

BUSHFIRE CONSTRAINTS REPORT

PLANNING PROPOSAL

LOT 2, LOT 3, LOT 4 and LOT 5 in DP 239612

No. 220, 300, 350 & 360

CHITTICK LANE,

COBBITTY

Australian Bushfire Protection Planners Pty Limited



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Bushfire Mitigation Consultants

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1.0 EXECUTIVE SUMMARY

Australian Bushfire Protection Planners Pty Limited has been commissioned to undertake a study to determine the potential bushfire constraints to future development within the site which comprises 146.52 hectares of RU1 Primary Production zoned land which has been historically used for agricultural purposes and is characterised by isolated rural dwellings and associated agricultural outbuildings.

The existing use of the property is a cattle farm known as 'Tidapa'.

The primary purpose of the Planning Proposal is to amend the Camden Local Environmental Plan (LEP) 2010 to enable the redevelopment of site for residential purposes, public open space and environmental conservation.

The proposal has been designed to provide infrastructure that will support the proposed community to ensure the additional residential land does not increase pressure on existing infrastructure in the area. This is to be achieved by providing land to accommodate future commercial uses in the form of a local or neighbourhood centre and land to accommodate future community uses such as a school or childcare centre.

A pre-lodgment meeting for the Planning Proposal was held with Camden Council on the 11th October 2019 identified the need for the Planning Proposal to contain specialist studies including a Bushfire Assessment.

This report has examined the proposed rezoning and identified that the site contains bushfire prone vegetation which will necessitate the need to provide Asset Protection Zones and other bushfire protection measures. This report therefore provides recommendations on the provision of setbacks to the bushfire hazard areas, access and water supplies for fire-fighting operations.

2.0 THE SITE INSPECTION.

An inspection of the site was undertaken by Graham Swain, Managing Director, *Australian Bushfire Protection Planners Pty Limited* on the 14th January 2020.

3.0 DESCRIPTION OF THE SITE.

The site is located on the northern end of Chittick Lane, approximately 1.2km to the north of the intersection of Chittick Lane and Cobbitty Road.

The site occupies approximately 146.52 hectares of RU1 Primary Production zoned land located directly adjacent to the South West Priority Growth Centre Area, immediately adjoining the Oran Park Precinct to the east and the indicative location of the Outer Sydney Orbital to the west.

The site is irregular in shape with an access handle from Chittick Lane and has been historically cleared for agriculture and is mostly free from significant vegetation except for the steeper gradients located in the north-western corner of the site which is vegetated with significant native tree species and exotic shrub understorey.

The landform of the site is mostly undulating, punctuated by water courses that flow into a tributary to Cobbitty Creek on the land to the east of the site.

The site contains a number of standing dams. Steeper gradients occur in the north-western part of the site.

Figure 1 – Site Location Plan is provided on Page 6.

Figure 2 – Cadastre & Contour Plan showing the lot boundaries, contours and watercourses within the site is provided on Page 7.

The vegetation within the site has been assessed by Cumberland Ecology with the predominant bushland vegetation consisting of Shale Hills Woodland.

This vegetation is a sub-set of Cumberland Plain Woodland which is classified by *'Keith'* as forest vegetation.

Refer to Figure 3 – Vegetation Communities on Page 8 prepared by Cumberland Ecology.

Figure 1 – Site Location Plan.

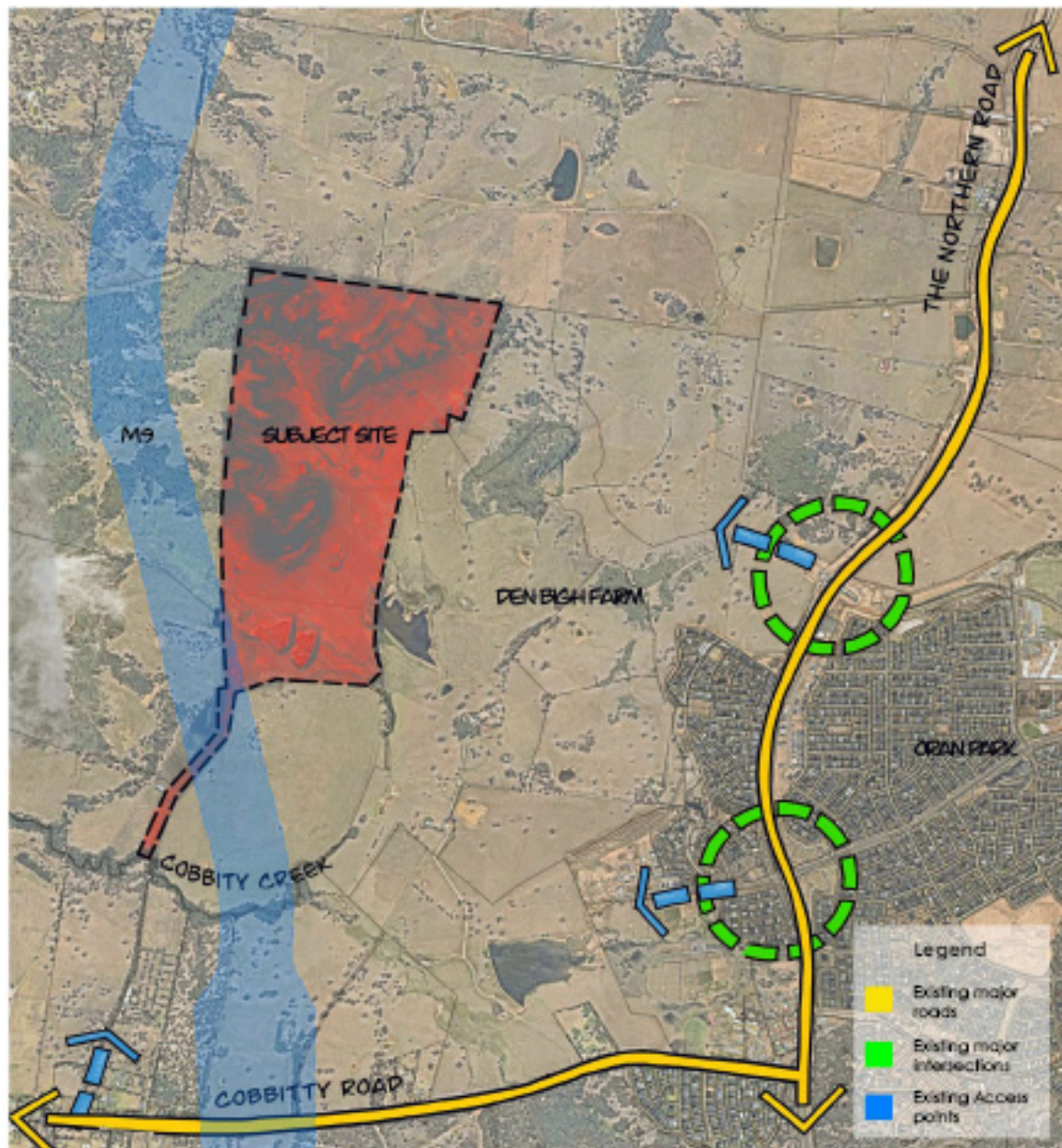


Figure 2 – Cadastre, Contour & Watercourse Plan.

