

STRATEGIC BUSHFIRE STUDY

FOR THE REZONING OF LOT 1 & LOT 2
in DP 1070081,

No. 361 OXLEY HIGHWAY,
GILGANDRA

Australian Bushfire Protection Planners Pty Limited

Bushfire Mitigation Consultants

ACN 083 085 474

32 Old Dog Trap Road
SOMERSBY 2250 NSW

Phone: (02) 43622112

Email: abpp@bigpond.net.au



ABPP

Australian Bushfire
Protection Planners Pty Ltd
ABN 48 935534 462

Bushfire Mitigation Consultants

STRATEGIC BUSHFIRE STUDY

FOR

FOR THE REZONING

OF

LOT 1 & LOT 2 in DP 1070081,

No. 361 OXLEY HIGHWAY,

GILGANDRA

Report Number	Document	Preparation Date	Issue Date	Directors Approval
B234067	Final	28.11.2023	05.12.2023	<i>G.L. Swain</i>

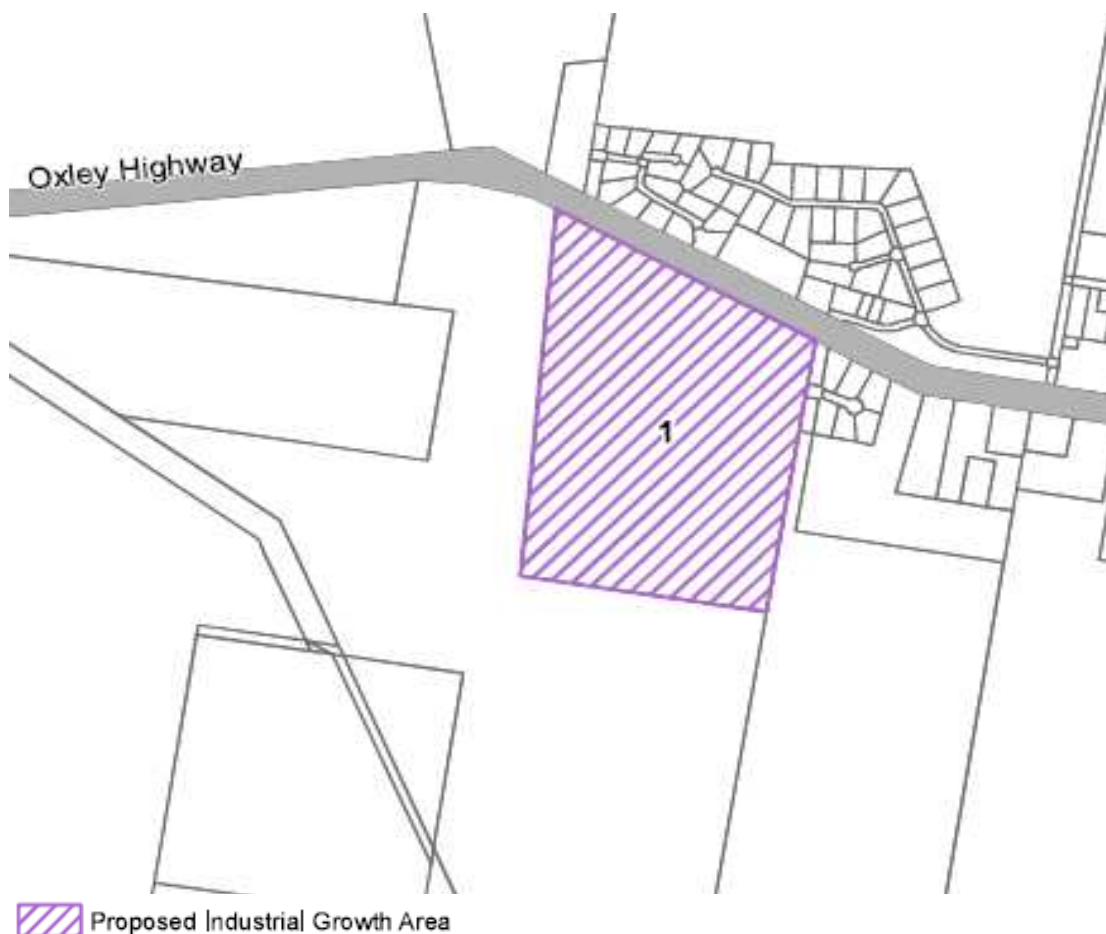
EXECUTIVE SUMMARY

Australian Bushfire Protection Planners Pty Limited has been commissioned by *Gilgandra Shire Council (GSC)* to undertake the Bushfire Consultancy for the Planning Proposal for the rezoning of the land within Lot 1 and Lot 2 in DP 1070081, No. 361 Oxley Highway, Gilgandra.

