

STRATEGIC BUSHFIRE STUDY

FOR THE REZONING
OF
LOT 2 in DP 1144979,

WALLAROO ROAD,
WALLAROO

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Report Number	Document	Preparation Date	Issue Date	Directors Approval
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EXECUTIVE SUMMARY

Australian Bushfire Protection Planners Pty Limited has been commissioned by *Ginninderry* to undertake the Bushfire Consultancy for the Planning Proposal for the rezoning of the land within Lot 2 in DP 1144979, Wallaroo Road, Wallaroo.

The Yass Valley Bushfire Prone Land Map records the site and surrounding land within NSW as containing Category 3 Bushfire Prone Vegetation. (The site is located adjacent to the ACT border and the ACTMapi Bushfire Prone Land Map records the vegetation on the land bordering the site is bushfire prone).

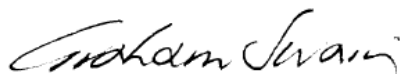
Section 4.1 of *Planning for Bush Fire Protection 2019* introduces a range of strategic planning considerations which are intended to be addressed via the preparation of a Strategic Bush Fire Study.

The broad principles which apply to a Strategic Bushfire Study are:

- Ensuring land is suitable for development in the context of bushfire risk;
- Ensure new development on Bushfire Prone Land will comply with *Planning for Bush Fire Protection 2019*;
- Minimise reliance on performance-based solutions;
- Provide adequate infrastructure associated with emergency evacuation and fire-fighting operations;
- Facilitate appropriate ongoing land management practices.

The relevant Bushfire Protection Measures in Chapters 5 – 8 of *Planning for Bush Fire Protection 2019* are to be considered at the strategic planning stage to ensure that future development can comply with *Planning for Bush Fire Protection 2019*.

This study considers the components of Table 4.2.1 of *Planning for Bushfire Protection 2019* and identifies that the proposal to rezone the land satisfies *Environmental Planning & Assessment Act* s.9.1 Direction 4.3 – ‘Planning for Bushfire Protection’ and ‘*Planning for Bushfire Protection 2019*’.



Graham Swain
Managing Director,
Australian Bushfire Protection Planners Pty Limited.

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SECTION 1

INTRODUCTION

1.1 Aim of this Assessment.

The aim of this Strategic Bushfire Study is to inform and assist with the consideration of a Planning Proposal for the rezoning of the land within Lot 2 in DP 1144979, Wallaroo Road Lane, Wallaroo.

The assessment detailed in this study seeks to establish the Planning Proposals compliance with the requirements and specifications of *Planning for Bushfire Protection 2019*.

1.2 Site Inspection.

Graham Swain of Australian Bushfire Protection Planners Pty Limited undertook a detailed desk-top assessment of the site and surrounding areas prior to the preparation of this report. Previous inspection of the area has been carried out during studies undertaken for development within West McGregor, in the ACT.

The desk-top assessment of the rezoning precinct included:

- An assessment of the existing landuse within and external to the rezoning precinct;
- Topography of the land within and external to the rezoning precinct;
- The type and classification of the vegetation on the land within and external to the rezoning precinct;
- Potential fire paths;
- Bushfire risk to the rezoning precinct;
- The location of water courses/overland flow paths.

A broader examination of the bushfire risk to the rezoning proposal was undertaken, including fire paths in the local area and access to and from the rezoning precinct.

1.3 Scope of the Assessment.

Chapter 4.1 of *Planning for Bushfire Protection 2019* identifies the principles and assessment considerations for strategic planning and identifies that bushfire protection measures are to be assessed at the strategic planning stage to determine the suitability of the proposal against the broader bushfire risk.

Chapter 4.2 of *Planning for Bushfire Protection 2019* states that a Strategic Bushfire Study must include the components of Table 4.2.1 of the document (refer to copy of Table 4.2.1 on Page 7).

Once the strategic issues have been addressed, an assessment of compliance with the requirements and specifications of *Planning for Bushfire Protection 2019* should be carried out.

Table 4.2.1 – Strategic Bushfire Study Requirements

ISSUE	DETAIL	ASSESSMENT CONSIDERATIONS
Bush fire landscape assessment	A bush fire landscape assessment considers the likelihood of a bush fire, its potential severity and intensity and the potential impact on life and property in the context of the broader surrounding landscape.	<ul style="list-style-type: none"> ➤ The bush fire hazard in the surrounding area, including: <ul style="list-style-type: none"> ➤ Vegetation ➤ Topography ➤ Weather ➤ The potential fire behaviour that might be generated based on the above; ➤ Any history of bush fire in the area; ➤ Potential fire runs into the site and the intensity of such fire runs; and ➤ The difficulty in accessing and suppressing a fire, the continuity of bush fire hazards or the fragmentation of landscape fuels and the complexity of the associated terrain.
Land use assessment	The land use assessment will identify the most appropriate locations within the masterplan area or site layout for the proposed land uses.	<ul style="list-style-type: none"> ➤ The risk profile of different areas of the development layout based on the above landscape study; ➤ The proposed land use zones and permitted uses; ➤ The most appropriate siting of different land uses based on risk profiles within the site (i.e. not locating development on ridge tops, SFPP development to be located in lower risk areas of the site); and ➤ The impact of the siting of these uses on APZ provision.
Access and egress	A study of the existing and proposed road networks both within and external to the masterplan area or site layout.	<ul style="list-style-type: none"> ➤ The capacity for the proposed road network to deal with evacuating residents and responding emergency services, based on the existing and proposed community profile; ➤ The location of key access routes and direction of travel; and ➤ The potential for development to be isolated in the event of a bush fire.
Emergency services	An assessment of the future impact of new development on emergency services.	<ul style="list-style-type: none"> ➤ Consideration of the increase in demand for emergency services responding to a bush fire emergency including the need for new stations/brigades; and ➤ Impact on the ability of emergency services to carry out fire suppression in a bush fire emergency.
Infrastructure	An assessment of the issues associated with infrastructure and utilities.	<ul style="list-style-type: none"> ➤ The ability of the reticulated water system to deal with a major bush fire event in terms of pressures, flows, and spacing of hydrants; and ➤ Life safety issues associated with fire and proximity to high voltage power lines, natural gas supply lines etc.
Adjoining land	The impact of new development on adjoining landowners and their ability to undertake bush fire management.	<ul style="list-style-type: none"> ➤ Consideration of the implications of a change in land use on adjoining land including increased pressure on BPMs through the implementation of Bush Fire Management Plans.

1.4 Statutory Requirements.

This report has been prepared having regard to the following legislative and planning requirements:

1.4.1 Legislation.

(a) Environmental Planning and Assessment Act (EPA Act)

Planning and development within NSW is regulated by the *Environmental Planning & Assessment Act, 1979* (EPA Act). The ACT provides a framework for the overall environmental planning and assessment of development proposals.

Consent Authorities considering the rezoning of bushfire prone land are to have regard to s.9.1 (2) of the EP&A Act. This includes the need to address Local Planning Directions. Direction 4.3 Planning for Bushfire Protection is relevant to this study.

The objectives of Direction 4.3 are:

- (a) To protect life, property and the environment from bushfire hazards, by discouraging the establishment of incompatible land uses in bushfire prone areas; and*
- (b) To encourage sound management of bushfire prone areas.*

Direction 4.3(1) instructs the relevant planning authority to:

- Consult with the Commissioner of the NSW Rural Fire Service and take into account any comments so made.

Direction 4.3(2) states that a planning proposal must:

- Have regard to *Planning in Bushfire Protection 2019*;
- Introduce controls that avoid placing inappropriate developments in hazardous areas; and
- Ensure that bushfire hazard reduction is not prohibited within the Asset Protection Zone (APZ).

Direction 4.3(3) states that a planning proposal must, where development is proposed, comply with the following provisions, as appropriate:

- (a) Provide an Asset Protection Zone (APZ) incorporating at a minimum:

- i. An Inner Protection Area bounded by a perimeter road or reserve which circumscribes the hazard side of the land intended for development; and
 - ii. An Outer Protection Area managed for hazard reduction and located on the bushland side of the perimeter road.
- (b) For Infill Development, where an appropriate APZ cannot be achieved, provide for an appropriate performance standard, in consultation with the NSW Rural Fire Service. If the planning proposal permits Special Fire Protection Purposes, the APZ provisions must be complied with.
- (c) Contain provisions for two-way access roads which links to perimeter roads and/or to fire trail networks;
- (d) Minimise the perimeter of the area of land interfacing the hazard which may be developed;
- (e) Introduce controls on the placement of combustible materials in the Inner Protection Area.