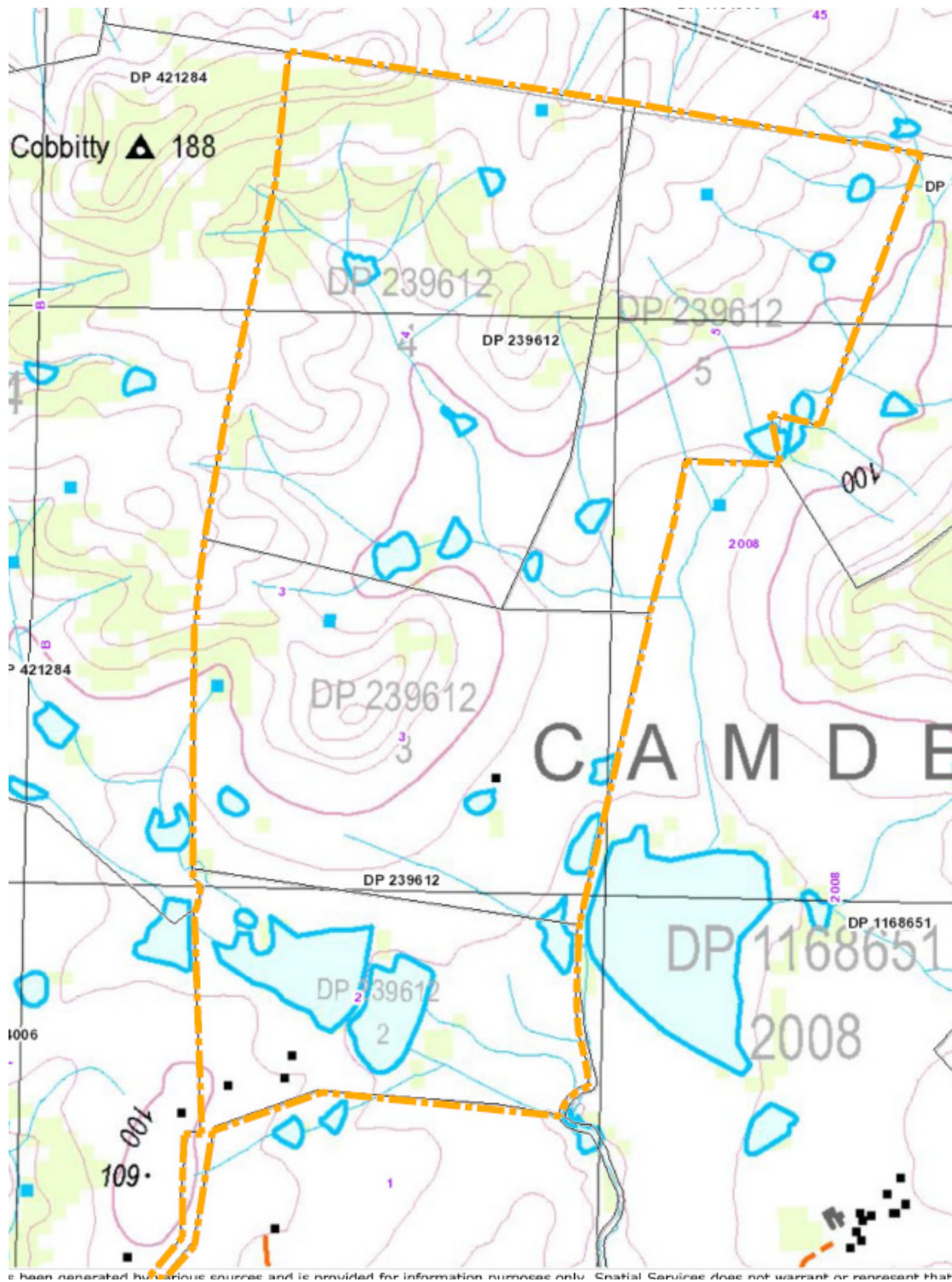
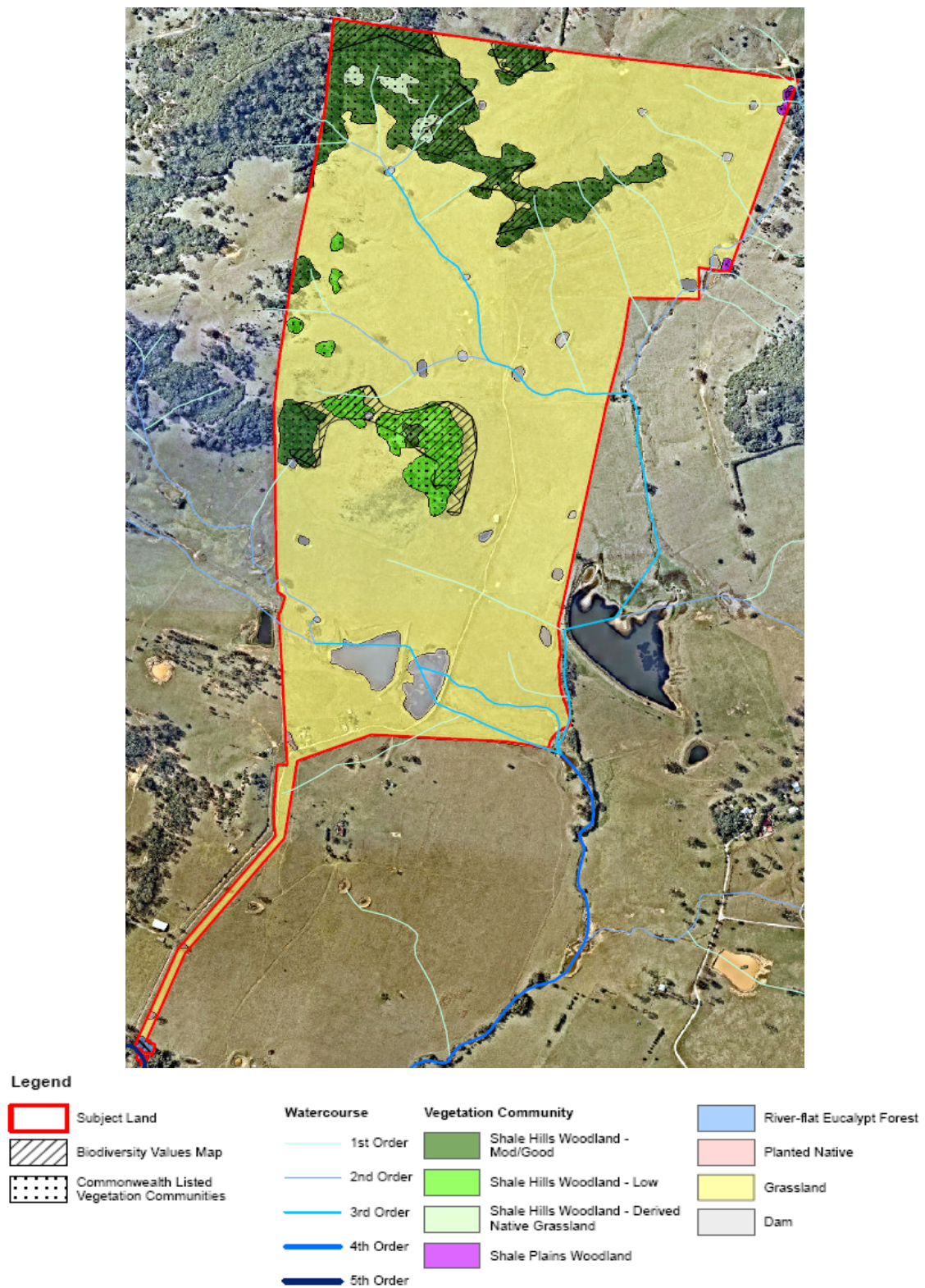