The Oxley Highway site is approximately 52 hectares in size and is proposed to be rezoned from RU1 Primary Production to E4 General Industrial with a minimum lot size of 5,000 m² and no height limit or Floor Space Ratio.

The site is shown as Area 1 in Figure 1 - 'Proposed Industrial Growth Area' map from the Western Landuse Strategy (2009). It should be noted the area identified for the Planning Proposal is approximately 6 ha larger than the area identified in the Strategy, which is at the landowner's request.

Figure 1 – Extract from the 'Proposed Industrial Growth Area' map from the Western Landuse Strategy (2009) showing the location of the land subject to the Planning Proposal.



The Gilgandra Bushfire Prone Land Map records the eastern portion of the site as containing a narrow width of the buffer zone to Category 1 Bushfire Prone Vegetation that occupies the land to the east of Aralee Road.

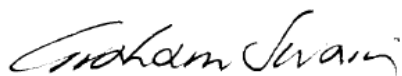
Section 4.1 of *Planning for Bush Fire Protection 2019* introduces a range of strategic planning considerations which are intended to be addressed via the preparation of a Strategic Bush Fire Study.

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 4.4 – ‘Planning for Bushfire Protection’ and ‘*Planning for Bushfire Protection 2019*’.



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

05.12.2023

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	3
TABLE OF CONTENTS	5
SECTION 1	6
INTRODUCTION	6
1.1 Aim of this Assessment.	6
1.2 Site Inspection.....	6
1.3 Scope of the Assessment.	6
1.4 Statutory Requirements.	8
1.4.1 Legislation.....	8
1.4.2 Planning Policies.	10
1.5 Documentation Reviewed in this Assessment.....	10
SECTION 2.....	11
PROJECT DESCRIPTION	11
2.1 Planning Proposal	11
SECTION 3.....	14
PROPERTY DESCRIPTION	14
3.1 Site Identification and Location.	14
3.2 Existing Land Use.....	15
3.3 Surrounding Land Use – Rezoning Precinct.	16
3.4 Vegetation.....	16
3.5 Topography.....	16
PRECINCT LEVEL ASSESSMENT	18
4.1 Precinct Level Assessment of Bushfire Prone Vegetation.....	18
SECTION 5.....	19
BUSHFIRE STRATEGIC STUDY.....	19
5.1 Introduction.....	19
5.2 Bushfire Landscape Assessment.....	19
5.2.1 Bushfire Hazard in the Surrounding Area.....	19
5.2.2 Potential Fire Behavior.	20
5.2.3 Bushfire History.	20
5.2.4 Potential Fire Paths.	20
5.2.5 Fire Management Operations.	20
5.3 Landuse Assessment.	21
5.3.1 Determine the Risk Profile for the Development:	21
5.4 Access and Egress.....	21
5.4.1 Examine the capacity of the road network to deal with..... emergencies, based on the existing and future community profile:.....	23 23
5.5 Emergency Services.....	23
5.6 Infrastructure.	23
5.7 Adjoining Land.....	23
5.8 Determination of Asset Protection Zones.....	23
5.8.1 Determination of Asset Protection Zones – Industrial Precinct.....	24
5.9 Assessment of Bushfire Attack (Construction Standards).	27
5.10 Bushfire Hazard Management.	27
5.11 Bushfire Maintenance Plans and Fire Emergency Procedures.	27
SECTION 6.....	28
CONCLUSION	28
REFERENCES:	30

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 1 in DP 1070081 and Part Lot 2 in DP 1070081, No. 361 Oxley Highway, Gilgandra.

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 inspection of the site and surrounding areas on the 30th of May 2022 as part of an inspection of the area for another project. A desk-top review of the rezoning precinct was undertaken prior to the preparation of this report.