Future development applications for the construction of buildings/assets will require further assessment against the requirements and specifications of *Planning for Bushfire Protection 2019*

(b) Rural Fires Act 1997

The objectives of the *Rural Fires Act* are to provide:

- The prevention, mitigation and suppression of fires;
- Coordination of bushfire fighting and prevention;
- Protection of people and property from fires; and
- Protection of the environment.

In relation to the management of bushfire fuels on public and private lands within NSW, Sections 63(1) and 63(2) require public authorities and owners / occupiers of land to take all practicable steps to prevent the occurrence of bushfires on, and to minimize the danger of the spread of bushfires.

1.4.2 Bushfire Planning Policies.

Planning for Bushfire Protection – 2019 – (Rural Fire Service).

This document provides guidance on the planning and development control processes in relation to bushfire protection measures for development in bushfire prone areas.

The Commissioner may determine additional measures that are considered necessary to protect the development against the impact of bushfire.

1.5 Documentation Reviewed in this Assessment.

The following documents were reviewed in the preparation of this report:

- Scoping Report prepared by Knight Frank Town Planning;
- Proposed Access Plan prepared by Egis;
- Ecological Values and Constraints Assessment prepared by Capital Ecology;
- *Planning for Bushfire Protection 2019* prepared by the NSW Rural Fire Service;
- Australian Standard AS3959 - 2018 *Construction of Buildings in Bushfire Prone Areas*;
- *Rural Fires Regulation 2022*;
- Yass Valley Bushfire Prone Land Map;
- ACTMapi Bushfire Prone Land Map;
- ACTMapi Bushfire Operations Plan;
- ACTMapi Plan of Strategic Bushfire Management Zones;
- ACTMapi Plan of Bushfire Abatement Zones;
- ACT Bushfire Management Standards;
- Ministerial direction 4.3 Planning for Bushfire Protection.

SECTION 2

PROJECT DESCRIPTION

2.1 Planning Proposal

A Planning Proposal has been lodged with Yass Valley Council, on behalf of the proponent, Riverview Projects (ACT) Pty Ltd and represented by the custodian of the land – the ACT Government, Suburban Land Agency, seeking to rezone the lot from RU1 Primary Production to C3, Environmental Management under the Yass Valley LEP 2013 (YLEP 2013).

In addition, it is proposed to amend Schedule 1 of the LEP to enable an additional permissible use (APU) for Electricity Generating Works and an associated road to provide a site for a potential future substation.

The development area covers land within both the Australian Capital Territory (ACT) and New South Wales (NSW). This is now known as Ginninderry – see **Figure 1**.

The West Belconnen Strategic Assessment (SA024) approval was granted on 01 September 2017 under Part 10 of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

The Strategic Assessment looked at possible impacts of the proposed urban development on:

- listed threatened species and listed ecological communities
- listed migratory species
- any other protected matters present.

The Assessment included areas to be considered for environmental offsets. This included the subject site in Wallaroo (Lot 2 DP 1144979), to be included within an offset strategy to provide environmental offset against the possible future impacts on 1.8ha of GSM habitat that will occur due to the development of the proposed Ginninderra Drive extension in the future – see **Figure 1**.

The GSM habitat offset area required for the Ginninderry Project is 33.1 ha, while the Lot 2 area in its entirety is 86.8 ha (*Ref. EPBC Strategic Assessment Report Table 4*).

EPBC approval was granted in 2017 for the development of the West Belconnen development area. This included a condition of consent that required the site to be rezoned to C3 Environmental Management.

Accordingly, this planning proposal is required to ensure compliance with the approval granted to Riverview Projects (ACT) Pty Ltd associated with the urban development and biodiversity conservation requirements of the West Belconnen Strategic Assessment (WBSA) area.

Whilst only 33.1 hectares is required to be preserved for GSM habitat, the EPBC approval has crudely required Lot 2 to be rezoned to C3 without consideration that the remainder of the land is not subject to GSM restoration.

The Ginninderry Project is not the land custodian and cannot dedicate the entirety of SLA land to be dedicated and rezoned. The Ginninderry Project team, along with the SLA, have met with the Commonwealth and advised of the conditional error.

The SLA has agreed to Lot 2 in its entirety being rezoned to C3.

Noting however that Lot 2 covers a greater area than what is required (circa 86.8 hectares) it is proposed to also make provision for a future substation as an option for the relocating of the existing Transgrid substation at North Belconnen in the event this is required.

Whilst there is an approval pathway for a substation in certain circumstances under the *State Environmental Planning Policy (Transport and Infrastructure) 2021*, the purpose of the planning proposal would be to provide long term certainty and security for a future substation given it is strategic infrastructure.

Accordingly, is proposed to set aside 19 hectares for this potential future substation site, should it be required.

Support from the SLA (as the landowner) will be provided with the planning proposal, confirming support for lodgment of the planning proposal and the mechanism to allow for a potential future substation on the land.

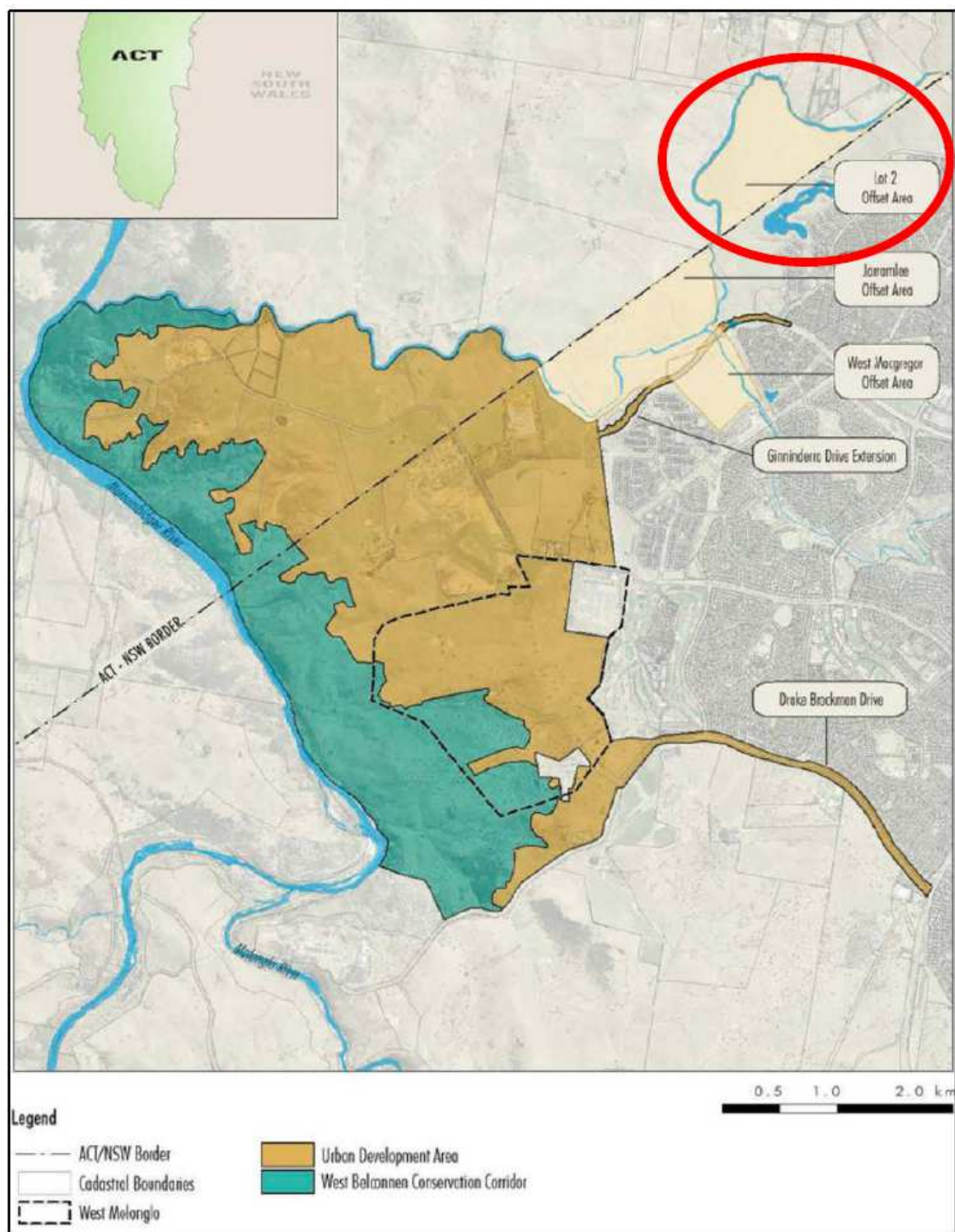


Figure 1 – Map of the Ginninderry Strategic Assessment Area – ACT & NSW – Source Scoping Report.