Figure 3 – Vegetation Communities Plan.



4.0 STRUCTURE PLAN

The Planning Proposal (PP) for Tidapa aims to rezone the 146.52ha site from agricultural land to mixed land uses, consisting of low density and large lot residential, public open space and environmental conservation landuse.

In order to ensure that the future development is fully integrated, a high level Structure Plan has been prepared for the site. The Structure Plan considers how the rezoning integrates with the existing development to the east and the future Western Sydney Orbital to the west of the site and identifies potential future land uses as well as key road connections.

The objective of the proposal is to extend the defined urban boundary of the existing South Wet Growth Area to the Outer Sydney Orbital and provide a well-designed residential neighbourhood that responds to the natural and cultural characteristics of the site, the surrounding urban development and provides a transition in density to rural lands located to the west of the site.

This is to be achieved through the rezoning of the site to provide zoning and minimum lot size control that will facilitate future residential development that is appropriate for the site's context.

The key objectives of the planning g proposal and resulting neighbourhood are:

- ❖ Transition – Provision of a residential neighbourhood that provides a clear transition from urban development to the east of the site to rural lands to the west of the site;
- ❖ Natural & Cultural Environment – Provision of a residential neighbourhood that positively responds to the natural and cultural characteristic of the site; and
- ❖ Accessibility and Amenity – Provision of a well-designed and accessible residential neighbourhood that provides an appropriate connection to the surrounding locality.

Figure 4 – Structure Plan is provided on Page 10.

Figure 5 – Structure Plan Context is provided on Page 11.

Figure 6 – Zoning Plan is provided on Page 12.

Figure 7 – Lot Size Plan is provided on Page 13.