The review 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 8).

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 for residential purposes are to have regard to s.9.1 (2) Direction 4.3 of the EP&A Act.

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 subdivision of lands and construction of buildings 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 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 rural residential and residential subdivision and Special Protection Developments 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:

- Western Land Council Land Use Strategy – Gilgandra LGA;
- Fire Assessment – Gilgandra 1A Solar Farm prepared by ITP;
- Concept Lot Layout prepared by Gilgandra Shire Council – 10.10.2023;
- *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*;
- Gilgandra Bushfire Prone Land Map.

SECTION 2

PROJECT DESCRIPTION

2.1 Planning Proposal

The Planning Proposal is over the land within Lot 1 in DP 1070081 and Part Lot 2 in DP 1070081, No. 631 Oxley Highway, Gilgandra, in the Gilgandra Shire Local Government Area (LGA).

The Planning Proposal seeks approval to rezone the land from RU1 Primary Production to E4 – General industrial with a minimum lot size of 5,000m².

Figure 2 – Existing Landuse Zoning Plan.



Figure 3 – Concept Lot Layout Plan.



Figure 4 – Plan of Approved Solar Farm.



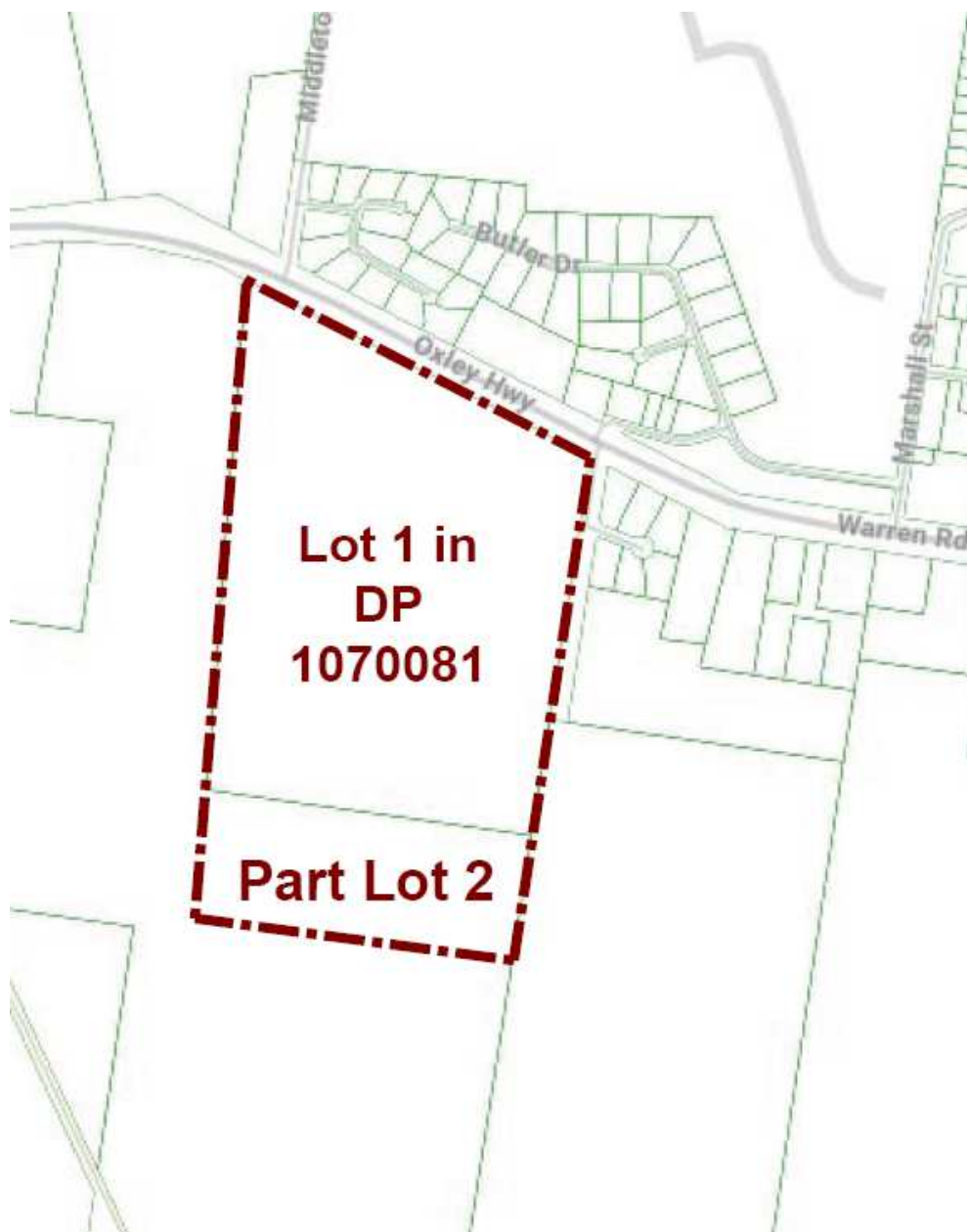
SECTION 3

PROPERTY DESCRIPTION

3.1 Site Identification and Location.

The Planning Proposal for rezoning is over the land known as Lot 1 in DP 1070081 and Part Lot 2 in DP 1070081, No. 631 Oxley Highway, Gilgandra.

Figure 4 – Location of Planning Proposal Site.



