Dunes* (Keith 2004) as required by A1.2 of PBP.

The classified vegetation within the assessment area has been mapped and is shown in **Figure 11** and **Figure 12**. Photographs of the classified vegetation from the site inspection are provided in the following plates for each of the assessment plots.

Plot 1	
Vegetation Description	Comprises the driver reviver rest area component in the northern part of the site. Comprises managed vegetation and non-vegetated areas.
Existing Classification	A1.10 Low threat vegetation – exclusions
Post Development Classification	APZ
DIRECTION 19 deg(T) 697471 6313134 ACCURACY 5 m DATUM WGS84  Redmond Place, Orange B 2025-03-14 08:46:18+11:00	DIRECTION 57 deg(T) 697471 6313134 ACCURACY 5 m DATUM WGS84  Redmond Place, Orange B 2025-03-14 08:46:20+11:00
Plate 1: Plot 1	Plate 2: Plot 1

Plot 2	
Vegetation Description	Comprises the majority of the subject site. Currently contains existing managed vegetation along the Mitchell Highway corridor and unmanaged grassland within paddock areas. With the development, it will become non-vegetated areas and managed vegetation. It is to be managed to an APZ standard.
Existing Classification	Grassland/A1.10 Low threat vegetation – exclusions
Post Development Classification	APZ
DIRECTION 236 deg(T) 697754 6312810 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:08:05+11:00	
DIRECTION 168 deg(T) 697754 6312810 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:08:10+11:00	
Plate 3: Plot 2	Plate 4: Plot 2
DIRECTION 126 deg(T) 697761 6312810 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:08:25+11:00	
DIRECTION 328 deg(T) 697762 6312811 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:08:28+11:00	
Plate 5: Plot 2	Plate 6: Plot 2

Plot 2	
Vegetation Description	Comprises the majority of the subject site. Currently contains existing managed vegetation along the Mitchell Highway corridor and unmanaged grassland within paddock areas. With the development, it will become non-vegetated areas and managed vegetation. It is to be managed to an APZ standard.
Existing Classification	Grassland/A1.10 Low threat vegetation – exclusions
Post Development Classification	APZ
DIRECTION 146 deg(T) 697826 6312781 ACCURACY 3 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:09:15+11:00 DIRECTION 143 deg(T) 697946 6312667 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:11:42+11:00	
Plate 7: Plot 2	Plate 8: Plot 2
DIRECTION 104 deg(T) 697629 6312932 ACCURACY 3 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:25:50+11:00 DIRECTION 140 deg(T) 697603 6313002 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:27:06+11:00	
Plate 9: Plot 2	Plate 10: Plot 2

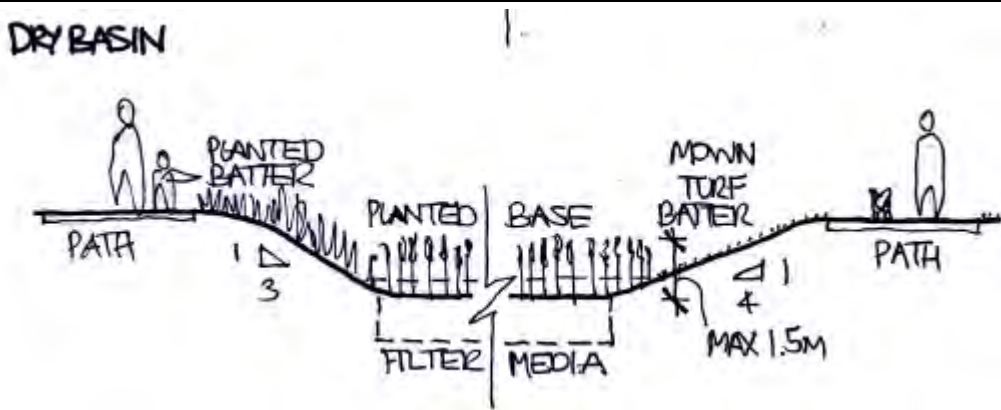
Plot 2	
Vegetation Description	Comprises the majority of the subject site. Currently contains existing managed vegetation along the Mitchell Highway corridor and unmanaged grassland within paddock areas. With the development, it will become non-vegetated areas and managed vegetation. It is to be managed to an APZ standard.
Existing Classification	Grassland/A1.10 Low threat vegetation – exclusions
Post Development Classification	APZ
DIRECTION 310 deg(T) 697603 6313002 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:27:12+11:00 DIRECTION 304 deg(T) 697609 6313030 ACCURACY 3 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:28:01+11:00	
Plate 11: Plot 2	Plate 12: Plot 2
DIRECTION 184 deg(T) 697521 6313124 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:30:03+11:00 DIRECTION 170 deg(T) 697531 6313066 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:30:49+11:00	
Plate 13: Plot 2	Plate 14: Plot 2

Plot 2	
Vegetation Description	Comprises the majority of the subject site. Currently contains existing managed vegetation along the Mitchell Highway corridor and unmanaged grassland within paddock areas. With the development, it will become non-vegetated areas and managed vegetation. It is to be managed to an APZ standard.
Existing Classification	Grassland/A1.10 Low threat vegetation – exclusions
Post Development Classification	APZ
	
Plate 15: Plot 2	Plate 16: Plot 2
	
Plate 17: Plot 2	Plate 18: Plot 2

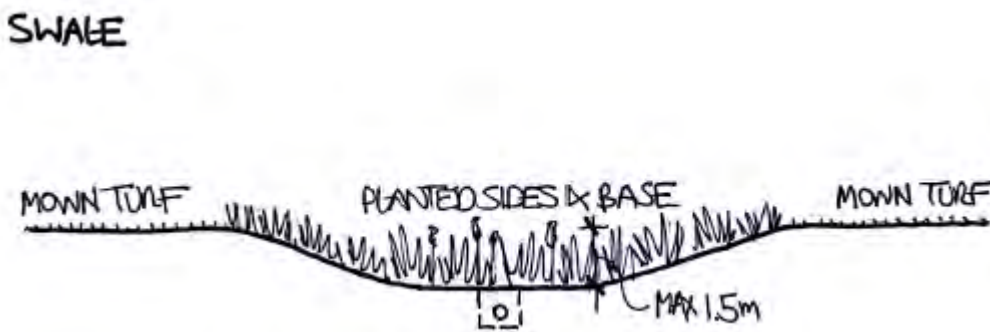
Plot 2	
Vegetation Description	Comprises the majority of the subject site. Currently contains existing managed vegetation along the Mitchell Highway corridor and unmanaged grassland within paddock areas. With the development, it will become non-vegetated areas and managed vegetation. It is to be managed to an APZ standard.
Existing Classification	Grassland/A1.10 Low threat vegetation – exclusions
Post Development Classification	APZ
DIRECTION 252 deg(T) 697296 6313177 ACCURACY 5 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:38:03+11:00 DIRECTION 28 deg(T) 697406 6312999 ACCURACY 5 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:49:20+11:00	
Plate 19: Plot 2	Plate 20: Plot 2
DIRECTION 153 deg(T) 697428 6312989 ACCURACY 3 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 09:50:58+11:00 DIRECTION 319 deg(T) 697722 6312488 ACCURACY 5 m DATUM WGS84  Redmond Place, Orange A 2025-03-14 10:10:30+11:00	
Plate 21: Plot 2	Plate 22: Plot 2

Plot 2	
Vegetation Description	Comprises the majority of the subject site. Currently contains existing managed vegetation along the Mitchell Highway corridor and unmanaged grassland within paddock areas. With the development, it will become non-vegetated areas and managed vegetation. It is to be managed to an APZ standard.
Existing Classification	Grassland/A1.10 Low threat vegetation – exclusions
Post Development Classification	APZ
	
Plate 23: Plot 2	Plate 24: Plot 2

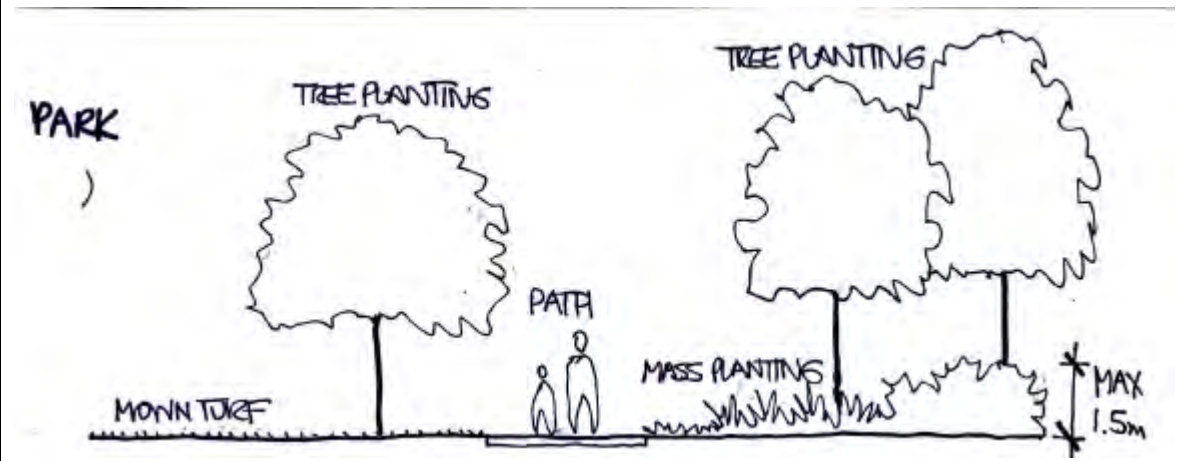
Plot 3	
Vegetation Description	Existing paddock areas with unmanaged grassland. Will become a stormwater detention basin that will be inundated during storm events. It has an area of 630m ² . It is not within 20m of any other vegetation being classified, nor any of the lots to be developed for residential purposes.
Existing Classification	Grassland
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 25: Plot 3	Plate 26: Plot 3

Plot 3	
Vegetation Description	Existing paddock areas with unmanaged grassland. Will become a stormwater detention basin that will be inundated during storm events. It has an area of 630m ² . It is not within 20m of any other vegetation being classified, nor any of the lots to be developed for residential purposes.
Existing Classification	Grassland
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 27: Plot 3	

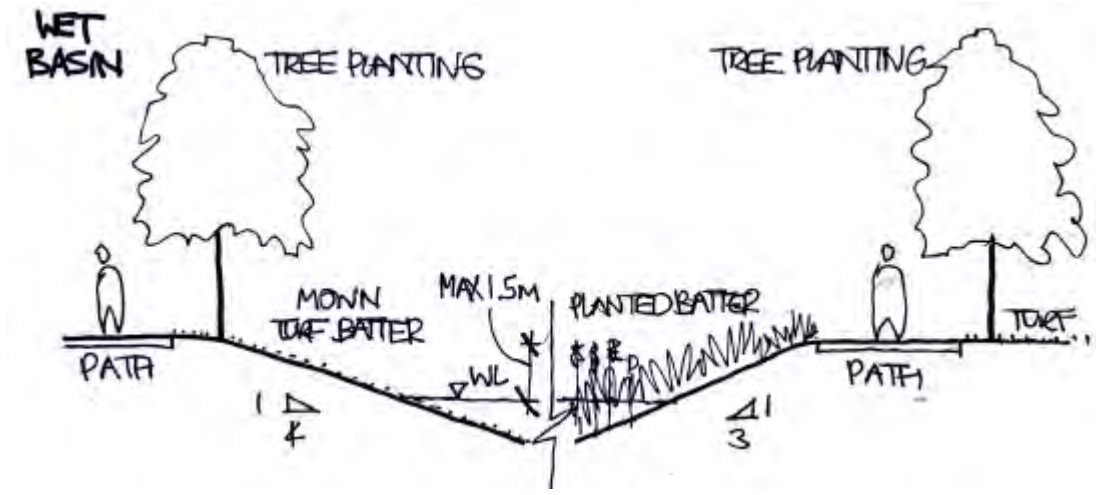
Plot 4	
Vegetation Description	Currently unmanaged grassland within drainage swale and unmanaged grassland within paddock area. Post development will all become drainage swale. As seen by the existing swale component, the vegetation with the swale will predominantly remain wet due to the additional runoff generated by the new urban area. The geometry of the vegetation (generally <4m wide) will also mean that it will not be sufficient to carry a fire.
Existing Classification	Grassland
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 28: Plot 4	Plate 29: Plot 4

Plot 4	
Vegetation Description	Currently unmanaged grassland within drainage swale and unmanaged grassland within paddock area. Post development will all become drainage swale. As seen by the existing swale component, the vegetation with the swale will predominantly remain wet due to the additional runoff generated by the new urban area. The geometry of the vegetation (generally <4m wide) will also mean that it will not be sufficient to carry a fire.
Existing Classification	Grassland
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 30: Plot 4	

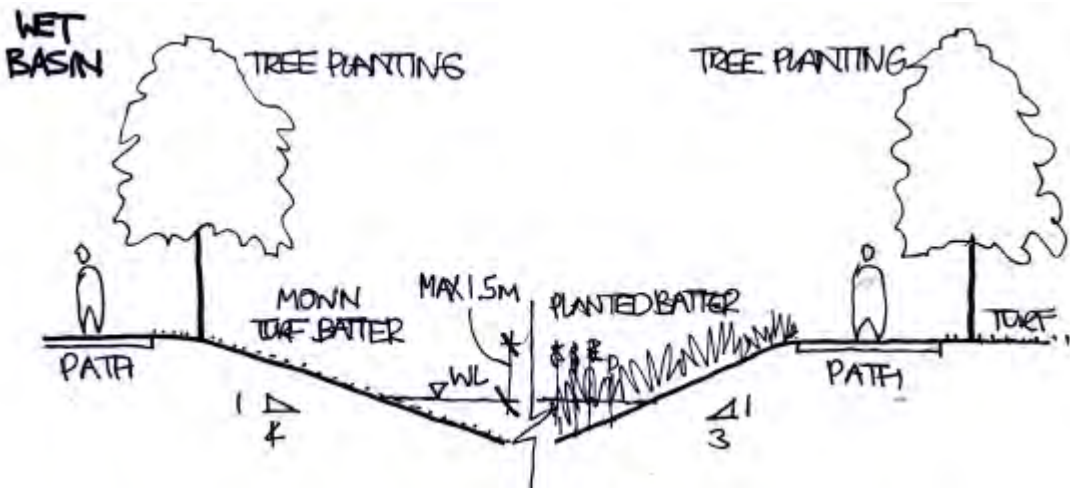
Plot 5	
Vegetation Description	Currently grassland within paddock areas and managed vegetation along Mitchell Highway verge. Will become a mass planting area (refer cross section below) directly adjacent to the permanent water basin. It will have a maximum width of approximately 7m and will be surrounded by managed land, pathway and water. The vegetation configuration will essentially form windbreak and would not be such to constitute a bushfire hazard.
Existing Classification	Grassland/A1.10 Low threat vegetation – exclusions
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 31: Plot 5	Plate 32: Plot 5

Plot 5	
Vegetation Description	Currently grassland within paddock areas and managed vegetation along Mitchell Highway verge. Will become a mass planting area (refer cross section below) directly adjacent to the permanent water basin. It will have a maximum width of approximately 7m and will be surrounded by managed land, pathway and water. The vegetation configuration will essentially form windbreak and would not be such to constitute a bushfire hazard.
Existing Classification	Grassland/A1.10 Low threat vegetation – exclusions
Post Development Classification	A1.10 Low threat vegetation – exclusions
 The diagram is a hand-drawn cross-section of Plot 5. On the left, a label 'PARK' is written above a small curved line. To its right is a large, rounded tree labeled 'TREE PLANTING'. Further right is a 'PATH' with two small human figures standing on it. To the right of the path is a 'MASS PLANTING' area represented by a dense line of small trees. To the right of this is another large, rounded tree labeled 'TREE PLANTING'. A vertical dimension line on the far right indicates a 'MAX' height of '1.5m'.	
Plate 33: Plot 5	

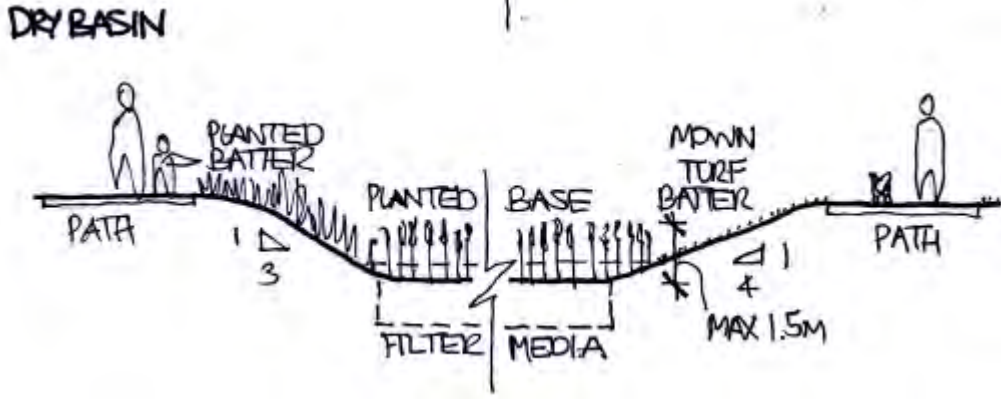
Plot 6	
Vegetation Description	Currently unmanaged grassland within paddock areas. Will become a permanently inundated basin. Plot 6 is the area of permanently standing water.
Existing Classification	Grassland
Post Development Classification	A1.10 Low threat vegetation – exclusions
 DIRECTION 233 deg(T) 698032 6312569 ACCURACY 3 m DATUM WGS84 Redmond Place, Orange A 2025-03-14 09:13:52+11:00	 DIRECTION 289 deg(T) 698032 6312571 ACCURACY 3 m DATUM WGS84 Redmond Place, Orange A 2025-03-14 09:13:56+11:00
Plate 34: Plot 6	Plate 35: Plot 6

Plot 6	
Vegetation Description	Currently unmanaged grassland within paddock areas. Will become a permanently inundated basin. Plot 6 is the area of permanently standing water.
Existing Classification	Grassland
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 36: Plot 6	

Plot 7	
Vegetation Description	Currently unmanaged grassland within paddock areas. Will become a planted batter (refer cross section below) adjacent to the permanently inundated basin. The vegetation will be fragmented, located adjacent to a water body and managed pathway and have a maximum width of approximately 5m.
Existing Classification	Grassland
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 37: Plot 6	Plate 38: Plot 6

Plot 7	
Vegetation Description	Currently unmanaged grassland within paddock areas. Will become a planted batter (refer cross section below) adjacent to the permanently inundated basin. The vegetation will be fragmented, located adjacent to a water body and managed pathway and have a maximum width of approximately 5m.
Existing Classification	Grassland
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 39: Plot 7	

Plot 8	
Vegetation Description	Existing paddock areas with unmanaged grassland. Will become a stormwater detention basin that will be inundated during storm events. It has an area of 616m ² . It is not within 20m of any other vegetation being classified, nor any of the lots to be developed for residential purposes.
Existing Classification	Grassland
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 40: Plot 8	Plate 41: Plot 8

Plot 8	
Vegetation Description	Existing paddock areas with unmanaged grassland. Will become a stormwater detention basin that will be inundated during storm events. It has an area of 616m ² . It is not within 20m of any other vegetation being classified, nor any of the lots to be developed for residential purposes.
Existing Classification	Grassland
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 42: Plot 8	

Plot 9	
Vegetation Description	Unmanaged grassland on land directly to the south/west of the site
Existing Classification	Grassland
Post Development Classification	Grassland
	
Plate 43: Plot 9	Plate 44: Plot 9

Plot 9	
Vegetation Description	Unmanaged grassland on land directly to the south/west of the site
Existing Classification	Grassland
Post Development Classification	Grassland
DIRECTION 123 deg(T) 697167 6312977 ACCURACY 5 m DATUM WGS84  Redmond Place, Orange E 2025-03-14 09:55:41+11:00	DIRECTION 73 deg(T) 697176 6312595 ACCURACY 3 m DATUM WGS84  Redmond Place, Orange E 2025-03-14 10:02:20+11:00
Plate 45: Plot 9	Plate 46: Plot 9
DIRECTION 26 deg(T) 697505 6312526 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange E 2025-03-14 10:05:07+11:00	DIRECTION 58 deg(T) 697505 6312526 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange E 2025-03-14 10:05:09+11:00
Plate 47: Plot 9	Plate 48: Plot 9

Plot 10	
Vegetation Description	Managed vegetation and non vegetated areas around existing dwelling on Lot 1 DP 539043
Existing Classification	A1.10 Low threat vegetation – exclusions
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 49: Plot 10	Plate 50: Plot 10

Plot 11	
Vegetation Description	Stand of trees of Lot 7 DP 793145 and Lot 1 DP 72811 which connect to a row of pines along the front property boundary. Grassland surface fuels. Vegetation composition does not warrant forest classification.
Existing Classification	Woodland
Post Development Classification	Woodland
	
Plate 51: Plot 11	Plate 52: Plot 11

Plot 12	
Vegetation Description	Managed vegetation and non vegetated areas around existing dwelling on Lot 1 DP 72811
Existing Classification	A1.10 Low threat vegetation – exclusions
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 53: Plot 12	Plate 54: Plot 12

Plot 13	
Vegetation Description	Hard paved surfaces of public roads within assessment area
Existing Classification	A1.10 Low threat vegetation – exclusions
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 55: Plot 13	Plate 56: Plot 13

Plot 13	
Vegetation Description	Hard paved surfaces of public roads within assessment area
Existing Classification	A1.10 Low threat vegetation – exclusions
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 57: Plot 13	Plate 58: Plot 13
	
Plate 59: Plot 13	Plate 60: Plot 13
	
Plate 61: Plot 13	Plate 62: Plot 13

Plot 13	
Vegetation Description	Hard paved surfaces of public roads within assessment area
Existing Classification	A1.10 Low threat vegetation – exclusions
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 63: Plot 13	

Plot 14	
Vegetation Description	Existing residential area to the west of the site. Contains managed vegetation and non-vegetated areas
Existing Classification	A1.10 Low threat vegetation – exclusions
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 64: Plot 14	Plate 65: Plot 14

Plot 15	
Vegetation Description	Existing bulky goods development to the north of the site. Contains non-vegetated areas and managed vegetation
Existing Classification	A1.10 Low threat vegetation – exclusions
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 66: Plot 15	Plate 67: Plot 15
	
Plate 68: Plot 15	Plate 69: Plot 15

Plot 16	
Vegetation Description	Existing bulky goods development to the northeast of the site. Contains non-vegetated areas and managed vegetation
Existing Classification	A1.10 Low threat vegetation – exclusions
Post Development Classification	A1.10 Low threat vegetation – exclusions
DIRECTION 99 deg(T) 697450 6313329 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange C 2025-03-14 08:50:38+11:00 DIRECTION 44 deg(T) 697582 6313301 ACCURACY 5 m DATUM WGS84  Redmond Place, Orange C 2025-03-14 08:55:09+11:00	
Plate 70: Plot 16	Plate 71: Plot 16
DIRECTION 123 deg(T) 697601 6313286 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange C 2025-03-14 08:55:44+11:00 DIRECTION 268 deg(T) 697687 6313191 ACCURACY 7 m DATUM WGS84  Redmond Place, Orange C 2025-03-14 08:57:14+11:00	
Plate 72: Plot 16	Plate 73: Plot 16

Plot 17	
Vegetation Description	Unmanaged vegetation within stormwater basin. Predominantly grassland vegetation with scattered trees. Has an area of 4,550m ² and is located within 20m of Plot 20 vegetation.
Existing Classification	Grassland
Post Development Classification	Grassland
	
Plate 74: Plot 17	Plate 75: Plot 17

Plot 18	
Vegetation Description	A block of land within the bulky goods estate that has long standing evidence of being unmanaged. Has an area of 3,264m ² .
Existing Classification	Grassland
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 76: Plot 18	Plate 77: Plot 18

Plot 19	
Vegetation Description	Predominantly unmanaged grassland vegetation on the north eastern side of the Mitchell Highway. Windbreak/screening row of trees along the Mitchell Highway and Perc Griffin Way frontages and other scattered trees throughout. This vegetation is not sufficient to warrant a change in classification. The vegetation around the existing dwelling at the intersection of the Mitchell Highway and Brabham Way is semi managed, however, is conservatively mapped as grassland.
Existing Classification	Grassland
Post Development Classification	Grassland
DIRECTION 147 deg(T) 697701 6313044 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange C 2025-03-14 09:02:45+11:00	
DIRECTION 108 deg(T) 697701 6313044 ACCURACY 2 m DATUM WGS84  Redmond Place, Orange C 2025-03-14 09:02:47+11:00	
Plate 78: Plot 19	Plate 79: Plot 19
DIRECTION 46 deg(T) 697707 6313045 ACCURACY 3 m DATUM WGS84  Redmond Place, Orange C 2025-03-14 09:02:57+11:00	
DIRECTION 159 deg(T) 697696 6313009 ACCURACY 3 m DATUM WGS84  Redmond Place, Orange C 2025-03-14 09:03:49+11:00	
Plate 80: Plot 19	Plate 81: Plot 19

Plot 19	
Vegetation Description	Predominantly unmanaged grassland vegetation on the north eastern side of the Mitchell Highway. Windbreak/screening row of trees along the Mitchell Highway and Perc Griffin Way frontages and other scattered trees throughout. This vegetation is not sufficient to warrant a change in classification. The vegetation around the existing dwelling at the intersection of the Mitchell Highway and Brabham Way is semi managed, however, is conservatively mapped as grassland.
Existing Classification	Grassland
Post Development Classification	Grassland
	
Plate 82: Plot 19	Plate 83: Plot 19
	
Plate 84: Plot 19	Plate 85: Plot 19

Plot 20	
Vegetation Description	Part of the subject site located in between Mitchell Highway, Brabham Way and Dairy Creek Road. Currently comprises semi managed/unmanaged grassland with a row of poplar trees along the boundary with the Mitchell Highway. Post development it will remain a grassed area within a stormwater basin. The poplar trees will be retained. These will not change the classification.
Existing Classification	Grassland
Post Development Classification	Grassland
	
Plate 86: Plot 20	Plate 87: Plot 20

Plot 21	
Vegetation Description	Two (2) areas of vegetation adjacent to the Mitchell Highway, south of Brabham Way. Contains a drainage depression with tall grasses and trees within it. Conservatively classified as forest as appears to be somewhat young regrowth/plantings.
Existing Classification	Forest
Post Development Classification	Forest
	
Plate 88: Plot 21	Plate 89: Plot 21

Plot 21	
Vegetation Description	Two (2) areas of vegetation adjacent to the Mitchell Highway, south of Brabham Way. Contains a drainage depression with tall grasses and trees within it. Conservatively classified as forest as appears to be somewhat young regrowth/plantings.
Existing Classification	Forest
Post Development Classification	Forest
	
Plate 90: Plot 21	

Plot 22	
Vegetation Description	Part of the subject site located on the south western corner of the intersection of Brabham Way and Dairy Creek Road. It is currently semi managed grassland. A future sewerage treatment plant will be located on the site. Conservatively it is classified as grassland
Existing Classification	Grassland
Post Development Classification	Grassland
	
Plate 91: Plot 22	Plate 92: Plot 22

Plot 23	
Vegetation Description	Land to the south of the site between Mitchell Highway and Dairy Creek Road. Contains unmanaged grassland with planted rows of trees and one other scattered tree. The configuration of these trees do not warrant a higher classification. The land along the Mitchell Highway is semi managed.
Existing Classification	Grassland
Post Development Classification	Grassland
	
Plate 93: Plot 23	Plate 94: Plot 23
	
Plate 95: Plot 23	Plate 96: Plot 23

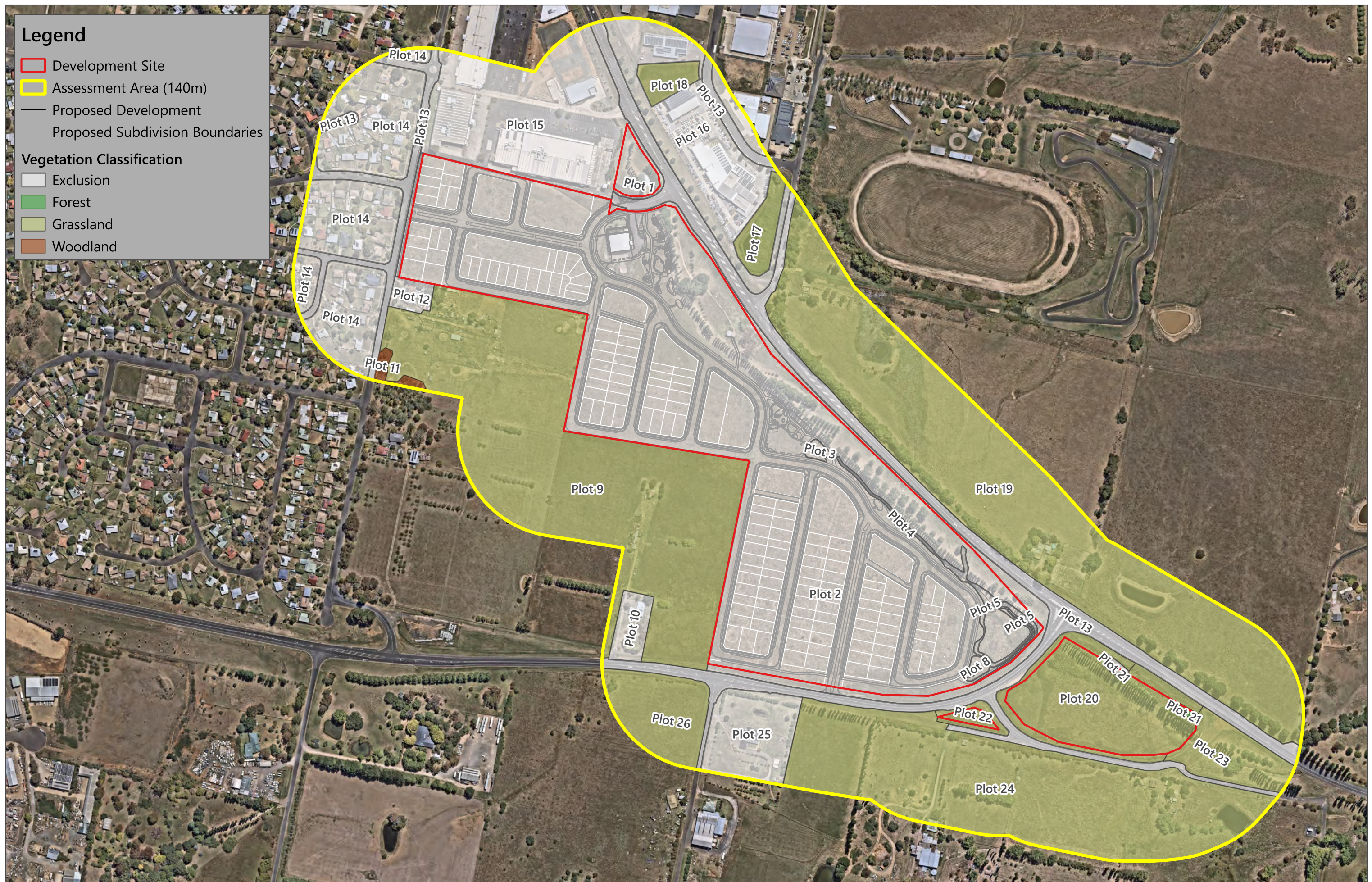
Plot 24	
Vegetation Description	Land to the south of Brabham Way and Dairy Creek Road. Comprises unmanaged grassland, rows of trees along fencing/boundaries and scattered trees otherwise. Tree configuration does not warrant higher classification.
Existing Classification	Grassland
Post Development Classification	Grassland
DIRECTION 192 deg(T) 698264 6312368 ACCURACY 6 m DATUM WGS84 Redmond Place, Orange D 2025-03-14 10:21:54+11:00	DIRECTION 249 deg(T) 698093 6312397 ACCURACY 2 m DATUM WGS84 Redmond Place, Orange D 2025-03-14 10:18:38+11:00
Plate 97: Plot 24	Plate 98: Plot 24
DIRECTION 197 deg(T) 698074 6312402 ACCURACY 5 m DATUM WGS84 Redmond Place, Orange D 2025-03-14 10:18:18+11:00	DIRECTION 191 deg(T) 697949 6312427 ACCURACY 2 m DATUM WGS84 Redmond Place, Orange D 2025-03-14 10:14:23+11:00
Plate 99: Plot 24	Plate 100: Plot 24
DIRECTION 133 deg(T) 697714 6312471 ACCURACY 4 m DATUM WGS84 Redmond Place, Orange D 2025-03-14 10:11:28+11:00	DIRECTION 174 deg(T) 697714 6312471 ACCURACY 4 m DATUM WGS84 Redmond Place, Orange D 2025-03-14 10:11:25+11:00
Plate 101: Plot 24	Plate 102: Plot 24

Plot 25	
Vegetation Description	Managed vegetation and non-vegetated areas around the existing dwelling on Lot 2 DP 1262729.
Existing Classification	A1.10 Low threat vegetation – exclusions
Post Development Classification	A1.10 Low threat vegetation – exclusions
	
Plate 103: Plot 25	Plate 104: Plot 25
	
Plate 105: Plot 25	Plate 106: Plot 25

Plot 26	
Vegetation Description	Unmanaged grassland with scattered/rows of trees on land on the south western corner of the intersection of Brabham Way and Calton Road.
Existing Classification	Grassland
Post Development Classification	Grassland
	
Plate 107: Plot 26	Plate 108: Plot 26

2.3 Effective Slope

The topography for the site is shown in **Figure 13**. To determine the effective slope, 2m contour data has been sourced from the NSW Elevation Data Service (NSW Government n.d.). The contour data was verified by ground truthing during the site inspection.