Figure 4 – Structure Plan

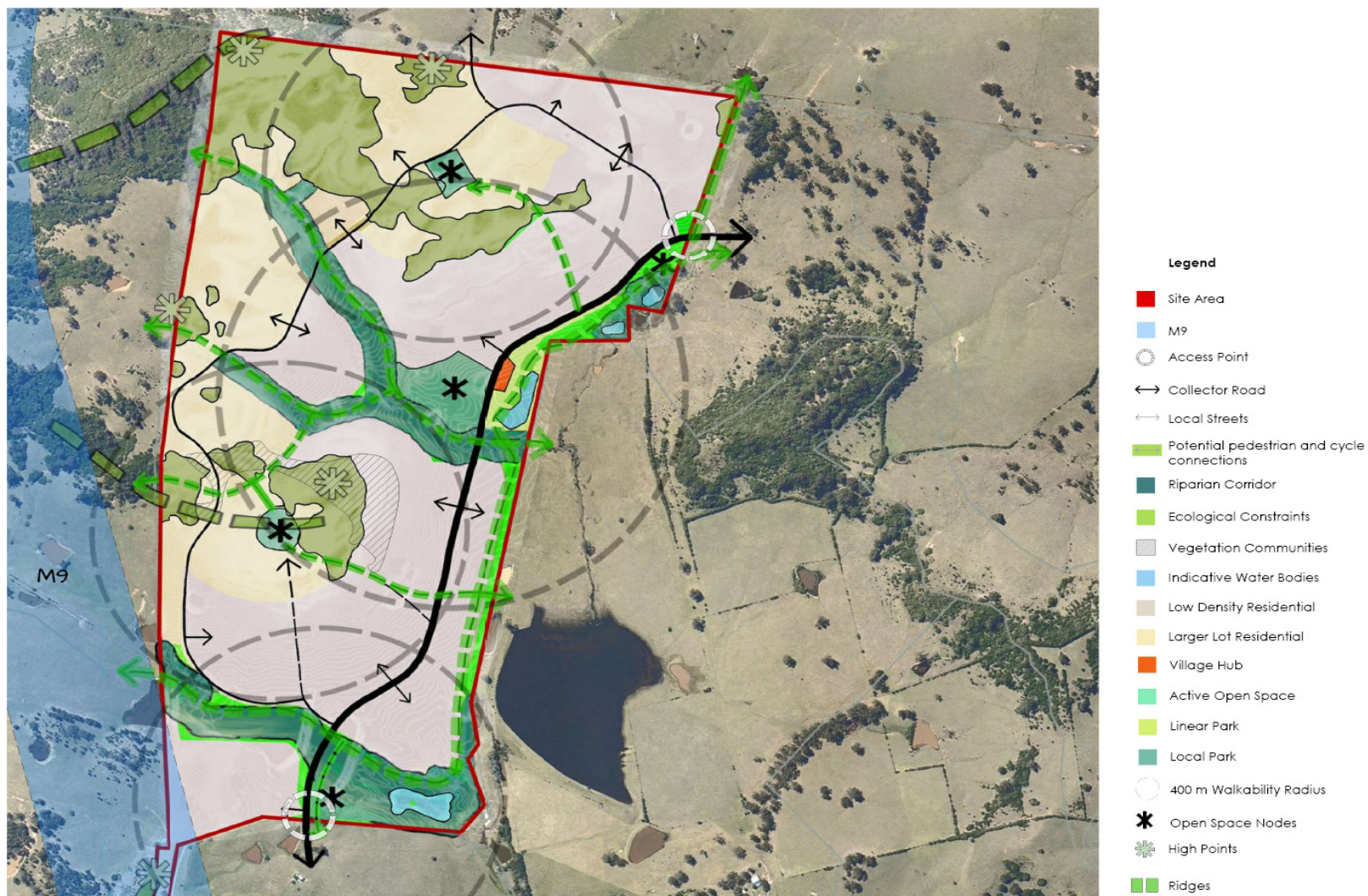


Figure 5 – Structure Plan Context

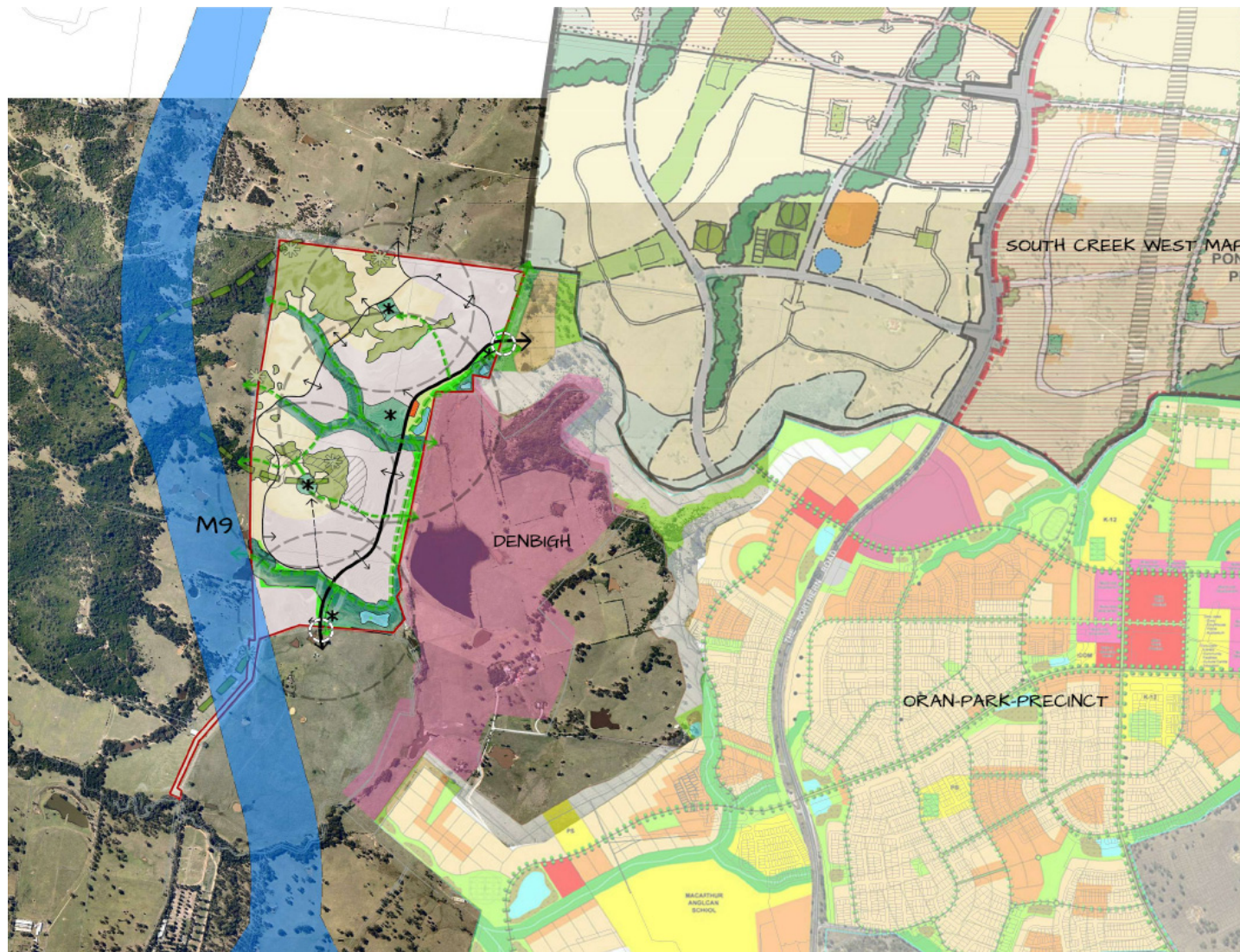