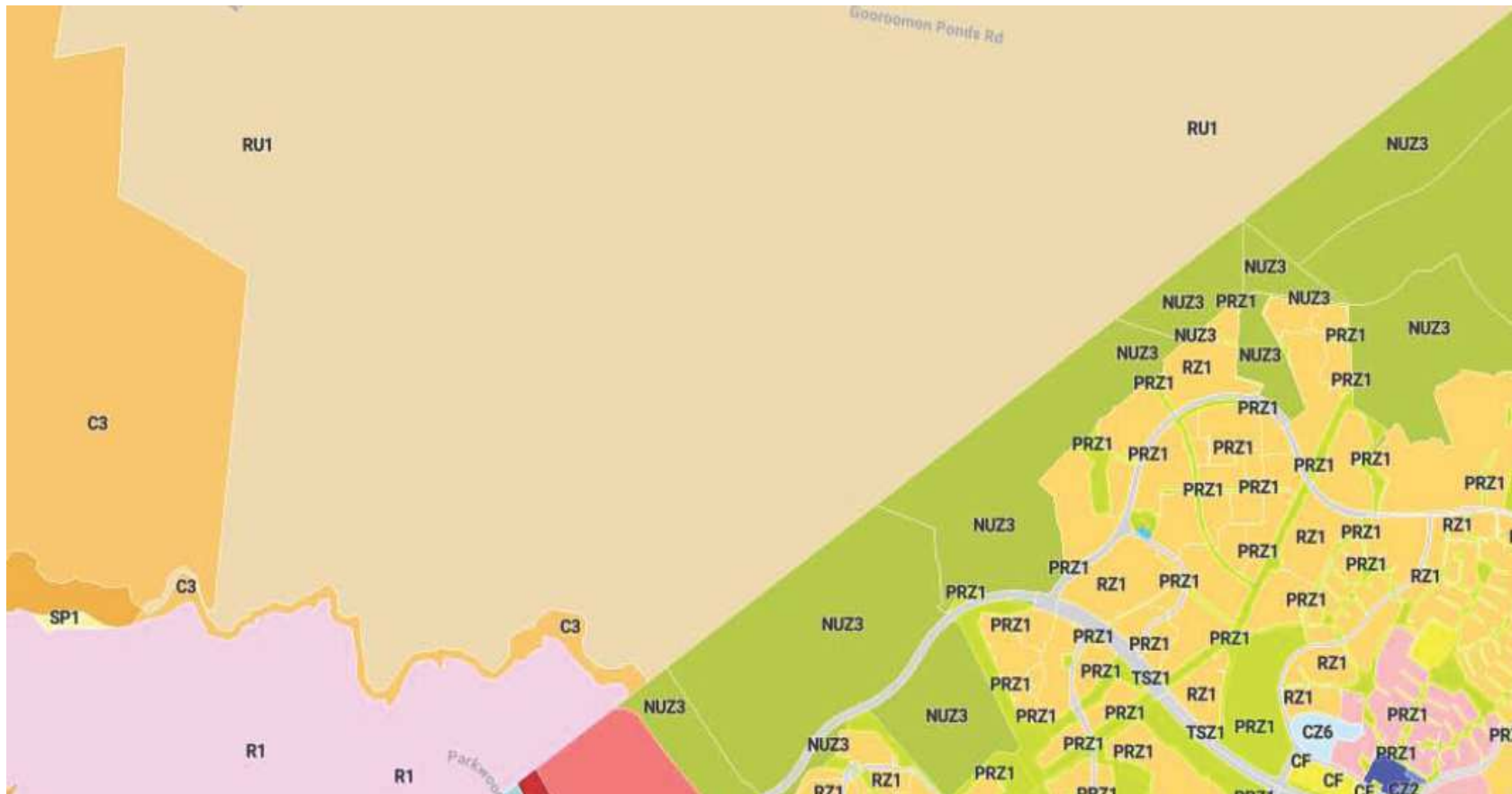


Figure 2 – Existing NSW/ACT Landuse Zoning Map – Source Mecone Mosaic.

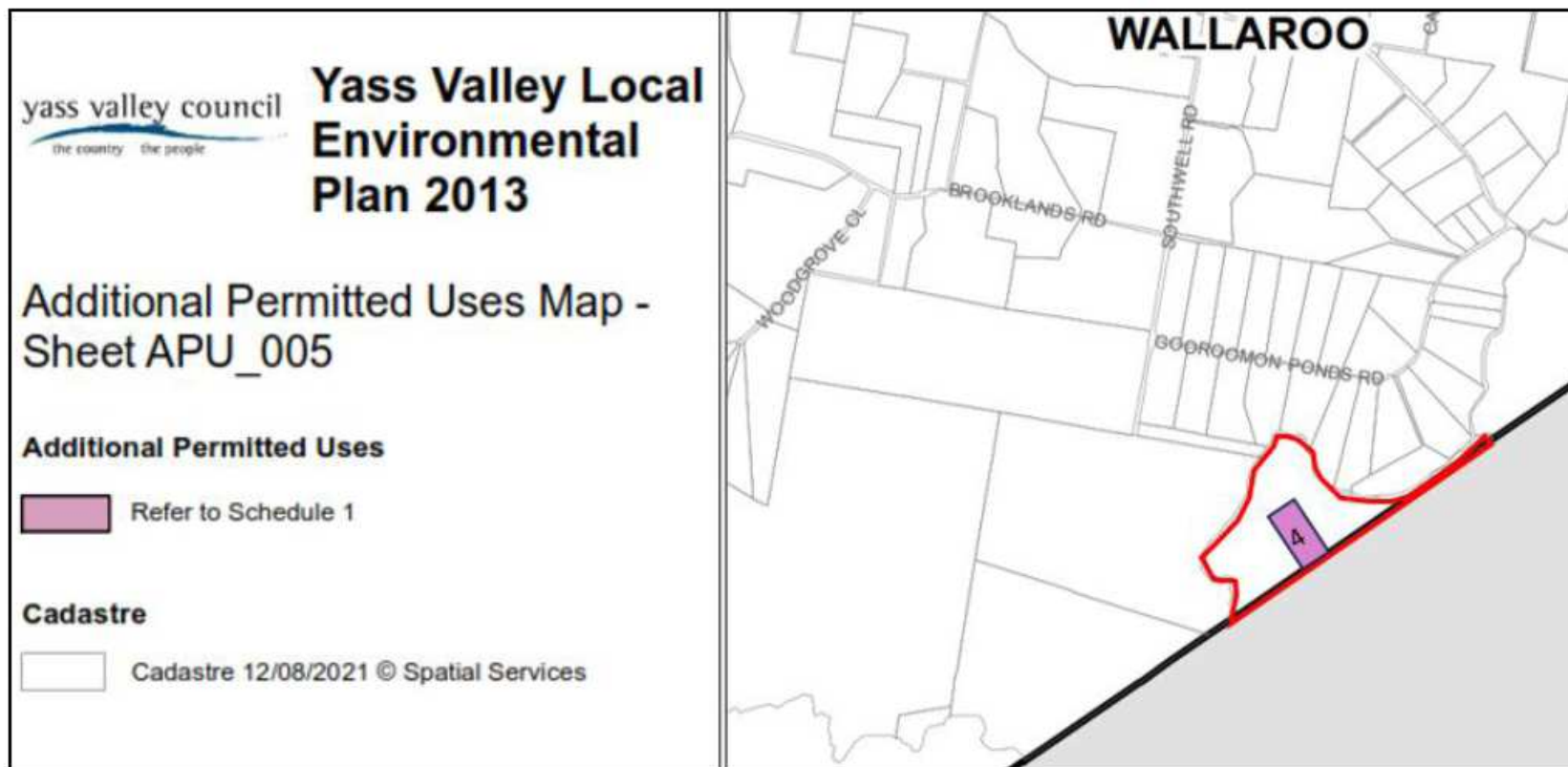


Figure 3 – Proposed amendment to the Yass Valley LEP – Additional Permitted Uses Map – Source Scoping Report.



Figure 4 – Concept – Proposed Road Access to Site – Source Scoping Report.