0 200 400 m

1:4,500 @ A3

Source: NearMap; DCS Spatial Services
Ref: 24142

Figure 11: Vegetation Classification Plan (Overall)



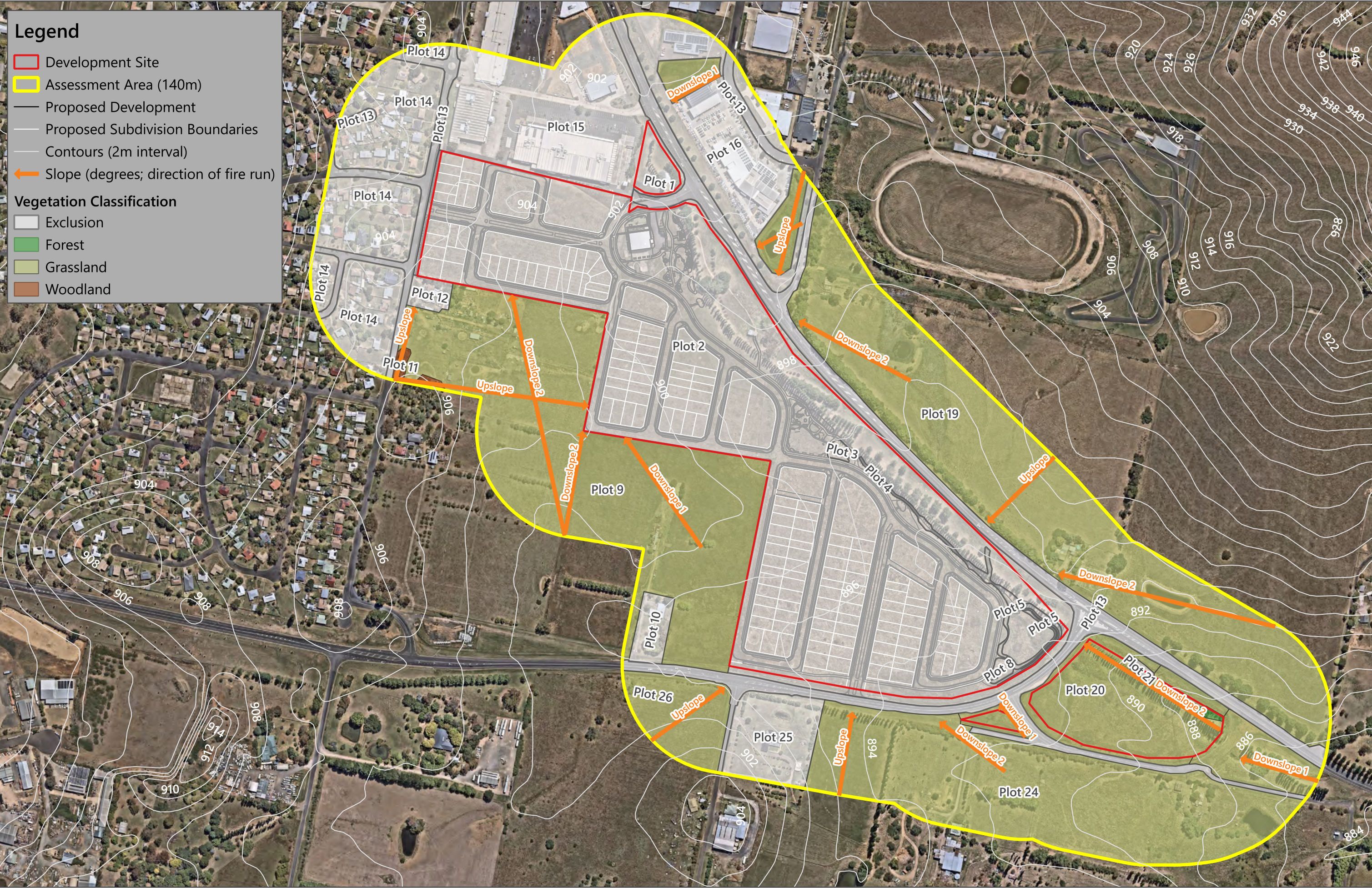
Legend

- Development Site
- Assessment Area (140m)
- Proposed Development
- Proposed Subdivision Boundaries



Source: NearMap; DCS Spatial Services
Ref: 24142

Figure 12: Vegetation Classification Plan (Part)



Source: NearMap; DCS Spatial Services
Ref: 24142

Figure 13: Slope

2.4 Fire Weather

The subject site is located within the Orange City Council LGA. Pursuant to A1.6 of the PBP and the RFS' NSW Local Government Areas FDI (NSW Rural Fire Service 2017), the relevant Fire Danger Index (FDI) for the site is 80.

2.5 Asset Protection Zone Determination

Asset Protection Zones (APZ) have been determined for the developable parts of the site based on Table A1.12.3 of PBP. The detailed APZ calculations for each lot are provided in **Table 2**.

Table 2: APZ Determination

Plot	Vegetation Classification	Effective Slope	APZ Required
1	Exclusion	N/A	N/A
2	Exclusion	N/A	N/A
3	Exclusion	N/A	N/A
4	Exclusion	N/A	N/A
5	Exclusion	N/A	N/A
6	Exclusion	N/A	N/A
7	Exclusion	N/A	N/A
8	Exclusion	N/A	N/A
9	Grassland	Downslope >0°-5°	11m
10	Exclusion	N/A	N/A
11	Woodland	Upslope	11m
12	Exclusion	N/A	N/A
13	Exclusion	N/A	N/A
14	Exclusion	N/A	N/A
15	Exclusion	N/A	N/A
16	Exclusion	N/A	N/A
17	Grassland	Downslope >0°-5°	11m
18	Grassland	Downslope >0°-5°	11m
19	Grassland	Downslope >0°-5°	11m
20	Grassland	Downslope >0°-5°	11m
21	Forest	Downslope >0°-5°	25m*
22	Grassland	Downslope >0°-5°	11m
23	Grassland	Downslope >0°-5°	11m
24	Grassland	Downslope >0°-5°	11m
25	Exclusion	N/A	N/A
26	Grassland	Upslope	10m

Table 2: APZ Determination

Plot	Vegetation Classification	Effective Slope	APZ Required
Notes:			
* Whilst Plot 22 requires a 25m APZ, Plot 21 being closer to the site will have a more dominant APZ requirement.			

Within the subject site, a minimum 11m APZ is therefore required to be provided. **Figure 14** shows the minimum required APZ and the extent of the APZ to be provided as part of the development.

2.6 BAL Determination

The Bushfire Attack Levels (BAL) have been determined for each of the lots within the subdivision using Table A1.12.6 of PBP. The Inputs used in the calculation of the BAL are as outlined in the following table.

Table 3: Bushfire Attack Level (BAL) Determination Inputs

Criteria	Input
Relevant FDI	As per Section 2.4 = 80
Classified vegetation	As per Section 2.2 and Figure 11 and Figure 12
Separation Distance	Measured from the Classified Vegetation and in accordance with Table A1.12.6 of PBP, and as shown on Figure 15 .
Effective Slope	As per Table 2 and Figure 13 .

The BALs are shown within the BAL Contour Map provided in **Figure 15**. This map is provided for the purpose of Section 45(4)(a) of the *Rural Fires Regulation 2022*. This assumes that:

- The minimum required APZ will be provided as shown on **Figure 14**,
- All residential lots will be kept in a managed state at all times (i.e. grass mown kept to a maximum of 10cm height) and any future landscaping in accordance with PBP Appendix 4 APZ requirements, and
- All public open space areas and road reserves are developed in accordance with the Landscape Plans prepared by Oculus as part of the DA and maintained in a managed state (i.e. all non-water management areas to be kept mown to 10cm at all times).

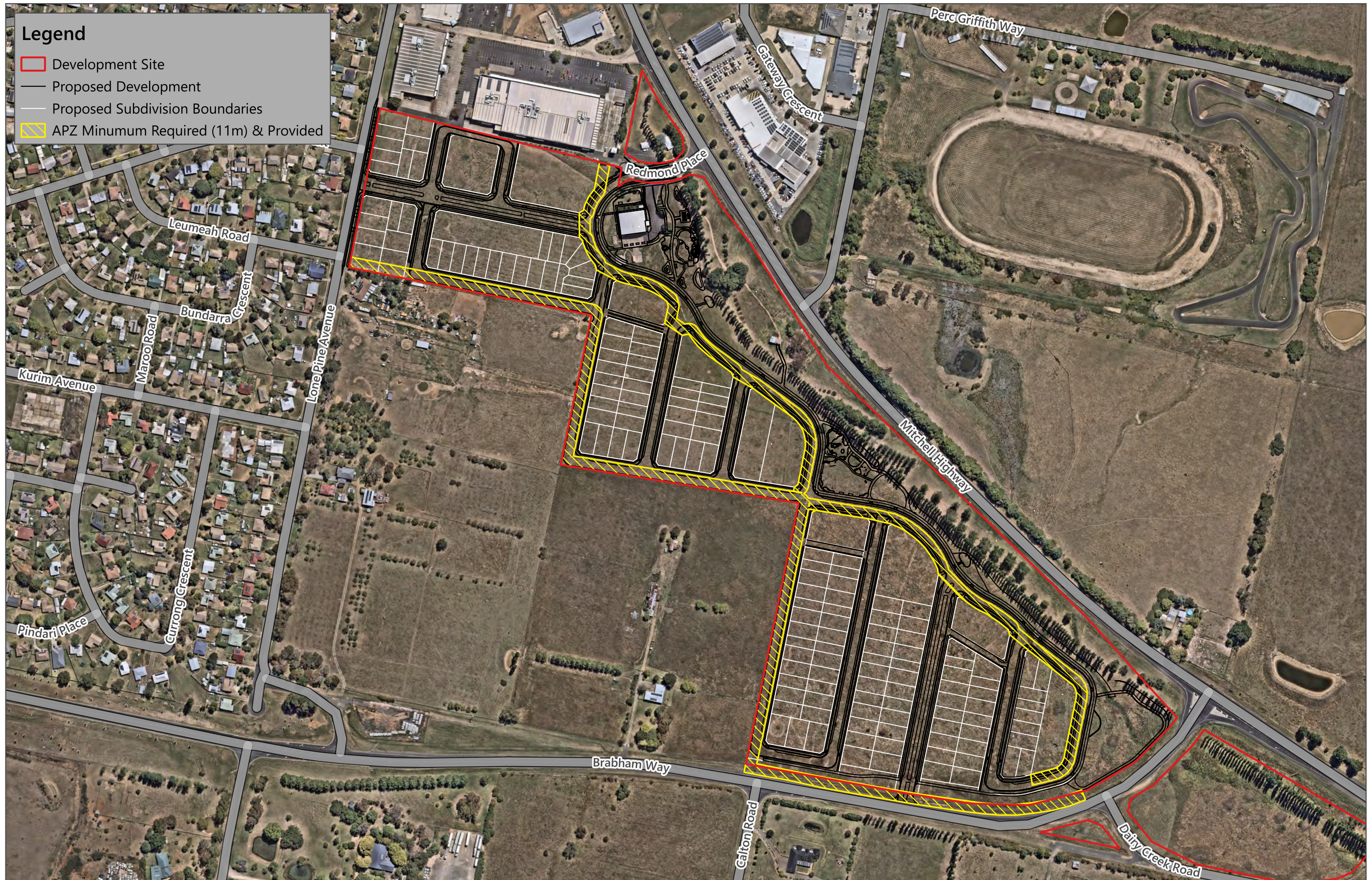
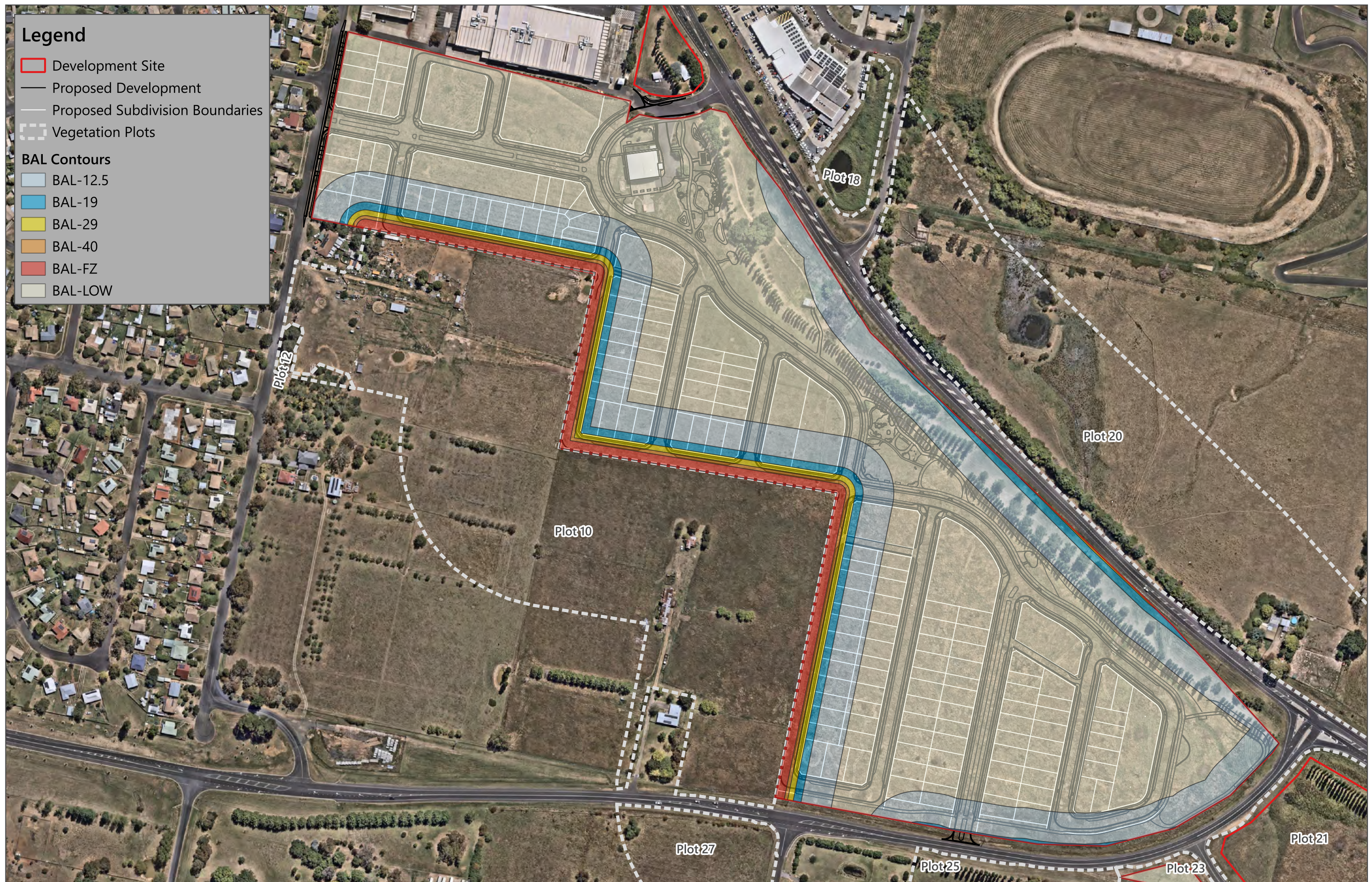


Figure 14: Required & Proposed APZs



0 100 200 m

1:3,000 @ A3

Source: NearMap; DCS Spatial Services
Ref: 24142

Figure 15: BAL Contour Map

3 Bush Fire Protection Measures

3.1 Introduction

Subdivisions that will accommodate residential land uses is required to comply with the Bush Fire Protection Measures (BFPM) outlined in Section 5.3 of PBP. There are six key BFPMs outlined by PBP:

- Asset Protection Zones and Defendable Space;
- Construction Standards and Design;
- Access Standards (public roads, private access and fire trails);
- Water Supply and Utility Services;
- Emergency Management Arrangements; and
- Landscaping

The BFPMs relevant to the development have been considered in **Section 3.4**. **Figure 16** illustrates the BFPM as applied to the development.

PBP requires consideration of the development in relation to the aims and objectives of PBP and also the objectives for subdivision. These matters have been considered respectively in **Sections 3.2** and **3.3**.

3.2 PBP Aims & Objectives

The aim of PBP is:

... to provide for the protection of human life and minimise impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment.

The objectives of PBP are to:

- afford buildings and their occupants protection from exposure to a bush fire;
- provide for a defendable space to be located around buildings;
- provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;
- ensure that appropriate operational access and egress for emergency service personnel and occupants is available;
- provide for ongoing management and maintenance of BPMs; and
- ensure that utility services are adequate to meet the needs of firefighters.

The subdivision has been designed to provide for developable areas within each of the lots that will have radiant heat levels of less than 29kW/m² and avoid flame contact, thus providing for appropriate separation to the hazards. The subject lot layout in conjunction with the bush fire protection measures will provide for safe operational access and egress for emergency services personnel and possible residents within the subdivision, as well as sufficient water supply. Therefore, the proposed development is considered to be consistent with the objectives of PBP.

3.3 PBP Objectives for Subdivisions

Section 4.1.2 of PBP contains the specific objectives for subdivisions:

- minimise perimeters of the subdivision exposed to the bush fire hazard (hourglass shapes, which maximise perimeters and create bottlenecks should be avoided);
- minimise vegetated corridors that permit the passage of bush fire towards buildings;
- provide for the siting of future dwellings away from ridge-tops and steep slopes, within saddles and narrow ridge crests;
- ensure that APZs between a bush fire hazard and future dwellings are effectively designed to address the relevant bush fire attack mechanisms;
- ensure the ongoing maintenance of APZs;
- provide adequate access from all properties to the wider road network for residents and emergency services;
- provide access to hazard vegetation to facilitate bush fire mitigation works and fire suppression; and

- ensure the provision of an adequate supply of water and other services to facilitate effective firefighting.

In complying with the BFPM, the proposed development complies with objectives for subdivisions outlined above.

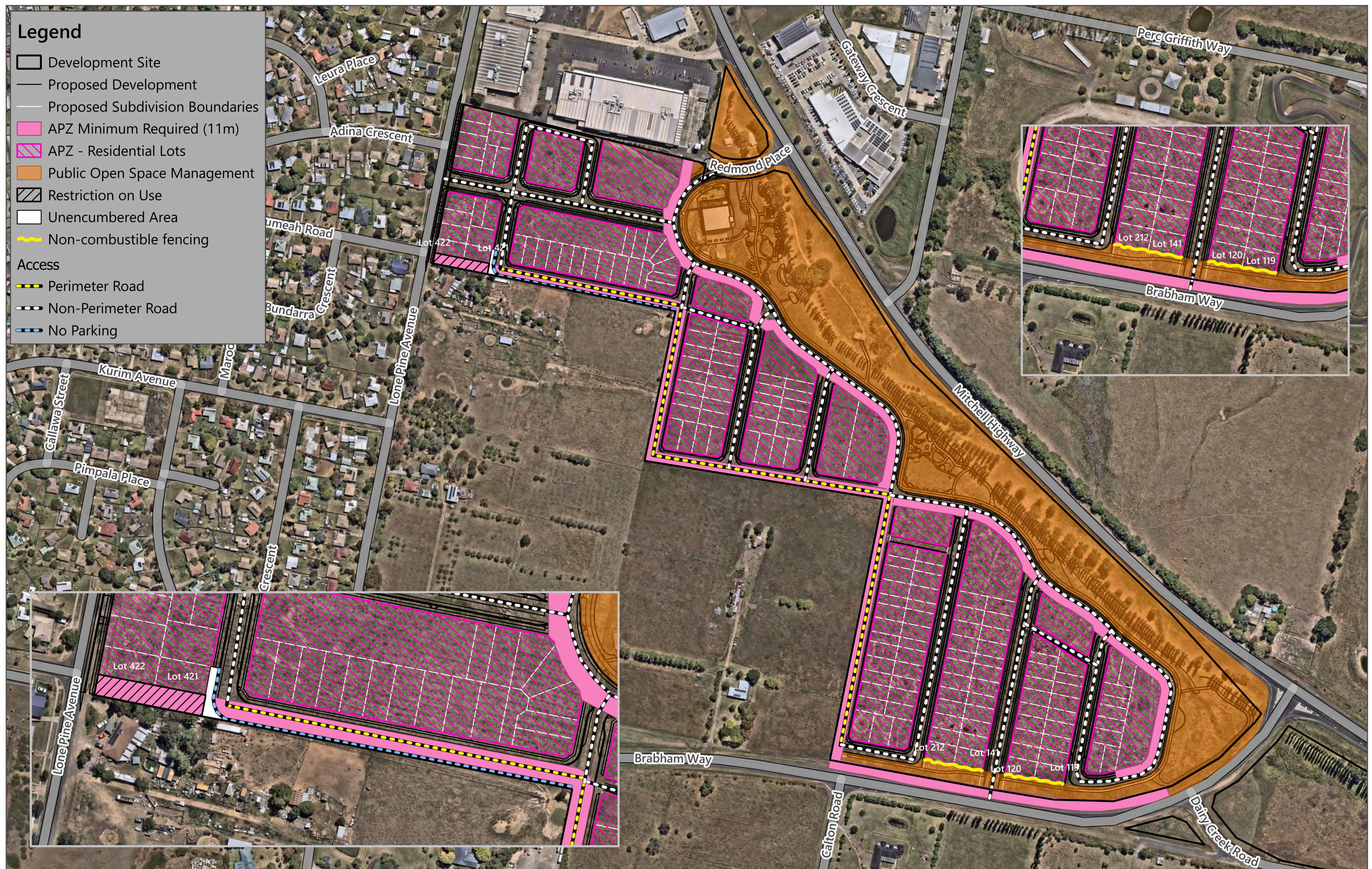
3.4 Bush Fire Protection Measures

3.4.1 Asset Protection Zones & Defendable Space

The intent of measures for the Asset Protection Zone (APZ) BFPM is:

To provide sufficient space and maintain reduced fuel loads to ensure radiant heat levels at the buildings are below critical limits and prevent direct flame contact.

The following table outlines the Performance Criteria and associated Acceptable Solutions for the APZ BFPM, and how the development responds.



Source: NearMap; NSW Spatial Services
Ref: 24142

Figure 16: Bush Fire Protection Measures

Table 4: Asset Protection Zone (APZ) Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
		Acceptable Solution	Performance Solution	Not Applicable	
The intent may be achieved where:					
Asset Protection Zones					
Potential building footprints must not be exposed to radiant heat levels exceeding 29 kW/m² on each proposed lot.	APZs are provided in accordance with Tables A1.12.2 and A1.12.3 based on the FFDI.	☒	☐	☐	As outlined in Section 2.5 and shown on Figure 14 , the proposed development will be provided with compliant APZs determined in accordance with Table A1.12.3 of PBP.
APZs are managed and maintained to prevent the spread of a fire towards the building.	APZs are managed in accordance with the requirements of Appendix 4.	☒	☐	☐	The APZ is to be managed in accordance with the Inner Protection Area (IPA) requirements of Appendix 4 of PBP (and contained in Appendix E of this report).
The APZs is provided in perpetuity	APZs are wholly within the boundaries of the development site	☒	☒	☐	APZ is wholly within the subject site and adjacent road reserves as shown in Figure 16 . A Performance Solution is provided in Section 3.4.1.1 for the APZ provided in the adjacent road reserve.
APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised	APZs are located on lands with a slope less than 18 degrees.	☒	☐	☐	The APZ will be located on land with a slope of less than 18 degrees.

Table 4: Asset Protection Zone (APZ) Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
		Acceptable Solution	Performance Solution	Not Applicable	
The intent may be achieved where:					
Landscaping					
landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.	Landscaping is in accordance with Appendix 4; and	☒	☒	☐	Any future landscaping of the lots is to be in accordance with the requirements of Appendix 4 of PBP (and contained in Appendix E of this report). A performance solution is provided in Section 3.4.1.2 for the landscaping within the Public Open Space/Road Reserve Areas which do not form part of the minimum required APZ Areas.
	Fencing is constructed in accordance with section 7.6.	☒	☐	☐	Any future fencing is to be constructed in accordance with section 7.6 of PBP.

3.4.1.1 Performance Solution – APZ

APZs are required to be wholly within the boundaries of the development site. The APZ for part of the development is proposed to be provided within the Brabham Way road reserve adjacent to the site as shown on **Figure 16**, which does not comply with the Acceptable Solution.

Pursuant to Section 1.4.5 of PBP:

Performance based solutions must provide substantiated evidence and clearly demonstrate how the specific objectives and performance criteria are to be satisfied.

Furthermore, Section A2.4 of PBP requires:

For performance based applications, it must be demonstrated how the product, design or material can meet the performance criteria of this document including the intent of measures and also, the aim and objectives.

The Intent and Performance Criteria are outlined in the table below.

Table 5: Applicable Performance Criteria & Acceptable Solutions for APZs

Intent	Performance Criteria	Acceptable Solution
To provide sufficient space and maintain reduced fuel loads to ensure radiant heat levels at the buildings are below critical limits and prevent direct flame contact.	The APZs is provided in perpetuity.	APZs are wholly within the boundaries of the development site

To achieve an appropriate APZ, it is necessary to demonstrate that the performance solution complies with the Performance Criteria and Intent of the provision. It is proposed in this instance to demonstrate this through evidence to demonstrate that the design meets the Performance Criteria and intent.

The performance solution is as follows:

- An 11m wide APZ is to be provided extending from the northern extent of the bitumen pavement of Brabham Way northwards for 11m as shown in **Figure 16**.
- This APZ area is to be managed by Orange City Council in perpetuity to an APZ standard.
- This APZ area is to be managed by Orange City Council in perpetuity along with the adjacent public open space areas. It will form part of the road reserve and public reserve areas associated with the site.

The Performance Solution will achieve the Performance Criteria and Intent as it will:

- Provide an APZ, sized as required by Table A.12.3 of PBP, to the interface of the development with the bush fire prone vegetation to the south of the site, thus providing sufficient space and maintenance of fuel loads to ensure that radiant heat levels at the future buildings will be below critical limits and prevent direct flame contact, and
- Provide an APZ on land that will be managed in perpetuity by Orange City Council as part of the overall public open space management of the site, thus ensuring permanent management of the land to achieve the requirement bushfire management outcomes.

The performance solution has demonstrated that it is consistent with the Performance Criteria and the Intent of the BFPM.

3.4.1.2 Performance Solution – Landscaping

In order to reduce the urban heat island effect, the proposed development includes provision of significant greening across the site, including the public domain areas of the Public Open Space and road reserve areas. The requirement for high levels of canopy cover originates from the site-specific Development Control Plan (DCP) and the Green Star Communities rating for the development.

PBP requires that landscaping within a development, including public domain areas such as Public Open Space and road reserves, is provided in accordance with Appendix 4 of PBP. Appendix 4 of PBP does not provide specific requirements for landscaping per se, instead providing requirements for APZs. The site, not being subject to a forest vegetation, requires the Inner Protection Area (IPA) standards of the APZ requirements to be applied to landscaping. This requires:

- **Trees:**
 - tree canopy cover should be less than 15% at maturity;
 - trees at maturity should not touch or overhang the building;
 - lower limbs should be removed up to a height of 2m above the ground;
 - tree canopies should be separated by 2 to 5m; and
 - preference should be given to smooth barked and evergreen trees.
- **Shrubs**
 - create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided;
 - shrubs should not be located under trees;
 - shrubs should not form more than 10% ground cover; and
 - clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.
- **Grass**
 - grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
 - leaves and vegetation debris should be removed.

The public domain landscaping will be managed by Orange City Council post development. It will essentially be managed parklands with mown grass with planted trees. There will be pockets of mass planting gardens and grassed swales/basins providing Water Sensitive Urban Design (WSUD) functions. These public domain landscaping areas will not achieve the specific IPA APZ requirements and therefore will not achieve the Acceptable Solution, however, has been designed to be cognisant of the external bushfire threat.

Pursuant to Section 1.4.5 of PBP:

Performance based solutions must provide substantiated evidence and clearly demonstrate how the specific objectives and performance criteria are to be satisfied.

Furthermore, Section A2.4 of PBP requires:

For performance based applications, it must be demonstrated how the product, design or material can meet the performance criteria of this document including the intent of measures and also, the aim and objectives.

The Intent and Performance Criteria are outlined in the table below.

Table 6: Applicable Performance Criteria & Acceptable Solutions for Landscaping

Intent	Performance Criteria	Acceptable Solution
To provide sufficient space and maintain reduced fuel loads to ensure radiant heat levels at the buildings are below critical limits and prevent direct flame contact.	Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.	Landscaping is in accordance with Appendix 4

To achieve appropriate landscaping, it is necessary to demonstrate that the performance solution complies with the Performance Criteria and Intent of the provision. It is proposed in this instance to demonstrate this through evidence to demonstrate that the design meets the Performance Criteria and intent.

The performance solution is as follows:

- The landscaping of the public domain areas of the development (other than the specified required APZ) is to be provided as outlined on the Landscape Plans in **Appendix C**.
- All grassed areas, other than the areas with designated Water Sensitive Urban Design (WSUD) functions, are to be kept mown to a maximum height of 10cm at all times.
- The street trees are to be provided in linear rows with mown turf and paving beneath (footpaths, trafficable permeable paving, and vehicular crossings). The orientation/ configuration of this vegetation will be akin to a windbreak.
- The areas of mass planting within the Public Open Space areas are provided in narrow strips (3m-8m) and very small fragmented areas that are surrounded by either hard paved surfaces, non-vegetated areas, standing water basins, or managed turf.
- Trees within the public domain areas are to be kept pruned so as to not overhang any dwellings on the residential allotments.
- Fencing that is solid and non-combustible with a minimum height of 1.2m is to be provided along the southern boundary of proposed Lots 119, 120, 141, and 212 which directly abut the Public Open Space reserve (refer **Figure 16**).
- The Public Open Space reserve is predominantly bound on both its internal and external sides by public roads, the Mitchell Highway and Brabham Way on the external sides and the new subdivision roads internally.