Figure 6 – Zoning Plan

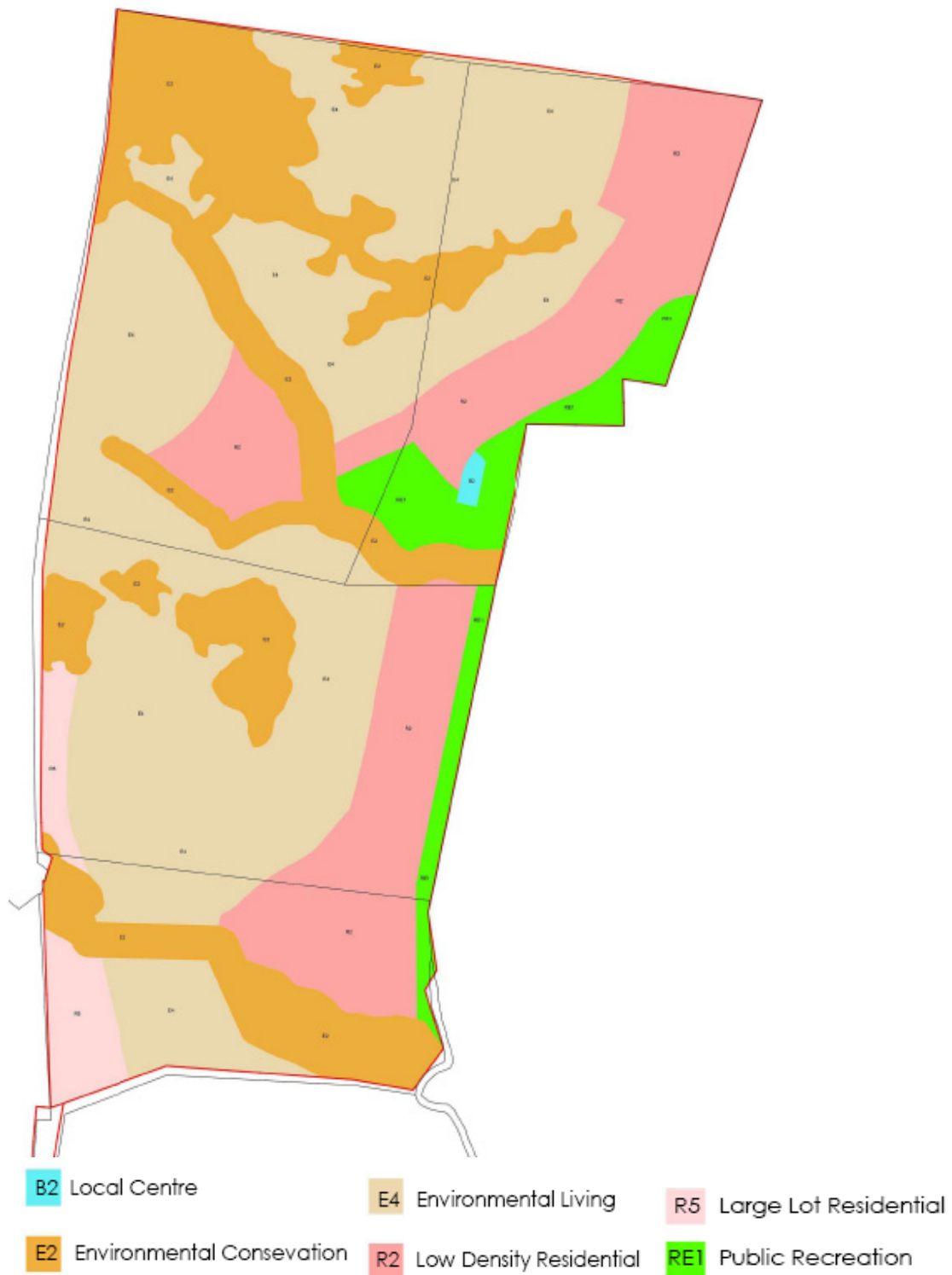
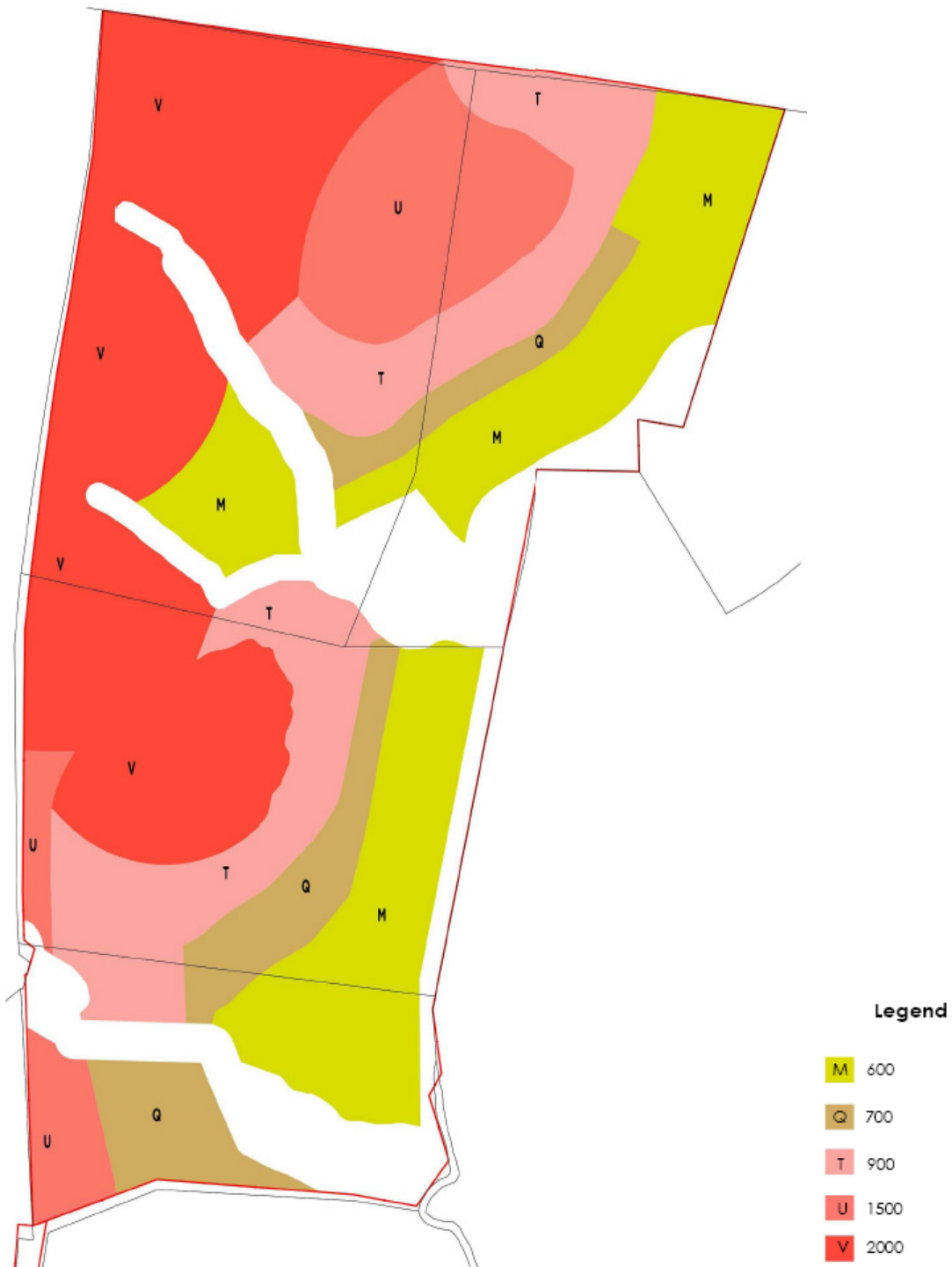


Figure 7 – Lot Size Plan.