SECTION 3

PROPERTY DESCRIPTION

3.1 Site Identification and Location.

The planning proposal site is circa 86.8 hectares and is legally known as Lot 2 in DP 1144979 as shown in Figure 5.

The site is located in Wallaroo, adjacent to the Australian Capital Territory border.

The southern boundary of the site coincides with the NSW-ACT border – See Figure 6 - Aerial Photograph.

The site and surrounding areas are zoned RU1 Primary Production. The site is not used for agricultural production and is currently vacant. The site is an isolated parcel and has no direct road access.

There are smaller lots located to the north of the site, used for agricultural purposes.

There is an existing 330kV and 132kV TransGrid easement for transmission lines located to the south of the site close to the NSW-ACT border.

The Gooromon Ponds Creek (indicated in blue on Figure 5 below), a tributary of the Ginninderra Creek, border the site on the north, east and western boundaries.

The West Belconnen pond is located approx. 100 metres to the south of the site and border within the ACT lands. In addition, the Bicentennial National Trail is located to the south of the site and border.

There is a State Significant Development proposal currently being assessed by DPHI for the property to the west of the site. The solar farm is proposed to have a capacity of 120MW, including an on-site substation and a battery storage facility with a storage capacity of up to 45MW/90MWh (REF SSD Application No. SSD-9261283).



Figure 5 – Location of Site – Source SixMaps.



Figure 6 – Aerial Photograph of the site showing NSW/ACT Border – Source Scoping Report.

3.4 Topography.

Appendix A1.5 of *Planning for Bushfire Protection 2019* establishes the protocols for determining the effective slope of under the classified bushfire prone vegetation.

The topography of the land within the site falls from AHD 560m to the southwest, west and northeast towards Gooromon Ponds. Beyond the site boundary, and the Gooromon Ponds, the land rises to the southwest, northwest and northeast.

The land to the southeast, within the ACT, the land rises towards the suburb of Dunlop.

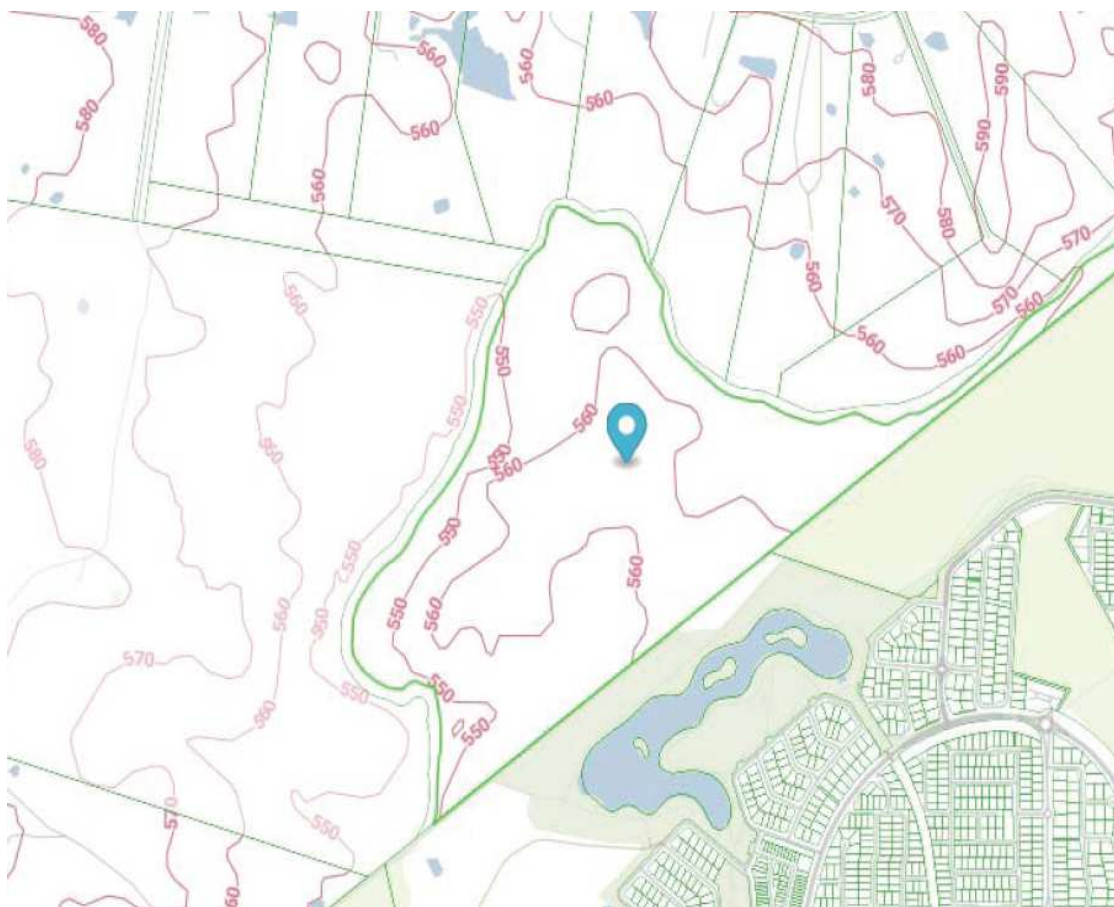


Figure 7 – Contour Plan.

3.5 Vegetation.

Appendix A1.2 of *Planning for Bushfire Protection 2019* provides a methodology for determining the predominant bushfire prone vegetation for at least 140 metres in all directions from the future development on the site. Vegetation is classified using Figure A2.1 of *Planning for Bushfire Protection 2019*, which classifies vegetation types into the following groups:

- (a) Rainforest;*
- (b) Wet Sclerophyll Forest;*
- (c) Dry Sclerophyll Forest;*
- (d) Woodland;*
- (e) Tall Heath;*
- (f) Short Heath;*
- (g) Grassland.*

3.5.1 Vegetation within Site

In 2017, Capital Ecology Pty Ltd (Capital Ecology 2018) was commissioned by the ACT Government Parks and Conservation Service (PCS) to assess and map the quality and extent of the grassland in seven ACT offset reserves.

The vegetation in the subject land was assessed as part of this project.

As described in Capital Ecology (2018), the entirety of the subject land would historically have been natural temperate grassland (NTG, PCT 1289).

The central parts of the subject land have largely been cleared and pasture improved, but several small patches of high quality NTG remain (PCT1289/ACT01 Zone 1), as well as larger patches of low diversity native pasture (PCT1289/ACT01 Zone 33).

The floristically diverse areas of NTG-SEH (3.51 ha) are dominated by Spear Grass, Wallaby Grass or Kangaroo Grass, and are generally found on the sloped sections of the site which border Gooromon Ponds creek.

The remainder of the subject land is exotic pasture, dominated by sown Phalaris, Paspalum and Yorkshire Fog (PCT1289/ACT01 Zone 4).

The entirety of the site currently supports or would have historically supported NTG-SEH (PCT 1289).

However, only Zone 1 (3.51 ha) meets the criteria for the listed TEC under the EPBC Act. The remaining areas (Zones 3 and 4, 83.19 ha) have been degraded to the point that they no longer support this TEC.

3.5.2 Vegetation on the land surrounding the Site.

The land to the southwest, west, northwest and northeast of the site contains grassland vegetation on the adjoining farming land.

The land to the southeast, within the ACT, contains grassland vegetation surrounding the West Belconnen Pond.

