

Bushfire Assessment Report

Proposed:
Rezoning

At:
**126 Somersby Falls Road,
Somersby NSW**

Reference Number: 230593

23 February 2024



Prepared By:
**Building Code & Bushfire
Hazard Solutions Pty Limited**

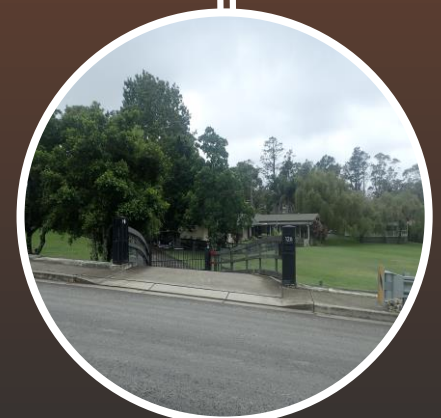
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Version Control				
Version	Date	Author	Reviewed	Details
1	14/02/2024	Andrew Muirhead	Stuart McMonnies	Draft Report
2	23/02/2024	Andrew Muirhead	Stuart McMonnies	Final Report

List of Abbreviations:

APZ	Asset Protection Zone
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Central Coast Council
DA	Development Application
EP&A Act	Environmental Planning and Assessment Act 1979
FRNSW	Fire & Rescue NSW
IPA	Inner Protection Area
NCC	National Construction Code
OPA	Outer Protection Area
PBP	Planning for Bush Fire Protection 2019
PP	Planning Proposal
RFS	NSW Rural Fire Service
SFPP	Special Fire Protection Purpose
SEPP	State Environmental Planning Policy

Executive Summary

Building Code and Bushfire Hazard Solutions P/L has been commissioned to prepare an independent Bushfire Assessment Report for a Planning Proposal which seeks a rezoning from RU1: Primary Production to E4: General Industrial at 126 Somersby Falls Road, Somersby.

The subject site comprises of an existing allotment (zoned RU1: Primary Production) located within Central Coast Council's local government area.

In this instance the subject site is depicted on Council's Bushfire Prone Land Map as containing Category 1 and 3 Vegetation and Vegetation Buffer. The subject site is therefore considered 'bushfire prone'.

To facilitate the industrial land uses a Planning Proposal (PP) is required in the first instance to modify the land zoning.

In relation to this PP Central Coast Council is required to apply section 9.1(2) of the *Environmental Planning and Assessment Act 1979*. Direction 4.4 Planning for Bushfire Protection identifies matters for consideration for proposals that affect or are in proximity to land mapped as bushfire prone. Under these directions the following objectives apply:

- i. to protect life, property and the environment from bush fire, by discouraging the establishment of incompatible land uses in bush fire prone areas; and*
- ii. to encourage sound management of bush fire prone areas.*

A Strategic Bush Fire Study has been undertaken and concluded the proposal is appropriate in the bushfire hazard context.

A key consideration for planning proposals in bushfire prone areas is limiting or excluding incompatible development commensurate with the level of risk. In this regard the subject site is considered to have a low bushfire risk when considering the characteristics of the vegetation including fragmentation, public exposure and access and previous bushfire history.

In addition to the Strategic Bush Fire Study an assessment of the proposed land zoning against the specific Bushfire Protection Measures of PBP has concluded that future Development Applications have the capacity to satisfy this document.

It is of our opinion that the proposal provides an appropriate combination of Bushfire Protection Measures (BPMs) in accordance with *Planning for Bush Fire Protection 2019*.

Furthermore, we are satisfied that the proposed zoning, in combination with the bushfire protection measures discussed herein will not result in areas that are difficult to evacuate, create control difficulties during a bushfire or adversely affect other bush fire protection strategies or place existing development at increased risk.

1.0 Introduction

Building Code and Bushfire Hazard Solutions P/L has been commissioned to prepare an independent Bushfire Assessment Report for a Planning Proposal which seeks a rezoning from RU1: Primary Production to E4: General Industrial at 126 Somersby Falls Road, Somersby.

The subject site comprises of an existing allotment (zoned RU1: Primary Production) located within Central Coast Council's local government area.

In this instance the subject site is depicted on Council's Bushfire Prone Land Map as containing Category 1 and 3 Vegetation and Vegetation Buffer. The subject site is therefore considered 'bushfire prone'.

In relation to this planning proposal Central Coast Council is required to apply section 9.1(2) of the *Environmental Planning and Assessment Act 1979*. Direction 4.4 Planning for Bushfire Protection identifies matters for consideration for proposals that affect or are in proximity to land mapped as bushfire prone. Under these directions the following objectives apply:

- i. to protect life, property and the environment from bush fire, by discouraging the establishment of incompatible land uses in bush fire prone areas; and*
- ii. to encourage sound management of bush fire prone areas.*

The proposal must demonstrate compliance with the s9.1(2) Directions and the relevant specifications and requirements of *Planning for Bush Fire Protection 2019* (PBP).

The application of PBP requires satisfactory demonstration of the aim and objectives and the specific objectives and bushfire protection measures relevant to the type of development.

In this instance the proposal relates to a Planning Proposal to facilitate a future industrial development and therefore in addition to the aim and objectives detailed in Chapter 1 'Introduction' the proposal must satisfy Chapter 4 'Strategic Planning' of PBP.

The bushfire protection measures detailed in Chapter 8 'Other Development' of PBP have also been considered for the future applications.

2.0 Purpose of Report

The purpose of this Bushfire Assessment Report is to provide an independent bushfire assessment together with appropriate recommendations for bushfire mitigation measures considered necessary having regard to development within a designated 'bushfire prone' area.

This Bushfire Assessment Report addresses Section 4 'Strategic Planning' of *Planning for Bush Fire Protection 2019*.

3.0 Scope of this Report

The scope of this report is limited to providing a bushfire assessment and recommendations for the subject site (refer to Figure 01). Where reference has been made to the surrounding lands, this report does not purport to directly assess those lands; rather it may discuss bushfire impact and/or progression through those lands and possible bushfire impact to the subject site.