The Performance Solution will achieve the Performance Criteria and Intent as:

- The vegetation within the public domain areas has been designed to be fragmented and interspersed with non-vegetated areas or areas of well managed vegetation or in a formation akin to a windbreak.
- The public domain vegetation is separated from external bushfire hazards that will remain post development by large arterial roads or otherwise by APZs.
- The design of the public domain landscaping and its context therefore would not provide the ability for a fire to develop within the vegetation on site such that it would constitute a bushfire hazard, and consequently will:
 - o minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions, and
 - o provide sufficient space and maintain reduced fuel loads to ensure radiant heat levels at the buildings are below critical limits and prevent direct flame contact.

The performance solution has demonstrated that it is consistent with the Performance Criteria and the Intent of the BFPM.

3.4.2 Construction Standards & Design

No buildings are proposed as part of this subdivision.

3.4.3 Access

The intent of measures for the Access BFPM is:

to provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area.

The following table outlines the Performance Criteria and associated Acceptable Solutions for the Access BFPM, and how the development responds.

Table 7: Access Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
		Acceptable Solution	Performance Solution	Not Applicable	
The intent may be achieved where:					
Access (General Requirements)					
Firefighting vehicles are provided with safe, all-weather access to structures.	Property access roads are two-wheel drive, all-weather roads;	☒	☐	☐	All roads are to be two wheeled drive, all weather roads.
	Perimeter roads are provided for residential subdivisions of three or more allotments;	☒	☒	☐	A Perimeter Road has been provided at the interface of the development site with the directly adjacent off site bushfire hazard as shown on Figure 16 . A very small (~10m) section of this interface does not contain a perimeter road at the western extent of the perimeter road. A Performance Based Solution has been prepared in Section 3.4.3.1 .
	Subdivisions of three or more allotments have more than one access in and out of the development;	☒	☐	☐	The development will have three (3) access points to the existing public road network. If the development is constructed in stages, it is to ensure all allotments 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 traffic management devices are to be constructed to facilitate access by emergency services vehicles.

Table 7: Access Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
		Acceptable Solution	Performance Solution	Not Applicable	
The intent may be achieved where:					
	Maximum grades for sealed roads do not exceed 15 degrees and an average grade of not more than 10 degrees or other gradient specified by road design standards, whichever is the lesser gradient;	☒	☐	☐	Grades are to not exceed 15 degrees sealed road/10 degrees unsealed road.
	All roads are through roads;	☒	☐	☐	All roads are to be 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;	☒	☐	☐	No dead end roads are proposed as part of the development. If the development is constructed in stages, it is to ensure that any dead end roads do not exceed 200m in length and are provided with a minimum 12 metres outer radius turning circle, and be clearly sign posted as a dead end
	Where kerb and guttering is provided on perimeter roads, roll top kerbing should be used to the hazard side of the road;	☒	☐	☐	Roll top kerbing is to be used on the hazard side of perimeter roads.
	Where access/egress can only be achieved through forest, woodland and heath vegetation, secondary access shall be provided to an alternate point on the existing public road system; and	☐	☐	☒	No access through forest, woodland or heath vegetation.
	One way only public access roads are no less than 3.5 metres wide and have designated parking bays with hydrants	☒	☐	☐	No one way only public access roads.

Table 7: Access Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
The intent may be achieved where:		Acceptable Solution	Performance Solution	Not Applicable	
	located outside of these areas to ensure accessibility to reticulated water for fire suppression.				
The capacity of access roads is adequate for firefighting vehicles.	The capacity of perimeter and non-perimeter road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges/causeways are to clearly indicate load rating	☒	☐	☐	The capacity of the road surfaces will be sufficient to carry a fully laden fire fighting vehicle.
There is appropriate access to water supply.	Hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression;	☒	☐	☐	Hydrants are located outside of parking reserves and road carriageways.
	Hydrants are provided in accordance with the relevant clauses of AS 2419.1: 2021 Fire hydrant installations – System design, installation and commissioning;; and	☒	☐	☐	Hydrants to be provided in accordance with AS 2419.1: 2021 where required.

Table 7: Access Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
		Acceptable Solution	Performance Solution	Not Applicable	
The intent may be achieved where:					
	There is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.	☐	☐	☒	Reticulated water supply is provided.
Perimeter Roads					
Access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface.	Are two-way sealed roads;	☒	☐	☐	The Perimeter Roads are to be two-way sealed roads.
	Minimum 8m carriageway width kerb to kerb;	☒	☐	☐	The Perimeter Roads are to have a minimum 8m carriageway width kerb to kerb.
	Parking is provided outside of the carriageway width;	☒	☐	☐	Parking on the Perimeter Roads is provided outside of the carriageway width.
	Hydrants are located clear of parking areas;	☒	☐	☐	Hydrants are located clear of parking areas on the Perimeter Roads.
	Are through roads, and these are linked to the internal road system at an interval of no greater than 500m;	☒	☐	☐	All perimeter roads are through roads and are linked to the internal road system at an interval of no more than 500m.
	Curves of roads have a minimum inner radius of 6m;	☒	☐	☐	Curves of the Perimeter Roads are to have a minimum inner radius of 6m.
	The maximum grade road is 15 degrees and average grade of not more than 10 degrees;	☒	☐	☐	The maximum grade of Perimeter Roads is to be 15 degrees and average grade of not more than 10 degrees.

Table 7: Access Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
		Acceptable Solution	Performance Solution	Not Applicable	
The intent may be achieved where:					
	The road crossfall does not exceed 3 degrees; and	☒	☐	☐	The Perimeter Road crossfall is not to exceed 3 degrees.
	A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.	☒	☐	☐	A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is to be provided.
Non-Perimeter Roads					
Access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating.	Minimum 5.5m carriageway width kerb to kerb;	☒	☐	☐	The non-perimeter roads will provide a minimum 5.5m carriageway width kerb to kerb.
	Parking is provided outside of the carriageway width;	☒	☐	☐	Parking for the non-perimeter roads is to be provided outside of the carriageway width.
	Hydrants are located clear of parking areas;	☒	☐	☐	Hydrants are to be located clear of parking areas for the non-perimeter roads.
	Roads are through roads, and these are linked to the internal road system at an interval of no greater than 500m;	☒	☐	☐	All non-perimeter roads are through roads and are linked to the internal road system at an interval of no more than 500m.
	Curves of roads have a minimum inner radius of 6m;	☒	☐	☐	Curves of the non-perimeter roads have are to have a minimum inner radius of 6m.
	The road crossfall does not exceed 3 degrees; and	☒	☐	☐	Cross fall on the non-perimeter roads is not to exceed 3 degrees.

Table 7: Access Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
		Acceptable Solution	Performance Solution	Not Applicable	
The intent may be achieved where:					
	A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.	☒	☐	☐	A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is to be provided.
Property Access					
Firefighting vehicles can access the dwelling and exit the property safely	There are no specific access requirements in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles.	☒	☐	☐	All lots are expected to comply with this requirement.
	In circumstances where this cannot occur, the following requirements apply:	☐	☐	☒	N/A as complies with above.
	• minimum 4m carriageway width;	☐	☐	☒	
	• in forest, woodland and heath situations, rural property access roads have passing bays every 200m that are 20m long by 2m wide, making a minimum trafficable width of 6m at the passing bay;	☐	☐	☒	

Table 7: Access Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
		Acceptable Solution	Performance Solution	Not Applicable	
The intent may be achieved where:					
	a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches;	☐	☐	☒	
	provide a suitable turning area in accordance with Appendix 3;	☐	☐	☒	
	curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress;	☐	☐	☒	
	the minimum distance between inner and outer curves is 6m;	☐	☐	☒	
	the crossfall is not more than 10 degrees;	☐	☐	☒	
	maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads; and	☐	☐	☒	
	a development comprising more than three dwellings has access by dedication of a road and not by right of way.	☐	☐	☒	
	Note: Some short constrictions in the access may be accepted where they are not less than 3.5m wide, extend for no				

Table 7: Access Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
		Acceptable Solution	Performance Solution	Not Applicable	
The intent may be achieved where:					
	more than 30m and where the obstruction cannot be reasonably avoided or removed. The gradients applicable to public roads also apply to community style development property access roads in addition to the above.				

3.4.3.1 Performance Based Solution – Perimeter Road

Perimeter Roads are required to be provided for residential subdivisions of three (3) or more allotments. Perimeter Roads are utilised to separate classified vegetation from residential land. They provide “space to conduct active firefighting operations and hazard reduction activities” (NSW Rural Fire Service 2019)p. 29. In relation to the proposed development, perimeter roads would ordinarily be required adjacent to Plot 10, being the classified vegetation affecting the development. It is noted that the existing public roads of the Mitchell Highway and Brabham Place provide the required Perimeter Roads for the other off site hazards.

The subject site is an existing residential zoned area, located contiguous to existing residential and bulky goods areas. The development provides a perimeter road for all of the interface with Plot 10, apart from a small (<10m) section at the north western extent of Plot 10 as shown in **Figure 17**. It was originally intended that the perimeter road would continue to the west to intersect with Lone Pine Avenue. However, as the design progressed, it was determined that the new intersection would form an offset four way intersection with Leumeah Road, which has been determined to be unacceptable from a traffic engineering and safety perspective. Further consideration was given to providing a narrow park in this location including a bollarded vehicular access, however, this was deemed unacceptable from a safety and security perspective.

The development will provide only two (2) lots that are not provided with a perimeter road, and of these, only one (1) is partially directly adjacent to a hazard (i.e. Plot 10).

Pursuant to Section 1.4.5 of PBP:

Performance based solutions must provide substantiated evidence and clearly demonstrate how the specific objectives and performance criteria are to be satisfied.

Furthermore, Section A2.4 of PBP requires:

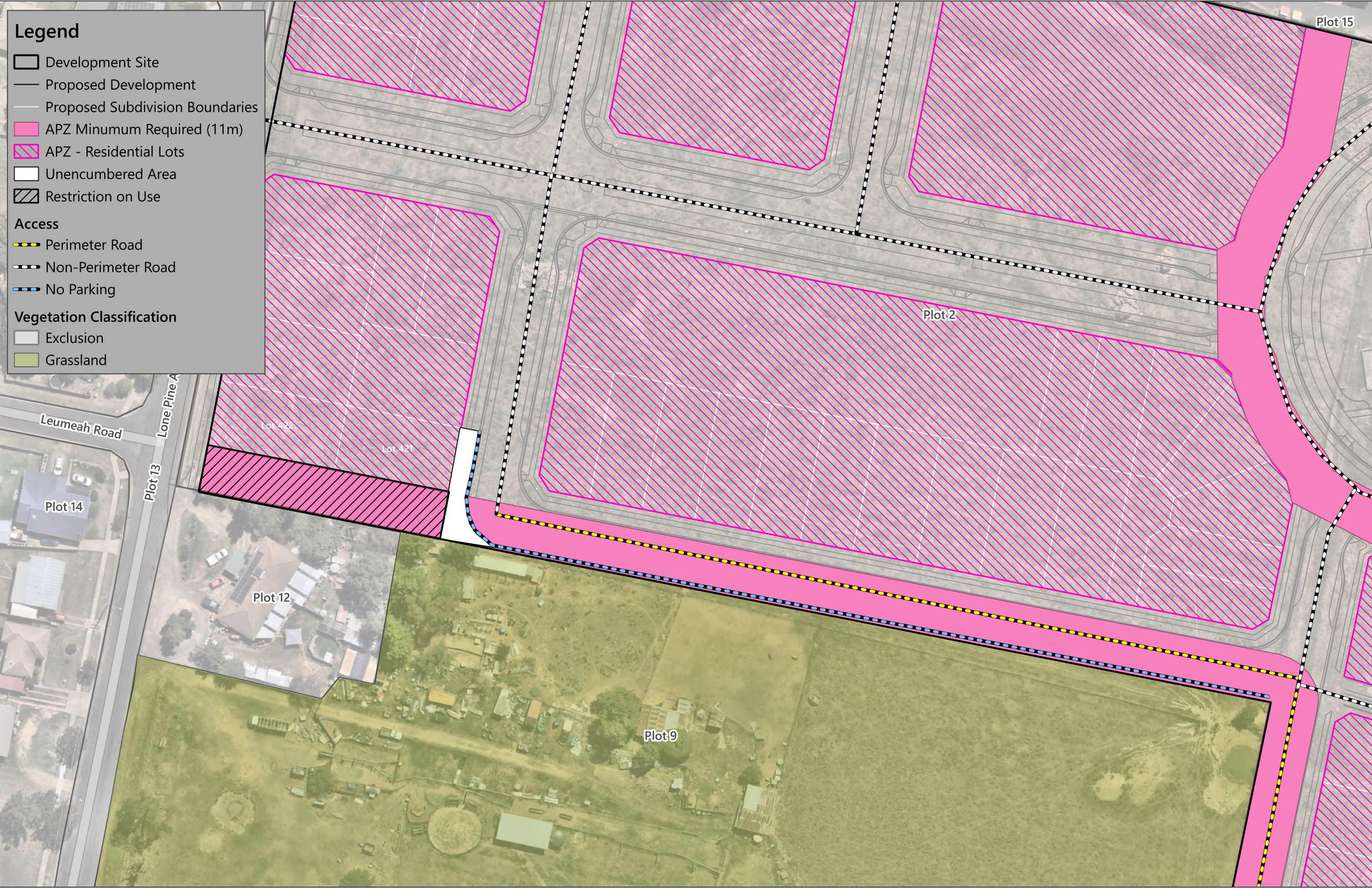
For performance based applications, it must be demonstrated how the product, design or material can meet the performance criteria of this document including the intent of measures and also, the aim and objectives.

The Intent and Performance Criteria are outlined in the table below.

Table 8: Applicable Performance Criteria & Acceptable Solutions for Access – Perimeter Roads

Intent	Performance Criteria	Acceptable Solution
To provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area.	Firefighting vehicles are provided with safe, all-weather access to structures.	Perimeter roads are provided for residential subdivisions of three or more allotments.

To achieve appropriate access, it is necessary to demonstrate that the performance solution complies with the Performance Criteria and Intent of the provision. It is proposed in this instance to demonstrate this through evidence to demonstrate that the design meets the Performance Criteria and intent.



Source: NearMap; DCS Spatial Services
Ref: 24142

Figure 17: Perimeter Road Performance Solution Area

The performance solution is as follows:

- Road 1 (as shown on **Figure 17**) is to be constructed to a Perimeter Road standard, as required by PBP.
- Road 2 (as shown on **Figure 17**) is to be constructed to a Non-Perimeter Road standard, as required by PBP.
- Kerbside parking is to be prohibited along the southern and western sides of Roads 1 and 2 in the location and for the extent as shown on **Figure 17**. No parking signs are to be erected to enforce this requirement.
- An unencumbered area is to be provided in the verge area adjacent to the lot on the western side of the intersection of Roads 1 and 2 in the location and for the extent as shown on **Figure 17**. This area is only permitted to contain grass and other paving to permit vehicular access to the adjacent lot. The purpose of the unencumbered area is to permit the standing and operating of fire fighting vehicles.
- A Restriction on the Use of land is to be applied to the area as shown on **Figure 17** to prohibit the erection of any habitable buildings and require the area to be managed to an IPA standard as an APZ in accordance with Appendix 4 of PBP.
- If the construction of the subdivision is staged in this location, through road access is to be provided at all times. No temporary dead end roads with compliant turning heads are permitted on either Road 1 or 2 as shown in **Figure 17**.

The Performance Solution will achieve the Performance Criteria and Intent as it will:

- Ensure all future habitable development on proposed Lots 1 and 2 are sited to provide an acceptable exposure to bushfire (i.e. BAL-29 or less) and provided with a compliant APZ.
- Direct access to proposed Lot 1 is provided from the existing Lone Pine Avenue public road, which is in a low threat area.
- Direct access to proposed Lot 2 is provided from Roads 1 and 2, which will be provided as PBP compliant roads, with additional standards to ensure that fire fighting appliances can access the lot without encumbrances of parked vehicles or other structures and within an area to be managed to an APZ standard.
- Ensure that two way access is provided at all times in this location.

The performance solution has demonstrated that it is consistent with the Performance Criteria and the Intent of the BFPM.

3.4.4 Services – Water, Electricity & Gas

The intent of measures for the Services – Water, Electricity & Gas BFPM is:

To provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building.

The following table outlines the Performance Criteria and associated Acceptable Solutions for the Services – Water, Electricity and Gas BFPM, and how the development responds.

Table 9: Services – Water, Electricity & Gas Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
		Acceptable Solution	Performance Solution	Not Applicable	
The intent may be achieved where:					
Water Supply					
Adequate water supplies is provided for firefighting purposes.	Reticulated water is to be provided to the development where available;	☒	☐	☐	The subdivision is to be provided with a reticulated water supply.
	A static water and hydrant supply is provided for non-reticulated developments or where reticulated water supply cannot be guaranteed; and	☐	☐	☒	Reticulated water supply to be provided.
	Static water supplies shall comply with Table 5.3d.	☐	☐	☒	No static water supply to be provided.
- Water supplies are located at regular intervals; and - The water supply is accessible and reliable for firefighting operations.	fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS 2419.1: 2021;	☒	☐	☐	Fire hydrant, spacing, design and sizing is to comply with the relevant clauses of Australian Standard AS 2419.1: 2021.
	Hydrants are not located within any road carriageway; and	☒	☐	☐	Hydrants are not to be located within any road carriageway.

Table 9: Services – Water, Electricity & Gas Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
The intent may be achieved where:		Acceptable Solution	Performance Solution	Not Applicable	
	Reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.	☒	☐	☐	A ring main system within the reticulated water supply is to be used for area with perimeter roads.
Flows and pressure are appropriate.	Fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1: 2021.	☒	☐	☐	Fire hydrant flows and pressures are to comply with the relevant clauses of AS 2419.1: 2021.
The integrity of the water supply is maintained.	All above-ground water service pipes are metal, including and up to any taps; and	☒	☐	☐	All above ground pipes and taps are to be metal.
	Above-ground water storage tanks shall be of concrete or metal.	☐	☐	☒	No static water supply proposed.
Electricity Services					
Location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.	Where practicable, electrical transmission lines are underground;	☒	☐	☐	All electrical transmission lines are to be underground.

Table 9: Services – Water, Electricity & Gas Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
		Acceptable Solution	Performance Solution	Not Applicable	
The intent may be achieved where:					
	Where overhead, electrical transmission lines are proposed as follows: - lines are installed with short pole spacing of 30m, unless crossing gullies, gorges or riparian areas; and - no part of a tree is closer to a power line than the distance set out in ISSC3 Guideline for Managing Vegetation Near Power Lines.	☐	☐	☒	No overhead electrical transmission lines proposed.
Gas Services					
Location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.	Reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 - The storage and handling of LP Gas, the requirements of relevant authorities, and metal piping is used;	☐	☐	☒	No reticulated gas is to be installed in the subdivision. No fixed gas cylinders proposed as part of the development.
	All fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side;	☐	☐	☒	No fixed gas cylinders proposed as part of the development.
	Connections to and from gas cylinders are metal;	☐	☐	☒	No fixed gas cylinders proposed as part of the development.

Table 9: Services – Water, Electricity & Gas Bush Fire Protection Measures

Performance Criteria	Acceptable Solution	Development Solution			
		Means of achieving Performance Criteria			Comments
The intent may be achieved where:		Acceptable Solution	Performance Solution	Not Applicable	
	Polymer-sheathed flexible gas supply lines are not used; and	☐	☐	☒	No fixed gas cylinders proposed as part of the development.
	Above-ground gas service pipes are metal, including and up to any outlets.	☐	☐	☒	No reticulated gas is to be installed in the subdivision. No fixed gas cylinders proposed as part of the development.

4 Recommendations

4.1 Summary of Bush Fire Protection Measures

This BFAR has demonstrated that the site is suitable for future residential development as it can achieve the requirements of PBP. The following table provides a summary of the BFMP that must be incorporated into the development to ensure it best protects the development from the effects of bushfire in accordance with the requirements of PBP and other best practice guidelines. The BFPM are also shown on **Figure 16**.

Table 10: Summary of Recommendations

Provision	Measures
Asset Protection Zone	- Prior to the issue of a Subdivision Certificate, an Asset Protection Zone (APZ) to an Inner Protection Area (IPA) standard is to be provided on the site in the location and for the extent as shown in Figure 16 of the Bush Fire Assessment Report prepared by Integrated Consulting dated 28 July 2025. The APZ is to be established and maintained in perpetuity in accordance with the requirements outlined in Appendix 4 of <i>Planning for Bush Fire Protection 2019</i>. If the subdivision is constructed in stages, a minimum distance of 50m outwards from the lots being created and within the DA subject site is to be maintained to the specified APZ standards until such a time as the land is further subdivided in accordance with the DA. - A Restriction on the Use of land is to be applied to the area as shown on Figure 16 of the Bush Fire Assessment Report prepared by Integrated Consulting dated 28 July 2025 to prohibit the erection of any habitable buildings and require the area to be managed to an IPA standard as an APZ in accordance with Appendix 4 of <i>Planning for Bush Fire Protection 2019</i>.
Landscaping	- Any future landscaping of the residential lots is to be established and maintained in perpetuity in accordance with the requirements outlined in Appendix 4 of <i>Planning for Bush Fire Protection 2019</i>. - The landscaping of the Public Domain Areas (i.e. Public Open Space and road reserves) as shown on Figure 16 of the Bush Fire Assessment Report prepared by Integrated Consulting dated 28 July 2025 is to be in accordance with the plans prepared by Oculus and submitted with the DA. The public open space is to be maintained in a managed state (i.e. all non-water management areas to be kept mown to 10cm at all times). - Prior to the issue of a Subdivision Certificate creating proposed Lots 119, 120, 141, and 212, evidence shall be provided to Council to demonstrate that a solid non-combustible fence has been erected along the southern boundary of the abovementioned lots to a height of no less than 1200mm above finished ground level. The fence is to be maintained in perpetuity in accordance with these requirements. - Any future fencing is to be made of either hardwood or non-combustible material. Where the fence is within 6m of a building or in areas of BAL-29 or greater, all fencing is to be made of non-combustible material only.
Access	- Perimeter Roads are to be provided in the location as shown on Figure 16 of the Bush Fire Assessment Report prepared by Integrated Consulting dated 28 July 2025. All Perimeter Roads within the subdivision are to be designed, constructed, and maintained to the following standards: - A minimum sealed trafficable width of 8m kerb to kerb, - Parking is provided outside of the carriageway width, - Curves of roads have a minimum inner radius of 6m,

Table 10: Summary of Recommendations

Provision	Measures
	• A minimum clearance height of 4m above the road, • Crossfall not to exceed 3 degrees, • Maximum gradient 15 degrees for sealed roads, • hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression, • Capacity is sufficient to carry a fully loaded fire fighting vehicle (23 tonnes), and • Traffic management devices are to be designed and constructed to facilitate access by emergency service vehicles.
	• Non-Perimeter Roads are to be provided in the location as shown on Figure 16 of the Bush Fire Assessment Report prepared by Integrated Consulting dated 28 July 2025. All Non-Perimeter Roads within the subdivision are to be designed, constructed, and maintained to the following standards: • A minimum sealed trafficable width of 5.5m kerb to kerb, • Parking is provided outside of the carriageway width, • Curves of roads have a minimum inner radius of 6m, • A minimum clearance height of 4m above the road, • Crossfall not to exceed 3 degrees, • Maximum gradient 15 degrees for sealed roads, • hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression, • Capacity is sufficient to carry a fully loaded fire fighting vehicle (23 tonnes), and • Traffic management devices are to be designed and constructed to facilitate access by emergency service vehicles.
	• All roads are to be through roads. If the subdivision is constructed in stages it is to ensure: • All allotments have more than one access in and out of the development at all times, • Any temporary dead end road has a maximum length of 200m and is provide with a temporary turning head in accordance with Appendix 3 of <i>Planning for Bush Fire Protection 2019</i> and is clearly signposted that it is a dead end road. • For Roads 1 and 2 as shown on Figure 17 in the Bush Fire Assessment Report prepared by Integrated Consulting dated 28 July 2025, through road access is to be provided at all times
	• An unencumbered area is to be provided in the verge area adjacent to the lot on the western side of the intersection of Roads 1 and 2 in the location and for the extent as shown on Figure 16 in the Bush Fire Assessment Report prepared by Integrated Consulting dated 28 July 2025. This area is only permitted to contain grass and other paving to permit vehicular access to the adjacent lot. The purpose of the unencumbered area is to permit the standing and operating of fire fighting vehicles.

Table 10: Summary of Recommendations

Provision	Measures
Water Supply (Reticulated)	- Prior to the issue of a Subdivision Certificate, the development is to be provided with a reticulated water supply system that meets the following specifications: - fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS 2419.1:2021, - hydrants are not located within any road carriageway, - reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads, - fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2021, and - all above-ground water service pipes are metal, including and up to any taps. The reticulated water supply is to maintain in accordance with these requirements and in good working order in perpetuity.
Electricity	- Prior to the issue of a Subdivision Certificate, the development is to be provided with a reticulated electricity supply the meets the following specifications: - Where practicable, electrical transmission lines are underground, and - Were electricity transmission lines are above ground, short pole spacings are to be providing (i.e. less than 30m) and no part of a tree is closer to a power line than the distance set out in ISSC3 Guideline for Managing Vegetation Near Power Lines.

5 Conclusion

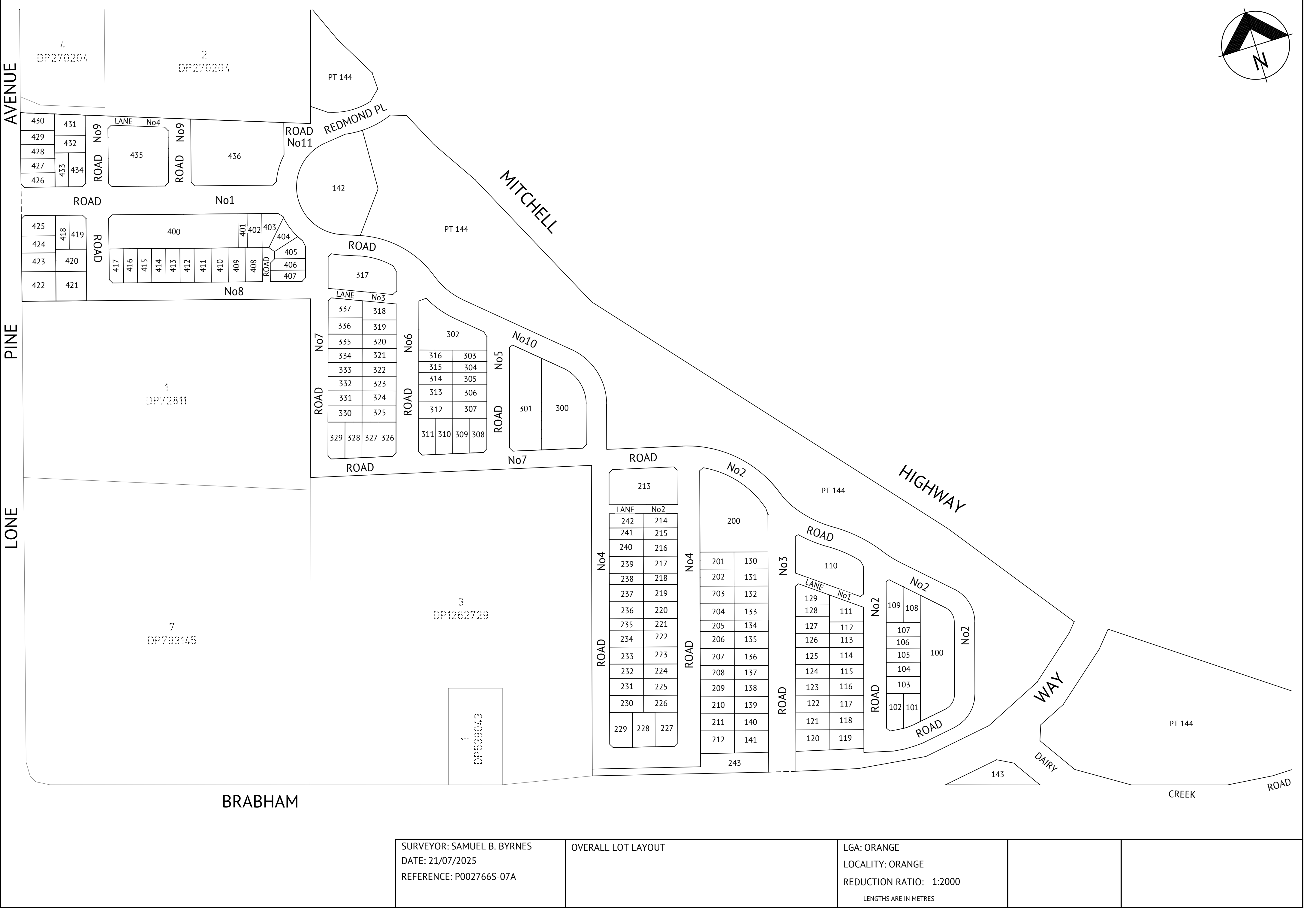
On completion, the proposed subdivision will ensure that all habitable development is located in an area that has an acceptable bushfire hazard level (i.e. $\leq$ BAL-29). With the implementation of the recommendations, as outlined in **Section 4** and as shown on **Figure 9**, the proposed development is considered to be appropriately protected from bushfire and complies with the requirements of PBP. The proposed development is not expected to increase the bushfire risk.

6 References

- Keith. 2004. *Ocean Shores to Desert Dunes: The Native Vegetation of New South Wales and the ACT*. Hurstville: NSW Department of Environment and Conservation.
- NSW Government. n.d. *NSW Elevation Data Service*. Accessed February 10, 2023.
<https://portal.spatial.nsw.gov.au/portal/apps/webappviewer/index.html?id=437c0697e6524d8ebf10adod915bc219>.
- NSW Rural Fire Service. 2019. *Planning for Bush Fire Protection: A guide for councils, planners, fire authorities and developers*. Granville: NSW Rural Fire Service.
- NSW Rural Fire Service. 2022. *Planning For Bush Fire Protection: A Guide for Councils, Planners, Fire Authorities and Developers Addendum November 2022*. Sydney: NSW Rural Fire Service.
- OzArk Environment & Heritage. 2024. *Archaeological Technical Report: Proposed Rezoning & Subdivision - Redmond Place, Orange*. Dubbo: OzArk Environment & Heritage.
- OzArk Environment & Heritage. 2025. *Biodiversity Assessment Report: Redleaf Subdivision*. Dubbo: OzArk Environment & Heritage.