3.2 Existing Land Use.

The rezoning precinct is zoned RU1 – Primary Production and is used growing crops.

Figure 5 – Aerial Photograph of Planning Proposal Site.



3.3 Surrounding Land Use – Rezoning Precinct.

The land to the north of the rezoning precinct contains rural and residential land uses. The land to the west of the rezoning precinct is zoned RU1 – Primary Production and is used for cropping.

The land to the east of the rezoning precinct is part zoned R1 – Low Density Residential and RU1 – Primary Production. The residential zoned land contains dwelling houses and the RU1 zoned land is vacant, vegetated land.

The land to the south and southeast of the rezoning precinct is zoned is zoned RU1 – Primary Production and is used for cropping and vacant vegetated land.

3.4 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.

The vegetation within the rezoning precinct consists of grassland and sown crops. The vegetation on the farming land to the west and south of the rezoning precinct consists of grassland and sown crops. The residential development to the north of the Oxley Highway corridor contains managed landscaped gardens.

The residential development to the east of the rezoning precinct contains managed landscaped gardens. The vacant land to the east of the rezoning precinct contains Cypress Pine Forest.

3.5 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 land within the rezoning precinct falls from the east to west at less than 2 degrees. The land that contains the bushfire prone vegetation to the east of the rezoning precinct rises to the east at less than 2 degrees.

Figure 6 – Contour Plan.