4.0 Aerial Image, BPLM, Zoning, Structure Plan & Master Plan

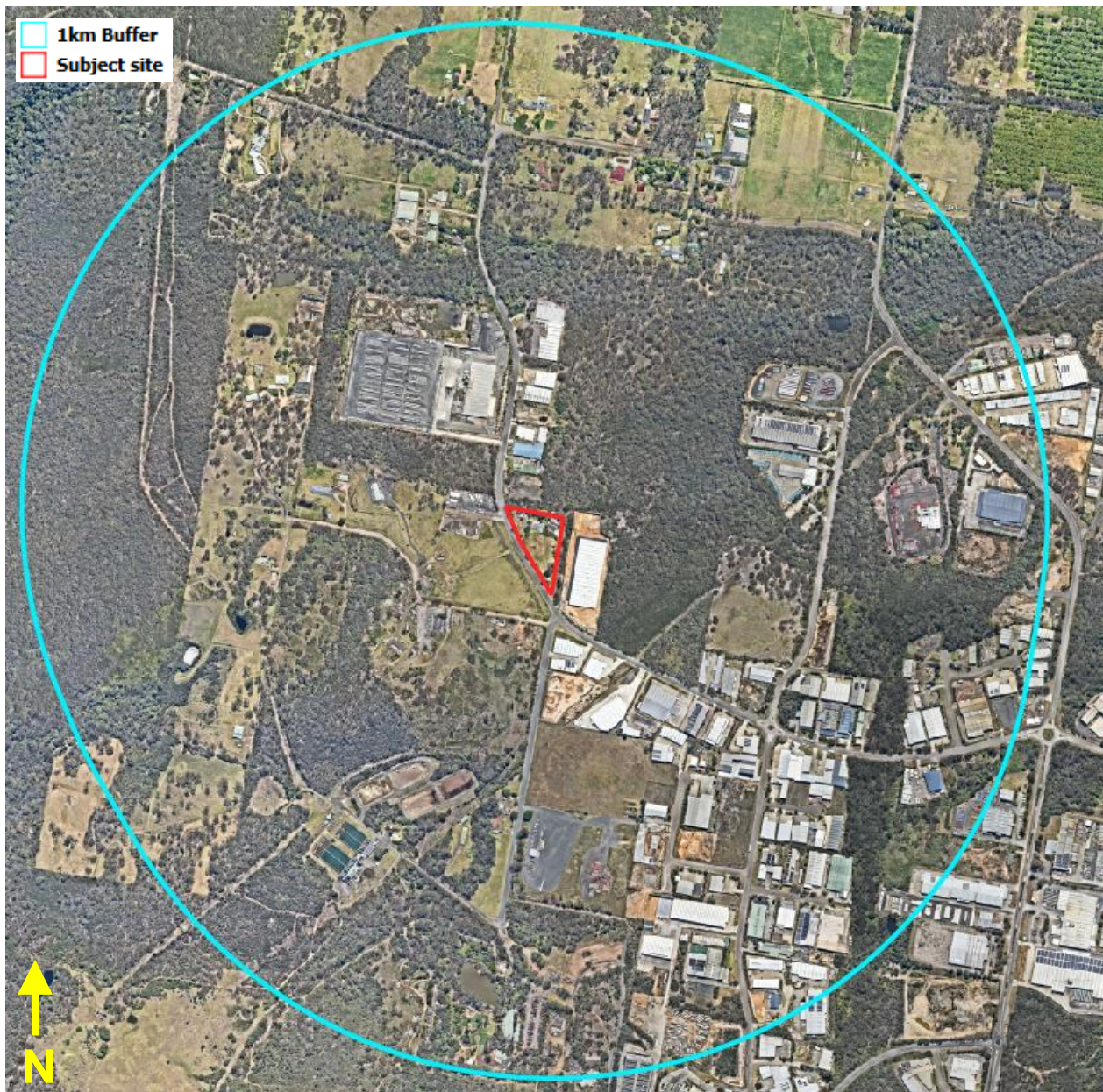


Figure 01: Aerial view of the subject area

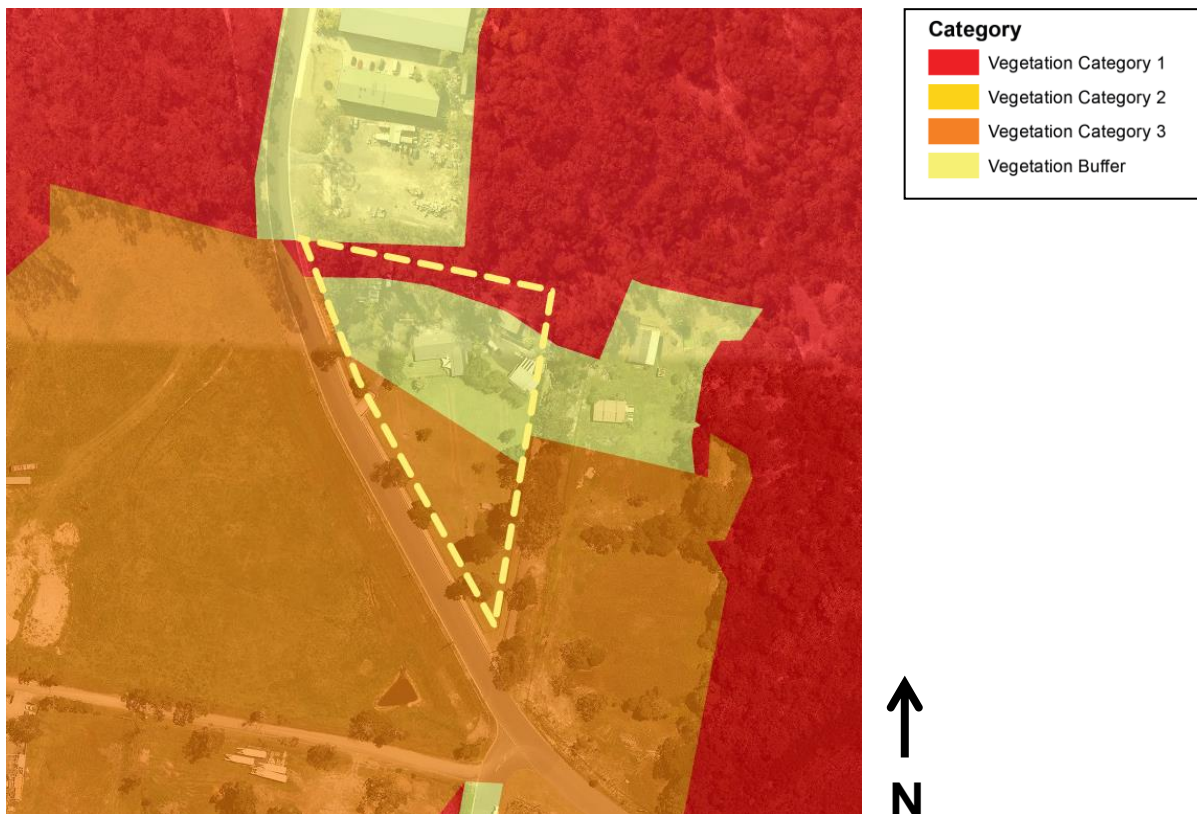


Figure 02: Extract from Central Coast Council's Bushfire Prone Land Map

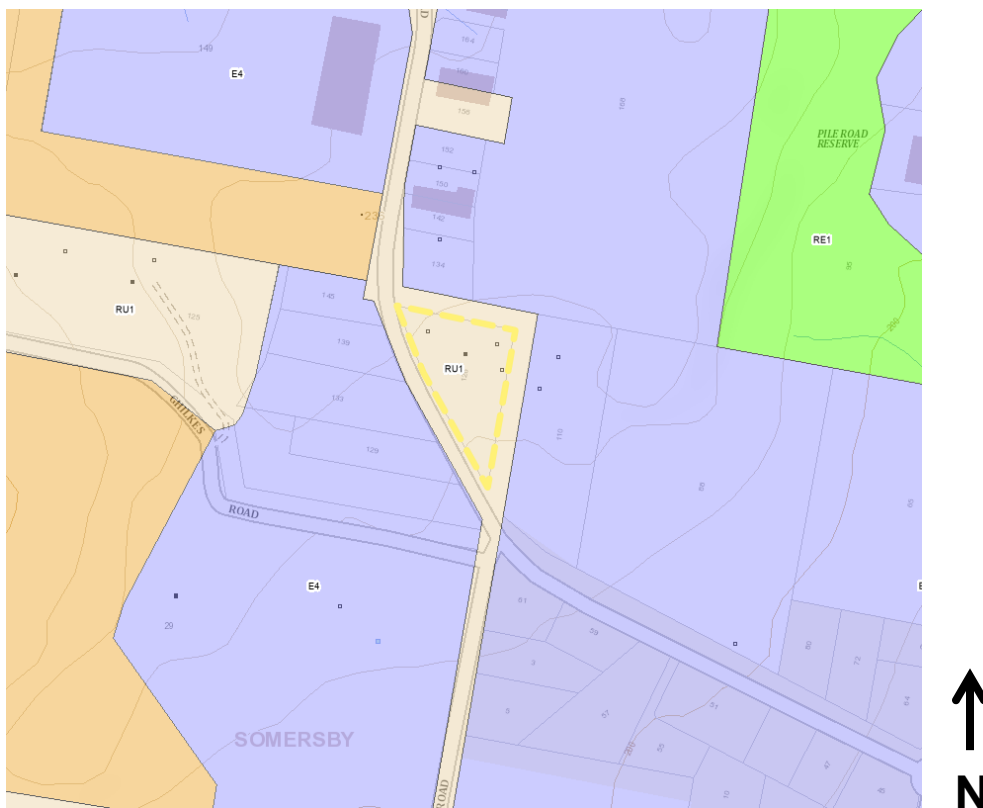


Figure 03: Land zoning of the subject area



Figure 04: Proposed Zoning Map

5.0 Bushfire Assessment

5.01 Preface

Properties considered to be affected by possible bushfire impact are determined from the local Bushfire Prone Land Map as prepared by Council and/or the Rural Fire Service. All development within affected areas is subject to the application of the relevant specifications and requirements of 'Planning for Bush Fire Protection - 2019' (PBP).

PBP formally adopted on the 1st March 2020 provides for the protection of property and life (including fire-fighters and emergency service personnel) from bushfire impact.

In this instance the subject site is depicted on Council's Bushfire Prone Land Map as containing Category 1 and 3 Vegetation and Vegetation Buffer. The subject site is therefore considered 'bushfire prone'.

When preparing a planning proposal s9.1(2) of the EP&A Act is required to be applied. Direction 4.4 'Planning for Bushfire Protection' of the s9.1(2) Direction, applies when a Council prepares a draft LEP that affects, or is in proximity to, land mapped as bushfire prone. Under these directions the following objectives apply:

- i. to protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas; and
- ii. to encourage sound management of bush fire prone areas.

Under direction 4.4 the Commissioner of the NSW RFS must be consulted, and any comments taken into account. As part of the consultation process with the NSW RFS, a bush fire assessment is required to be submitted to demonstrate compliance with the s9.1(2) Directions and PBP.

Consideration must be given to limiting or excluding incompatible development in bushfire affected areas commensurate with the level of risk. A key principle to ensure this is that future development is designed and sited capable of complying with PBP.

The NSW Rural Fire Service also encourages the application of zones that limit or exclude inappropriate development in bushfire prone areas where:

- *the development area is exposed to a high bush fire risk and should be avoided;*
- *the development is likely to be difficult to evacuate during a bush fire due to its siting in the landscape, access limitations, fire history and/or size and scale;*
- *the development will adversely effect other bush fire protection strategies or place existing development at increased risk;*
- *the development is within an area of high bush fire risk where density of existing development may cause evacuation issues for both existing and new occupants; and*
- *the development has environmental constraints to the area which cannot be overcome.*

We provide the following assessment in consideration of the above and *Planning for Bush Fire Protection 2019* to highlight the suitability of the site for residential development and the relevant Bushfire Protection Measures.

5.02 Strategic Bush Fire Study

Planning proposals which relate to bushfire prone properties require the preparation of a Strategic Bush Fire Study. The Strategic Bush Fire Study (SBFS) provides opportunity to assess the broader landscape and ultimately assesses whether the new zones and proceeding development is appropriate in the bushfire hazard context.

The broad principles which apply to the SBFS analysis are:

- ensuring land is suitable for development in the context of bush fire risk;
- ensuring new development on BFPL will comply with PBP;
- minimising reliance on performance-based solutions;