Appendix A

Development Plans



SURVEYOR: SAMUEL B. BYRNES
DATE: 21/07/2025
REFERENCE: P002766S-07A

OVERALL LOT LAYOUT

LGA: ORANGE
LOCALITY: ORANGE
REDUCTION RATIO: 1:2000
LENGTHS ARE IN METRES

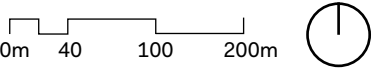
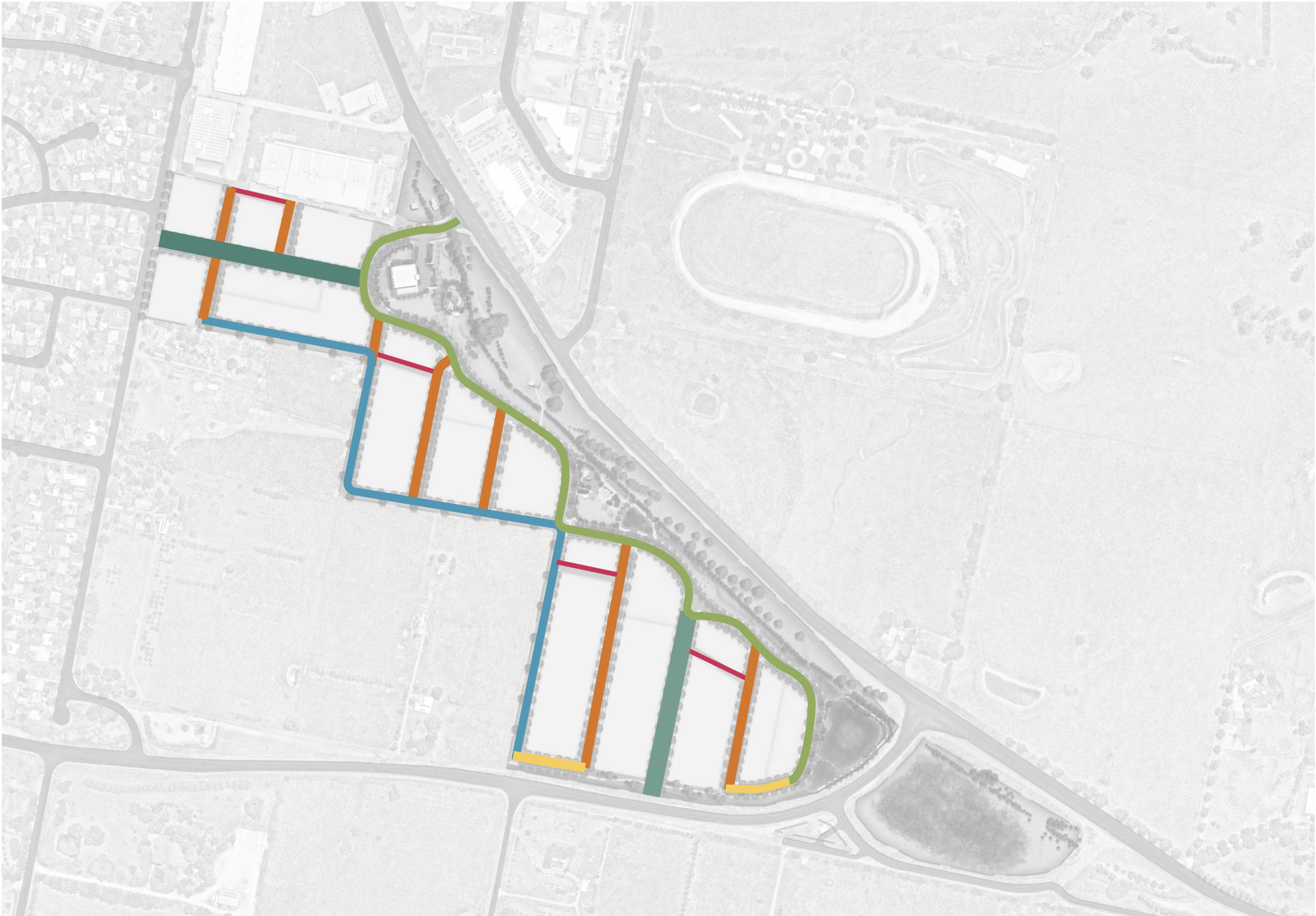
Appendix B

Proposed Access

Street Network

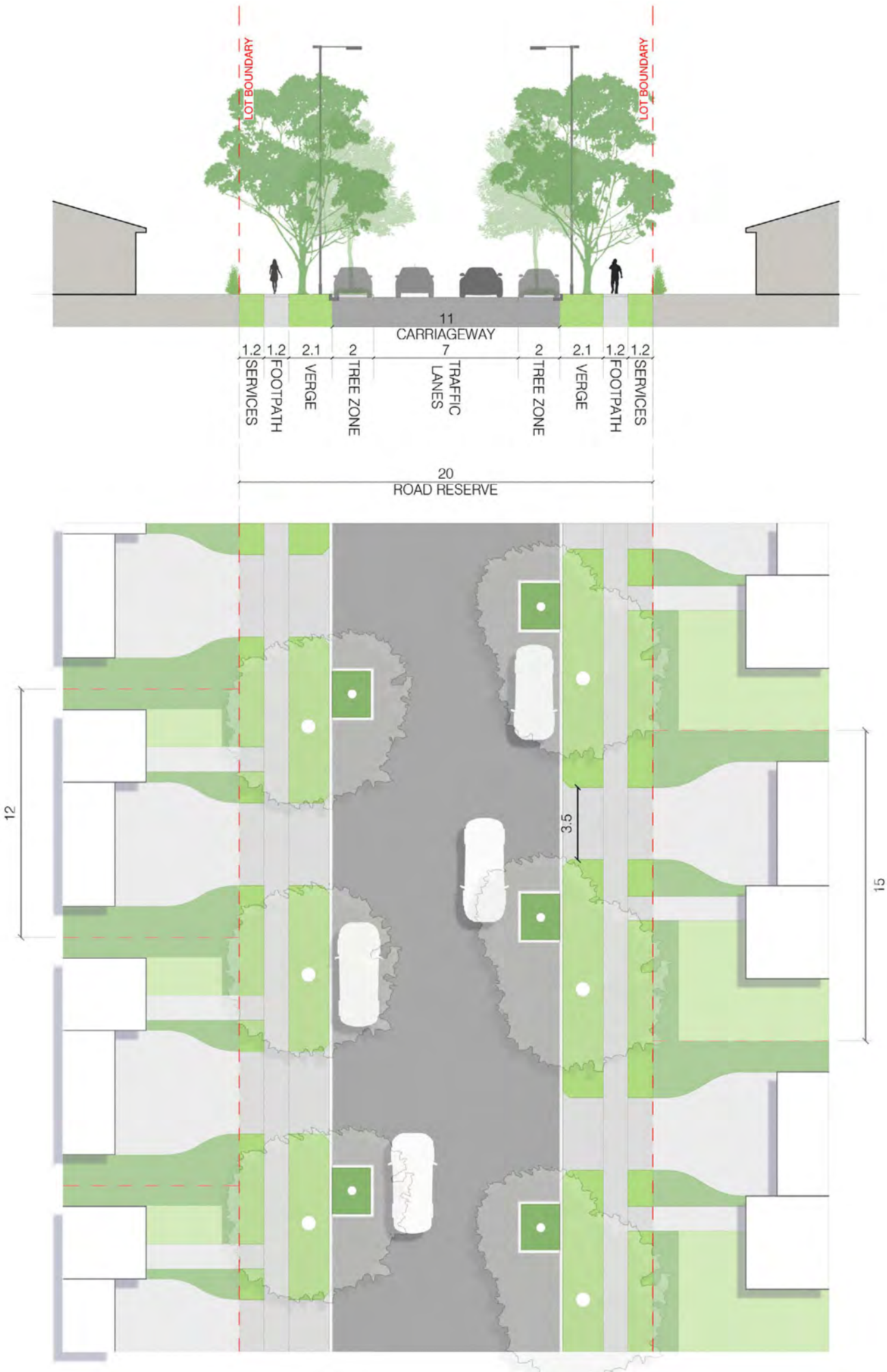
Streets Types

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



Street Network
Local Street

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



Street Network

Park Street

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



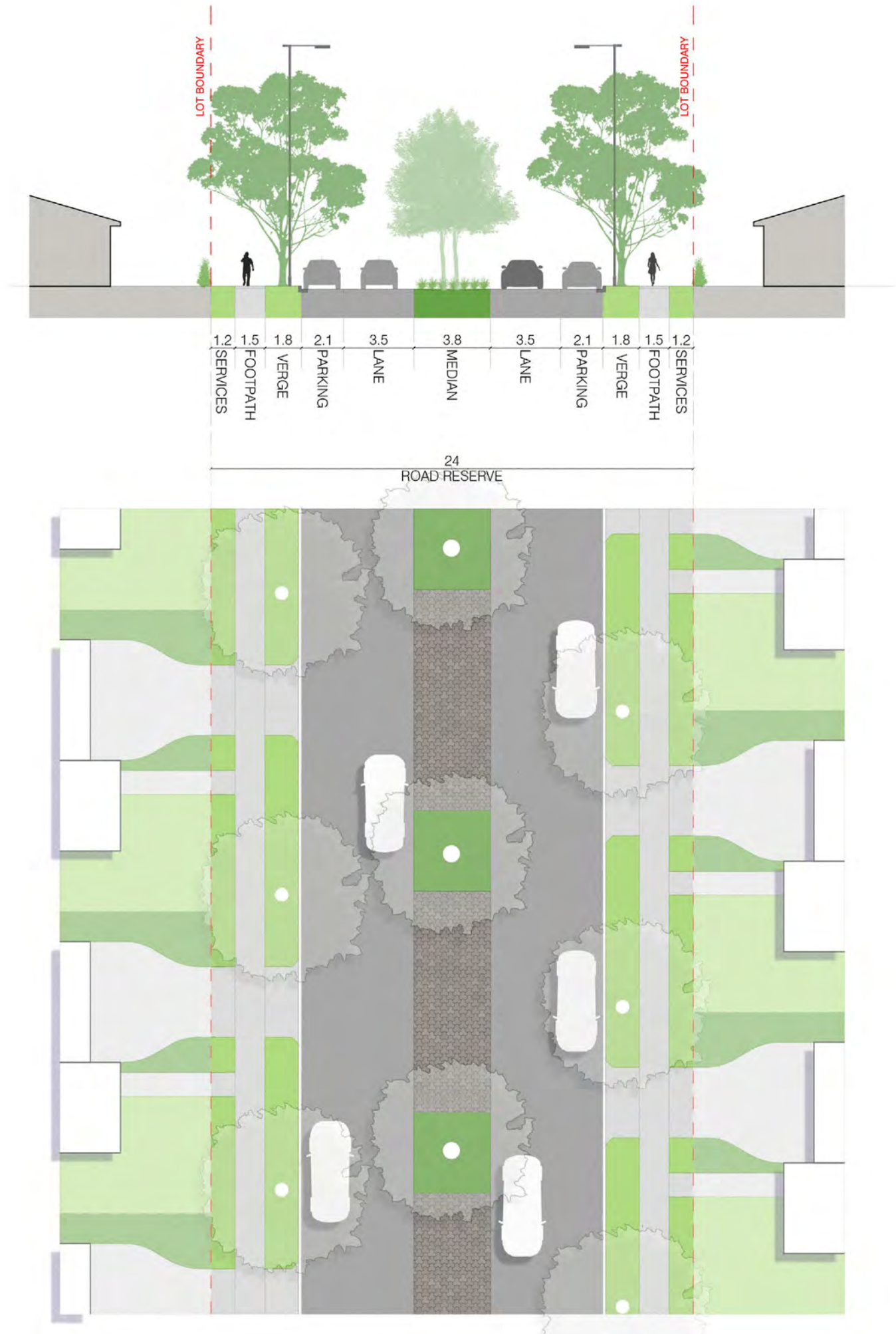
Street Network
Northern Entry Street

- + Create an avenue / green link to open space
- + Median with trees and flush paving
- + Bus route
- + Shared path along northern side



Street Network
Southern Entry Street

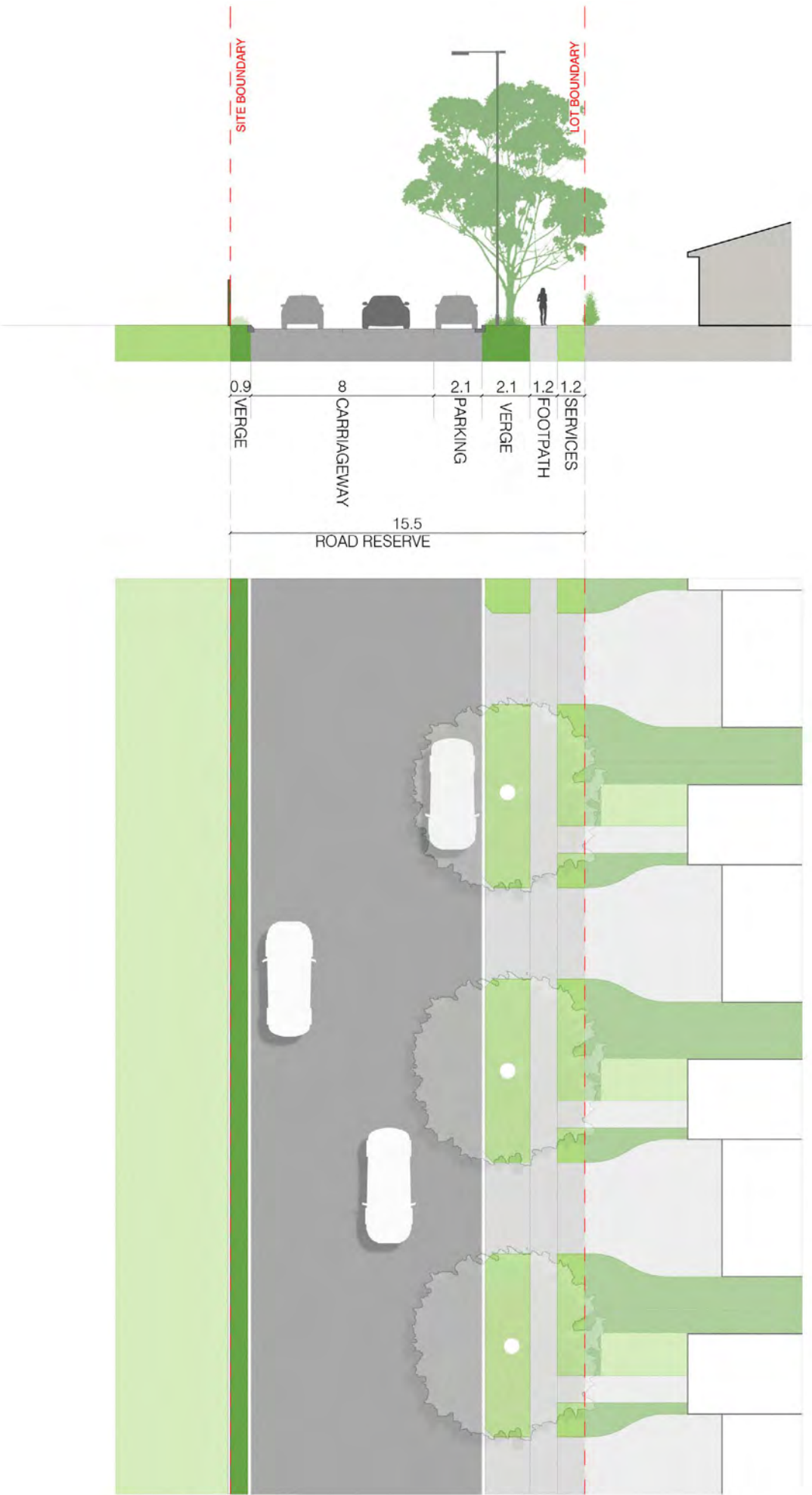
- + Create an avenue / green link to open space
- + Median with trees and flush paving
- + Bus route



Street Network

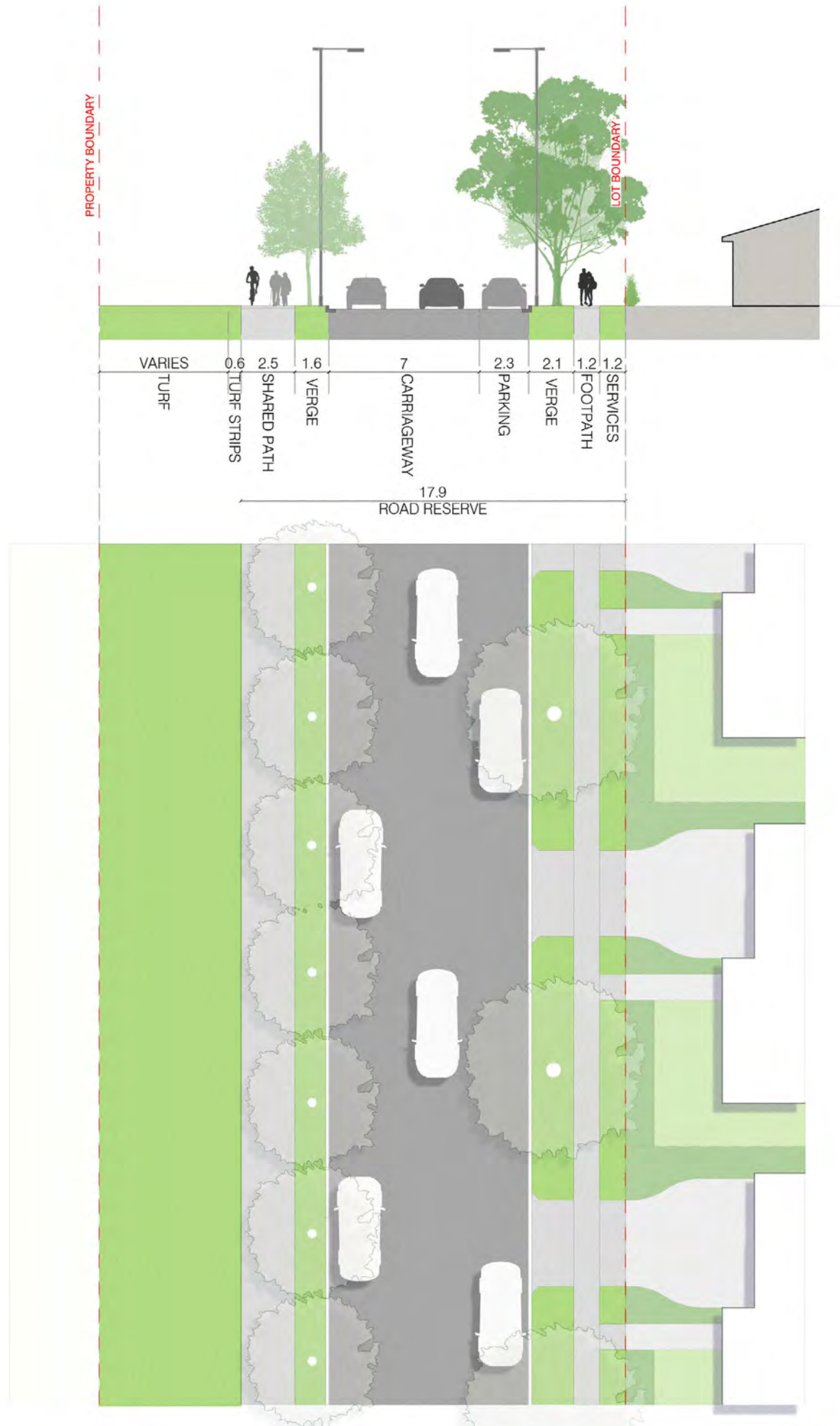
Interface Street

- + 8m perimeter road without designated parking required for fire vehicles
- + 11m APZ requirement achieved (verge + road + parking)
- + 0.9m verge to boundary
- + 2.1m parking zone provided to housing side of road



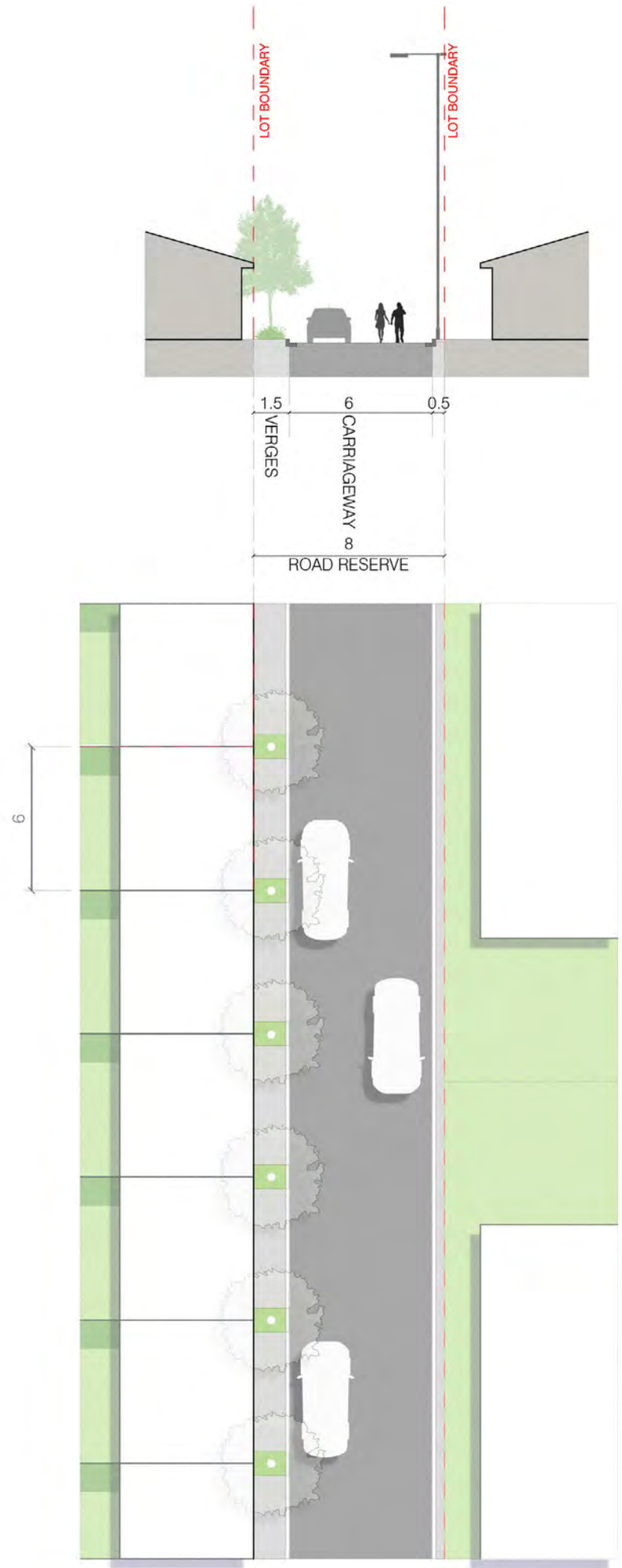
Street Network
Southern Interface Street

- + Parking on northern side only
- + 2.5m shared path connects into open space



Street Network
Laneway

- + Laneways to act as shared pedestrian / vehicle zones



Appendix C

Landscaping Plans

Redleaf

Landscape Development Application

OCULUS

oculus.info
ABN 34 074 882 447

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 we care and design for Country.

PROJECT S23-034
REDLEAF
REDMOND PLACE, ORANGE, NEW SOUTH WALES

STATUS
DEVELOPMENT APPLICATION

CLIENT
LANDCOM

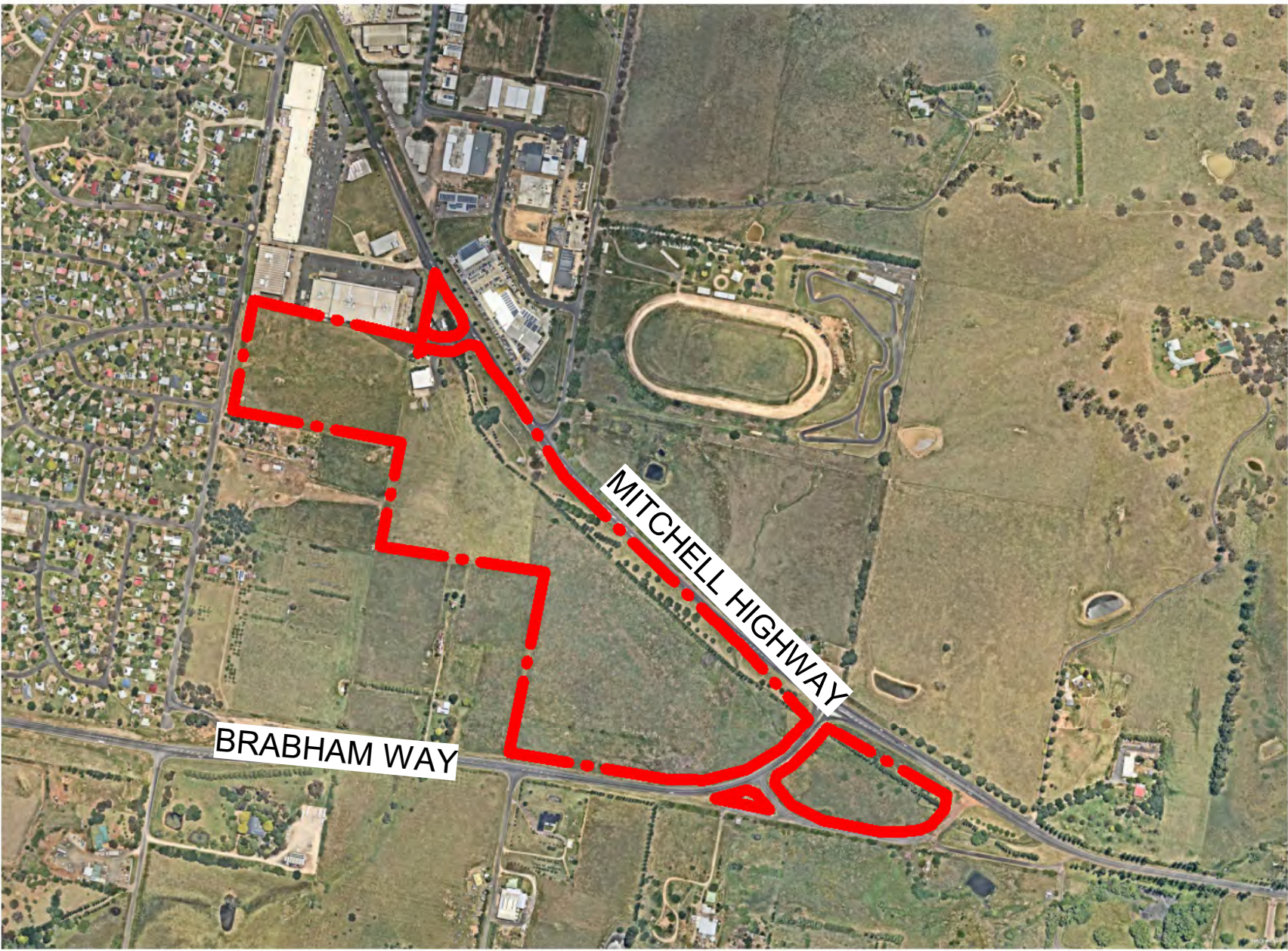
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1	06.06.25	DRAFT ISSUE FOR INFORMATION	SLRB	SB/KS
2	27.06.25	DRAFT DA ISSUE	SLRB	SB/KS
3	21.07.25	DA ISSUE	SLRB	SB/KS

DRAWING TITLE
Cover Sheet

DRAWING NUMBER
L000

REVISION
3

LOCATION PLAN

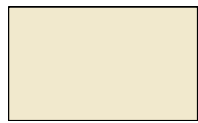


SHEET	NAME	DATE	REVISION
L000	Cover Sheet	21.07.25	3
L001	Legend Sheet	21.07.25	3
L002	Materials Schedule	21.07.25	2
L003	Planting Schedule	21.07.25	3
L004	Site Plan	21.07.25	4
L101	Tree Management Plan - Sheet 01	21.07.25	3
L102	Tree Management Plan - Sheet 02	21.07.25	3
L103	Tree Management Plan - Sheet 03	21.07.25	2
L104	Tree Management Plan - Sheet 04	21.07.25	2
L105	Tree Management Plan - Sheet 05	21.07.25	2
L106	Tree Canopy Calculation Plan	21.07.25	4
L201	General Arrangement Plan - Sheet 01	21.07.25	2
L202	General Arrangement Plan - Sheet 02	21.07.25	2
L203	General Arrangement Plan - Sheet 03	21.07.25	2
L204	General Arrangement Plan - Sheet 04	21.07.25	2
L205	General Arrangement Plan - Sheet 05	21.07.25	2
L206	General Arrangement Plan - Northern Park	21.07.25	4
L207	General Arrangement Plan - Central Park	21.07.25	4
L208	General Arrangement Plan - Southern Wetland	21.07.25	4
L501	Planting Plan - Sheet 01	21.07.25	3
L502	Planting Plan - Sheet 02	21.07.25	3
L503	Planting Plan - Sheet 03	21.07.25	3
L504	Planting Plan - Sheet 04	21.07.25	3
L505	Planting Plan - Sheet 05	21.07.25	3
L506	Planting Plan - Northern Park	21.07.25	3
L507	Planting Plan - Central Park	21.07.25	3
L508	Planting Plan - Southern Wetland	21.07.25	3
L701	Northern Open Space Sections	21.07.25	3
L702	Central Open Space Sections	21.07.25	3
L703	Central Open Space Sections	21.07.25	3
L704	Southern Wetland Sections	21.07.25	3

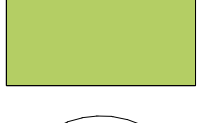
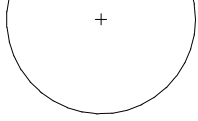
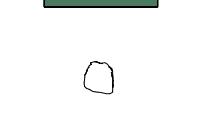
NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL LANDSCAPE ARCHITECTURE SCHEDULES, TECHNICAL SPECIFICATIONS, AND OTHER CONSULTANT DRAWINGS. PLEASE CHECK AND VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO THE COMMENCEMENT OF ANY WORK. DO NOT SCALE DRAWINGS, REFER TO FIGURED DIMENSIONS ONLY. PLEASE INFORM OCULUS OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING. UNLESS OTHERWISE NOTED THIS DRAWING IS NOT FOR CONSTRUCTION. SERVICES SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY, THE EXACT LOCATION IS TO BE CONFIRMED ON-SITE BY CONTRACTOR PRIOR TO COMMENCEMENT – BEFORE YOU DIG.