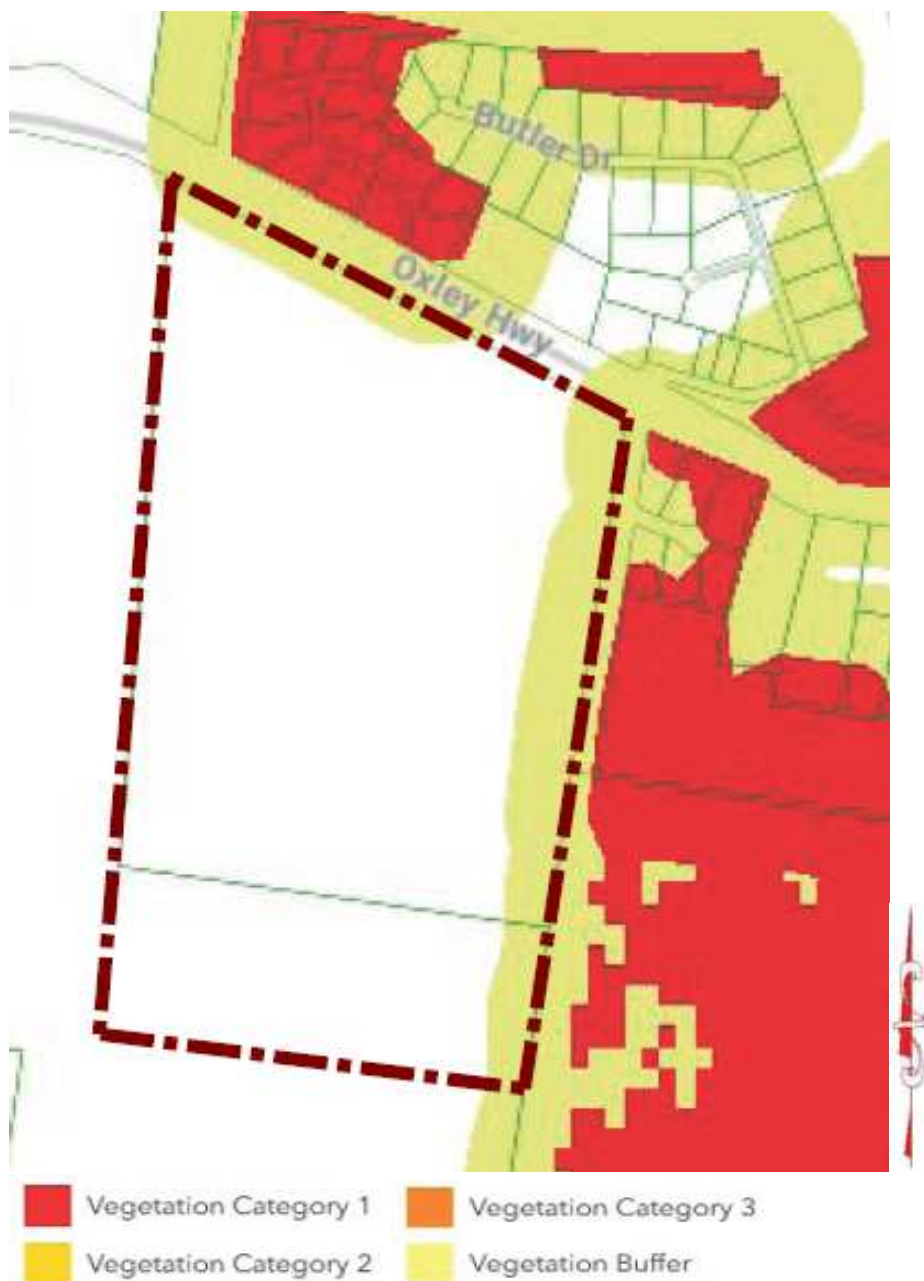
SECTION 4

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 7 – Extract from the Gilgandra Bushfire Prone Land Map.



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 rezoning precinct consists of:

- Grassland and crops on the downslope land to the west and south of the rezoning precinct;
- Cypress Pine Forest on upslope land to the east of the rezoning precinct;

(b) Topography

The topography of the land has been described in Section 3.5 and establishes that the effective slope of the land to the west is downslope at less than 2 degrees and less than 2 degrees upslope to the east.

(c) Weather

The Fire Danger Index (FDI) for the region is 80.

The Castlereagh Bushfire Risk Management Plan identifies the average climate does not vary much across the BFMC area with warm to hot temperatures with winds normally from the western sector during the summer with a cool to cold dryer winter period.

Summer rainfall is generally in the form of severe electrical storms caused by cold fronts moving in from the west. Dry lightning storms can also occur during the dryer seasonal conditions.

The fire season generally runs from October to March. Mid November to the end of December is typically the worst months for large fires.

Extreme fire danger days are usually experienced due to strong west to north-westerly winds, particularly where the drought inducers are low.

5.2.2 Potential Fire Behavior.

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

Unmanaged grassland and crops to the west and south of the rezoning precinct can ignite and spread upslope across the landscape.

The upslope fire paths will significantly increase the fire behaviour, particularly under southwest wind influences.

The unmanaged forest vegetation to the east of the rezoning precinct rises to the east, therefore only subject to downslope spreading fires, travelling towards the rezoning precinct.

5.2.3 Bushfire History.

The Castlereagh Bushfire Risk Management Plan identifies that the area averages 80 bushfires per year of which 3 on average can be considered to be major fires.

5.2.4 Potential Fire Paths.

The rezoning precinct maybe subject to an upslope fire from the northwest, west and southwest, through unmanaged grassland and crop vegetation. This fire path has the potential to cause a moderate to high level of risk to the rezoning precinct.

A fire that occurs in the Pine Forest on the land to the east may burn downslope under south-easterly, easterly and north-easterly wind influences.