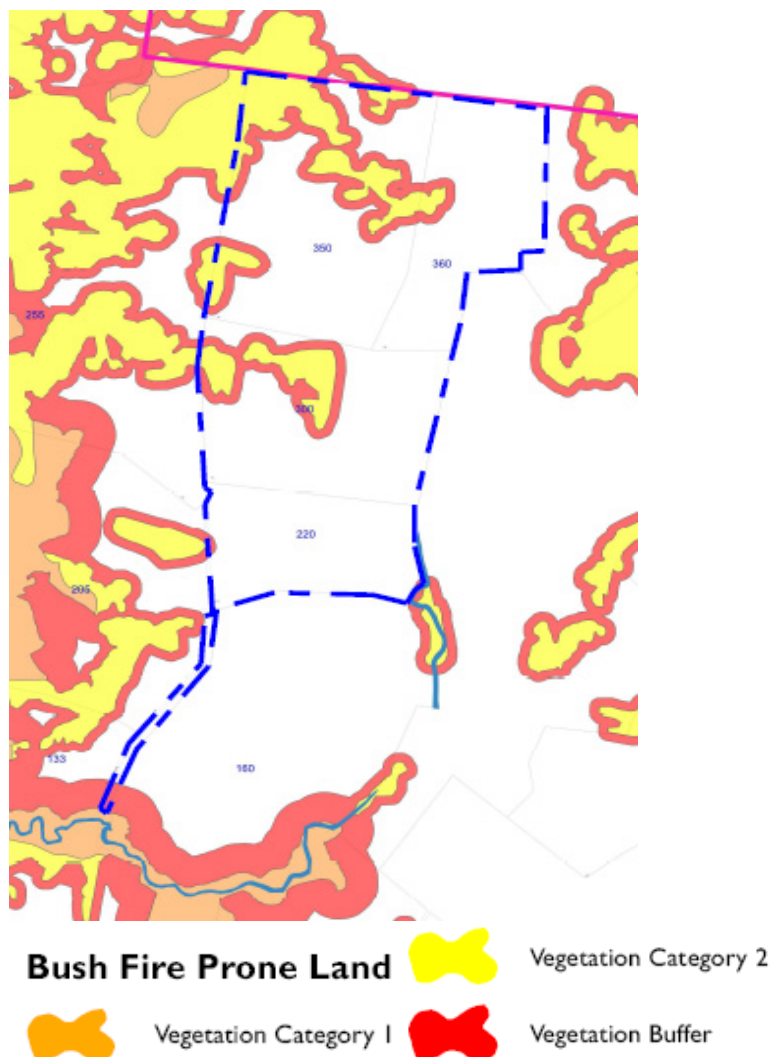
5.0 BUSHFIRE PRONE LAND MAP.

The Camden Bushfire Prone Land Map records the bushland vegetation on the site as Category 2 Bushfire Prone Vegetation.

Refer to Figure 8 – Extract from the Camden Bushfire Prone Land Map below.

The site inspection confirmed the extent of the bushfire prone vegetation within the site and on the adjoining land. The managed grassland within the site and on adjoining lands is not deemed to be bushfire prone.

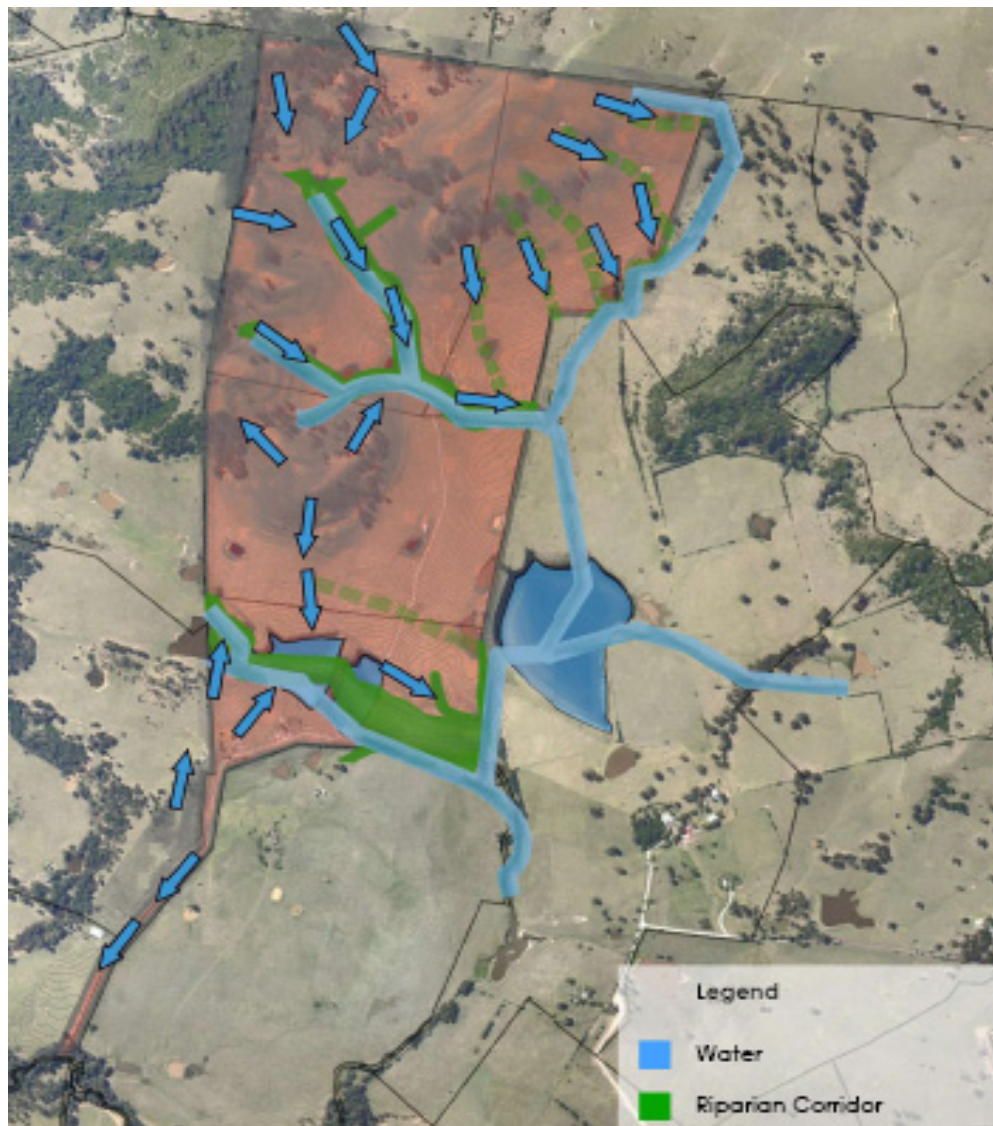
Figure 8 – Extract from the Camden Bushfire Prone Land Map