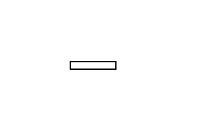
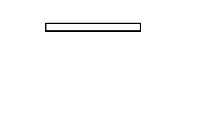
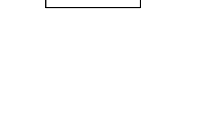
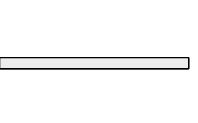
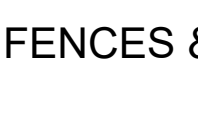
PAVING

	⟨PV01⟩	INSITU CONCRETE PAVING
	⟨PV02⟩	RUBBER SOFTFALL
	⟨PV03⟩	PLAYGROUND MULCH
	⟨PV04⟩	SPORTS COURT SURFACE
	⟨PV05⟩	GRAVEL PAVING
	⟨PV06⟩	CONCRETE
	⟨PV07⟩	FRP DECKING
	⟨PV08⟩	TRAFFICABLE PERMEABLE PAVING
	⟨PV09⟩	ASPHALT

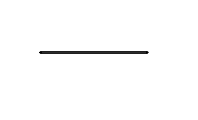
SOFT LANDSCAPE

	⟨BB01⟩	BIO BASIN
	⟨MP01⟩	MASS PLANTING
	⟨MP02⟩	PLANTED SWALE
	⟨MP03⟩	RAISED COMMUNITY VEGETABLE GARDEN BEDS
	⟨MU01⟩	BARK MULCH
	⟨TU01⟩	TURF ON NATURAL GRADE
	⟨TU02⟩	STABILISED TURF ON NATURAL GRADE
	⟨TR01⟩	TREE PLANTING
	⟨TP01⟩	MEDIAN TREE PIT
	⟨TP02⟩	ON-STREET TREE PIT
	⟨BO01⟩	STONE SEATING BOULDER

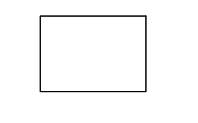
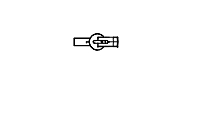
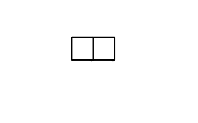
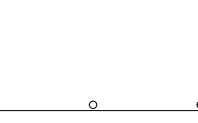
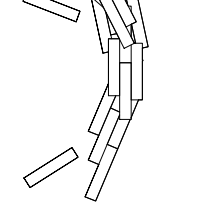
EDGES, KERBS, WALLS

	⟨SI01⟩	INTERPRETIVE SIGNAGE
	⟨WA01⟩	SPORTS COURT WALL
	⟨WA02⟩	SANDSTONE
	⟨WA03⟩	COLOURED CONCRETE
	⟨WA04⟩	RAISED VEGETABLE GARDEN BED
	⟨KE01⟩	CONCRETE RAISED KERB

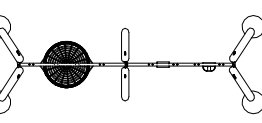
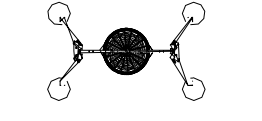
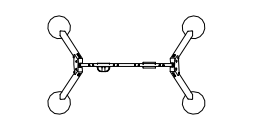
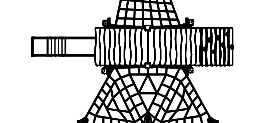
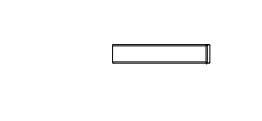
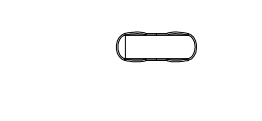
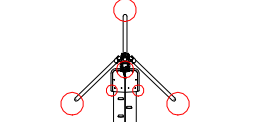
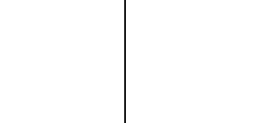
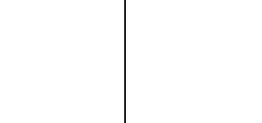
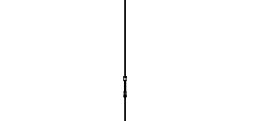
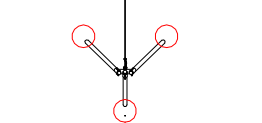
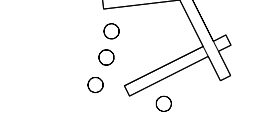
FENCES & EDGES

	⟨BA01⟩	BALUSTRADE
	⟨ED01⟩	TIMBER EDGING
	⟨FE01⟩	PLAYGROUND FENCE
	⟨FE02⟩	DOG PARK FENCE
	⟨GA01⟩	PLAYGROUND FENCE GATE
	⟨GA02⟩	DOG PARK FENCE GATE

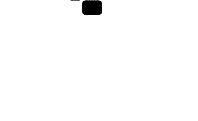
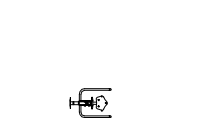
FURNITURE

	⟨FN01⟩	SEAT
	⟨FN02⟩	BIKE HOOP
	⟨FN03⟩	GARDEN SHED
	⟨FN04⟩	BENCH
	⟨FN05⟩	TABLE
	⟨FN06⟩	DRINKING FOUNTAIN
	⟨FN07⟩	DOUBLE BINS
	⟨FN08⟩	PICNIC SHELTER
	⟨FN09⟩	AMPHITHEATER SEATING

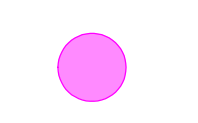
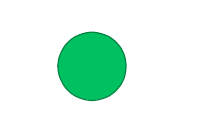
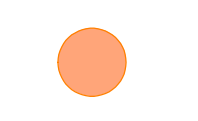
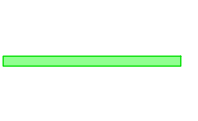
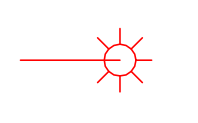
PLAY EQUIPMENT

	⟨PL01⟩	DOUBLE BAY SWING
	⟨PL02⟩	SINGLE BAY NEST SWING
	⟨PL03⟩	SINGLE BAY SWING
	⟨PL04⟩	PLAY TOWER
	⟨PL05⟩	WIDE SLIDE
	⟨PL06⟩	SLIDE
	⟨PL07⟩	ROCKER
	⟨PL08⟩	FLYING FOX
	⟨PL09⟩	TIMBER PLAY LOGS
	⟨PL10⟩	TRAMPOLINE
	⟨PL11⟩	CLIMBING BOULDERS
	⟨PL12⟩	FUTSAL GOAL
	⟨PL13⟩	BASKETBALL HOOP
	⟨PL14⟩	CLIMBING WEB NET

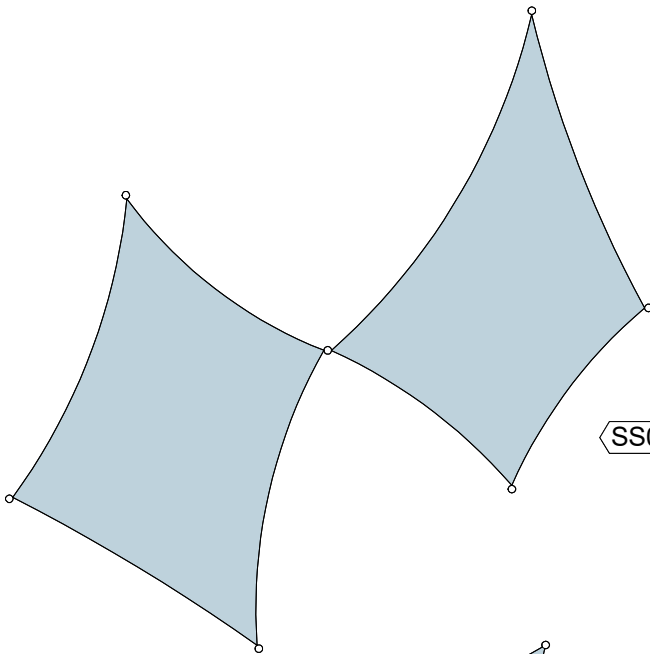
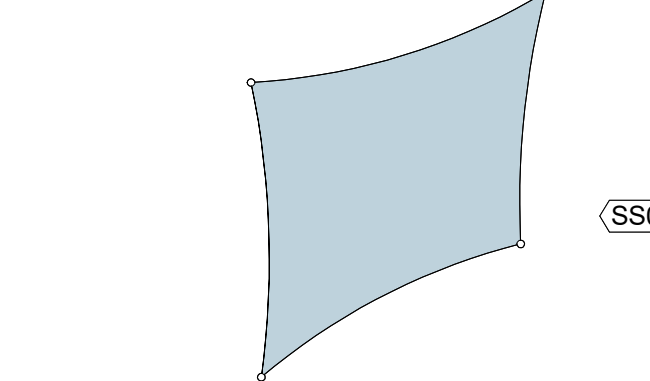
FITNESS STATION EQUIPMENT

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	⟨FS03⟩	FITNESS EQUIPMENT 03
	⟨FS04⟩	FITNESS EQUIPMENT 04
	⟨FS05⟩	FITNESS EQUIPMENT 05
	⟨FS06⟩	FITNESS EQUIPMENT 06
	⟨FS07⟩	FITNESS EQUIPMENT 07
	⟨FS08⟩	FITNESS EQUIPMENT 08
	⟨FS09⟩	FITNESS EQUIPMENT 09

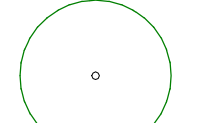
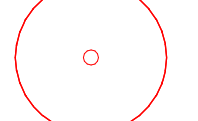
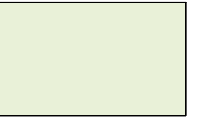
LIGHTING

	POST TOP MOUNTED LED LUMINAIRE
	SIDE ENTRY MOUNTED LED LUMINAIRE
	FLOOD LIGHT FOR MULTI COURT LIGHTING
	SHELTER LIGHT
	STREET LIGHT
REFER TO LIGHTING DOCUMENTATION FOR LIGHTING DETAILS	

SHADE SAILS

	⟨SS01⟩	SHADE SAIL
	⟨SS02⟩	SHADE SAIL

EXISTING FEATURES

	⟨EX01⟩	TREE TO REMAIN
	⟨EX02⟩	TREE TO REMOVE
	⟨EX03⟩	EXISTING TURF AND VEGETATION TO BE RETAINED AND RESTORED / MADE GOOD IF REQUIRED
	⟨EX04⟩	EXISTING GRAVEL PATH TO BE RETAINED

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PROJECT S23-034
REDLEAF
REDMOND PLACE, ORANGE, NEW SOUTH WALES

STATUS
DEVELOPMENT APPLICATION

CLIENT
LANDCOM

ISSUE	DATE	AMENDMENT	BY	APPROVED
1	27.06.25	DRAFT DA ISSUE	SLRB	SB/KS
2	21.07.25	DA ISSUE	SLRB	SB/KS

DRAWING TITLE
Materials Schedule

DRAWING NUMBER
L002

REVISION
2

PAVING		
CODE	MATERIAL	DESCRIPTION
PV01	INSITU CONCRETE PAVING	INSITU CONCRETE PAVING WITH BROOM FINISH TO COUNCIL'S STANDARD DRAWINGS.
PV02	RUBBER SOFTFALL	RUBBER SOFTFALL INSTALLED TO AS 4685.1:2021 PLAYGROUND EQUIPMENT AND SURFACING AND AS/NZS 4422: PLAYGROUND SURFACING – SPECIFICATIONS, REQUIREMENTS AND TEST METHODS. COLOUR TBD IN COORDINATION WITH PUBLIC ART INSTALLATION.
PV03	PLAYGROUND MULCH	PLAYGROUND SOFTFALL MULCH TO COMPLY WITH AS 4685.1:2021 PLAYGROUND EQUIPMENT AND SURFACING AND AS/NZS 4422: PLAYGROUND SURFACING – SPECIFICATIONS, REQUIREMENTS AND TEST METHODS. ANL PLAYGROUND MULCH OR APPROVED EQUIVALENT.
PV04	SPORTS COURT SURFACE	PAINTED INSITU CONCRETE PAVING WITH ANTI-SLIP FINISH. PAINTED SURFACE TO BE COORDINATED AS PART OF THE PUBLIC ART INSTALLATION.
PV05	GRAVEL PAVING	CEMENT STABILISED DECOMPOSED GRANITE PAVING ON COMPACTED SUBGRADE - GOLD COLOUR.
PV06	CONCRETE	CONCRETE SAWCUT PATTERN TO EXISTING CONCRETE PAVING.
PV07	FRP DECKING	FIBER REINFORCED PLASTIC BOARDWALK - DARK GREY.
PV08	TRAFFICABLE PERMEABLE PAVING	ADBRI 'ECOTRIHEX' PERMEABLE PAVER IN 'STEEL' COLOUR INSTALLED OVER 800mm DEPTH CITYGREEN STRATAVAULT SOIL CELL SYSTEM OR APPROVED EQUIVALENT. 200mm FLUSH INSITU CONCRETE EDGE TO PAVING. INSTALLED TO COUNCIL'S TYPICAL HEAVY-DUTY PERMEABLE PAVEMENT DETAIL.
PV09	ASPHALT	ASPHALT DRIVEWAY TO CIVIL ENGINEER'S DETAIL

SOFT LANDSCAPE		
CODE	MATERIAL	DESCRIPTION
BB01	BIO BASIN	MASS PLANTING IN FILTER SOIL MEDIA. BATTERS TO BE STABILISED WITH JUTE MESH PINNED TO BATTER AND PLANTING PLANTED WITHIN JUTE MESH
KE01	CONCRETE RAISED KERB	CONCRETE RAISED KERB
MP01	MASS PLANTING	MASS PLANTING ON GRADE. 300mm AMELEORATED SITE TOPSOIL. 75mm ORGANIC MULCH.
MP02	PLANTED SWALE	MASS PLANTING TO SIDES AND BASE OF SWALE. BATTERS TO BE STABILISED WITH JUTE MESH PINNED TO BATTER AND PLANTING PLANTED WITHIN JUTE MESH.
MP03	RAISED COMMUNITY VEGETABLE GARDEN BEDS	MASS PLANTING IN RAISED GARDEN BEDS
MU01	BARK MULCH	75mm ORGANIC MULCH.
TP01	MEDIAN TREE PIT	TREE PIT WITH TREE AND MASS PLANTING. 200mm INSITU CONCRETE EDGE FLUSH WITH ADJACENT PAVING. 75mm ORGANIC MULCH. 1m HIGH FSC CERTIFIED HARDWOOD TIMBER BOLLARD TO EACH CORNER OF TREE PIT.
TP02	ON-STREET TREE PIT	TREE PIT WITH TREE AND MASS PLANTING. 200mm INSITU CONCRETE EDGE FLUSH WITH ADJACENT PAVING. 75mm ORGANIC MULCH. CONCRETE WHEEL STOPS TO EITHER END OF PIT.
TU01	TURF ON NATURAL GRADE	TURF ON NATURAL GRADE. 200mm AMELIORATED SITE TOPSOIL.
TU02	STABILISED TURF ON NATURAL GRADE	TURF PLANTED IN PLASTIC TURF CELL REINFORCEMENT.
BO01	STONE SEATING BOULDER	450mm HIGH SITE SALVAGED BASALT BOULDER WITH SAWN TOP
TR01	TREE PLANTING	TREE PLANTING IN AMELIORATED SITE TOPSOIL. TREE PIT TO BE DEPTH OF ROOT BALL AND 3x WIDTH OF ROOTBALL. 75mm ORGANIC MULCH. INSTALLED TO COUNCIL'S TYPICAL DETAILS.

EDGES, KERBS & WALLS		
CODE	MATERIAL	DESCRIPTION
SI01	INTERPRETIVE SIGNAGE	POWDERCOATED STEEL INTERPRETIVE SIGN. DETAILS TO BE CONFIRMED DURING DESIGN DEVELOPMENT STAGE.
WA01	SPORTS COURT WALL	PAINTED CONCRETE BLOCKWORK WALL TO BACK OF HALF COURT. MURAL FINISH SUBJECT TO PUBLIC ART IMPLEMENTATION.
WA02	SANDSTONE	600mm WIDE SANDSTONE WALL.
WA03	COLOURED CONCRETE	600mm WIDE COLOURED CONCRETE SEATING WALL.
WA04	RAISED VEGETABLE GARDEN BED	RAISED CORRUGATED STEEL GARDEN BEDS. FINAL COMMUNITY GARDEN DESIGN SUBJECT TO COMMUNITY CONSULTATION AND COORDINATION.

FENCES & EDGES		
CODE	MATERIAL	DESCRIPTION
BA01	BALUSTRADE	1.2m HIGH BALUSTRADE TO BOARDWALK. STAINLESS STEEL POSTS WITH STAINLESS STEEL CABLE INFILL BETWEEN POSTS.
ED01	TIMBER EDGING	TIMBER EDGING INSTALLED BETWEEN TURF, GRAVEL AND PLANTING. 50x100 MINIMUM HARDWOOD EDGE NAILED TO 50x50x450 HARDWOOD TIMBER PEGS
FE01	PLAYGROUND FENCE	1.2m HIGH BLACK POWDERCOATED STEEL PLAYGROUND FENCE. TO COMPLY WITH AUSTRALIAN STANDARDS FOR PLAYGROUNDS.
FE02	DOG PARK FENCE	1.2m HIGH BLACK POWDERCOATED STEEL DOG PARK FENCE.
GA01	PLAYGROUND FENCE GATE	1.2m HIGH BLACK POWDERCOATED STEEL PLAYGROUND FENCE GATE. TO COMPLY WITH AUSTRALIAN STANDARDS FOR PLAYGROUNDS.
GA02	DOG PARK FENCE GATE	1.2m HIGH BLACK POWDERCOATED STEEL DOG PARK FENCE GATE.

FURNITURE		
CODE	MATERIAL	DESCRIPTION
FN01	SEAT	STREET FURNITURE AUSTRALIA 'ARIA' SEAT WITH BACKREST AND ARMREST. TEXTURA MONUMENT POWDERCOATED STEEL FRAME. SPOTTED GUM TIMBER LOOK ALUMINIUM BATTENS.
FN02	BIKE HOOP	STREET FURNITURE AUSTRALIA STAINLESS STEEL SLIM BIKE HOOP
FN03	GARDEN SHED	STEEL PROPRIETRY GARDEN SHED. FINAL COMMUNITY GARDEN DESIGN SUBJECT TO COMMUNITY CONSULTATION AND COORDINATION.
FN04	BENCH BATTENS	STREET FURNITURE AUSTRALIA 'ARIA' BENCH SEAT. TEXTURA MONUMENT POWDERCOATED STEEL FRAME. SPOTTED GUM TIMBER LOOK ALUMINIUM BATTENS.
FN05	TABLE	STREET FURNITURE AUSTRALIA 'ARIA' TABLE. TEXTURA MONUMENT POWDERCOATED STEEL FRAME. SPOTTED GUM TIMBER LOOK ALUMINIUM BATTENS.
FN06	DRINKING FOUNTAIN	BOTTOM + GARDINER 'PROSPECT' STAINLESS STEEL WHEELCHAIR ACCESSIBLE DRINKING FOUNTAIN WITH BOTTLE FILL TAP AND DOG BOWL
FN07	DOUBLE BINS	STREET FURNITURE AUSTRALIA 'ESCOLA' 240L BIN ENCLOSURE. TEXTURA MONUMENT POWDERCOATED STEEL FRAME. DUAL UNIT WITH GARBAGE AND RECYCLING COLOURS AND LABELS.
FN08	PICNIC SHELTER	LANDMARK 'BRIGHTON' POWDERCOATED ALUMINIUM PICNIC SHELTER. COLOUR TO BE COORDINATED WITH PUBLIC ART IMPLEMENTATION.
FN09	AMPHITHEATER SEATING	350x350mm LARGE FORMAT TIMBER SQUARE LOG SEATING IN INFORMAL STACKED AMPHITHEATRE SEATING ARRANGEMENT. STEEL TUBE SPACERS BETWEEN LOGS AND BETWEEN GROUND AND LOGS.

PLAY EQUIPMENT		
CODE	MATERIAL	DESCRIPTION
PL01	DOUBLE BAY SWING	MODUPLAY S-9902 CAPITAL DOUBLE BAY SWING WITH NEST SEAT
PL02	SINGLE BAY NEST SWING	MODUPLAY S-9900 CAPITAL SINGLE BAY SWING WITH NEST SEAT
PL03	SINGLE BAY SWING	MODUPLAY S-9904 CAPITAL SINGLE BAY SWING
PL04	PLAY TOWER	MODUPLAY J-2400 CASTAWAY PLAY TOWER
PL05	WIDE SLIDE	MODUPLAY D-8837 1500H WIDE STAINLESS STEEL SLIDE
PL06	SLIDE	MODUPLAY D-8802 1200H STAINLESS STEEL SLIDE
PL07	ROCKER	MODUPLAY R-808 INCLUSIVE BEDWAY ROCKER
PL08	FLYING FOX	MODUPLAY B-9430 25M SINGLE SKYRIDER, WITH PLATFORM
PL09	TIMBER PLAY LOGS	UNTREATED HARDWOOD TIMBER LOGS. SURFACE TO HAVE BARK REMOVED AND SANDED SMOOTH. RECYCLED FROM REMOVED SITE TREES WHERE POSSIBLE.
PL10	TRAMPOLINE	MODUPLAY WALLABY TRAMPOLINE RECTANGLE WITH ACCESSIBLE RAMP
PL11	CLIMBING BOULDERS	SITE SALVAGED BASALT BOULDERS WITH PLASTIC ROCK CLIMBING HOLDS BOLTED ON
PL12	FUTSAL GOAL	STEEL FUTSAL GOAL INCORPORATED INTO BLOCKWORK WALL.
PL13	BASKETBALL HOOP	GALVANISED STEEL BASKETBALL HOOP
PL14	CLIMBING WEB NET	NYLON / POLYESTER STEEL REINFORCED CLIMBING NET FIXED TO CLIMBING BOULDERS

FITNESS STATION EQUIPMENT		
CODE	MATERIAL	Description
FS01	FITNESS EQUIPMENT 01	A SPACE FITX029 STEP UP STATION
FS02	FITNESS EQUIPMENT 02	A SPACE FFP6018 AEROBIC CYCLE
FS03	FITNESS EQUIPMENT 03	A SPACE FFP6027 ELLIPTICAL TRAINER
FS04	FITNESS EQUIPMENT 04	A SPACE FFP6022 CHEST PRESS
FS05	FITNESS EQUIPMENT 05	A SPACE FITX016 GORILLA BARS
FS06	FITNESS EQUIPMENT 06	A SPACE FITX033 PARALLEL BARS - 990MM HIGH
FS07	FITNESS EQUIPMENT 07	A SPACE FITX028 BALANCE BEAM
FS08	FITNESS EQUIPMENT 08	A SPACE FFP6028 DEXTERITY BUILDER
FS09	FITNESS EQUIPMENT 09	A SPACE FITX026 SIT UP BENCH - 20 DEGREE DECLINE

SHADE SAILS		
CODE	MATERIAL	DESCRIPTION
SS01	SHADE SAILS	FIRE RETARDANT SYNTHETIC SHADE SAIL FIXED TO PAINTED STEEL POSTS. COLOUR TBC IN COORDINATION WITH PUBLIC ART INTEGRATION.
SS02	SHADE SAILS	FIRE RETARDANT SYNTHETIC SHADE SAIL FIXED TO PAINTED STEEL POSTS. COLOUR TBC IN COORDINATION WITH PUBLIC ART INTEGRATION.

EXISTING FEATURES		
EX01	TREE TO REMAIN	EXISTING TREE TO REMAIN
EX02	TREE TO REMOVE	EXISTING TREE TO BE REMOVED
EX03	TURF / VEGETATION	EXISTING TURF AND VEGETATION TO BE RETAINED AND RESTORED / MADE GOOD IF REQUIRED
EX04	GRAVEL PATH	EXISTING GRAVEL PATH TO BE RETAINED

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2	27.06.25	DRAFT DA ISSUE	SLR/BB	SB/KS
3	21.07.25	DA ISSUE	SLR/BB	SB/KS

DRAWING TITLE
Planting Schedule

DRAWING NUMBER
L003

REVISION
3

TREE AND SPECIMEN PLANTING SCHEDULE							
Code	Botanical Name (SP)	Common Name	Origin	Height (m)	Spread (m)	Pot Size (L)	Count
AB	Acer buergerianum	Trident Maple	Exotic	6.0 m	7.0 m	100	18
ABA	Acaria baileyana 'Purpurea'	Cootamunda Wattle	Native	5.0 m	8.0 m	100	9
ANV	Acer negundo violaceum	Violet Twig Box Elder	Exotic	10.0 m	6.0 m	100	18
AO	Acer rubrum 'October Glory'	Lipstick Maple	Exotic	15.0 m	9.0 m	100	11
AR	Acer rubrum	Red Maple	Exotic	12.0 m	9.0 m	100	55
AS	Acer saccharinum	Silver Maple	Exotic	20.0 m	12.0 m	100	44
ASP	Acacia spectabilis	Mudgee Wattle	Endemic	6.0 m	4.0 m	100	3
BPO	Brachycton populneus	Kurrajong	Endemic	15.0 m	8.0 m	100	1
CC	Callistemon citrinus	Crimson Bottlebrush	Native	6.0 m	5.0 m	100	5
CS	Callistemon salignus	White Bottlebrush	Native	7.0 m	8.0 m	100	9
CV	Callistemon viminalis	Weeping Bottlebrush	Native	6.0 m	5.0 m	100	5
EB	Eucalyptus blakelyi	Blakely's Red Gum	Endemic	25.0 m	20.0 m	100	4
EBR	Eucalyptus bridgesiana	Apple Box	Endemic	20.0 m	10.0 m	100	8
EC	Eucalyptus cinerea	Argyle Apple	Native	13.0 m	8.0 m	100	26
ED	Eucalyptus dives	Broad-leaved Pepperment	Endemic	20.0 m	10.0 m	100	20
EG	Eucalyptus goniolocalyx	Long-leaf Box	Endemic	20.0 m	15.0 m	100	1
EM	Eucalyptus mannifera	Manna Gum	Endemic	12.0 m	10.0 m	100	101
EME	Eucalyptus melliodora	Yellow Box	Endemic	12.0 m	10.0 m	100	3
EP	Eucalyptus pauciflora	Snow Gum	Endemic	12.0 m	6.0 m	100	11
ER	Eucalyptus rossii	Scribbly Gum	Endemic	15.0 m	10.0 m	100	22
ES	Eucalyptus sideroxylon	Red Ironbark	Endemic	15.0 m	8.0 m	100	9
EST	Eucalyptus stellulata	Black Sallee	Endemic	15.0 m	8.0 m	100	18
EV	Eucalyptus viminalis	Ribbon Gum	Endemic	30.0 m	15.0 m	100	2
FC	Fraxinus pennsylvanica 'Cimmzam'	Cimmaron Ash	Exotic	13.0 m	8.0 m	100	19
FR	Fraxinus x 'Raywoodii'	Claret Ash	Exotic	12.0 m	9.0 m	100	21
GR	Grevillea robusta	Silky Oak	Native	15.0 m	9.0 m	100	1
HS	Hakea salicifolia	Willow-leaved Hakea	Native	5.0 m	4.0 m	100	2
LS	Lagerstroemia indica x fauriei 'Sioux'	Crepe Myrtle Pink	Exotic	4.0 m	3.0 m	100	29
LT	Lagerstroemia indica x fauriei 'Tuscarora'	Crepe Myrtle Bright Pink	Exotic	6.0 m	4.0 m	100	25
MA	Melaleuca amillarlis	Bracelet Honey Myrtle	Native	8.0 m	4.0 m	100	1
MD	Melaleuca decora	White Feather Honey Myrtle	Native	10.0 m	5.0 m	100	3
MQ	Melaleuca quinquenervia	Broad-Leafed Paperbark	Native	15.0 m	10.0 m	100	43
MS	Magnolia soulangeana	Saucer Magnolia	Exotic	8.0 m	5.0 m	100	9
MT	Malus tschonoskii	Pillar Crabapple	Exotic	7.0 m	5.0 m	100	29
PP	Parrotia persica	Persian Ironwood	Exotic	10.0 m	10.0 m	100	30
PU	Pyrus ussuriensis	Manchurian Pear	Exotic	9.0 m	7.0 m	100	46
SS	Sapium sebiferum	Chinese Tallow Tree	Exotic	8.0 m	8.0 m	100	32
UP	Ulmus parvifolia	Chinese Weeping Elm	Exotic	10.0 m	12.0 m	100	41
ZG	Zelcova serrata 'Green Vase'	Green Vase Japanese Elm	Exotic	14.0 m	10.0 m	100	38
Grand total: 772							

EXISTING TREES TO BE REMOVED requirements							*Refer to Arborist Report for additional information and tree retention	
Tree No.	Botanical Name	Common Name	Height (m)	Spread (m)	TPZ (m)	SRZ (m)	Health	Retention Value
2	Populus deltoides	Cottonwood Poplar	10	2	2.4	1.7	Immature with physical damage on the stem a scar at base to 1 metre	Low
8	Populus deltoides	Cottonwood Poplar	6	7	4.0	2.0	Semi mature, collapsed tree branches and fractured unions with broken branches.	Very low
9	Populus deltoides	Cottonwood Poplar	9	10	4.0	2.3	Semi mature broken branches fungal fruiting body at three metres, fractured unions	Very Low
10	Hamamelis virginiana	Witch Hazel	5	4	2.0	1.7	Immature good condition and poor development.	Low
11	Hamamelis virginiana	Witch Hazel	4	3	2.0	1.7	Immature in good condition with multiple stems.	Low
12	Hamamelis virginiana	Witch Hazel	6	4	2.0	2.0	Immature in good condition.	Low
13	Hamamelis virginiana	Witch Hazel	5	3	2.0	1.7	Immature in good condition.	Low
14	Crataegus crus-galli	Hawthorn	6	6	2.9	2.0	Semi mature with decay on the branches and around the base. Fruiting berries.	Low
15	Hamamelis virginiana	Witch Hazel	6	6	2.0	2.0	Semi mature in good condition.	Low
16	Hamamelis virginiana	Witch Hazel	6	4	2.6	1.7	Immature in good condition.	Low
17	Prunus sp	Plum	7	6	2.0	1.7	Immature in good condition.	Low
29	Pittosporum undulatum	Pittosporum	6	5	2.2	1.9	Immature in good condition	Low
30	Pittosporum undulatum	Pittosporum	6	6	3.0	2.0	Immature in good condition	Low
420	Stag		10	0	4.1	2.1	Dead with possible habitat- (Microbat may be utilising the under-bark area).	Very Low
421	Stag		5	0	4.1	2.1	Dead with possible habitat value.	Very Low
422	Salix alba	White Willow	8	5	7.2	2.9	Mature and in moderate condition, Scar on the stem to 1 metre indicates possible weakness in stem.(If leaving may require additional resistograph testing).	Low
423	Crataegus sp.	Hawthorn	5	6	2.6	2.3	Mature and poor condition with likely fauna protection when foraging	Low
423	Crataegus sp.	Hawthorn	5	6	2.6	2.3	Mature and poor condition with likely fauna protection when foraging	Low
424	Crataegus sp.	Hawthorn	5	4	2.0	1.5	Semi-mature in moderate condition. Likely fauna protection when foraging. (Deciduous).	Low
424	Crataegus sp.	Hawthorn	5	4	2.0	1.5	Semi-mature in moderate condition. Likely fauna protection when foraging. (Deciduous).	Low
425	Stag		5	0	2.0	1.5	Dead no hollows. Lean is extensive to the south.	Very low
426	Crataegus sp.	Hawthorn	5	4	2.4	2.3	Mature moderate condition and cavity at base with root damage. Likely fauna protection when foraging. (Deciduous)	Low
427	Crataegus sp.	Hawthorn	3	0	2.0	1.7	Immature, moderate condition ,likely fauna protection when foraging. (Deciduous)	Low
428	Crataegus sp.	Hawthorn	3	3	2.6	2.0	Immature, moderate condition likely fauna protection when foraging. (Deciduous)	Low
Grand total: 24								

PLANTING MIXES			
Code	Planting Mix	Condition	Area
PM01	Planting Mix 01 Playground	Playground	481 m²
PM02	Planting Mix 02 Low	Low	676 m²
PM03	Planting Mix 03 Shrubs <1m	Shrubs <1m	1616 m²
PM04	Planting Mix 04 Swale	Swale	2747 m²
PM05	Planting Mix 05 Wetland	Wetland	563 m²
PM06	Planting Mix 06 Northern Median Strip	Northern Median Strip	266 m²
PM07	Planting Mix 07 Southern Median Strip	Southern Median Strip	319 m²
PM08	Planting Mix 08 Bush Tucka	Bush Tucka	83 m²
Grand total			