This fire path has the potential to cause a low/moderate level of risk to the rezoning precinct.

5.2.5 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 Concept Lot Layout Plan (Figure 3) for the proposed Industrial Estate provides for an internal loop road. This road network provides heavy vehicle and fire service access to each lot.

The Concept Lot Layout Plan does not provide for perimeter fire service access to the west of proposed Lots 21 – 27. There shall be provided along the western boundary of the proposed Industrial Estate an all-weather gravel fire access road having a width of 4.0 metres and a carrying capacity of 28 tonnes.

This access road shall also extend along the southern boundary of proposed Lots 14 – 20, between these lots and the approved Solar Farm – exiting onto Aralee Road, with a connection to the proposed internal road.

A locked gate shall be provided at the Oxley Highway and Aralee Road ends of the access road

The landform does not limit fire-fighting access to the lots within the Estate and adjoining land

5.3 Landuse Assessment.

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

The Planning Proposal seeks approval to rezone the land from RU1 Primary Production to E4 General Industrial with a minimum lot size of 5,000 m² and no height limit or Floor Space Ratio.

The whole of the rezoning precinct provides a suitable location for E4 General Industrial development.

5.3.1 Determine the Risk Profile for the Development:

The Planning Proposal locates the future industrial buildings in the northern portion of the rezoning precinct with the approved Solar Farm occupying the southern portion of the precinct.

The provision of Asset Protection Zones (Defendable Spaces) to a width which lowers the radiant heat exposure on the buildings to less than 40kW/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 Planning Proposal.

Figure 8 – Plan of proposed Fire Access Road.



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

The primary access to the Industrial Estate will be from the Oxley Highway, to the north. The Highway has the capacity to deal with the additional traffic generated by the additional lots within the Industrial Estate.

Secondary, emergency access/egress is available via the perimeter fire access road onto Aralee Road

5.5 Emergency Services.

The NSW Fire & Rescue closest station is located at No. 25 Warren Road, Gilgandra. The NSW F&R Station is an On-Call station.

The NSW Rural Fire Service station and Castlereagh Office and Fire Control Centre is located on the corner of Derri Road and Warrie Street, Gilgandra.

Both stations are located less than 2 klm from the Industrial Estate.

5.6 Infrastructure.

The Concept Lot Layout Plan allows for extension of a reticulated water supply to service the future industrial development.

The reticulated water supply will provide hydrants that meet the pressure, flows and spacing specifications of A.S. 2419.1.2005.

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.

Appendix 1 of *Planning for Bushfire Protection 2019* provides a site assessment methodology to determine the widths of Asset Protection Zones and Bushfire Attack Levels for residential and rural residential 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 A1.12.6 and determine the appropriate setback [Asset Protection Zone] for the assessed land use, vegetation formation and slope range.*

5.8.1 Determination of Asset Protection Zones – Industrial Precinct.

The rezoning precinct is identified as containing a narrow strip of buffer zone to the Category 1 Bushfire Prone Vegetation on the land to the east of Aralee Road.

The predominant vegetation classification within the Category 1 Bushfire Prone Vegetation is forest on land that rise to the east.

The FDI for the region is 80.

Table A.1.12.6 of *Planning for Bushfire Protection 2019* identifies that for forest vegetation with an effective slope under the vegetation of upslope, the width of Asset Protection Zone (to minimise flame contact on the future industrial buildings) is 15 metres.

The Aralee Road reserve width is 30 metres, with the existing formed roadway providing the required 15 metre wide Asset Protection Zone. Note the proposed layout provides for a 10 metre wide APZ along the eastern boundary. This shall be located in the proposed lots.

Site Photograph of Aralee Road.



Whilst the Bushfire Prone Land Map does not record the grassland/cropping vegetation on the land to the west and south as bushfire prone vegetation, the NSW Rural Fire Service classify this vegetation as a hazard (Category 3 Bushfire Prone Vegetation).

Table A.1.12.6 of *Planning for Bushfire Protection 2019* identifies that for grassland vegetation with an effective slope under the vegetation of 0 – 5 degrees downslope the width of Asset Protection Zone (to minimise flame contact on the future industrial buildings) is 7 metres.