- providing adequate infrastructure associated with emergency evacuation and firefighting operations; and
- facilitating appropriate ongoing land management practices.

Once the strategic assessment has been addressed in the SBFS, an assessment of whether the future land uses can comply with the aim and objectives and specific bushfire protection measures of PBP must then be carried out. The assessment against PBP is addressed in section 5.03 of this report.

The following assessment details the components in Table 4.2.1 of PBP which must be addressed in a SBFS.

Bushfire Landscape Assessment

The Bushfire Landscape Assessment component 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.

A representative of Bushfire Hazard Solutions undertook a detailed site inspection on Tuesday 6 February 2024. In addition to the collected site data this assessment has relied on:

- Aerial imagery of the subject area (NSW Spatial Services & Nearmap);
- 1 metre contour mapping of the subject area (Elevation and Depth Foundation Spatial Data – Geoscience Australia)
- NSW Planning Portal Spatial Viewer
- NSW State Vegetation Type Map (DPE 2022)

Location

The subject site comprises of an existing allotment legally identified as Lot 1 DP 712505 and known as 126 Somersby Falls Road, Somersby (refer to Figure 02).

The subject site is located within Central Coast Council's local government area and is zoned RU1: Primary Production pursuant to *Central Coast Local Environmental Plan 2022*.

The site has an area of approximately 1.04 hectares.

The neighbouring allotments are zoned E4: General Industrial.

The subject site has street frontage to Somersby Falls Road to the southwest and formed access road to east and unformed road easement to the north.

The subject site is within the Central Coast Bush Fire Management Committee (BFMC) area and Greater Sydney Region Fire Weather District.

Vegetation

The vegetation structure, connectivity and attributes are fundamental contributors to bushfire behaviour and its movement through the landscape.

As part of this assessment, we have considered the potential bushfire runs that currently exist into the site, as well as the potential fire behaviour and impacts from the retained vegetation within the site.

The vegetation within the subject site was found to comprise of managed land.

To assess the potential fire runs into the site we have considered all bushfire hazards within 1 kilometre of the subject site. Refer to Figure 06 for the bushfire hazards within this area, which have been derived from Council's Bush Fire Prone Lands Map (Category 1 and 2 Vegetation).

Prevailing weather conditions associated with the bush fire season in the Central Coast BFMC area are associated with coastal conditions, and more generally north-westerly winds accompanied by high daytime temperatures and low relative humidity (Central Coast Bush Fire Risk Management Plan, 2020).

In this instance there is one fire catchment to the northwest of the subject site, however this area is broken by exiting industrial allotments and surrounding public roads.

The vegetation in the broader landscape to the north and southwest, where fire catchments were identified, was found to be fragmented, broken by industrial allotments, residential land and established residential development.

The comprehensive road network and surrounding developments also provide excellent exposure for the early detection of any unplanned fires in the broader landscape, facilitating an early response and ultimately suppression / containment by attending fire services.

The largest fire catchment was identified to be from the west. There has been one recorded wildfire along this catchment (source NPWS Fire History dataset, 120 year record period).