PLANT SCHEDULE								
PM01 PLAYGROUND								
Botanical Name	Common Name	Native (N) / Endemic (En)	Mature Height (m)	Mature Width (m)	Pot Size	Spacing - Plants/m2	% in Mix	Quantity
Dianella revoluta	Black Arther Flax Lily	En	0.3	1	200mm	6	10%	289
Bothriochloa macra	Red Grass	En	1	0.2	200mm	6	10%	289
Callistemon viminalis 'Better John'	Better John Bottlebrush	N	0.8	0.8	200mm	6	10%	289
Cinnam pandanuculatum	Spider Lily	En	1	0.8	200mm	6	10%	289
Grevillea 'Bronze Rambler'	Bronze Rambler	N	0.4	3	200mm	6	10%	289
Lomandra longifolia 'Tanka'	Lomandra 'Tanka'	N	0.5	0.6	200mm	6	10%	289
Poa labillardieri 'Eskdale'	Tussock Grass	N	0.7	0.5	200mm	6	10%	289
Pyroloperma fulvum	Wallaby Grass	En	0.7	0.4	200mm	6	10%	289
Sporobolus crotchi	Slender Rat Tail Grass	En	0.15	0.3	200mm	6	10%	289
Westringia frutescens 'Zena'	Native Rosemary	N	0.8	0.8	200mm	6	10%	289
PM02 LOW								
Botanical Name	Common Name	Native (N) / Endemic (En)	Mature Height (m)	Mature Width (m)	Pot Size	Spacing - Plants/m2	% in Mix	Quantity
Brachyscome angustifolia	Native Daisy	En	0.2	0.5	140mm	6	7%	284
Chrysocochlam apiculatum 'Desert Flame'	Yellow Buttons	En	0.3	0.4	140mm	6	7%	284
Austrospiza scabra	Rough Speargrass	En	0.2	0.3	140mm	6	7%	284
Banksia 'Rollercoaster'	Banksia 'Rollercoaster'	N	0.2	1	140mm	6	7%	284
Casuarina glauca 'Cousin it'	Cousin it	N	0.1	1	140mm	6	7%	284
Dodonaea repens	Kidney Weed	En	0.1	0.5	140mm	6	7%	284
Grevillea pauciflora	Grevillea	N	0.2	3	140mm	6	7%	284
Grevillea argentea 'Mt Tamboritha'	Mt Tamboritha Grevillea	N	0.2	1	140mm	6	7%	284
Hardenbergia violacea 'Mim Nla Hat'	False Sarsaparilla	N	0.2	1	140mm	6	7%	284
Myoporum parvifolium	Creeping Bodhi tree	N	0.2	1	140mm	6	7%	284
Staveola tenuis	Fairy Fan Flower	N	0.2	1	140mm	6	7%	284
Scaevola laevis	Cushion Bush	En	0.1	0.4	140mm	6	7%	284
Wahlenbergia fluminalis	Native Bluebell	N	0.6	0.3	140mm	6	7%	284
Chloris truncata	Windmill Grass	En	0.15	0.3	140mm	6	7%	284
Sporobolus crotchi	Slender Rat Tail Grass	En	0.15	0.3	140mm	6	7%	284
PM03 SHRUBS <1M								
Botanical Name	Common Name	Native (N) / Endemic (En)	Mature Height (m)	Mature Width (m)	Pot Size	Spacing - Plants/m2	% in Mix	Quantity
Cornus reflexa 'Dusky Belle'	Dusky Bell Cornus	N	0.8	2.5	140mm	4	5%	323
Austrospiza scabra	Cornish Grass	En	0.8	0.3	140mm	4	5%	323
Bothriochloa macra	Red Grass	En	1	0.2	140mm	4	5%	323
Callistemon viminalis 'Better John'	Better John Bottlebrush	N	0.8	0.8	140mm	4	5%	323
Coprosma repens 'Rainbow Surprise'	Minor Bush	N	1	1	140mm	4	5%	323
Dillwynia sericea	Showy Parrot Pea	En	0.8	0.8	140mm	4	5%	323
Grevillea juniperina 'Molonglo'	Juniper Leaf Grevillea	N	0.5	3	140mm	4	5%	323
Grevillea linearifolia	White Spider Flower	N	1	1	140mm	4	5%	323
Grevillea rosmarinifolia 'Crimson Villae'	Rosemary Grevillea	N	0.8	0.8	140mm	4	5%	323
Grevillea rosmarinifolia 'Scarlet Sprite'	Rosemary Grevillea	N	0.9	1	140mm	4	5%	323
Grevillea sericea	Pink Spider Flower	N	1	1	140mm	4	5%	323
Hardenbergia violacea 'Meemal'	Happy Wanderer	En	0.5	2	140mm	4	5%	323
Isopogon artemissifolius	Drumsticks	N	0.5	0.5	140mm	4	5%	323
Leucophyllum laevis	Cushion Bush	N	0.6	1.2	140mm	4	5%	323
Phoradendron laevis	Pink Enolanthem	N	1	1	140mm	4	5%	323
Poa labillardieri 'Eskdale'	Tussock Grass	N	0.7	0.5	140mm	4	5%	323
Poa debilis	Shore Grass	N	0.5	0.5	140mm	4	5%	323
Rhagodia spinosa	Aussie Flat Bush	N	0.4	1	140mm	4	5%	323
Pyroloperma fulvum	Wallaby Grass	En	0.7	0.4	140mm	4	5%	323
Thymusandra	Kangaroo Grass	En	1.2	0.5	140mm	4	5%	323
PM04 SWALE								
Botanical Name	Common Name	Native (N) / Endemic (En)	Mature Height (m)	Mature Width (m)	Pot Size	Spacing - Plants/m2	% in Mix	Quantity
Bulbine bulbosa	Bulbine Lily	En	0.75	0.4	140mm	6	15%	2472
Carex appressa	Sword Sedge	En	1	1	140mm	8	10%	1648
Carex inversa	Knot Sedge	En	0.4	0.4	140mm	8	10%	1648
Carex tenellula	Basket Sedge	En	1	0.2	140mm	6	10%	1648
Cinnam pandanuculatum	Spider Lily	En	1	0.8	140mm	6	10%	1648
Lomandra longifolia 'Evergreen Baby'	Spartan Leaf Mat-rush	En	0.7	1	140mm	6	15%	2472
Microseris stipodes	Weeping Grass	En	0.5	0.2	140mm	6	15%	2472
Ranunculus lappaceus	Australian Buttercup	En	0.2	0.2	140mm	6	15%	2472
PM05 WETLAND								
Botanical Name	Common Name	Native (N) / Endemic (En)	Mature Height (m)	Mature Width (m)	Pot Size	Spacing - Plants/m2	% in Mix	Quantity
Carex appressa	Sword Sedge	En	1	1	140mm	6	25%	845
Carex inversa	Knot Sedge	En	0.4	0.4	140mm	8	25%	845
Cinnam pandanuculatum	Spider Lily	En	1	0.8	140mm	6	25%	845
PM06 NORTHERN MEDIAN STRIP								
Botanical Name	Common Name	Native (N) / Endemic (En)	Mature Height (m)	Mature Width (m)	Pot Size	Spacing - Plants/m2	% in Mix	Quantity
Lomandra longifolia 'Tanka'	Lomandra 'Tanka'	N	0.5	0.6	200mm	6	20%	319
Carphoxylum glaucum	Puffball	N	0.1	1	200mm	6	20%	319
Grevillea 'Bronze Rambler'	Bronze Rambler	N	0.4	3	200mm	6	20%	319
Grevillea argentea 'Mt Tamboritha'	Mt Tamboritha Grevillea	N	0.2	1	200mm	6	20%	319
Grevillea sericea	Pink Spider Flower	N	1	1	200mm	6	20%	319
PM07 SOUTHERN MEDIAN STRIP								
Botanical Name	Common Name	Native (N) / Endemic (En)	Mature Height (m)	Mature Width (m)	Pot Size	Spacing - Plants/m2	% in Mix	Quantity
Banksia 'Rollercoaster'	Banksia 'Rollercoaster'	N	0.2	1	200mm	6	20%	383
Chrysocochlam apiculatum 'Desert Flame'	Yellow Buttons	En	0.3	0.4	200mm	6	20%	383
Grevillea 'Bronze Rambler'	Bronze Rambler	N	0.4	3	200mm	6	20%	383
Hebe artemissifolia	Drumsticks	N	0.5	0.5	200mm	6	20%	383
Rhagodia spinosa	Aussie Flat Bush	N	0.4	1	200mm	6	20%	383
PM08 BUSH THICKET								
Botanical Name	Common Name	Native (N) / Endemic (En)	Mature Height (m)	Mature Width (m)	Pot Size	Spacing - Plants/m2	% in Mix	Quantity
Austromyrtus dulcis	Midgen Benne	N	1	1	200mm	4	20%	66
Amphora rumicoides	Old Man Salt Bush	N	3	5	140mm	4	10%	33
Gilvia scandens	Native Apple	N	1.5	3	200mm	4	10%	33
Myrtus australis	River Mint	N	0.6	1	200mm	4	10%	66
Prodracanthus selbergii	Bush Mint	N	1.5	1.5	140mm	4	20%	66
Thymusandra	Kangaroo Grass	En	1.2	0.5	140mm	4	20%	66
Grand Total								3422



NOTES

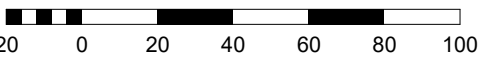
- DRIVEWAYS, STREET LIGHTING AND STREET TREE LOCATIONS INDICATIVE ONLY

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PROJECT S23-034
REDLEAF
REDMOND PLACE, ORANGE, NEW SOUTH WALES

STATUS
DEVELOPMENT APPLICATION

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ISSUE	DATE	AMENDMENT	BY	APPROVED
1	16.05.25	CONCEPT FOR COSTING	SLRB	SB/KS
2	06.06.25	DRAFT ISSUE FOR INFORMATION	SLRB	SB/KS
3	27.06.25	DRAFT DA ISSUE	SLRB	SB/KS
4	21.07.25	DA ISSUE	SLRB	SB/KS

DRAWING TITLE
Site Plan

DRAWING NUMBER
L004

REVISION
4

Diagram illustrating the zones around a tree, labeled from the center outwards:

- TREE TO REMAIN
- TREE PROTECTION ZONE
- STRUCTURAL ROOT ZONE
- CANOPY
- TRUNK

()

Diagram illustrating four levels of retention value, each represented by a concentric circle with a dashed blue outer boundary and a solid inner boundary:

- HIGH RETENTION VALUE**: Red circle with a small solid red inner circle.
- MODERATE RETENTION VALUE**: Orange circle with a small solid orange inner circle.
- LOW RETENTION VALUE**: Yellow circle with a small solid yellow inner circle.
- VERY LOW RETENTION VALUE**: Green circle with a small solid green inner circle.

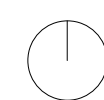
REFER TO ARBORIST REPORT FOR
ADDITIONAL INFORMATION AND TREE
RETENTION REQUIREMENTS



FOR CONTINUATION REFER: L102

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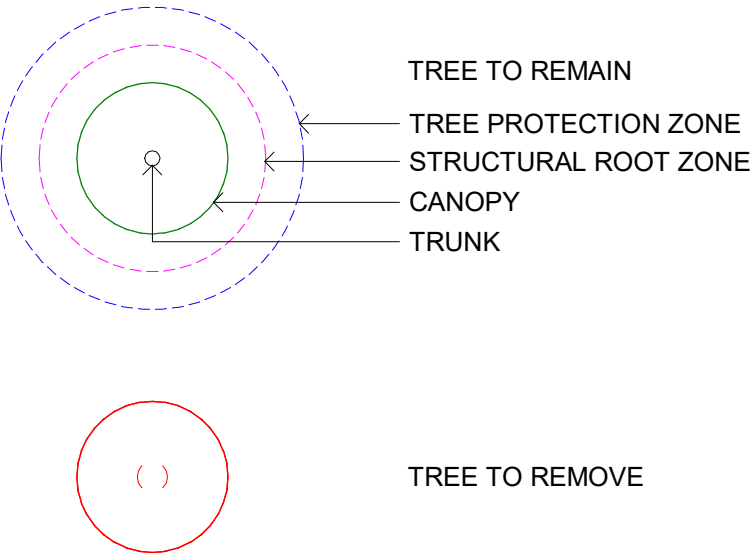
CLIENT
5 LANDCOM

REVISION
3

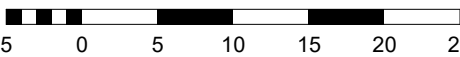
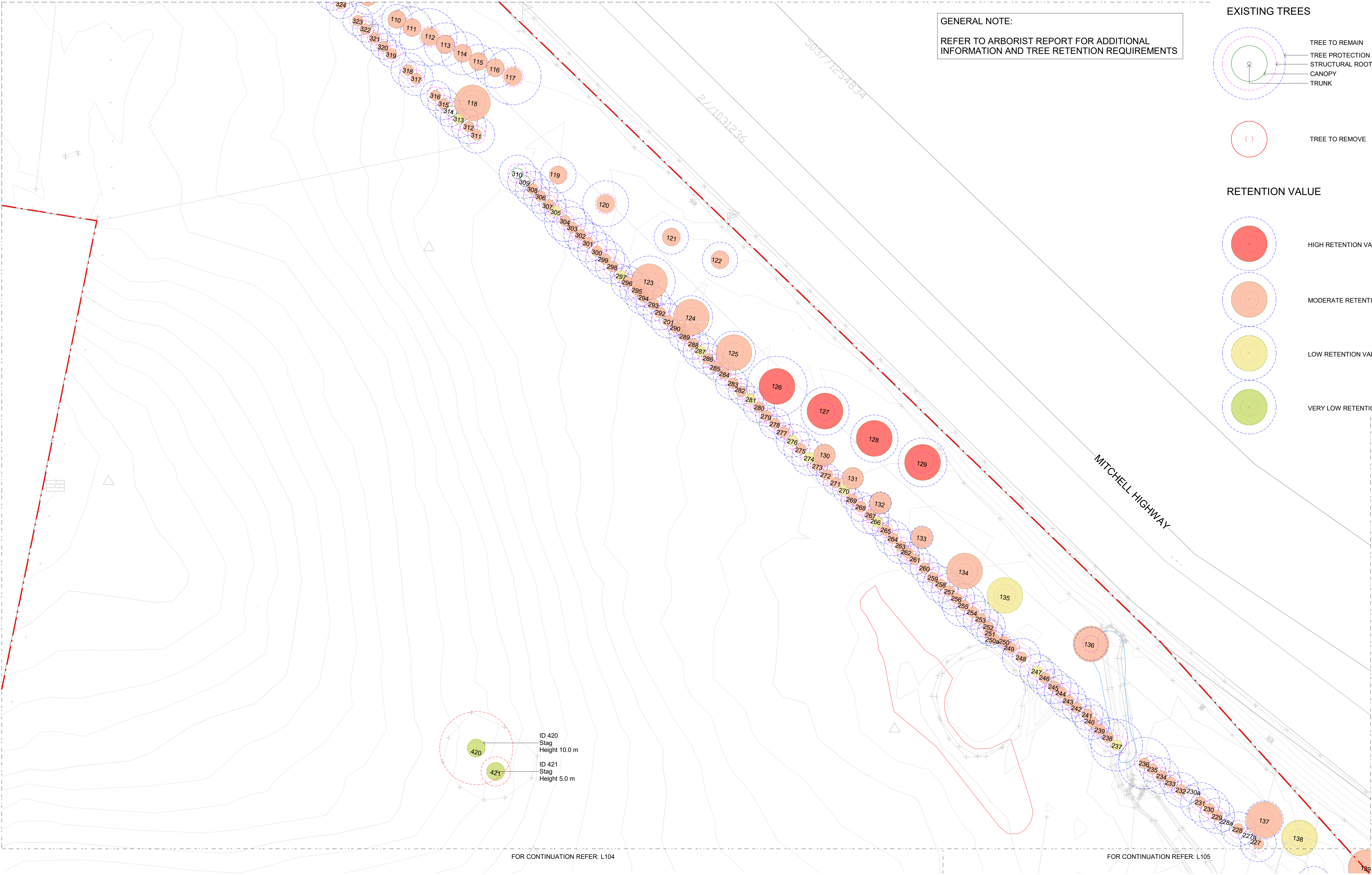
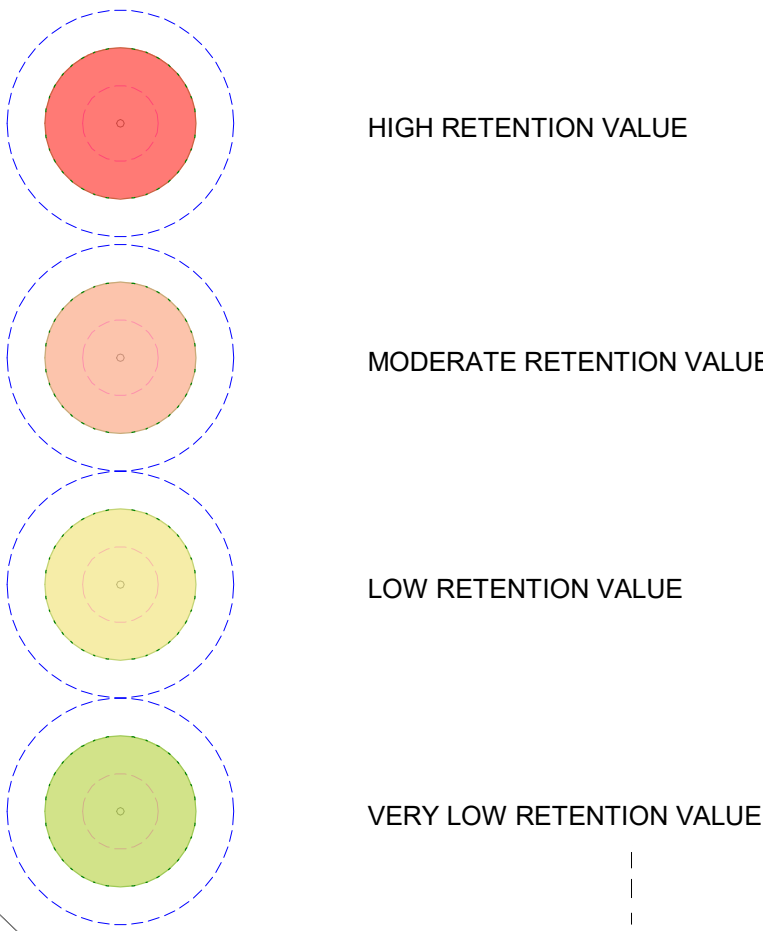
FOR CONTINUATION REFER: L102

GENERAL NOTE:
REFER TO ARBORIST REPORT FOR ADDITIONAL
INFORMATION AND TREE RETENTION REQUIREMENTS

EXISTING TREES

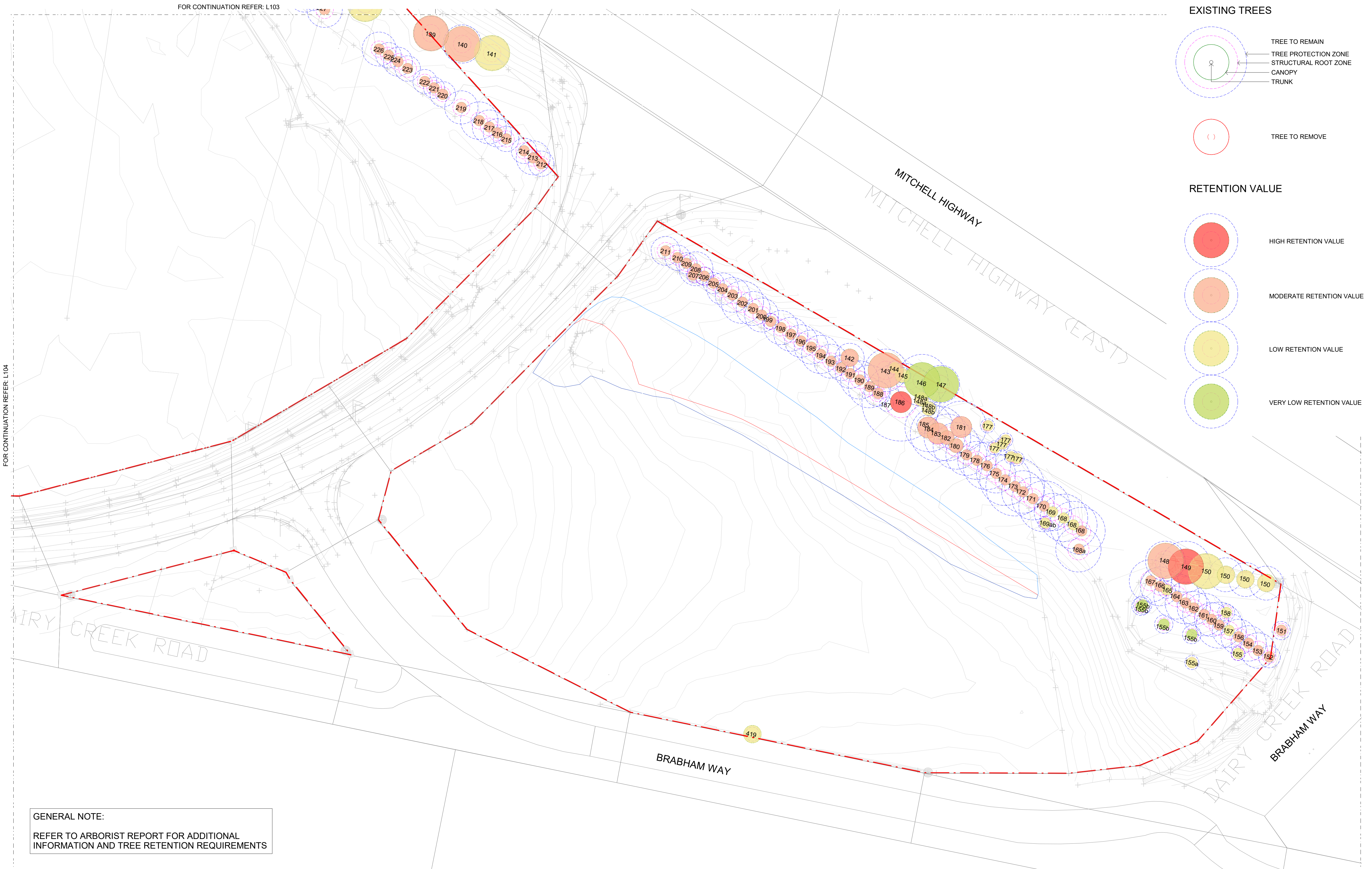


RETENTION VALUE



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1	27.06.25	DRAFT DA ISSUE	SLRB	SB/KS
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CANOPY COVER CALCULATIONS

NEW OPEN SPACE AREA (BLUE BOUNDARY) - EXCLUDING HANGAR BUILDING, SOUTHERN WETLAND WATER AREA, DETENTION BASIN AND AREA EAST OF THE POPLARS = 32,430m²

45% CANOPY COVER = 14,590m²

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REDLEAF
REDMOND PLACE, ORANGE, NEW SOUTH WALES

STATUS
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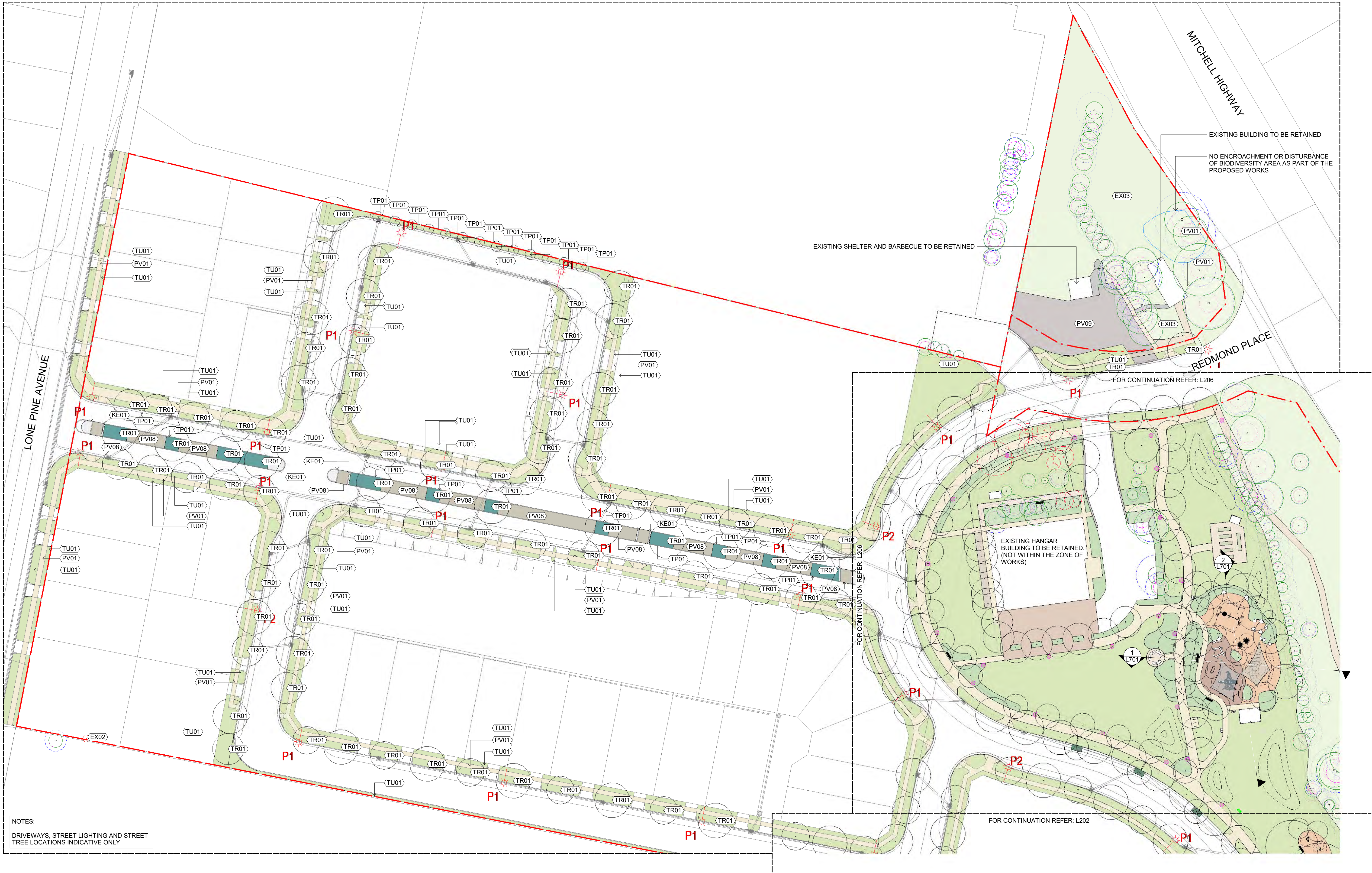
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1	16.05.25	CONCEPT FOR COSTING	SL/RB	SB/KS
2	06.06.25	DRAFT ISSUE FOR INFORMATION	SL/RB	SB/KS
3	27.06.25	DRAFT DA ISSUE	SL/RB	SB/KS
4	21.07.25	DA ISSUE	SL/RB	SB/KS

DRAWING TITLE
Tree Canopy Calculation Plan

DRAWING NUMBER
L106

REVISION
4



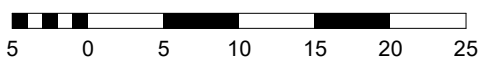
NOTES:
DRIVEWAYS, STREET LIGHTING AND STREET
TREE LOCATIONS INDICATIVE ONLY



NOTES:
DRIVEWAYS, STREET LIGHTING AND STREET
TREE LOCATIONS INDICATIVE ONLY

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REDLEAF
REDMOND PLACE, ORANGE, NEW SOUTH WALES

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1	27.06.25	DRAFT DA ISSUE	SLRB	SB/KS
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DRAWING TITLE
General Arrangement Plan - Sheet 02

DRAWING NUMBER
L202

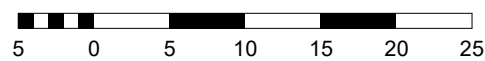
REVISION
2

NOTES:
DRIVEWAYS, STREET LIGHTING AND STREET
TREE LOCATIONS INDICATIVE ONLY



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1	27.06.25	DRAFT DA ISSUE	SLRB	SBKS
2	21.07.25	DA ISSUE	SLRB	SBKS

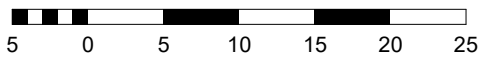
DRAWING TITLE
General Arrangement Plan - Sheet 03
DRAWING NUMBER
L203
REVISION
2



NOTES:
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TREE LOCATIONS INDICATIVE ONLY

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1	27.06.25	DRAFT DA ISSUE	SLRB	SB/KS
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DRAWING TITLE
General Arrangement Plan - Sheet 04
DRAWING NUMBER
L204
REVISION
2



NOTES:
DRIVEWAYS, STREET LIGHTING AND STREET
TREE LOCATIONS INDICATIVE ONLY

FOR CONTINUATION REFER: L201

NOTES:
DRIVEWAYS, STREET LIGHTING AND STREET
TREE LOCATIONS INDICATIVE ONLY



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REDMOND PLACE, ORANGE, NEW SOUTH WALES

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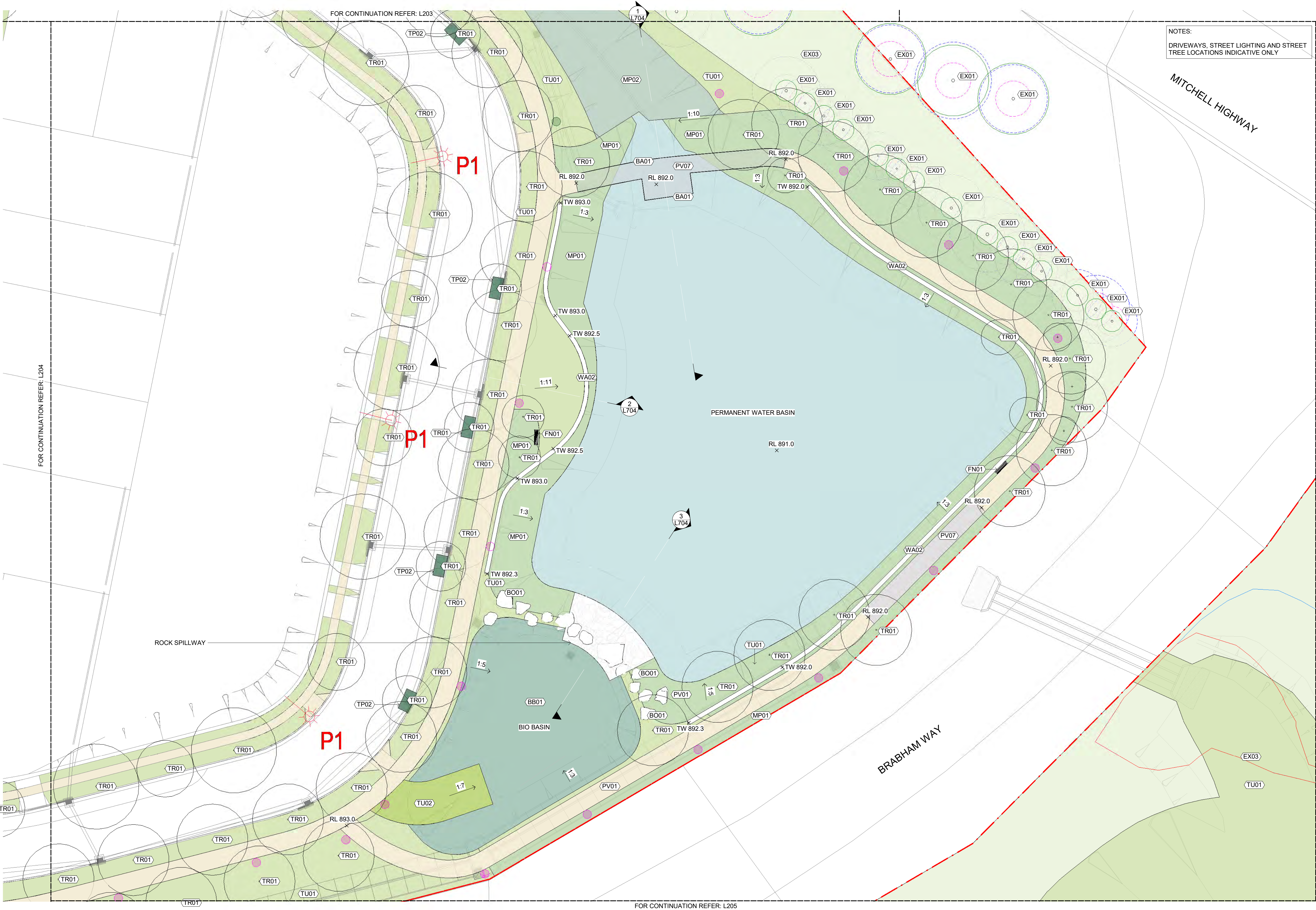
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1	16.05.25	CONCEPT FOR COSTING	SLRB	SB/KS
2	06.06.25	DRAFT ISSUE FOR INFORMATION	SLRB	SB/KS
3	27.06.25	DRAFT DA ISSUE	SLRB	SB/KS
4	21.07.25	DA ISSUE	SLRB	SB/KS