The site contains a number of watercourses and creek lines that form tributaries to Cobbitty Creek, located to the east of the site. A number of the tributaries are shown on the Topographic Map as a blue line and is therefore deemed to be 'designated streams' under the Water Management Act 2000.

This report assumes, for the purpose of determining the required Asset Protection Zones to future residential development within the site, that these streams will be rehabilitated with Cumberland Plain Shale Hills Woodland vegetation – refer to Figure 9 – Riparian Corridors and Overland Flow Path Plan below.

Figure 9 – Riparian Corridors and Overland Flow Path Plan.



6.0 LEGISLATION.

The site is recorded on the Camden Bushfire Prone Land Map as containing Category 2 Bushfire Prone Vegetation and the buffer zone to the Category 2 Bushfire Prone Vegetation – refer to Figure 9.

This affection triggers the requirements of the following Legislation:

1. Section 4.47 [Integrated Development] of the *Environmental Planning & Assessment Act 1979*;
2. Section 100B of the *NSW Rural Fires Act 1997*.

Section 4.47 of the *Environmental Planning & Assessment Act 1979* applies to the subdivision of bushfire prone land for the purposes of residential and rural residential development and the construction of a '*special fire protection purpose development*' within 100 metres of designated bushfire prone vegetation and requires the issue of a '*Bushfire Safety Authority*' from the Commissioner of the NSW Rural Fire Service, pursuant to Section 100B of the *Rural Fires Act 1997*.

'*Special fire protection purpose development*' is defined under Section 100B of the *Rural Fires Act 1997* as:

- ❖ Aged Care Facilities;
- ❖ Nursing Homes;
- ❖ Schools;
- ❖ Childcare Centres;
- ❖ Hotel, Motel or other tourist accommodation;
- ❖ Hospital;
- ❖ A building wholly or principally used as a home or other establishment for mentally incapacitated persons;
- ❖ A group home within the meaning of *State Environmental Planning Policy No. 9 – Group Homes*.

The Commissioner of the NSW Rural Fire Service will not issue a *Bushfire Safety Authority* under Section 100B of the *Rural Fires Act 1997* unless residential/rural residential subdivision and construction of a special fire protection purpose development complies with the bushfire protection measures identified within *Planning for Bushfire Protection 2019*.

The measures relate to the provision of:

1. Complying Asset Protection Zones – setback from unmanaged bushfire prone vegetation;
2. Complying access for fire-fighting operations;
3. Complying water supplies for fire-fighting operations;
4. Bushfire construction standards to buildings;
5. Landscape management – management of Asset Protection Zones; and
6. Emergency management – evacuation planning/management.

An examination of these bushfire protection measures for the site is provided in Section 7.0 of this report.

7.0 EXAMINATION OF BUSHFIRE PROTECTION MEASURES.

7.1 Asset Protection Zones:

Asset Protection Zones are determined using the methodology provided in *Planning for Bushfire Protection 2019* which includes determination of predominant bushfire prone vegetation within 140 metres of a development site and the effective slope [defined as the slope which will create the most significant bushfire behaviour] of the land within 100 metres of the development.

The rehabilitation of the Cumberland Plain Shale Hills Woodland within the riparian corridors generates the requirement to provide Asset Protection Zones to each side of these corridors.

The riparian corridors will vary in width and with the exception of the central and southern riparian corridors, will have a total width of less than 50 metres. This permits the Cumberland Plain Shale Hills Woodland to be defined as 'low hazard vegetation' and classified as 'rainforest' for the purpose of determining requisite widths of Asset Protection Zone to development adjacent to the riparian corridors.

The effective slope of the land under the Cumberland Plain Shale Hills Woodland vegetation is 0 – 5 degrees downslope.

Table A1.12.5 of *Planning for Bushfire Protection 2019* identifies that the required width of Asset Protection Zone to the riparian corridors is 14 metres.

The central and southern riparian corridors each have a total width of more than 50 metres and the vegetation is therefore not deemed to be 'low hazard'. The vegetation classification is therefore Cumberland Plain Shale Hills Woodland which is identified as 'forest' for the purpose of determining Asset Protection Zone widths to adjoining residential development.

The effective slope of the land under the Cumberland Plain Shale Hills Woodland (forest) vegetation is 5 – 10 degrees downslope.

Table A1.12.5 of *Planning for Bushfire Protection 2019* identifies that the required width of Asset Protection Zone to the riparian corridors is 29 metres.

The proposed E2 zones within the site contain Cumberland Plain Shale Hills Woodland (forest). The effective slope of the land under this vegetation varies from upslope to downslope.

For 'upslope' gradients – i.e. the residential development is located below the vegetation, Table A1.12.5 of *Planning for Bushfire Protection 2019* requires a 24 metre wide Asset Protection Zone.

The 'downslope' gradients – i.e. the residential development is located above the vegetation, the gradients vary from 5 – 10 degrees up to 15 – 20 degrees on the steeper slopes.