Therefore, there shall be a minimum 7 metre wide setback between the western boundary of the future industrial buildings and, pending construction of the approved Solar Farm, to the southern boundary of the proposed Industrial Estate.

Refer to Figure 9 – Plan of Asset Protection Zones.

5.9 Assessment of Bushfire Attack (Construction Standards).

The nominated minimum width of the Asset Protection to the future Light Industrial buildings within the Estate has been determined in order to mitigate flame contact on the buildings.

The required bushfire construction standard for the future industrial buildings that are erected up to the minimum width of Asset Protection Zone shall be constructed to comply with Section 3 and Section 8 – BAL 40 of A.S. 3959 – 2018 – *‘Construction of Buildings in Bushfire Prone Areas’*.

The bushfire construction standards to the remaining buildings shall be assessed at Development Application stage for each building.

5.10 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, to minimize the potential for wind driven embers to cause ignition and to reduce the effects of smoke on residents and fire-fighters.

Careful attention shall be given to species selection of landscaping near the future dwellings, their location relative to their flammability, avoidance of continuity of vegetation [separation horizontally and vertically] and ongoing maintenance to remove flammable fuels. Methods of bushfire hazard management include mowing of lawns within the immediate curtilage to the dwelling, slashing within the road reserves.

A Positive Covenant, pursuant to Section 88B of the Conveyancing Act 1909, shall be established for the maintenance of the Asset Protection Zones on the lots containing the prescribed Asset Protection Zone/s

5.11 Bushfire Maintenance Plans and Fire Emergency Procedures.

Due to the low level of bushfire risk to the future industrial development there is no requirement for the preparation of a bushfire maintenance plan and fire emergency procedures.

SECTION 6

CONCLUSION

This Strategic Bushfire Study has been prepared for the proposed rezoning of land within Lot 1 in DP 1070081 and Part Lot 2 in DP 1070081, No. 361 Oxley Highway, Gilgandra.

The Planning Proposal seeks consent to rezone the land from RU1 – Primary Production to E4 General Industrial. A Solar Farm has been approved for the southern portion of the rezoning precinct.

This Strategic Bushfire Study has examined the requirements of Chapter 4 of *Planning for Bushfire Protection 2019* and found that the rezoning 12 precinct is located in a low bushfire risk area that maybe subject to a grass/crop fire on the land to the west and south and a downslope forest fire on the land to the east and southeast.

The provision of Asset Protection Zones to the external hazards address the requirements of Table A1.12.6 of *Planning for Bushfire Protection 2019*.

A review of the access provisions has found that a perimeter fire access road should be provided along the western and southern boundaries.

The following table summarises the extent to which the development proposal conforms with [or deviates from] the requirements of Section 8.3.10 of *Planning for Bushfire Protection 2019* relating to the provision of:

- Asset Protection Zones to the future industrial buildings in the estate;
- The provision of water supplies for fire-fighting operations;
- Construction standards to the future buildings; 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 setbacks	The widths of the Asset Protection Zones comply with/exceed Table A1.12.6 of <i>Planning for Bushfire Protection 2019</i> in order to minimise flame contact on the future industrial buildings
Siting & adequacy of water supplies for firefighting operations	Reticulated water supply provided complete with hydrants installed to satisfy the specifications of A.S. 2419.1 – 2021.
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/proposed road network plus the recommended perimeter fire access road.
Adequacy of Bushfire Maintenance Plans and fire emergency procedures	A Bushfire Management Plan is not required. A Bushfire Emergency Management Plan should be prepared for the future industrial buildings.
Building construction standards	Asset Protection Zones recommended reduce the expected level of radiant heat on the future industrial buildings to less than 40kW/m ² .
Adequacy of sprinkler systems & other fire protection measures	Not applicable

The proposed Concept Lot Layout Plan, as represented by the layout prepared by *Gilgandra Shire Council* 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,
Managing Director,
Australian Bushfire Protection Planners Pty Ltd
05.12.2023

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*;
- *Biodiversity Conservation Act 2016*;
- *Gilgandra Bushfire Prone Land Map*;
- Building Code of Australia;
- Australian Standard A.S 3959-2018 “*Construction of Buildings in Bushfire Prone Areas*”.