DRAWING TITLE
General Arrangement Plan - Northern
Park

DRAWING NUMBER
L206

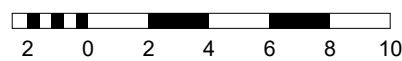
REVISION
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NOTES:
DRIVEWAYS, STREET LIGHTING AND STREET
TREE LOCATIONS INDICATIVE ONLY

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3	27.06.25	DRAFT DA ISSUE	SL/RB	SB/KS
4	21.07.25	DA ISSUE	SL/RB	SB/KS

DRAWING TITLE
General Arrangement Plan - Southern Wetland

DRAWING NUMBER
L208

REVISION
4



FOR CONTINUATION REFER: L506

LEGEND

- Planting Mix 01 Playground
- Planting Mix 02 Low
- Planting Mix 03 Shrubs <1m
- Planting Mix 04 Swale
- Planting Mix 08 Bush Tucka

TREE AND SPECIMEN PLANTING SCHEDULE
SHEET 02

Code	Botanical Name (SP)
AB	Acer buergerianum
ANV	Acer negundo violaceum
AS	Acer saccharinum
CC	Callistemon citrinus
CS	Callistemon salignus
CV	Callistemon viminalis
EB	Eucalyptus blakelyi
EC	Eucalyptus cinerea
ED	Eucalyptus dives
EG	Eucalyptus goniocalyx
EM	Eucalyptus mannifera
EME	Eucalyptus melliodora
EP	Eucalyptus pauciflora
ER	Eucalyptus rossii
ES	Eucalyptus sideroxylon
EST	Eucalyptus stellulata
EV	Eucalyptus viminalis
FC	Fraxinus pennsylvanica 'Cimmzam'
FR	Fraxinus x 'Raywoodii'
GR	Grevillea robusta
HS	Hakea salicifolia
LT	Lagerstroemia indica x fauriei 'Tuscarora'
MD	Melaleuca decora
MQ	Melaleuca quinquenervia
MS	Magnolia soulangeana
MT	Malus tschonoskii
PP	Parrotia persica
PU	Pyrus ussuriensis
SS	Sapium sebiferum
UP	Ulmus parvifolia
ZG	Zelcova serrata 'Green Vase'

FOR CONTINUATION REFER: L507

FOR CONTINUATION REFER: L507

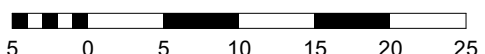
FOR CONTINUATION REFER: L503

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PROJECT S23-034
REDLEAF
REDMOND PLACE, ORANGE, NEW SOUTH WALES

STATUS
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1	06.06.25	DRAFT ISSUE FOR INFORMATION	SLRB	SB/KS
2	27.06.25	DRAFT DA ISSUE	SLRB	SB/KS
3	21.07.25	DA ISSUE	SLRB	SB/KS

DRAWING TITLE
Planting Plan - Sheet 02

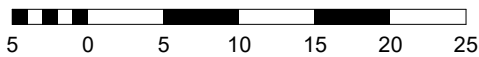
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L502

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3



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REDLEAF
REDMOND PLACE, ORANGE, NEW SOUTH WALES

STATUS
DEVELOPMENT APPLICATION

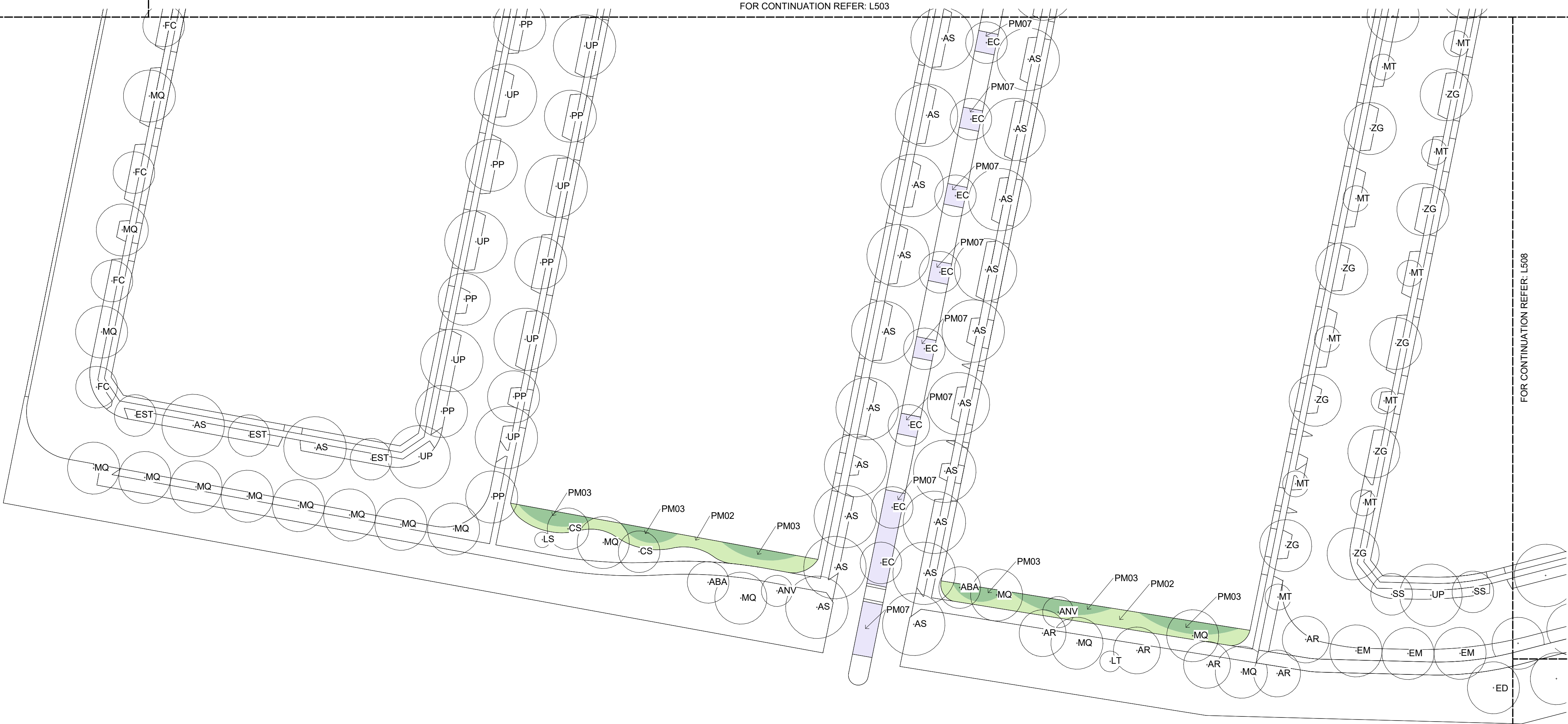
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2	27.06.25	DRAFT DA ISSUE	SL/BB	SB/KS
3	21.07.25	DA ISSUE	SL/BB	SB/KS

DRAWING TITLE
Planting Plan - Sheet 04

DRAWING NUMBER
L504

REVISION
3



LEGEND

- Planting Mix 02 Low
- Planting Mix 03 Shrubs <1m
- Planting Mix 04 Swale
- Planting Mix 07 Southern Median Strip

TREE AND SPECIMEN PLANTING SCHEDULE
SHEET 04

Code	Botanical Name (SP)
ABA	Aacia baileyana 'Purpurea'
ANV	Acer negundo violaceum
AR	Acer rubrum
AS	Acer saccharinum
CS	Callistemon salignus
EC	Eucalyptus cinerea
ED	Eucalyptus dives
EM	Eucalyptus mannifera
EST	Eucalyptus stellulata
FC	Fraxinus pennsylvanica 'Cimmzam'
LS	Lagerstroemia indica x fauriei 'Sioux'
LT	Lagerstroemia indica x fauriei 'Tuscarora'
MQ	Melaleuca quinquenervia
MT	Malus tschonoskii
PP	Parrotia persica
SS	Sapium sebiferum
UP	Ulmus parvifolia
ZG	Zelcova serrata 'Green Vase'

FOR CONTINUATION REFER: L503

FOR CONTINUATION REFER: L508

FOR CONTINUATION REFER: L505



LEGEND

- Planting Mix 01 Playground
- Planting Mix 02 Low
- Planting Mix 03 Shrubs <1m
- Planting Mix 08 Bush Tucka

TREE AND SPECIMEN PLANTING SCHEDULE 1	
Code	Botanical Name (SP)
ABA	Aacia baileyana 'Purpurea'
AO	Acer rubrum 'October Glory'
BPO	Brachyciton populneus
CC	Callistemon citrinus
CV	Callistemon viminalis
EBR	Eucalyptus bridgesiana
EC	Eucalyptus cinerea
ED	Eucalyptus dives
EM	Eucalyptus mannifera
EME	Eucalyptus melliodora
ER	Eucalyptus rossii
EST	Eucalyptus stellulata
FR	Fraxinus x 'Raywoodii'
HS	Hakea salicifolia
LS	Lagerstroemia indica x fauriei 'Sioux'
MA	Melaleuca amillarlis
MS	Magnolia soulangeana
MT	Malus tschonoskii
PP	Parrotia persica
PU	Pyrus ussuriensis
SS	Sapium sebiferum
ZG	Zelcova serrata 'Green Vase'



FOR CONTINUATION REFER: L503

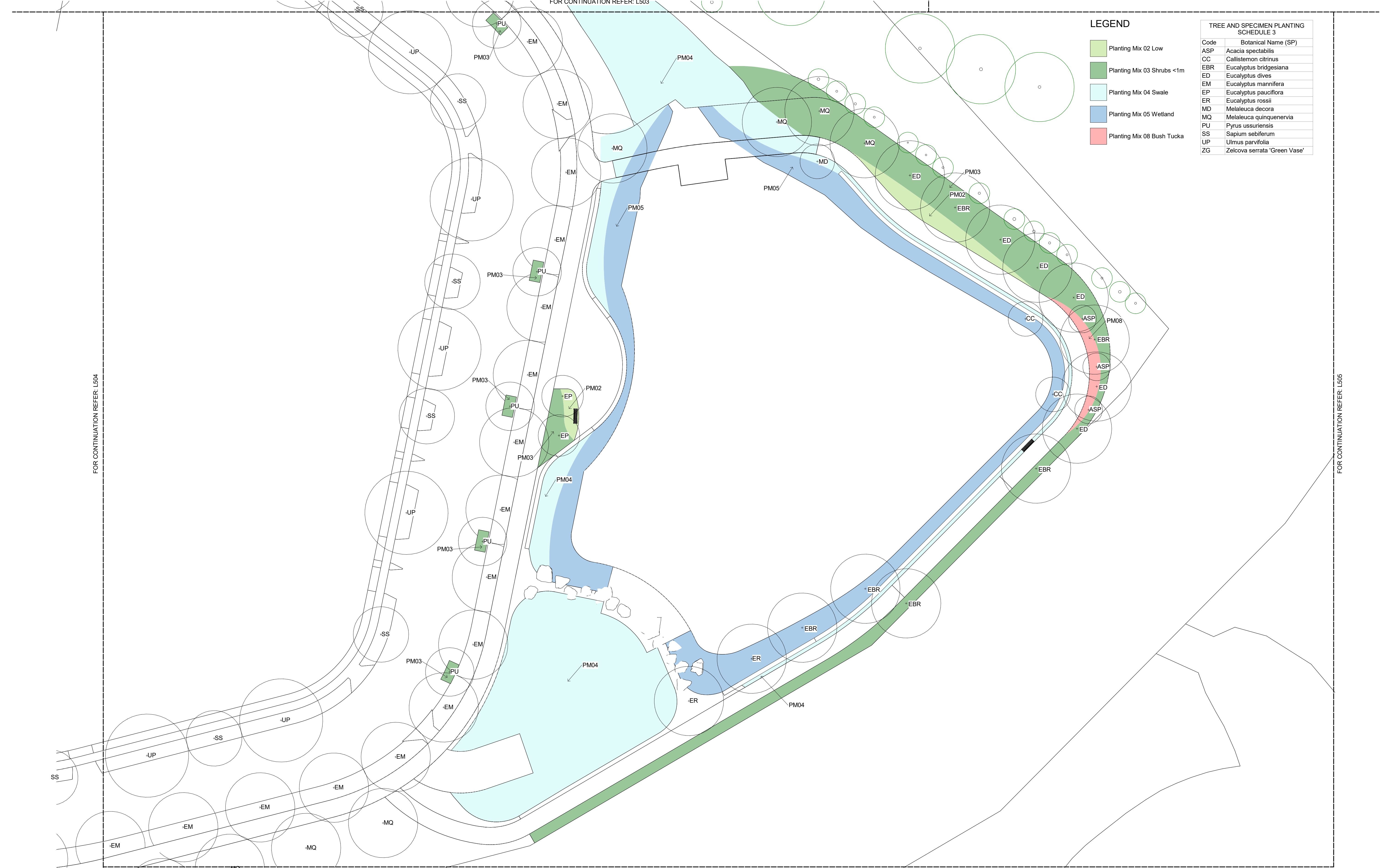
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PROJECT S23-034
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REDMOND PLACE, ORANGE, NEW SOUTH WALES

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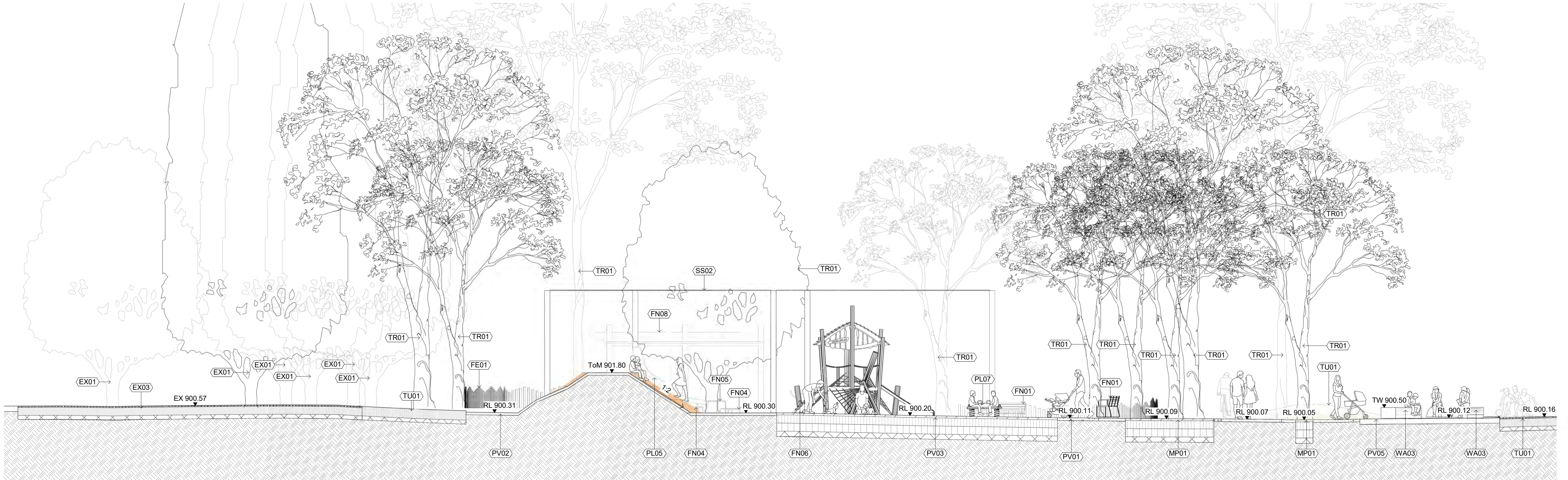
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1	06.06.25	DRAFT ISSUE FOR INFORMATION	SLRB	SB/KS
2	27.06.25	DRAFT DA ISSUE	SLRB	SB/KS
3	21.07.25	DA ISSUE	SLRB	SB/KS

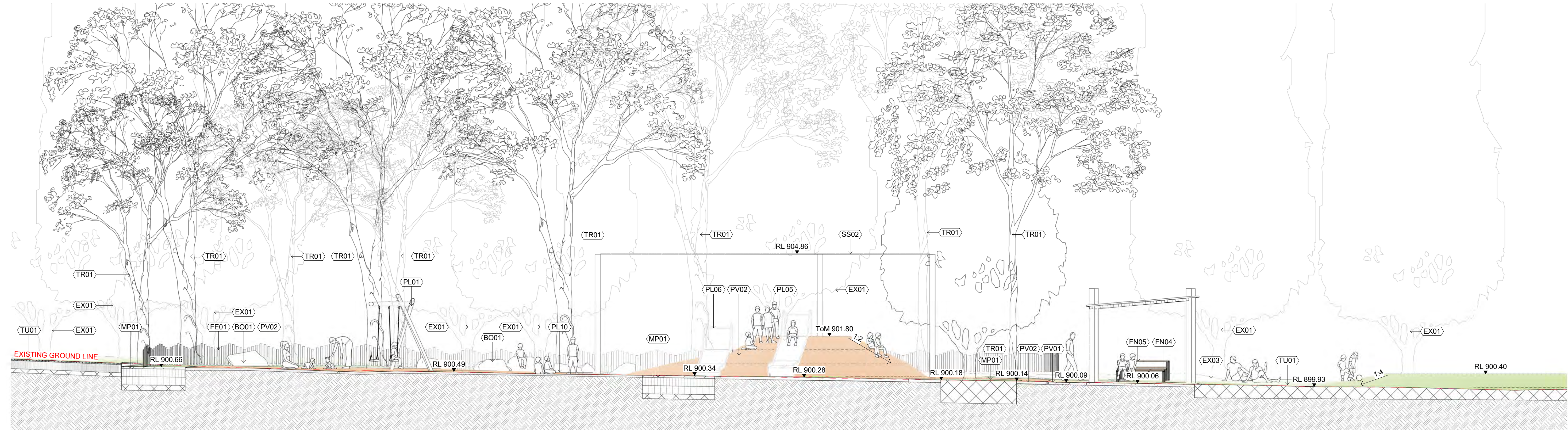
DRAWING TITLE
Planting Plan - Southern Wetland

DRAWING NUMBER
L508

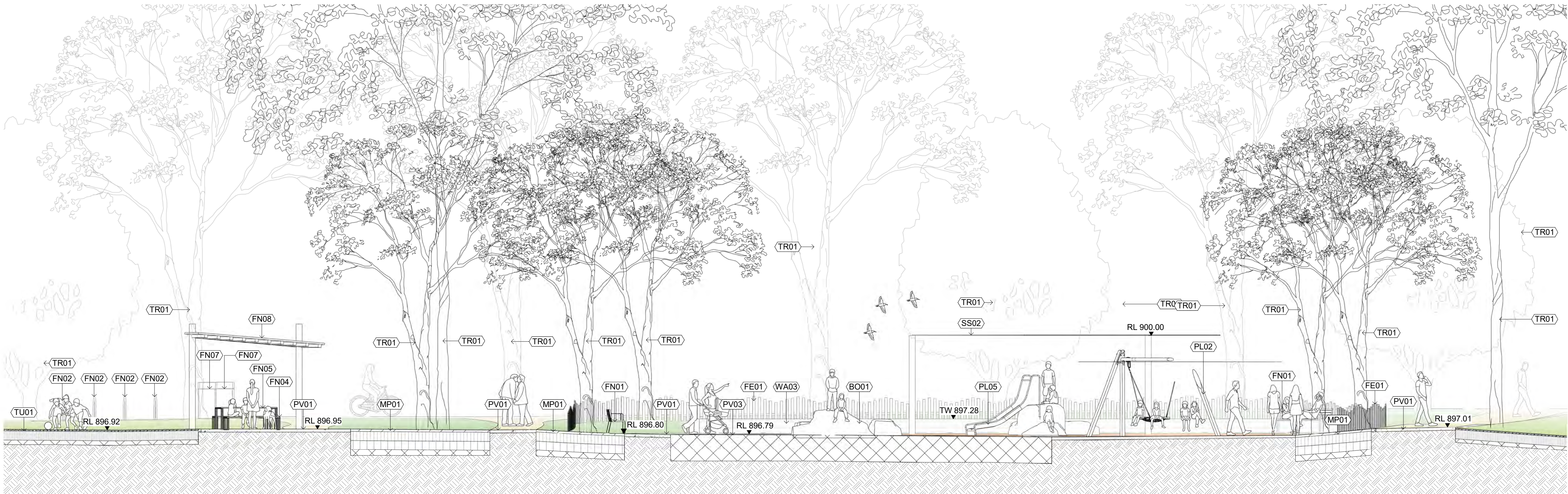
REVISION
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1 Northern Open Space Section 01
L004 1:75



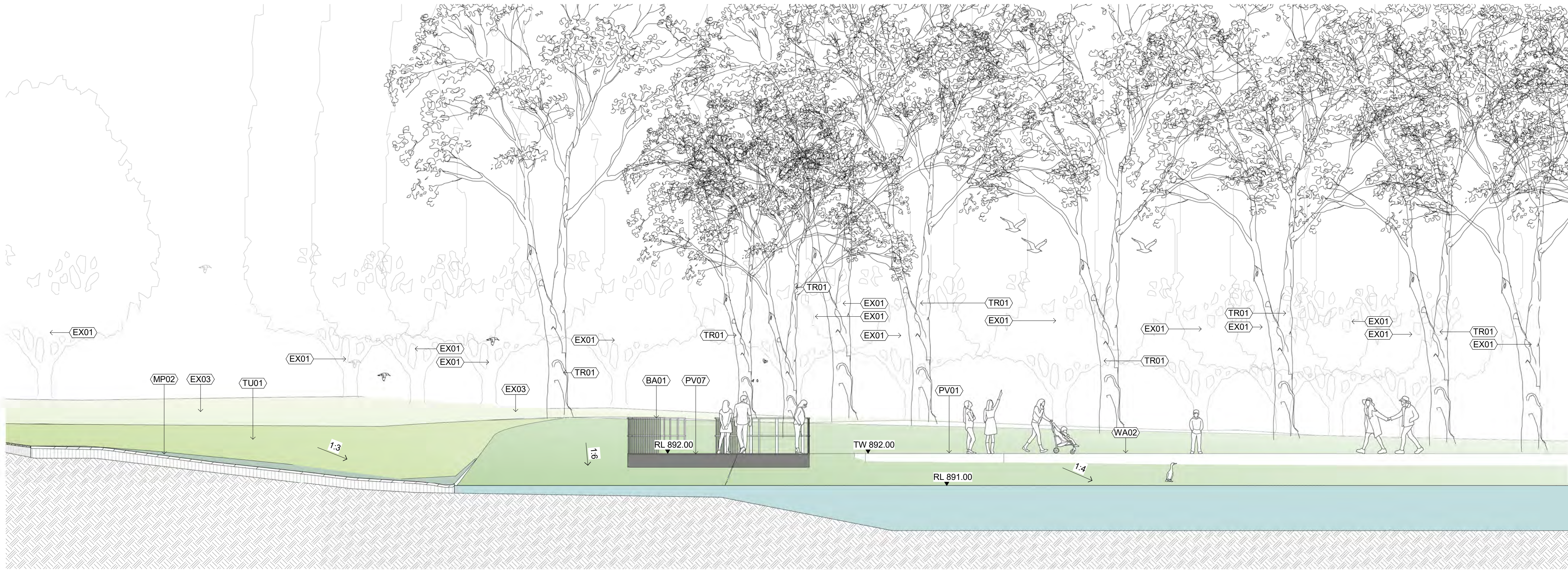
2 Northern Open Space Section 02
L004 1:75



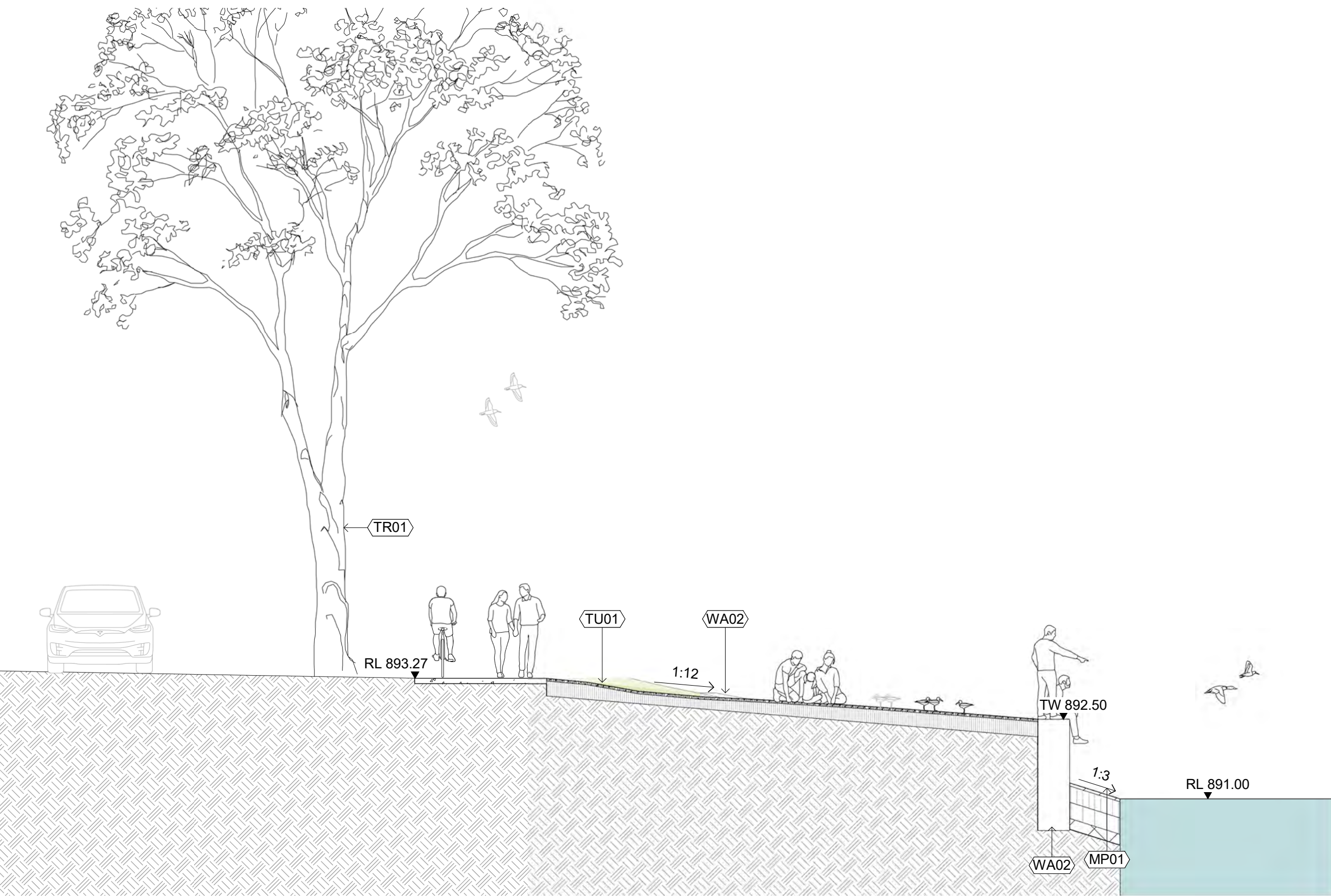
1 Central Open Space - Playground Section
1 : 75



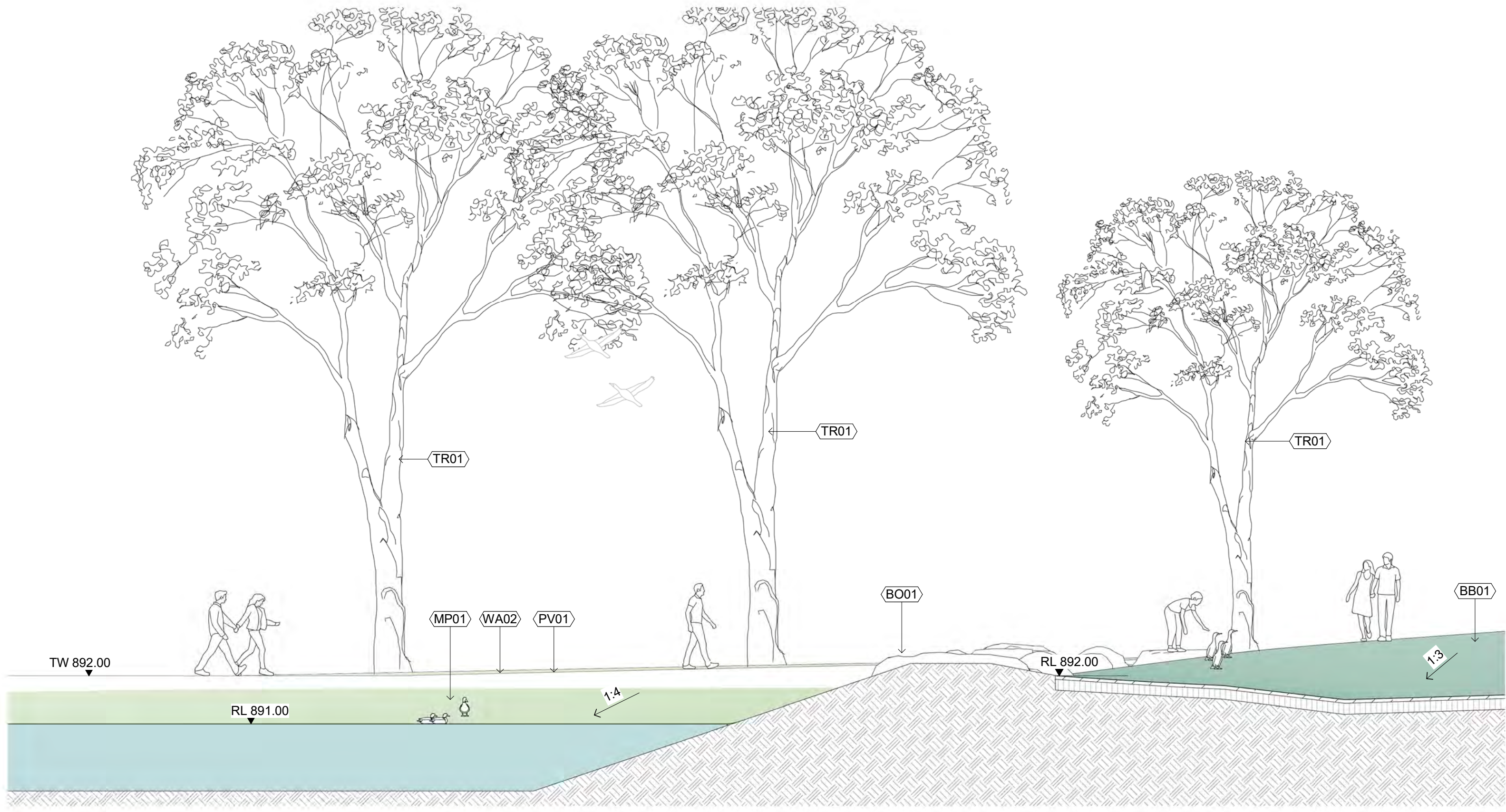
2 Central Open Space - Section 01
1 : 75