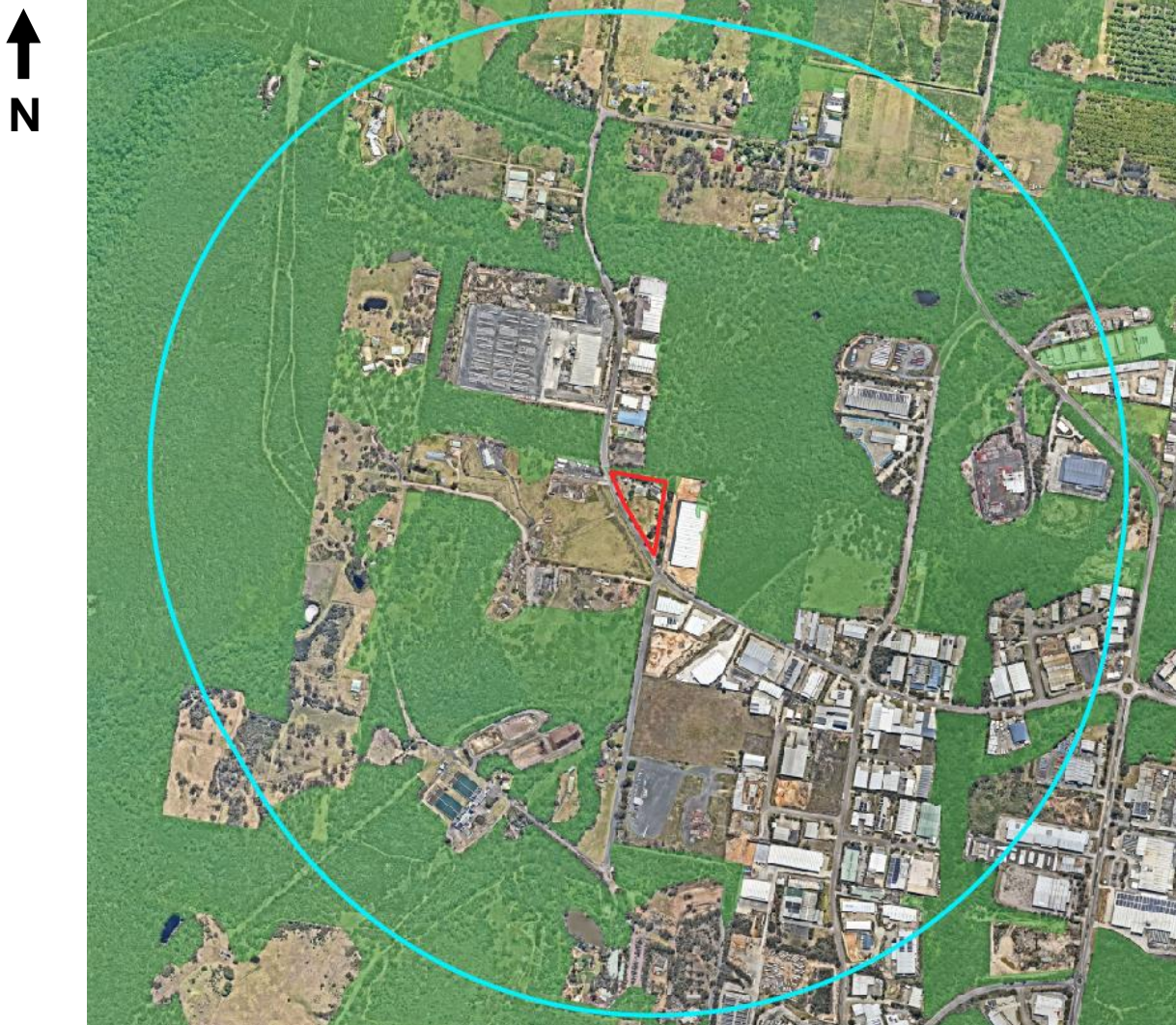


Figure 05: Aerial view of the subject area

1km buffer (blue line), subject site (thick red outline), mapped vegetation (green shaded area)

In accordance with Appendix 1 'Site Assessment Methodology' of PBP we have undertaken an assessment of all vegetation formations within 140 metres of the development site for each aspect as per Keith (2004).

The vegetation posing a threat to the proposed development to the northeast, northwest and east was found to consist of trees 10 - 20 metres in height with 50 - 70% foliage cover and an understorey of low trees and ferns.

The vegetation to the southwest was found to consist of tall grasses.

For the purpose of PBP the vegetation to the northeast, northwest and east was assessed to be Forest and to the southwest was assessed as a Grassland hazard.

The following vegetation parameters apply to the mapped vegetation:

Plant Community Type	Formation	Class	Surface and Elevation Fuel Load*	Overall Fuel Load (including bark and canopy)*
Northern Coastal Sandstone Bloodwood Shrub Forrest (PCT 3593)	Dry Sclerophyll Forests (Shrubby sub-formation)	Sydney Coastal Dry Sclerophyll Forests	21.3 t/ha	27.3 t/ha
Grassland	Grassland	Grassland	6.0 t/ha	6.0 t/ha

* Fuel loads from NSW Rural Fire Service publication Comprehensive Vegetation Fuel Loads (2019)

Slope and Topography

The slope of the land under the classified vegetation has a direct influence on the forward rate of spread, fire intensity and radiant heat exposure. The effective slope is considered to be the slope under the classified vegetation which will most significantly influence bushfire behaviour toward the development site.

In accordance with A1.4 'Determine slope' of PBP the slope assessment is to be derived from the most detailed contour data available.

The slope that would **most significantly** influence bushfire impact was determined using 1 metre LiDar contour mapping of the subject area.