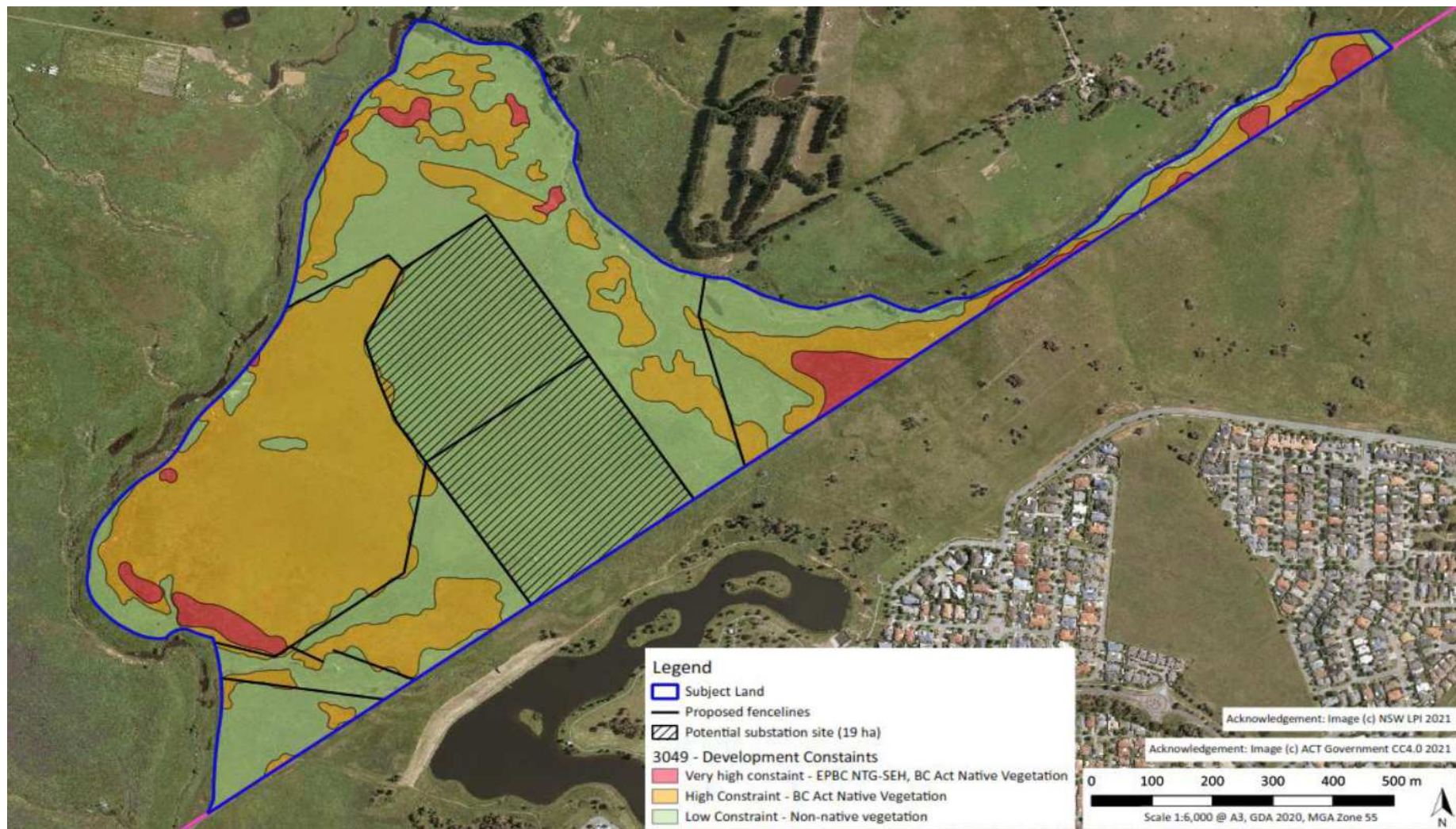


Figure 8 – Vegetation Mapping – Source Capital Ecology.

SECTION 4

PRECINCT LEVEL ASSESSMENT

4.1 Precinct Level Assessment of Bushfire Prone Vegetation.

Section 10.3 of the *Environmental Planning & Assessment Act 1979* requires councils, where a Bushfire Risk Management Plan applies, request the Commissioner of the NSW Rural Fire Service to designate land within the area that the Commissioner considers, having regard to the bushfire risk management plan, to be bushfire prone land and must record any land so designated on a map.

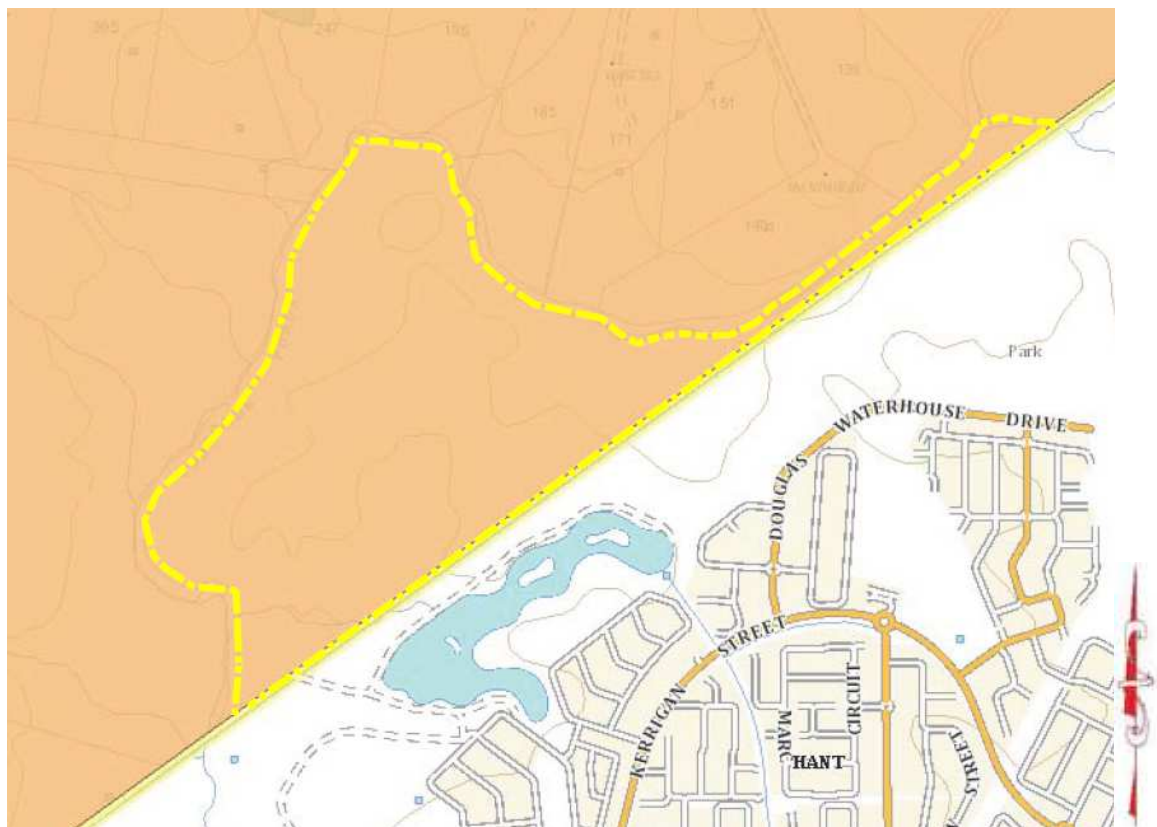


Figure 9 – Extract from the Yass Valley Bushfire Prone Land Map – Category 3 Vegetation.

The ACTMapi Bushfire Prone Land Map identifies the grassland vegetation on the land to the southeast of the site as Bushfire Prone – refer to Figure 10.

Figure 11 provides a copy of the ACTMapi Strategic Bushfire Management Zones. Figure 12 provides a copy of the ACTMapi Bushfire Operations Plan and Figure 13 provides a copy of the Bushfire Abatement Zone Plan.

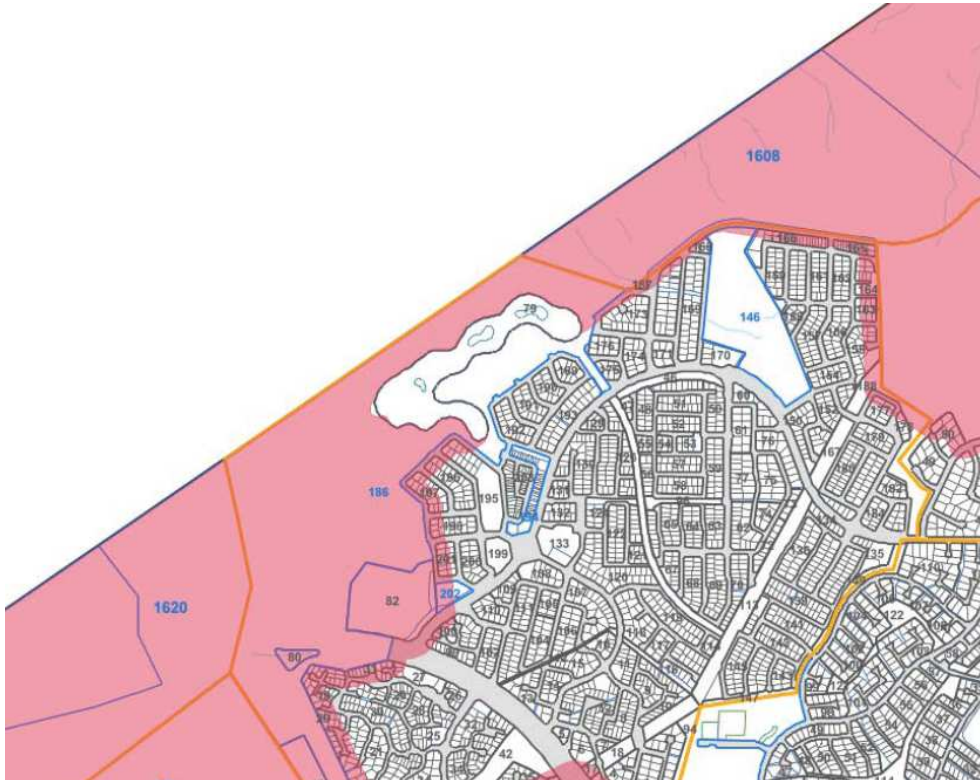


Figure 10 – Extract from the ACTMapi Bushfire Prone Land Map.