1 Southern Wetland Section 01
L004 1 : 75



2 Southern Wetland Section 02
L004 1 : 75



3 Southern Wetland Section 03
L004 1 : 75

Appendix D

Bush Fire Safety Authority Checklist

Table 11: Clause 45 Rural Fires Regulations 2022 Considerations

Requirement	Section of Report where addressed	Compliance		
		Yes	No	N/A
(1) For the purposes of the Act, section 100B(4), an application for a bush fire safety authority must be made in writing.	This report provides the application in writing.	☒	☐	☐
(2) An application for a bush fire safety authority must include the following—				
(a) a description, including the address, of the property on which the development the subject of the application is proposed to be carried out,	Section 1.3	☒	☐	☐
(b) a classification of the vegetation on and surrounding the property, out to a distance of 140 metres from the boundaries of the property, in accordance with the system for classification of vegetation contained in Planning for Bush Fire Protection,	Section 2.2	☒	☐	☐
(c) an assessment of the slope of the land on and surrounding the property, out to a distance of 100 metres from the boundaries of the property,	Section 2.3	☒	☐	☐
(d) identification of significant environmental features on the property,	Section 1.3.3	☒	☐	☐
(e) the details of a threatened species or threatened ecological community under the Biodiversity Conservation Act 2016 that the applicant knows to exist on the property,	Section 1.3.4	☒	☐	☐
(f) the details and location of an Aboriginal object or place, within the meaning of the National Parks and Wildlife Act 1974, that the applicant knows to be situated on the property,	Section 1.3.5	☒	☐	☐
(g) a bush fire assessment for the proposed development, including the methodology used in the assessment, that addresses the following matters—	Section 2	☒	☐	☐
(i) the extent to which the development is to provide for setbacks, including asset protection zones,	Section 2.5 and 3.4.1	☒	☐	☐
(ii) the siting and adequacy of water supplies for fire fighting,	Section 3.4.4	☒	☐	☐
(iii) the capacity of nearby public roads to handle increased volumes of traffic when a bush fire emergency occurs,	Section 3.4.3	☒	☐	☐
(iv) whether or not nearby public roads that link with the fire trail network have two-way access,	No fire trails	☐	☐	☒

Table 11: Clause 45 Rural Fires Regulations 2022 Considerations

Requirement	Section of Report where addressed	Compliance		
		Yes	No	N/A
(v) the adequacy of arrangements for access to and egress from the development site for the purposes of an emergency response,	Section 3.4.3	☒	☐	☐
(vi) the adequacy of bush fire maintenance plans and fire emergency procedures for the development site,	Nil.	☐	☐	☒
(vii) the construction standards to be used for building elements in the development,	Section 3.4.2.	☒	☐	☐
(viii) the adequacy of sprinkler systems and other fire protection measures to be incorporated into the development,	Nil proposed.	☐	☐	☒
(ix) registered fire trails on the property,	Nil	☐	☐	☒
(h) an assessment of the extent to which the proposed development conforms with or deviates from Planning for Bush Fire Protection.	Section 3	☒	☐	☐
(3) An application for a bush fire safety authority must also be accompanied by the prescribed information if—				
(a) the proposed development is subdivision for the purposes of dwelling houses, dual occupancies or secondary dwellings on property in an urban release area, and	The site is in an URA as mapped by the LEP and the development is for the purposes of residential development. It is recommended that an amendment to the “Bush Fire Planning Urban Release Area Map” be sought to enable this provision to be enacted.	☒	☐	☐
(b) the application includes a request by the applicant that the Commissioner, when deciding the application, considers whether it would be appropriate for the erection of the dwelling houses, dual occupancies or secondary dwellings concerned to be excluded from the application of the Environmental Planning and Assessment Act 1979, section 4.14.	It is requested that the Commissioner apply this provision.	☒	☐	☐
(4) In this section— prescribed information means the following— (a) a plan of subdivision that shows—	A BAL Contour Map is provided in Figure 15 and maximum BALs for each lot outlined in Table 10 .	☒	☐	

Table 11: Clause 45 Rural Fires Regulations 2022 Considerations

Requirement	Section of Report where addressed	Compliance		
		Yes	No	N/A
(i) the bush fire attack levels that will apply to the property on completion of clearing of vegetation proposed to be carried out as part of subdivision work, within the meaning of the Environmental Planning and Assessment Act 1979, and (ii) proposed setbacks of buildings that may in future be erected on the property, including asset protection zones, and (b) other information about the proposed development that the Commissioner may require. Note— More information about bush fire attack levels, including the flame zone, can be found in Planning for Bush Fire Protection, ISBN 978 0 646 99126 9, Table A1.7, published by the NSW Rural Fire Service in November 2019. urban release area has the same meaning as in the Environmental Planning and Assessment Regulation 2021, section 270. dual occupancy, dwelling house and secondary dwelling have the same meanings as in the standard instrument prescribed by the Standard Instrument (Local Environmental Plans) Order 2006.				

Table 12: Maximum Bushfire Attack Levels (BAL)

Proposed Lot	Maximum BAL	Proposed Lot	Maximum BAL
100	BAL-LOW	239	BAL-29
101	BAL-LOW	240	BAL-29
102	BAL-LOW	241	BAL-29
103	BAL-LOW	242	BAL-29
104	BAL-LOW	300	BAL-29
105	BAL-LOW	301	BAL-29
105	BAL-LOW	302	BAL-LOW
107	BAL-LOW	303	BAL-LOW
108	BAL-LOW	304	BAL-LOW
109	BAL-LOW	305	BAL-LOW
110	BAL-LOW	306	BAL-LOW
111	BAL-LOW	307	BAL-12.5
112	BAL-LOW	308	BAL-29
114	BAL-LOW	309	BAL-29
115	BAL-LOW	310	BAL-29
116	BAL-LOW	311	BAL-29
117	BAL-LOW	312	BAL-12.5
118	BAL-LOW	313	BAL-LOW
119	BAL-12.5	314	BAL-LOW
120	BAL-12.5	315	BAL-LOW
121	BAL-LOW	316	BAL-LOW
122	BAL-LOW	317	BAL-19
123	BAL-LOW	318	BAL-12.5
124	BAL-LOW	319	BAL-12.5
125	BAL-LOW	320	BAL-12.5
126	BAL-LOW	321	BAL-12.5
127	BAL-LOW	322	BAL-12.5
128	BAL-LOW	323	BAL-12.5
129	BAL-LOW	324	BAL-12.5
130	BAL-LOW	325	BAL-12.5
131	BAL-LOW	326	BAL-29
132	BAL-LOW	327	BAL-29
133	BAL-LOW	328	BAL-29
134	BAL-LOW	329	BAL-29
135	BAL-LOW	330	BAL-29
136	BAL-LOW	331	BAL-29

Table 12: Maximum Bushfire Attack Levels (BAL)

Proposed Lot	Maximum BAL	Proposed Lot	Maximum BAL
137	BAL-LOW	332	BAL-29
138	BAL-LOW	333	BAL-29
139	BAL-LOW	334	BAL-29
140	BAL-LOW	335	BAL-29
141	BAL-12.5	336	BAL-29
200	BAL-LOW	337	BAL-29
201	BAL-LOW	400	BAL-12.5
202	BAL-LOW	401	BAL-12.5
203	BAL-LOW	402	BAL-12.5
204	BAL-LOW	403	BAL-12.5
205	BAL-LOW	404	BAL-12.5
206	BAL-LOW	405	BAL-12.5
207	BAL-LOW	406	BAL-12.5
208	BAL-LOW	407	BAL-29
209	BAL-LOW	408	BAL-29
210	BAL-LOW	409	BAL-29
211	BAL-LOW	410	BAL-29
212	BAL-12.5	411	BAL-29
213	BAL-29	412	BAL-29
214	BAL-12.5	413	BAL-29
215	BAL-12.5	414	BAL-29
216	BAL-12.5	415	BAL-29
217	BAL-12.5	416	BAL-29
218	BAL-12.5	417	BAL-29
219	BAL-12.5	418	BAL-12.5
220	BAL-12.5	419	BAL-12.5
221	BAL-12.5	420	BAL-12.5
222	BAL-12.5	421	BAL-29*
223	BAL-12.5	422	BAL-19
224	BAL-12.5	423	BAL-12.5
225	BAL-12.5	424	BAL-12.5
226	BAL-12.5	425	BAL-LOW
227	BAL-LOW	426	BAL-LOW
228	BAL-12.5	427	BAL-LOW
229	BAL-29	428	BAL-LOW
230	BAL-29	429	BAL-LOW

Table 12: Maximum Bushfire Attack Levels (BAL)

Proposed Lot	Maximum BAL	Proposed Lot	Maximum BAL
231	BAL-29	430	BAL-LOW
232	BAL-29	431	BAL-LOW
233	BAL-29	432	BAL-LOW
234	BAL-29	433	BAL-LOW
235	BAL-29	434	BAL-LOW
236	BAL-29	435	BAL-LOW
237	BAL-29	436	BAL-LOW
238	BAL-29	437	BAL-LOW
Notes: * With Restriction on Use (APZ) maximum BAL-29 in developable area of site.			

Appendix E

APZ & Landscaping Measures

APPENDIX 4

ASSET PROTECTION ZONE REQUIREMENTS

In combination with other BPMs, a bush fire hazard can be reduced by implementing simple steps to reduce vegetation levels. This can be done by designing and managing landscaping to implement an APZ around the property.

Careful attention should be paid to species selection, their location relative to their flammability, minimising continuity of vegetation (horizontally and vertically), and ongoing maintenance to remove flammable fuels (leaf litter, twigs and debris).

This Appendix sets the standards which need to be met within an APZ.

A4.1 Asset Protection Zones

An APZ is a fuel-reduced area surrounding a building or structure. It is located between the building or structure and the bush fire hazard.

For a complete guide to APZs and landscaping, download the NSW RFS document *Standards for Asset Protection Zones* at the NSW RFS Website www.rfs.nsw.gov.au.

An APZ provides:

- a buffer zone between a bush fire hazard and an asset;
- an area of reduced bush fire fuel that allows for suppression of fire;
- an area from which backburning or hazard reduction can be conducted; and
- an area which allows emergency services access and provides a relatively safe area for firefighters and home owners to defend their property.

Bush fire fuels should be minimised within an APZ. This is so that the vegetation within the zone does not provide a path for the spread of fire to the building, either from the ground level or through the tree canopy.

An APZ, if designed correctly and maintained regularly, will reduce the risk of:

- direct flame contact on the building;
- damage to the building asset from intense radiant heat; and
- ember attack.

The methodology for calculating the required APZ distance is contained within Appendix 1. The width of the APZ required will depend upon the development type and bush fire threat. APZs for new development are set out within Chapters 5, 6 and 7 of this document.

In forest vegetation, the APZ can be made up of an Inner Protection Area (IPA) and an Outer Protection Area (OPA).

A4.1.1 Inner Protection Areas (IPAs)

The IPA is the area closest to the building and creates a fuel-managed area which can minimise the impact of direct flame contact and radiant heat on the development and act as a defensible space. Vegetation within the IPA should be kept to a minimum level. Litter fuels within the IPA should be kept below 1cm in height and be discontinuous.

In practical terms the IPA is typically the curtilage around the building, consisting of a mown lawn and well maintained gardens.

When establishing and maintaining an IPA the following requirements apply:

Trees

- tree canopy cover should be less than 15% at maturity;
- trees at maturity should not touch or overhang the building;
- lower limbs should be removed up to a height of 2m above the ground;
- tree canopies should be separated by 2 to 5m; and
- preference should be given to smooth barked and evergreen trees.

Shrubs

- create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided;
- shrubs should not be located under trees;
- shrubs should not form more than 10% ground cover; and
- clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.

Grass

- grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
- leaves and vegetation debris should be removed.

A4.1.2 Outer Protection Areas (OPAs)

An OPA is located between the IPA and the unmanaged vegetation. It is an area where there is maintenance of the understorey and some separation in the canopy. The reduction of fuel in this area aims to decrease the intensity of an approaching fire and restricts the potential for fire spread from crowns; reducing the level of direct flame, radiant heat and ember attack on the IPA.

Because of the nature of an OPA, they are only applicable in forest vegetation.

When establishing and maintaining an OPA the following requirements apply:

Trees

- tree canopy cover should be less than 30%; and
- canopies should be separated by 2 to 5m.

Shrubs

- shrubs should not form a continuous canopy; and
- shrubs should form no more than 20% of ground cover.

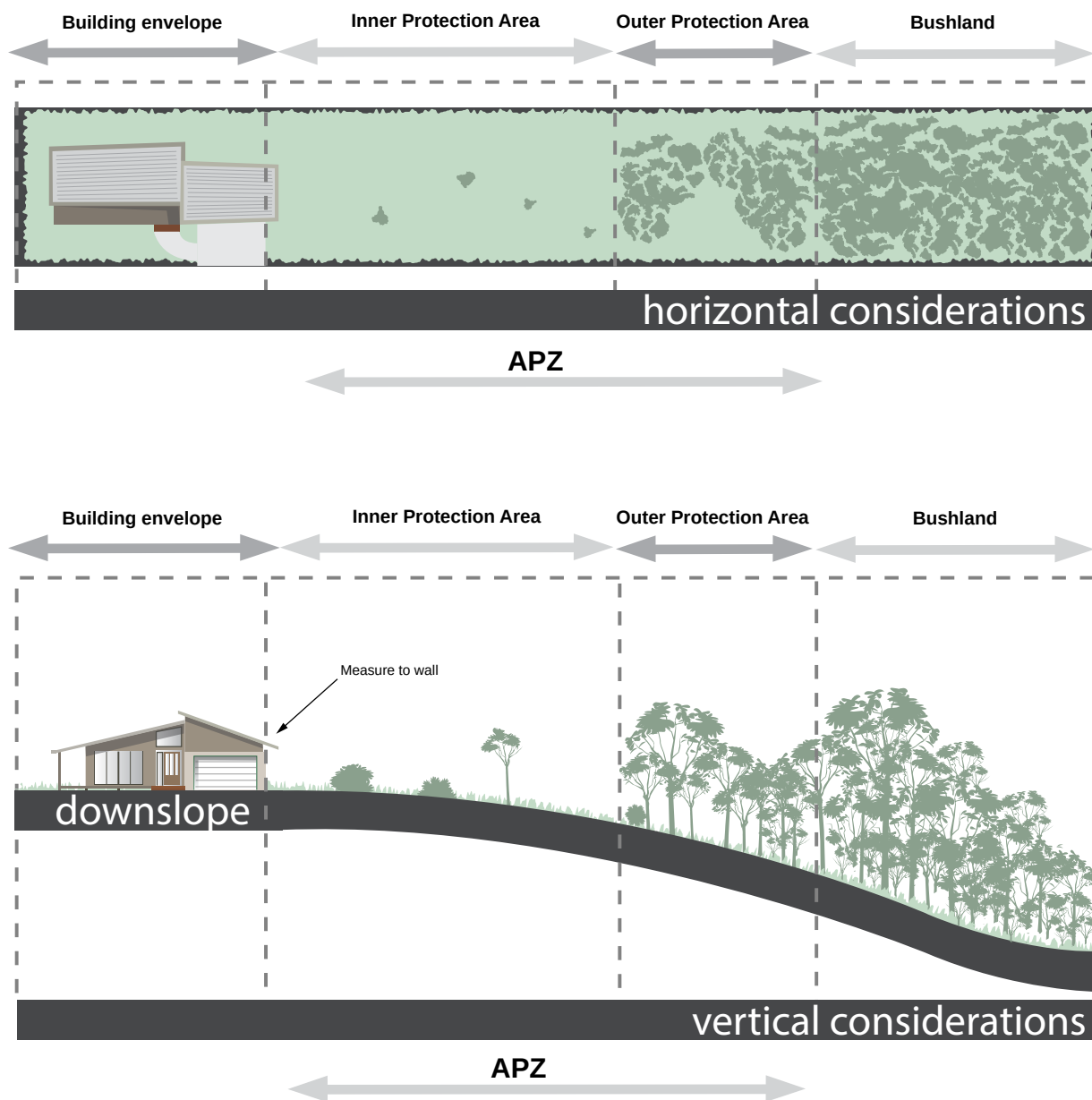
Grass

- grass should be kept mown to a height of less than 100mm; and
- leaf and other debris should be removed.

An APZ should be maintained in perpetuity to ensure ongoing protection from the impact of bush fires. Maintenance of the IPA and OPA as described above should be undertaken regularly, particularly in advance of the bush fire season.

Figure A4.1

Typical Inner and Outer Protection Areas.



Appendix F

Access Requirements

APPENDIX 3

ACCESS

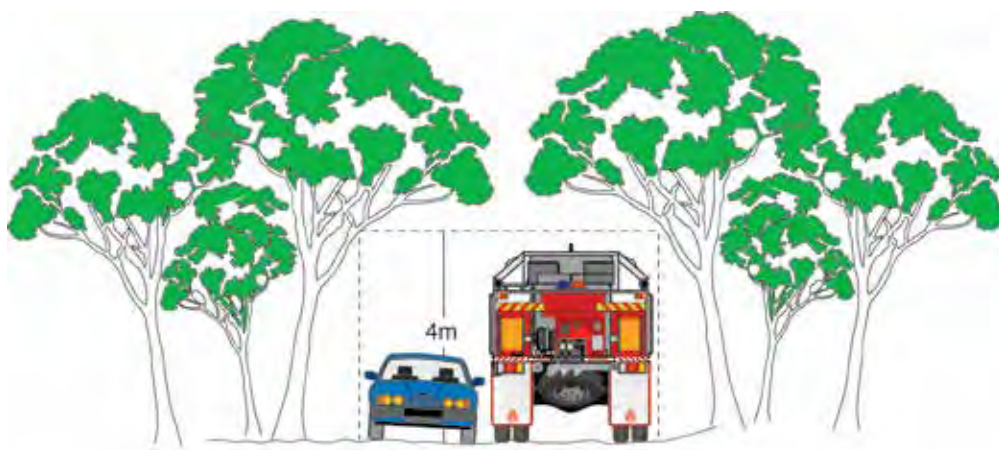
This appendix provides design principles for emergency service vehicle access.

A3.1 Vertical clearance

An unobstructed clearance height of 4 metres should be maintained above all access ways including clearance from building construction, archways, gateways and overhanging structures (e.g. ducts, pipes, sprinklers, walkways, signs and beams). This also applies to vegetation overhanging roads.

Figure A3.1

Vertical clearance.



A3.2 Vehicle turning requirements

Curved carriageways should be constructed using the minimum swept path as outlined in Table A3.2.

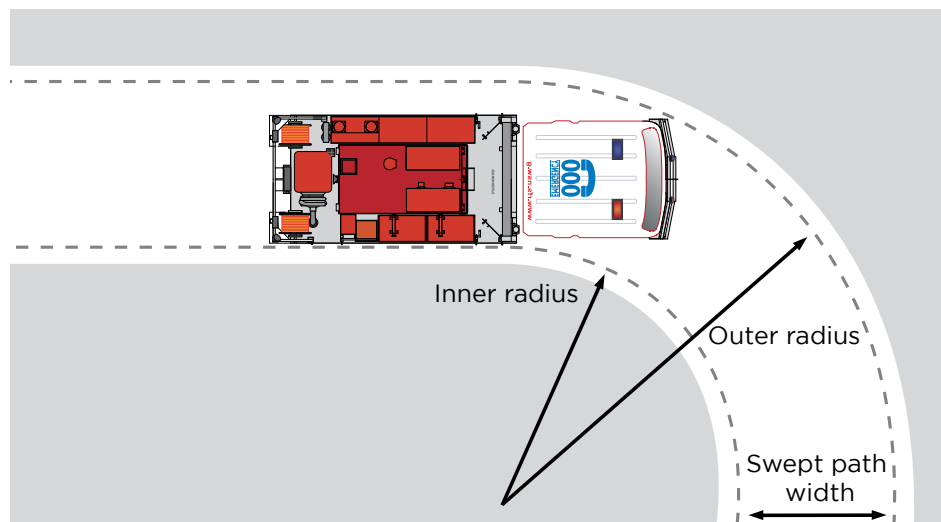
Table A3.2

Minimum curve radius for turning vehicles.

Curve radius (inside edge in metres)	Swept path (metres width)
< 40	4.0
40 - 69	3.0
70 - 100	2.7
> 100	2.5

Figure A3.2a

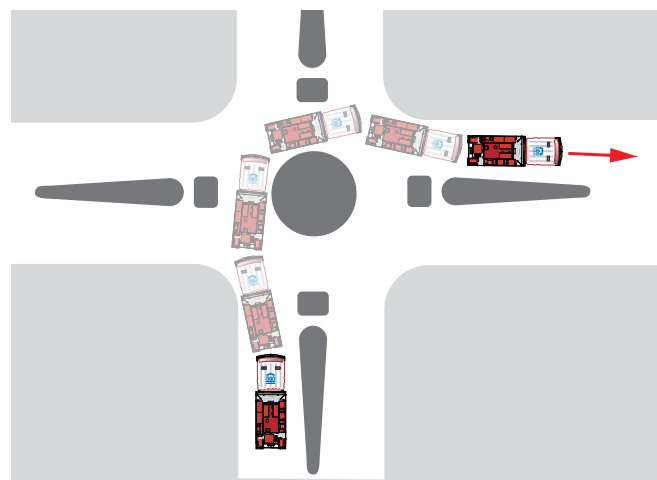
Swept path width for turning vehicles.



The radius dimensions given are for wall to wall clearance where body overhangs travel a wider arc than the wheel tracks (vehicle swept path). The swept path shall include an additional 500mm clearance either side of the vehicle.

Figure A3.2b

Roundabout swept path.



Example of a swept path as applied to a roundabout. The distance between inner and outer turning arcs allows for expected vehicle body swing of front and rear overhanging sections (the swept path).

A3.3 Vehicle turning head requirements

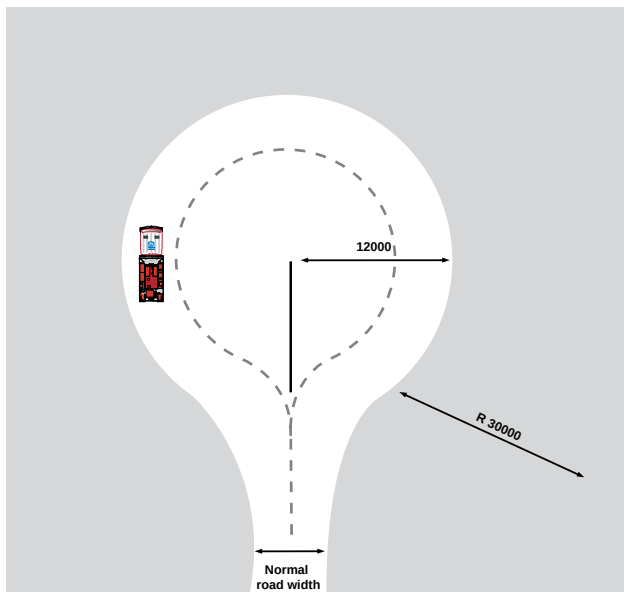
Dead ends that are longer than 200m must be provided with a turning head area that avoids multipoint turns. “No parking” signs are to be erected within the turning head.

The minimum turning radius shall be in accordance with Table A3.2. Where multipoint turning is proposed the NSW RFS will consider the following options:

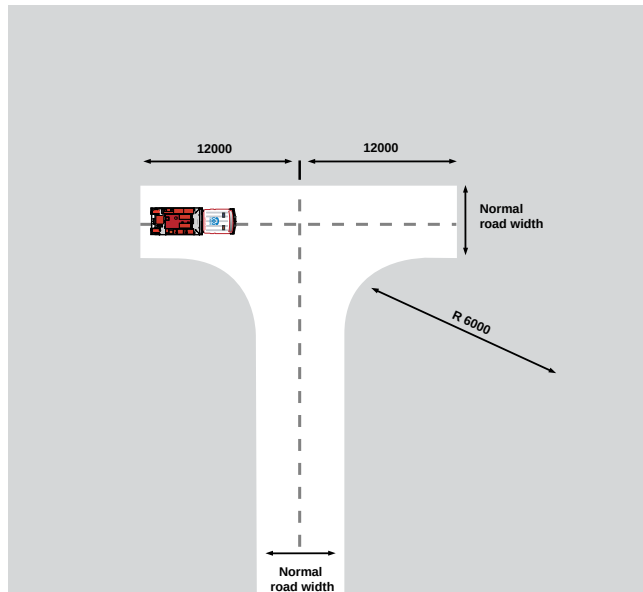
Figure A3.3

Multipoint turning options.

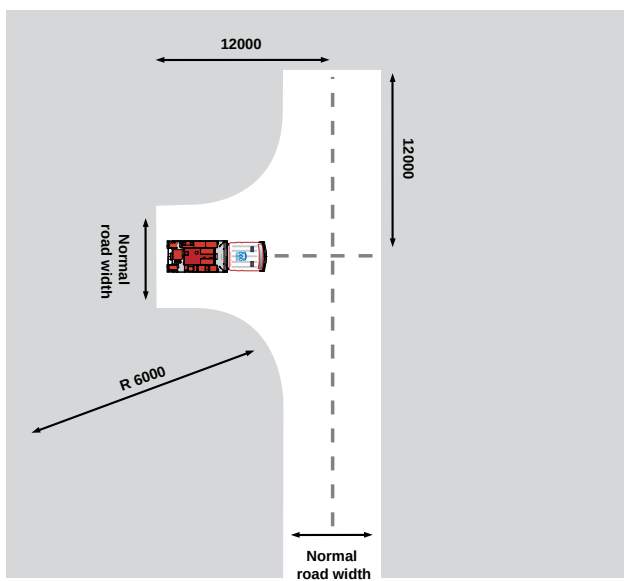
Type A



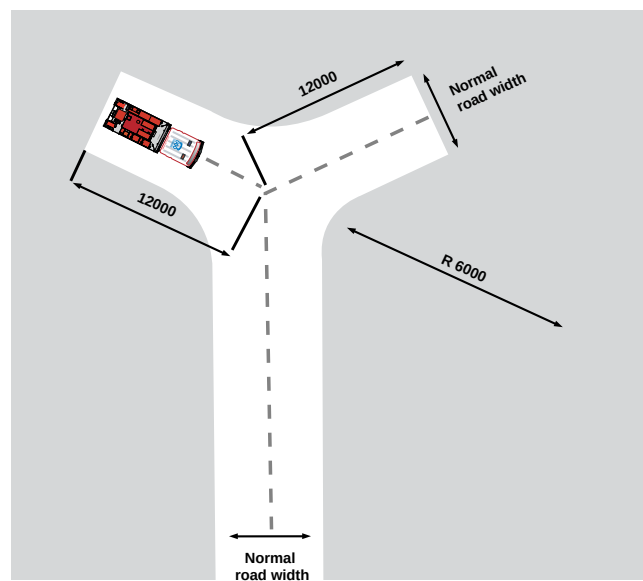
Type B



Type C



Type D



A3.4 Passing bays

The construction of passing bays, where required, shall be 20m in length and provide a minimum trafficable width at the passing point of 6m.

Figure A3.4

Passing bays can provide advantages when designed correctly. Poor design can and does severely impede access.



A3.5 Parking

Parking can create a pinch point in required access. The location of parking should be carefully considered to ensure fire appliance access is unimpeded. Hydrants shall be located outside of access ways and any parking areas to ensure that access is available at all times.

Figure A3.5

Hydrants and parking bays.

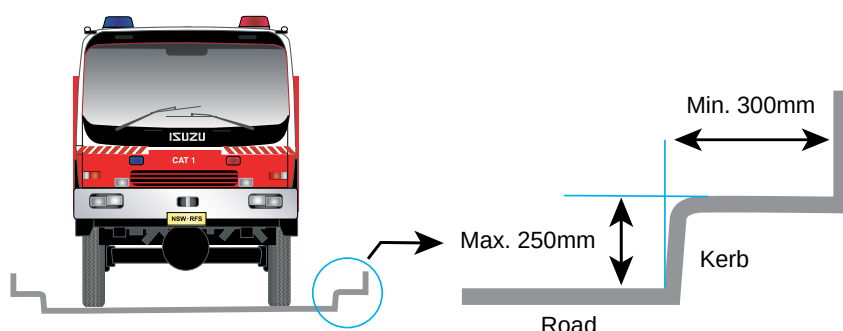


A3.6 Kerb dimensions

All kerbs constructed around access roads should be no higher than 250mm and free of vertical obstructions at least 300mm back from the kerb face to allow clearance for front and rear body overhang.

Figure A3.6

Carriageway kerb clearance dimensions.



A3.7 Services

Hydrant services should be located outside the carriageway and parking bays to permit traffic flow and access. Setup of standpipes within the carriageway may stop traffic flow. Hydrant services shall be located on the side of the road away from the bush fire threat where possible.

A3.8 Local Area Traffic Management (LATM)

The objective of LATM is to regulate traffic an acceptable level of speed and traffic volume within a local area.

Traffic engineers and planners should consider LATM devices when planning for local traffic control and their likely impact on emergency services. LATM devices by their nature are designed to restrict and impede the movement of traffic, especially large vehicles.

Where LATM devices are provided they are to be designed so that they do not impede fire vehicle access.

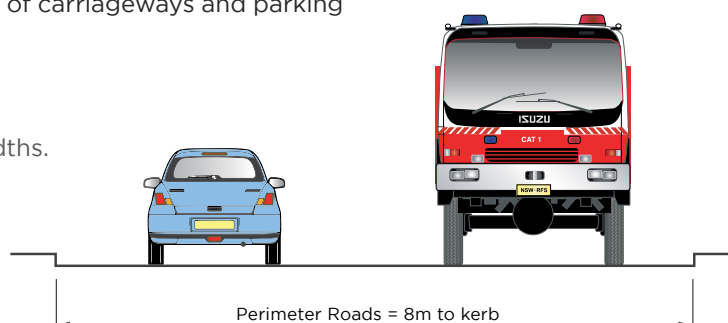
A3.9 Road types

A3.9.1 Perimeter Roads

Perimeter roads are to be provided with a minimum clear width of 8m. Parking and hydrants are to be provided outside of carriageways. Hydrants are to be located outside of carriageways and parking areas.

Figure A3.9a

Perimeter road widths.

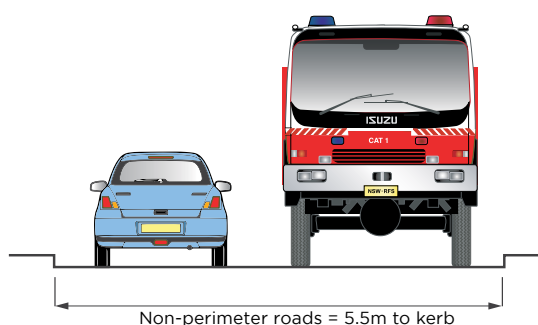


A3.9.2 Non-perimeter Roads

Non-perimeter roads shall be provided with a minimum clear width of 5.5m. Parking is to be provided outside of the carriageway and hydrants are not to be located in carriageways or parking areas.

Figure A3.9b

Non-perimeter road widths.



A3.9.3 Property access

Property access roads are to be a minimum of 4m wide.

Figure A3.9c

Property access road widths.