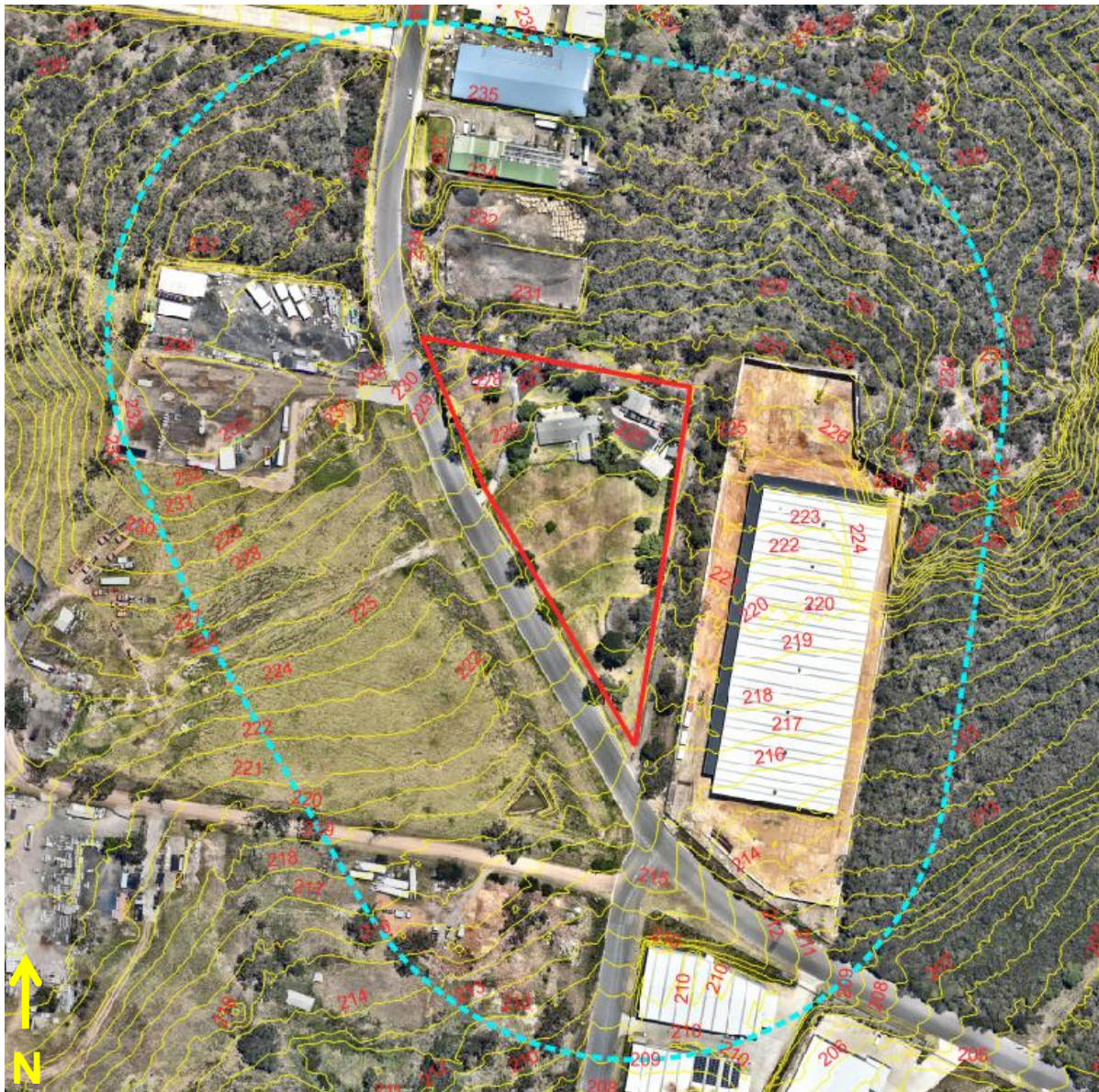


Figure 06: Aerial image overlaid with contour data, ELVIS – Geoscience Australia
(1 metre contours)

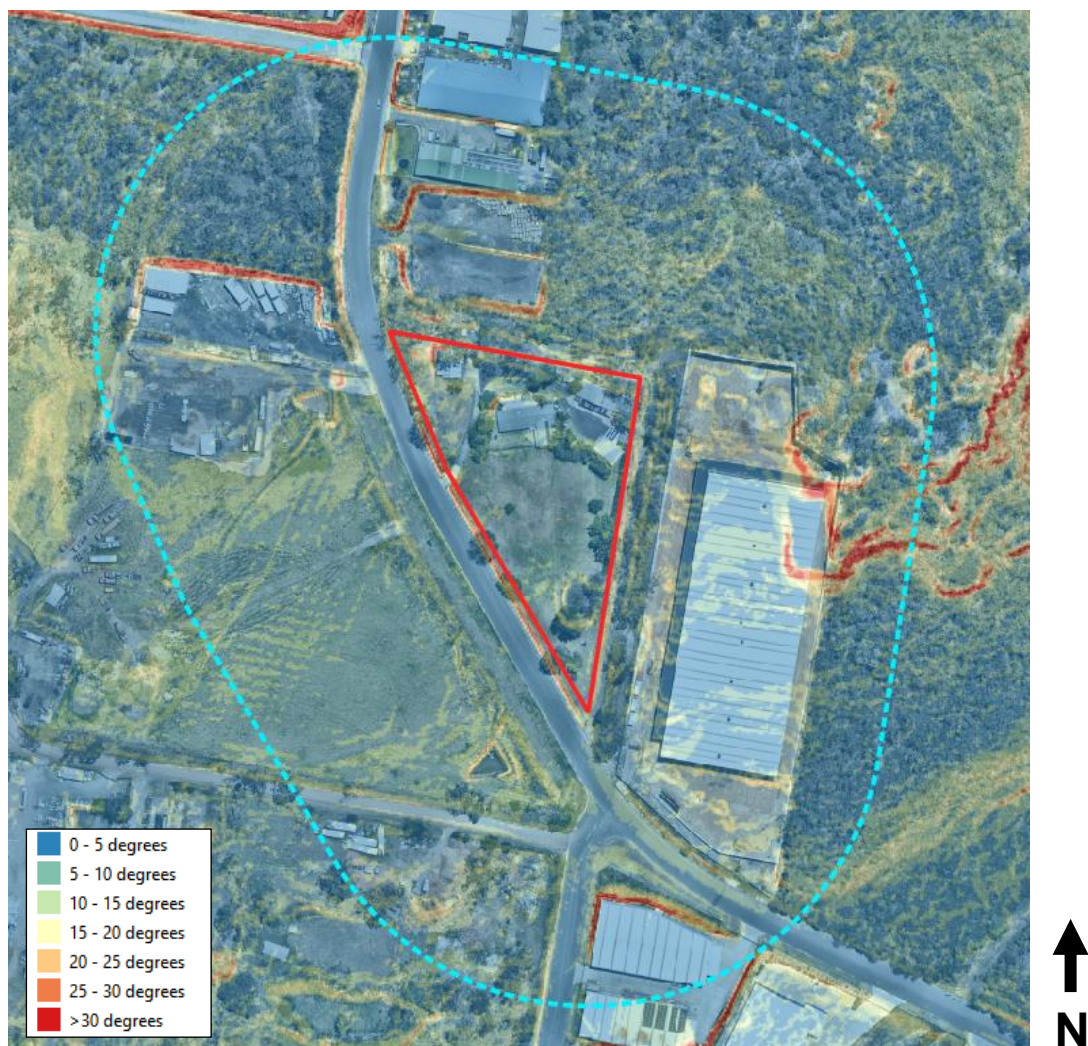


Figure 07: Slope categorisation for the subject site and surrounding area

Fire Weather

The FDI required to be used for development assessment purposes is based on local government boundaries, being Central Coast Council in this instance.

In accordance with the NSW Rural Fire Service publication 'NSW Local Government Areas FDI' (2017) Central Coast Council forms part of the Greater Sydney Region Fire Weather District and attracts an FDI of 100.

As there are identified grassland hazards identified within the assessment area, Table 5.1.4a of PBP was also used to determine a Grassland Fire Danger Index (GFDI) of 130 for this hazard.

Previous Bushfire History

There are areas within NSW which have significant fire history and are recognised as known fire paths. While the fire history is more commonly considered as part of strategic planning (to ensure future development is not exposed to an unacceptable risk), it is useful to consider at a Development Application phase to ensure the land is suitable for development in the context of bushfire risk.

In this instance the closest recorded wildfires were found to be located within neighbouring allotments of the subject site (source NPWS Fire History dataset). These fire occurred in the 1993-94 and 2005-06 fire season.

It should be noted that since the 1993-94 fire event the locality has been the subject of various development, reducing the extent of unmanaged vegetation.