Figure 11 – Extract from the ACTMapi SBMZ Map.



Figure 12 – Extract from the ACTMapi Bushfire Operations Plan.

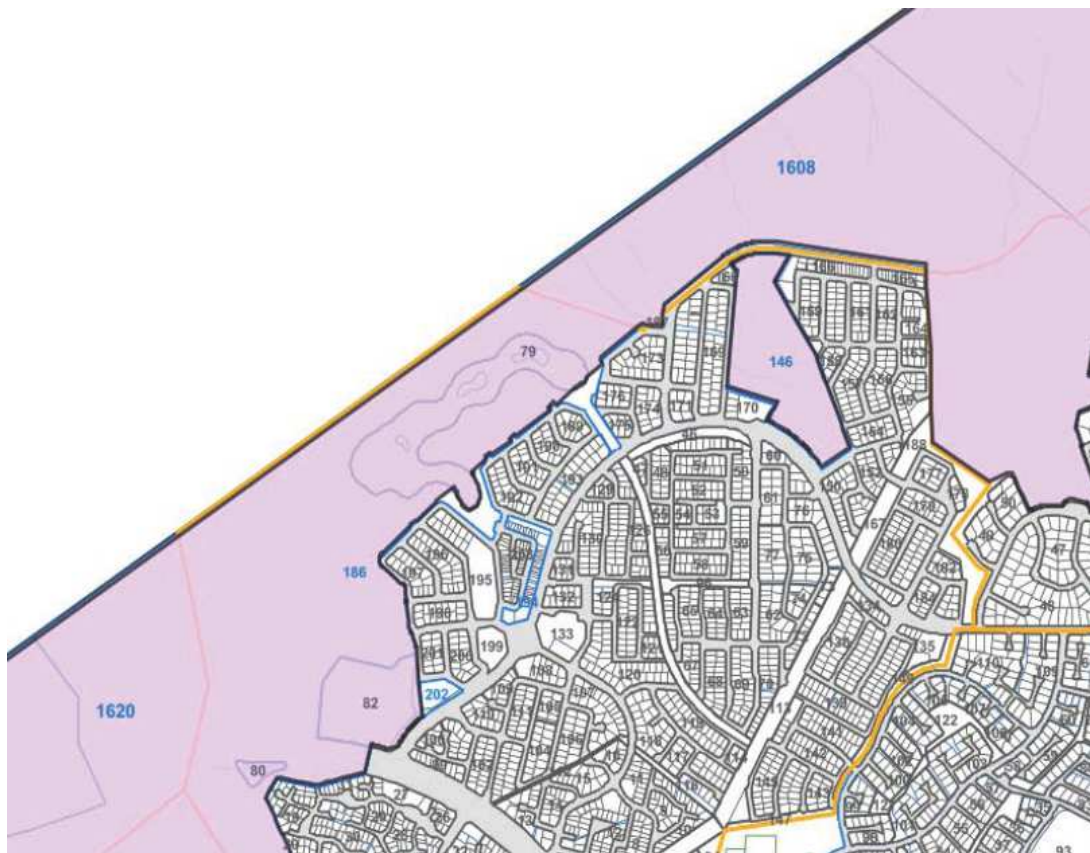


Figure 13 – Extract from the ACTMapi Bushfire Abatement Plan.

SECTION 5

BUSHFIRE STRATEGIC STUDY

5.1 Introduction.

Chapter 4.2 of *Planning for Bushfire Protection 2019* establishes the framework for preparing a Strategic Bushfire Study.

The following sections of this assessment examine the components identified in Table 4.2.1 of *Planning for Bushfire Protection 2019* in order to establish the strategic implications of future development for bushfire mitigation and management.

5.2 Bushfire Landscape Assessment.

A bushfire landscape assessment considers the likelihood of a bushfire, its potential severity and intensity and the potential impact on life and property in the context of the broader surrounding landscape.

5.2.1 Bushfire Hazard in the Surrounding Area.

(a) Vegetation

The vegetation on the land surrounding the site consists of:

- Grassland and cropping on the adjoining agricultural land to the southwest, northwest and northeast; and
- Grassland on the land to the southeast (within the ACT).

(b) Topography

The topography of the land within the site falls to the southwest, west and northeast towards the Gooromon Ponds Creek at 0 – 5 degrees. The land to the southeast, within the ACT, rise to the southeast.

(c) Weather

The Fire Danger Index (FDI) for the region is 100.

The site is located in a region that experiences a relatively dry, continental climate with warm to hot summers and cool to cold winters. Rainfall is relatively uniform throughout the year with a long-term monthly average of 50 – 75 mm.

Bushfire season coincides with fresh to strong west to northwest winds which prevail during Spring and Summer.

Longer fire seasons are experienced when rainfall is lower than average extending the bushfire season through summer to early autumn.

Extreme fire danger days are usually experienced due to strong west to north-westerly winds, particularly where grassland fuels are cured (dry) and the drought induces are low.

5.2.2 Potential Fire Behavior.

Three key factors influence fire behaviour. These are fuel, topography and weather.

The site is in an area occupied by farmland with predominant vegetation being grassland and cropping.

The behaviour of fire within the farming land will depend on the weather conditions at the time, the availability of cured (dry) vegetation and the topography of the land across which the fire spreads. The upslope fire path from the Gooromon Ponds will increase the rate of spread of fire.

5.2.3 Bushfire History.

The NPWS Bushfire History Maps identify that the Wallaroo area has not experienced a wildfire event. Figure 14 provides a copy of the extent of the 2002 – 2003 Canberra Bushfire.

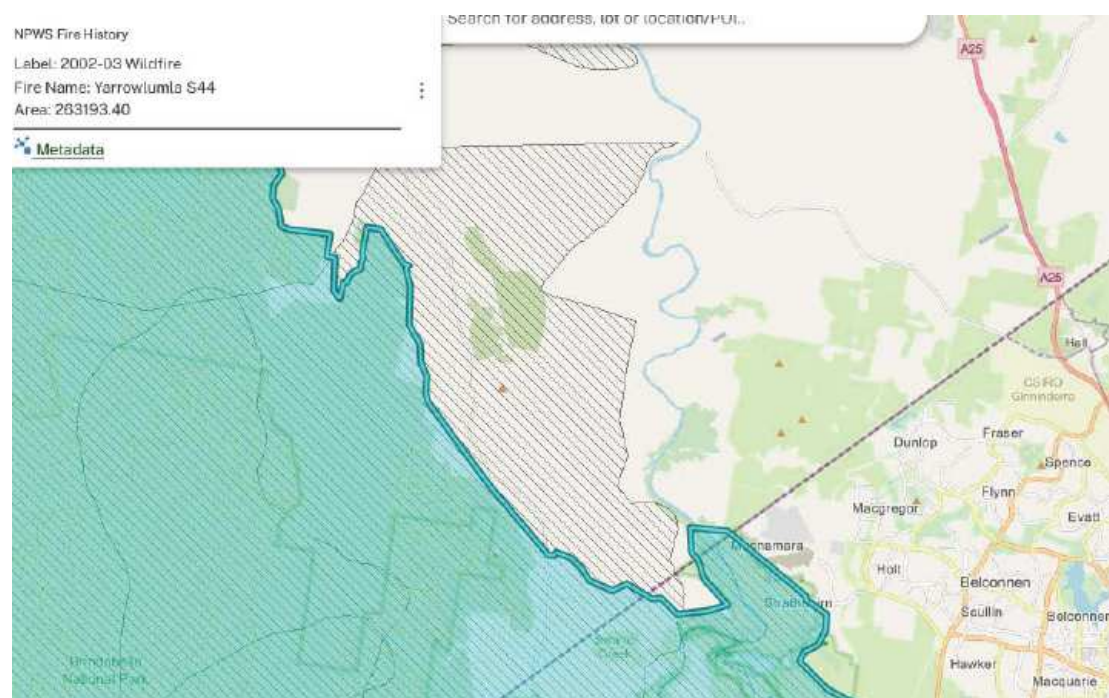


Figure 14 provides a copy of the extent of the 2002 – 2003 Canberra Bushfire – Source NPWS Bushfire History Maps.