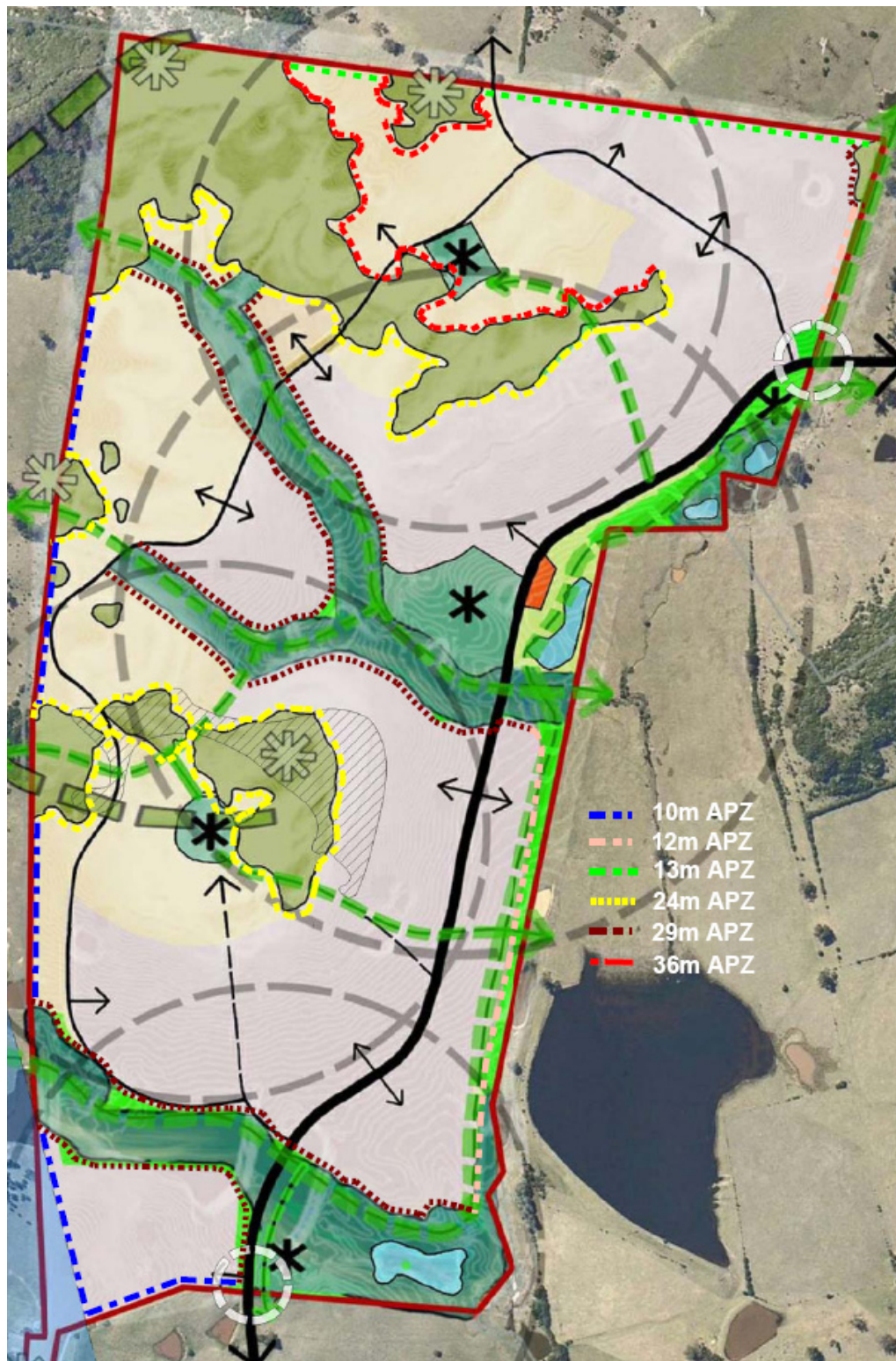
From Table A1.12.5 *Planning for Bushfire Protection 2019* the required width of Asset Protection Zone for 5 – 10 degrees downslope is 36 metres.

From Table A1.12.5 *Planning for Bushfire Protection 2019* the required width of Asset Protection Zone for 10 – 15 degrees downslope is 45 metres.

From Table A1.12.5 *Planning for Bushfire Protection 2019* the required width of Asset Protection Zone for 15 – 20 degrees downslope is 56 metres.

Refer to Figure 10 – Plan of Asset Protection Zones on Page 19.

Figure 10 – Plan of Asset Protection Zones.



7.2 Access for fire-fighting operations:

As the site is identified as being bushfire prone the NSW Rural Fire Service will require the following access provisions:

1. Two-way minimum eight [8m] wide - kerb to kerb - perimeter road to the bushfire hazard interface with 'No Parking' to both the sides;
2. Minimum 5.5m wide internal roads [kerb to kerb] with 'No Parking' to both sides and parking provided within parking bays and locate services [hydrants] outside parking bays;
3. Minimum width of One-Way streets shall be 3.5 metres, kerb to kerb and 'No Parking' to both sides and parking provided within parking bays and locate services [hydrants] outside parking bays.
4. Maximum length of dead-end roads 200 metres with turning area suitable for a heavy rigid vehicle [24m diameter turning circle for Cul-de-sacs].

Note 1:

The bushfire hazard interface includes all areas of unmanaged vegetation which are deemed to be bushfire prone. This includes the rehabilitated riparian corridors and the Open Space areas within the estate with an area of more than one [1] hectare and located less than 100 from Category 1 & 2 Bushfire Prone Vegetation.

7.3 Water supply for fire-fighting operations:

A reticulated fire-fighting water supply will be required, in accordance with the performance standards of AS 2419 .1 – 2005.

7.4 Construction Standards for Buildings:

Design and construction of future buildings on the site will be required to address the bushfire construction standards as determined by A.S. 3959 – 2018.

The width of Asset Protection Zones recommended in Section 7.1 allows the future dwellings exposed to the hazard to be constructed to BAL 29 – pursuant to A.S. 3959 – 2018 – '*Construction of Buildings in Bushfire Prone Areas*'.

All buildings located within 100 metres of the bushfire hazard are required to be constructed to a minimum of BAL 12.5 – pursuant to A.S. 3959 – 2018.

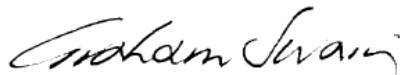
7.5 Landscape Management:

The creation and ongoing management of the Asset Protection Zones to future development within the site which has an interface with a bushfire hazard, either defined by the Bushfire Prone Land Map [or within areas of rehabilitated vegetation], will be required to address the criteria of Appendix 4 of *Planning for Bushfire Protection 2018* and the NSW Rural Fire Service's *Standards for Asset Protection Zones*.

A Positive Covenant will also be required over that portion of the Asset Protection Zone which affects any future private lots to ensure the long term management of the Asset Protection Zones.

Note 2:

A more detailed assessment will be required following resolution of the development layout and the matters noted in this report.



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Australian Bushfire Protection Planners Pty Limited

11.08.2020

Fire Protection Association Australia Member No. 48781