Prevailing weather conditions associated with the bush fire season in the Central Coast BPMC area are associated with coastal conditions, and more generally north-westerly winds accompanied by high daytime temperatures and low relative humidity (Central Coast Bush Fire Risk Management Plan, 2020).

In consideration of the development that has occurred post the 1993-94 fire event, the subject site is not considered to be within a known fire path.

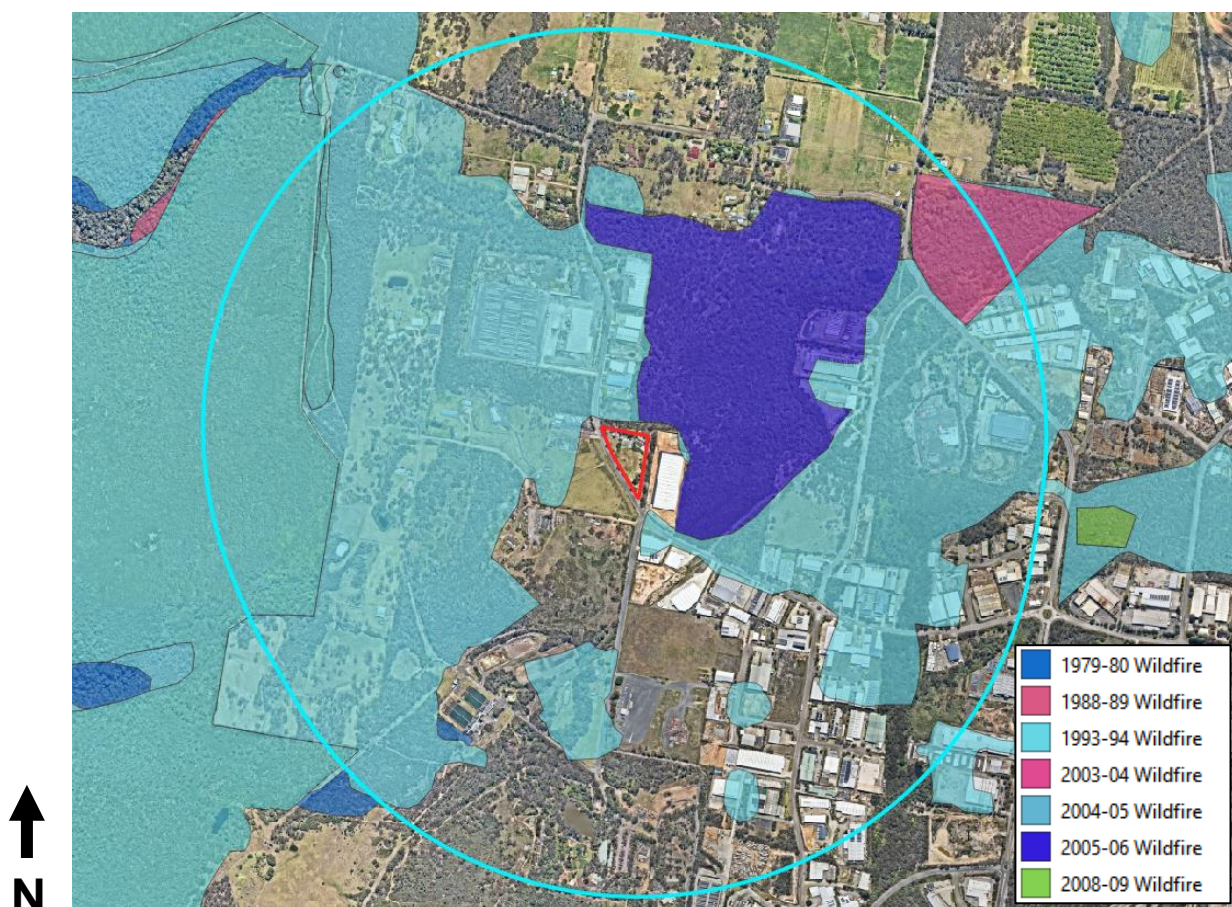


Figure 08: Aerial view of the subject area with previous wildfire history layer
Subject site (thick red outline) and 1km buffer (blue line)
(source NPWS Fire History)

Potential Fire Behaviour

In this instance it has been identified that the largest fire catchments to the subject site are from the north, northwest and southwest.

In applying the parameters described in this section, higher fuel loads (consistent with Forest) and FDI (100) as a margin of safety and the accepted assessment methodology described in PBP bushfire design modelling was undertaken to determine the intensity of three potential bushfires. These being:

1. A bushfire burning from the northwest through Brisbane Water National Park. This is the largest fire catchment towards the subject property. This is also the aspect that will be heavily influenced by the prevailing winds in the area and is associated with elevated fire behaviour. The vegetation in this area is broken and fragmented as it gets closer to the site;
2. A bushfire burning from the north through vegetated allotments toward the subject site. The vegetation to this aspect provides closest catchment toward the subject property. This is also an aspect which is associated with elevated fire behaviour; and
3. A bushfire burning from the southwest from vegetation partially connected to Brisbane Water National Park. While the influences of a fire burning in this direction are expected to reduce temperatures and humidity, stronger winds are also commonly experienced causing increased fire activity. It is also acknowledged that the vegetation to this aspect is fragmented due to roads and managed properties.

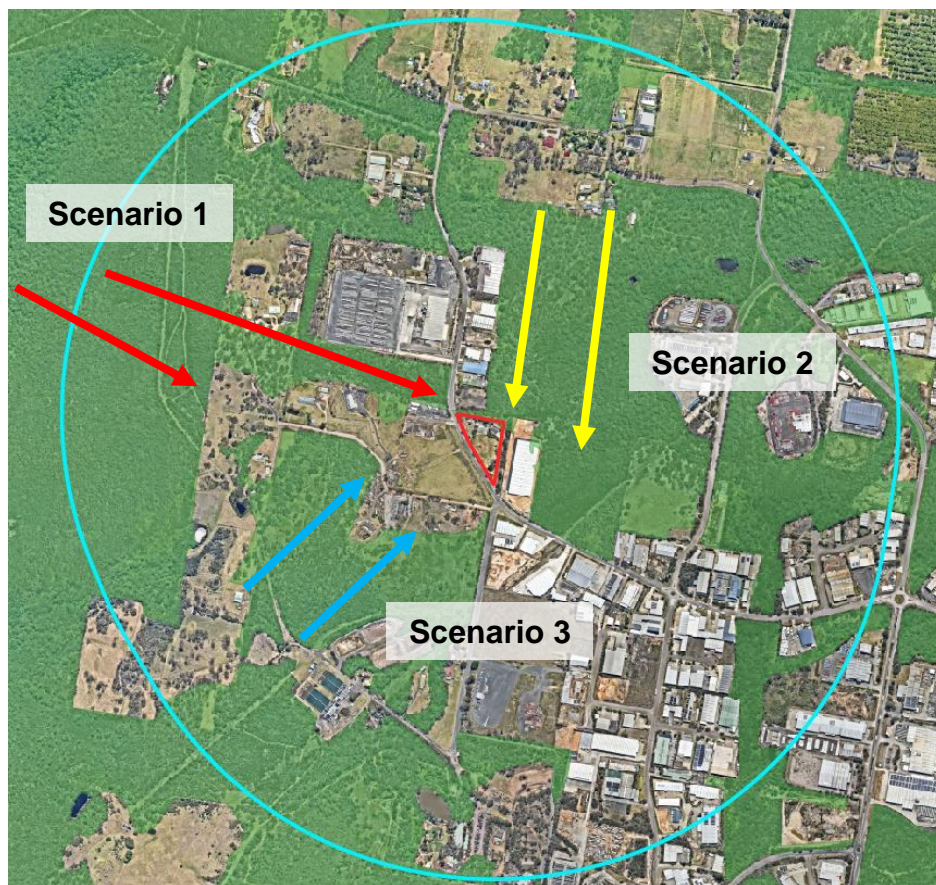


Figure 09: Aerial view of the subject area showing assessed fire runs

Access & Suppression

Access for attending fire services to undertake early suppression is a key factor in whether a fire has the opportunity to develop into a quasi-steady state at which point the opportunity to control / extinguish the fire becomes far more challenging.