Figure 15 provides a copy of the extent of the 1938 - 1939 Bushfire.

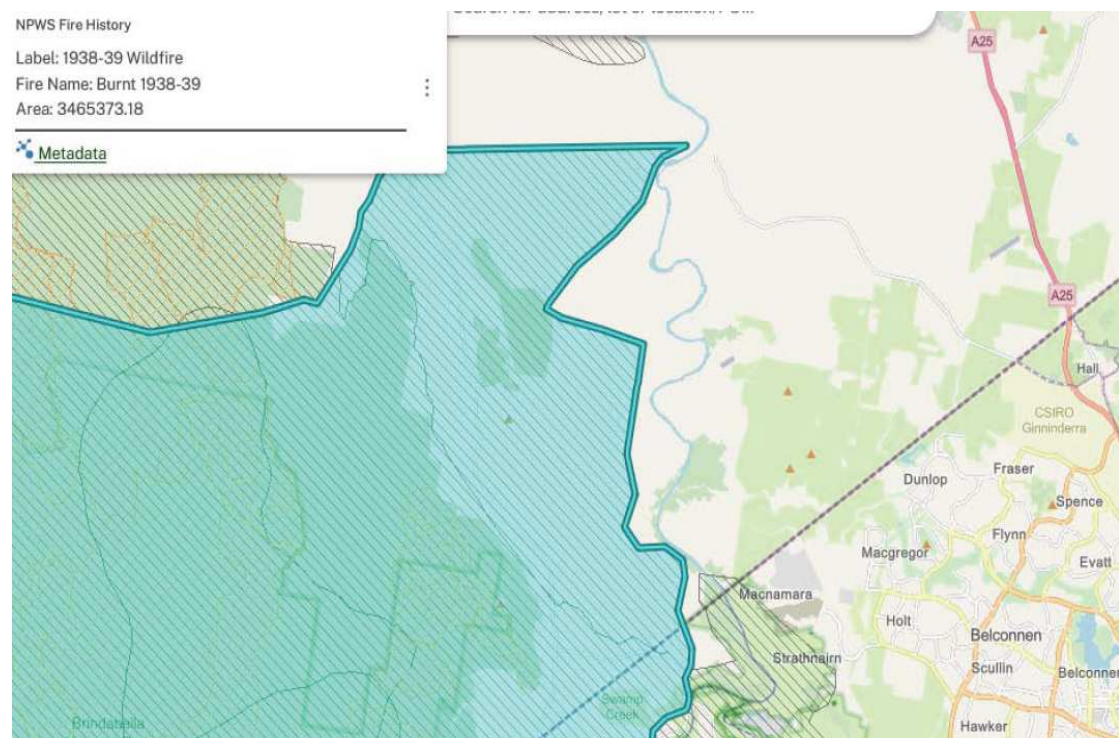


Figure 15 Extent of 1938 - 1939 Bushfire - Source NPWS Bushfire History Maps.

Figure 16 provides a copy of the extent of the 1978 - 1979 Bushfire which spread under westerly winds from ignition at Hall.

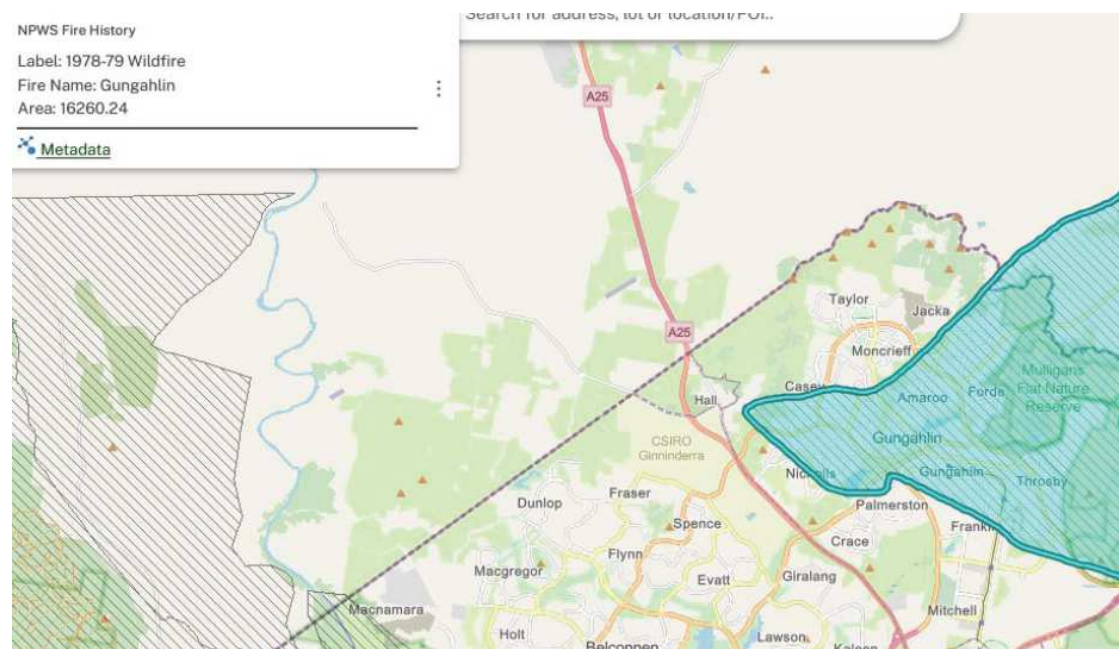


Figure 16 provides a copy of the extent of the 1978 - 1979 Bushfire - Source NPWS Bushfire History Maps.

5.2.4 Fire Management Operations.

This section examines the difficulty in accessing and suppressing a fire, the continuity of bushfire hazards and the fragmentation of landscape fuels and the complexity of the associated terrain.

The open, gently undulating landscape offers easy access for fire—fighting operations.

The Gooromon Ponds creek prevents vehicular access from the southwest, west and northeast. Fire -fighting access is therefore only available from the access road to the West Belconnen Ponds, within the ACT.

The landform does not limit fire-fighting access from the ACT.

5.3 Landuse Assessment.

The landuse assessment determines the most appropriate locations within the site for the proposed land use.

The Planning Proposal seeks approval to amend Schedule 1 of the LEP to enable an additional permissible use (APU) for Electricity Generating Works and an associated road to provide a site for a potential future substation.

The Concept Plan locates the future Electricity Generating Works precinct in the centre of the site, on land that is not impacted by environmental constraints.

The size of the land proposed to accommodate the future Electricity Generating Works allows for the establishment of Defendable Spaces to the facility without impacting the Native Grassland vegetation

Due to the overall low level of external bushfire risk to the site this is the most appropriate location for the future use of the site.

5.3.1 Determine the Risk Profile for the Development:

The Planning Proposal seeks approval to rezone land for the future Electricity Generating Works.

These works will include an Electricity Substation and Transmission Lines.

The provision of a Defendable Space to the equipment and building/s will mitigate the risk of grassland fire. The provision of Asset Protection Zones (Defendable Spaces) to a width which lowers the radiant heat exposure on the equipment and building/s to less than 29kW/m² reduces the risk to low/moderate.

5.4 Access and Egress.

The access and egress assessment examines the existing and proposed road network within and external to the future Electricity Generating Works.

5.4.1 Examine the capacity of the road network to deal with emergencies, based on the existing and future community profile.

The Planning Proposal identifies that a new access road is to be provided to the site from Eldershaw Crescent, Dunlop, ACT.

The proposed road shall be constructed to a minimum width of 5.5 metres and capable of carrying up to 23 tonnes GVM.

The existing road network within the ACT has the capacity to deal with the additional traffic generated by fire service access to the site.

A perimeter road shall be provided to the future Electricity Generating Works.

5.5 Emergency Services.

The ACT Fire & Rescue will be the primary response to the site with the closest station located at closest station is located at Belconnen West.

The closest ACT Rural Fire Service station is located at Gungahlin.

5.6 Infrastructure.

The site is not connected to a reticulated water supply. A static water supply for fire-fighting operations will be required.

5.7 Adjoining Land.

The development will not impact on the ability of adjoining landowners to undertake bushfire management on their land.

5.8 Determination of Asset Protection Zones (Defendable Spaces).

Appendix 1 of *Planning for Bushfire Protection 2019* provides a site assessment methodology to determine the widths of Asset Protection Zones for development which is deemed to be bushfire prone. This includes the following assessment process:

(a) *Determine vegetation formations as follows:*

- Identify all vegetation in all directions from the site for a distance of 140 metres;
- Consult Table A1.2 to determine the predominant vegetation type.

- (b) Determine the effective slope of the land under the predominant vegetation Class.
- (c) Determine the appropriate fire [weather] areas.
- (d) Consult Table A1.12.5 and determine the appropriate setback [Asset Protection Zone] for the assessed land use, vegetation formation and slope range.

The predominant vegetation adjacent to the site consists of grassland.

The FDI for the region is 100.

Table A.1.12.5 of *Planning for Bushfire Protection 2019* identifies that for unmanaged grassland vegetation with an effective slope of 0-5 degrees downslope under the vegetation, the width of Asset Protection Zone is 9 metres – to minimise flame contact with the equipment/buildings.

It is recommended that a 30 metre wide Defendable Space be provided to lower the radiant heat exposure to less than 10kW/m².

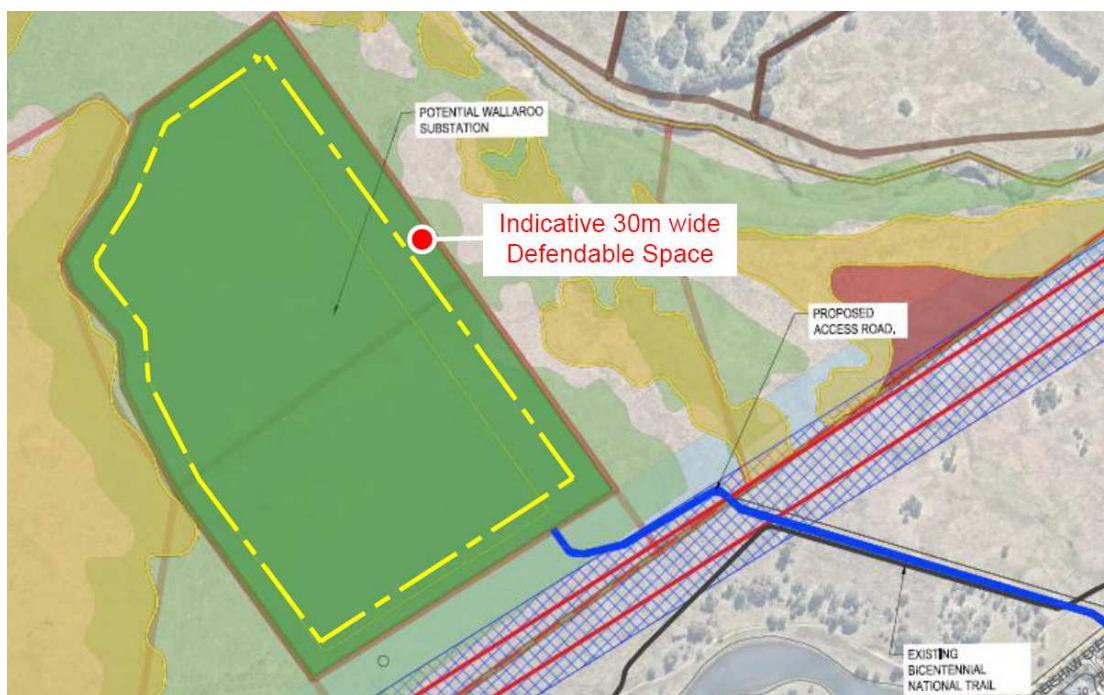


Figure 17 – Plan of indicative Defendable Space to future Electricity Assets.

5.8.3 Assessment of Bushfire Attack (Construction Standards).

The recommended 30 metre wide Defendable Space provided to the future Electricity Generating Works has been determined to mitigate the impact of bushfires to the extent that radiant heat levels will be less than 10 kW/m².

The construction requirements of the substation building/s will be assessed at Development Application stage.

5.8.4 Bushfire Hazard Management.

The intention of bushfire hazard management is to prevent flame contact with a structure, reduce radiant heat to below the ignition thresholds for various elements of a building and to minimize the potential for wind driven embers to cause ignition.

In the event that a substation is built on the land a Positive Covenant, pursuant to Section 88B of the Conveyancing Act 1909, shall be established on the title of the land for the management of the site to a standard that maintains grassland fuels to 150mm high during the Bushfire Danger Period.

8.5.6 Bushfire Maintenance Plans and Fire Emergency Procedures.

There is no requirement for the preparation of a bushfire maintenance plan and fire emergency procedures for the site whilst it remains vacant land.

SECTION 6

CONCLUSION

This Strategic Bushfire Study has been prepared for the Planning Proposal for the rezoning of the land within Lot 2 in DP 1144979, Wallaroo Road, Wallaroo.

The Planning Proposal seeks to rezone the lot from RU1 Primary Production to C3, Environmental Management under the Yass Valley LEP 2013 (YLEP 2013).

In addition, it is proposed to amend Schedule 1 of the LEP to enable an additional permissible use (APU) for Electricity Generating Works and an associated road to provide a site for a potential future substation.

The vegetation within the site and on adjoining land has been mapped as Category 3 Bushfire Prone Vegetation.

This Strategic Bushfire Study has examined the requirements of Chapter 4 of *Planning for Bushfire Protection 2019* and found that the site is suitable for the future use as an Electricity Generating facility.

The provision of Asset Protection Zones (Defendable Spaces), should a substation proceed, have been recommended to a width that reduces the potential level of radiant heat to the equipment and building/s to 10 kW/m².

A review of the access provisions has found that the existing road network within the ACT and proposed access road satisfies the access provisions for fire appliances

The following table summarises the extent to which the development proposal satisfies Chapter 4 of *Planning for Bushfire Protection 2019* relating to the provision of:

- Asset Protection Zones (Defendable Spaces) to the future Electricity Generating Works;
- The provision of water supplies for fire-fighting operations;
- Construction standards to the future building/s; and
- The management of bushfire fuels.

Table 1. Compliance with the deemed-to-satisfy provisions of *Planning for Bushfire Protection 2019*.

Bushfire Protection Measure	Compliance with deemed-to-satisfy provisions of <i>Planning for Bushfire Protection 2019</i>.
Asset Protection Zone (Defendable Space) setbacks	The width of the Asset Protection Zones (Defendable Spaces) achieve a radiant heat loading of 10kW/m ² on the equipment and building/s.
Siting & adequacy of water supplies for firefighting operations	Static Water Supply to be provided.
Capacity of public roads to handle increased volumes of traffic in the event of a bushfire emergency	The proposed and existing public roads provide for increased volumes of traffic in the event of the bushfire emergency.
Fire trail network	No Fire Trails are provided or required.
Adequacy of emergency response access and egress	Emergency response is provided via existing road network within adjoining development and new access road.
Adequacy of Bushfire Maintenance Plans and fire emergency procedures	A Bushfire Management Plan is not required. A Bushfire Emergency Management Plan is not required.
Building construction standards	Asset Protection Zones (Defendable Spaces) recommended reduce the expected level of radiant heat on the building/s and equipment to less than 10kW/m ² . Buildings constructed to BAL 12.5
Adequacy of sprinkler systems & other fire protection measures	Not applicable

The proposed Concept Site Plan, as represented by the layout prepared by *Sala4D* achieves compliance with the Strategic Planning provisions of Chapter 4.1 and Chapter 4.2 *Planning for Bushfire Protection 2019* and the aim and objectives of *Planning for Bushfire Protection 2019*.



Graham Swain,
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Australian Bushfire Protection Planners Pty Ltd
14.03.2025

REFERENCES:

- N.S.W Rural Fire Service – *Planning for Bushfire Protection 2019*;
- *Environmental Planning & Assessment Act – 1979*;
- *Rural Fires Act – 1997*;
- *Rural Fires Regulation 2022*;
- *Yass Valley Bushfire Prone Land Map*;
- Building Code of Australia;
- Australian Standard A.S 3959-2018 “*Construction of Buildings in Bushfire Prone Areas*”.