Where good access is available it provides opportunity to control / extinguish a fire in its growth phase before developing further and consequently becoming more difficult to conduct direct attacks.

In this particular instance access to the identified bushfire hazards is available via the surrounding road network.

In addition, there is also a fire trail network within Brisbane Water National Park providing additional access opportunities for attending fire services undertaking hazard reduction or fire suppression activities.

In consideration of the comprehensive access available and its exposure to the public the identification and subsequent extinguishment / containment of a bushfire within the immediately study area is considered probable.



Figure 10: Aerial view of the subject area overlaid with roads and trails
(source Transport NSW)

Land Use Assessment

The Land Use Assessment identifies the most appropriate locations for the proposed land uses.

In this instance the proposal is for the land to be rezoned to E4: General Industrial. In accordance with *Central Coast Local Environmental Plan 2022* the following uses are permitted within the zoning:

2. Permitted without consent

Recreation areas

3. Permitted with consent

Depots; Food and drink premises; Freight transport facilities; Garden centres; General industries; Goods repair and reuse premises; Hardware and building supplies; Industrial retail outlets; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Liquid fuel depots; Local distribution premises; Neighbourhood shops; Oyster aquaculture; Plant nurseries; Rural supplies; Take away food and drink premises; Tank-based aquaculture; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4

The following is not permitted within the zoning:

4. Prohibited

Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Eco-tourist facilities; Educational establishments; Entertainment facilities; Environmental facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Heavy industrial storage establishments; Heavy industries; Home-based child care; Home businesses; Home occupations; Home occupations (sex services); Hospitals; Information and education facilities; Marinas; Mooring pens; Moorings; Open cut mining; Public administration buildings; Residential accommodation; Tourist and visitor accommodation; Water recreation structures

In a bushfire planning context the various land uses present different risk profiles and as such are assessed differently under Planning for Bush Fire Protection.

Special Fire Protection Purpose (SFPP):

SFPP development is one which is occupied by people who are considered to be at-risk members of the community. In a bushfire event, these occupants may be more susceptible to the impacts of bush fire.

SFPP development consequently attracts the highest Bushfire Protection Measures commensurate to the risk profile. Most notably SFPP development, attracts large minimum required Asset Protection Zones, which in instances can preclude future development.

No SFPP is permitted within the site in accordance with the land use table in *Central Coast Local Environmental Plan 2022*

It should be noted that buildings used for public assembly which have a floor area of greater than 500m² are treated technically as SFPP development due to the evacuation challenges presented by large numbers of occupants.

Residential:

Residential development (increased density, subdivision, multi-storey buildings etc) presents the next highest risk profile and accordingly also attracts minimum required Asset Protection Zones.

While the site currently has residential entitlement under the new zoning residential development is not permitted in accordance with the land use table in *Central Coast Local Environmental Plan 2022*

Commercial and Industrial:

Commercial development (excluding SFPP, hazardous industries or that which includes a managers residence) is considered to have the lowest risk profile of a built environment.

The National Construction Code (NCC) does not provide for any bush fire specific performance requirements for Class 5 to 8 structures and as such Australian Standard 3959 'Construction of buildings in bushfire-prone areas' does not apply as a set of 'deemed to satisfy' provisions.

Whilst bushfire is not captured in the NCC for Class 5-8 buildings, the following objectives will be applied in relation to access, water and services, and emergency and evacuation planning under PBP:

- to provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation;
- to provide adequate services of water for the protection of buildings during and after the passage of bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building;
- to provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development; and
- consideration of storage of hazardous materials away from the hazard wherever possible.

In addition to the above the infill residential development provisions detailed in Chapter 7 of PBP are applied as the base for a package of measures any future commercial development. This includes the application of the residential APZs shown in (attachment 01).

The proposed commercial / industrial land use can achieve compliance with the residential APZs.

Hazardous Industry:

Hazardous industries by their very nature are considered to be hazardous, either due to an increased likelihood to start fires or their susceptibility to bushfire impact. Hazardous industries include but are not limited to:

- power generating works
- sawmills
- junk yards
- liquid fuel depots
- hazardous industries/storage
- chemical industries/storage
- service stations
- ammunition storage/manufacture
- fireworks manufacture/storage.

In a bushfire planning context hazardous industries should be avoided from bushfire prone land.

There is a pathway to have hazardous industries considered / approved on bushfire prone land however this would involve extensive consultation with the NSW Rural Fire Service and the preparation of a detailed performance-based solution / Bushfire Design Brief.

Land Use:

The proposed zoning will limit the site to industrial and commercial development. Any future development will require to have a perimeter road around which will provide adequate access for emergency services and provide the buildings with additional setback.

The bushfire hazards are framed by managed open space and roads. These areas provide a logical firefighting platform and defensible space for fire services and maximise the land use when applying the minimum required Asset Protection Zones.

In consideration of the landscape study and risk profiles we are of the opinion the proposed land use is appropriate.

Access and Egress

It is important to assess the capacity of both the existing and proposed road networks both within and external to the investigation area to deal with evacuating residents and responding emergency services.

There must be sufficient time for residents / occupants to safely evacuate and reasonable threat posed for emergency services to order / encourage the evacuation of an area.

In consideration of the characteristics of the bushfire threat, inclusive of size and rate of spread and the fact future development will comply with current bushfire planning controls, inclusive of construction standards and Asset Protection Zones, it is considered likely that the response to a bushfire emergency would be 'shelter in place'.

It is acknowledged that future occupants of the site may choose to evacuate / relocate from the area based on their own individual risk assessment.

Regardless as the site is industrial the Emergency Management Plans could include closure on days of Catastrophic fire danger.

The existing road network provides numerous evacuation routes, north and south away from the bushfire hazard, and ample opportunity to relocate from the area.

Access will be available to the bushfire hazard interfaces for attending fire services via the future and existing roads, providing excellent fire-fighting platforms for fire suppression or hazard reductions activities.

The future road network will comply with the relevant access requirements outlined in *Planning for Bush Fire Protection 2019*.

Access to the hazards in the broader landscape is available via existing public roads. Refer to Figure 11 for the extent of existing roads in the subject area (source Transport NSW).

The access and egress routes are considered acceptable.

Emergency Services

In some circumstances the scale of a planning proposal warrants a need to include provisions for a new fire station.

The subject site is located within a Fire and Rescue NSW area, with a station located in the adjacent township of Kariong and additional resources in Gosford.

The NSW Rural Fire Service have a control centre located in the township of Kariong.

In consideration of the relatively modest size of the future development the existing fire service coverage is considered adequate.

Infrastructure

An assessment of the issues associated with infrastructure and utilities must be undertaken. This assessment is to include the ability of the reticulated water system to deal with a major bushfire event in terms of pressures, flows and spacing of hydrants.

There are hydrants available along the existing surrounding public roads, including Somersby Falls Road and the unformed road easement around the site. The capabilities of the broader hydrant network is the responsibility of the water authority.

The sizing, spacing and pressures of any future hydrant system must comply with AS2419.1-2021.

It is understood that the proposal will not directly impact any existing electrical or gas infrastructure.

5.03 Planning for Bush Fire Protection

As the strategic issues have been satisfactorily addressed in the SBFS, an assessment of compliance with PBP is required. This section addresses the future developments capacity to comply with the relevant specifications and requirements of PBP.

The application of PBP requires satisfactory demonstration of the aim and objectives and the specific objectives and bushfire protection measures relevant to the type of development. The bushfire protection measures detailed in Chapter 8 of PBP have been considered.

The following table details the aim and objectives of *Planning for Bush Fire Protection 2019* and the proposals ability to comply.

Aim / Objective	Comment
<i>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.</i>	With the inclusion of the bushfire protection measures discussed herein it is of our opinion that the aim of PBP will be satisfied.
<i>(i) afford buildings and their occupants protection from exposure to a bush fire;</i>	<p>The proposed land uses exceed the corresponding minimum required Asset Protection Zones.</p> <p>In conjunction with the application of construction measures future buildings and their occupants will be afforded protection from exposure to a bushfire.</p>
<i>(ii) provide for a defensible space to be located around buildings;</i>	The existing roads and APZs provide a defensible space for fire services and logical fire-fighting platform.
<i>(iii) provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;</i>	The application of the available APZs in conjunction with construction measures for the future buildings will prevent the likely fire spread to buildings.

Objective	Comment
<i>(iv) ensure that appropriate operational access and egress for emergency service personnel and occupants is available;</i>	<p>Future access to the site will be required to provide a perimeter road adjacent the identified bushfire hazard allowing direct access for attending fire services undertaking fire suppression activities.</p> <p>Access to the hazard in the broader landscape is available via existing public roads.</p>
<i>(v) provide for ongoing management and maintenance of bush fire protection measures, (BPMs); and</i>	The specific bushfire protection measures of the future developments will be addressed within the submission documents of those developments.
<i>(vi) ensure that utility services are adequate to meet the needs of firefighters.</i>	<p>The capabilities of the broader hydrant network is the responsibility of the water authority.</p> <p>The sizing, spacing and pressures of any future hydrant system within the site must comply with AS2419.1-2021.</p> <p>These future hydrants are considered to be the logical water supply for fire services undertaking hazard reduction and / or fire suppression activities.</p>

It is therefore of our opinion that the proposal can satisfactorily comply with the aim and objectives of *Planning for Bush Fire Protection 2019*.

Asset Protection Zones

One of the objectives underpinning Planning for Bush Fire Protection is to provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings.

While there are no minimum required Asset Protection Zones for this type of development it is acknowledged that for commercial and industrial development PBP requires that the provisions within Chapter 7, inclusive of APZs, are to be used as the base for the package of measures.

Chapter 7 requires that APZs are provided in accordance with A1.12.2, which details the minimum APZs to achieve 29kW/m² (BAL 29).

APZs for residential subdivision and increased density are determined from Table A1.12.2 of Planning for Bush Fire Protection 2019 (PBP) or bushfire design modelling achieving a radiant heat impact of no more than 29 kW/m² at a building footprint.

The minimum required Asset Protection Zones for the future residential development were determined from Table A1.12.2 of PBP and are depicted on the attached Residential APZ Overlay (attachment 01).

The available APZs consist of the land entirely within the subject site (including road and active open space).

The subject site can exceed with minimum required Asset Protection Zones as detailed in PBP.

Fire Fighting Water Supply

There are hydrants available along the existing surrounding public roads within the area, including Somersby Falls Road.

The sizing, spacing and pressures of any future internal hydrant system must comply with AS2419.1-2021.

The subject site has the capacity to comply with the Water Supply requirements as detailed in sections 7.4 of PBP.

Access

Planning for Bush Fire Protection addresses design considerations for internal roads (public roads) for properties determined to be bushfire prone. In a bush fire prone area, the purpose of the road system is to:

- provide firefighters with access to structures, allowing more efficient use of firefighting resources;
- provide evacuation routes for firefighters and the public; and
- provide access to areas of bush fire hazard for firefighting and hazard mitigation purposes.

The subject site has street frontage to Somersby Falls Road to the southwest.

We are satisfied that the site has the capacity to comply with the requirements for Access under Chapter 8 of PBP.

6.0 Conclusion

Building Code and Bushfire Hazard Solutions P/L has been commissioned to prepare an independent Bushfire Assessment Report for a Planning Proposal which seeks to rezone from RU1: Primary Production to E4: General Industrial at 126 Somersby Falls Road, Somersby.

The subject site comprises of an existing allotment (zoned RU1: Primary Production) located within Central Coast Council's local government area.

In this instance the subject site is depicted on Central Coast Council's Bushfire Prone Land Map as containing Category 1 and 3 Vegetation and Vegetation Buffer. The subject site is therefore considered 'bushfire prone'.

We are satisfied that the subject site and future industrial development has the capacity to comply with the relevant specifications and requirements of *Planning for Bush Fire Protection* 2019.

Furthermore, we are satisfied that the proposal, in combination with the bushfire protection measures discussed herein will not result in areas that are difficult to evacuate, create control difficulties during a bushfire or adversely affect other bush fire protection strategies or place existing development at increased risk.

We are therefore in support of the Planning Proposal.

Should you have any enquiries regarding this project please contact me at our office.

Prepared by
Building Code & Bushfire Hazard Solutions



Andrew Muirhead

Bushfire Consultant
Graduate Certificate in Bushfire Protection
Diploma of Engineering
FPA Australia BPAD Level 2 Accredited Practitioner
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Reviewed by
Building Code & Bushfire Hazard Solutions P/L



Stuart McMonnies

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BPAD Accreditation No. BPAD9400



7.0 Annexure 01

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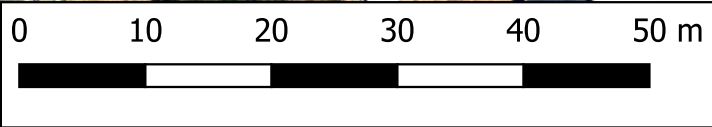
Geoscience Australia
Nearmap
Street-directory.com.au

Attachments

Attachment 01: Residential Asset Protection Zone Overlay



This Overlay has been prepared on the basis that the entire site is managed as an Asset Protection Zone in accordance with Appendix 4 of Planning for Bush Fire Protection.



Legend

Minimum APZ Subject site

BCBHS Ref: 230593
Drawn by: AM
Dated: 14/02/2024
Issue: 1
Client: Mike Fitzpatrick
Address: 126 Somersby Falls Road, Somersby



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**Minimum Residential
APZ Overlay**