



BUSHFIRE
CONSULTING
SERVICES PTY LTD

Designing Bushfire Protection Measures

Reference: 21/0148

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Bush Fire Assessment Report

in relation to the proposed

Yiribana Logistics Estate

at:



Lot 59 & 60 DP 259135

754 -770 & 784-786 Mamre Road Kemps Creek

(subject site)

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Document Tracking

Item	Detail
Project Name	Bush Fire Assessment Report, five warehouses and two into five lot subdivision
Project Address	Lot 59 & 60 DP 259135, 754- 770 & 784-786 Mamre Road Kemps Creek
Client Name	The GPT Group
Project Number	21/0148
Plan Reference	Plans by SBA Architects, Job No. 20194, Drawing No. MP 01, Issue P6, dated 06/05/2021, Drawing No. MP 03, Issue P3, dated 06/05/2021 & MP 08, Issue P3, dated 06/05/2021, Subdivision Plan by SBA Architects Issue P3 dated 6/05/2021
Prepared by	Adrian Armitstead
Approved by	Catherine Gorrie
BAL	Not applicable to this development type

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5	Catherine Gorrie	Final	18/05/2021

6	Catherine Gorrie	Final-Inclusion of AGV Network Commentary	27/05/2021
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It should be borne in mind that the measures recommended in this report cannot guarantee that a building will survive a bushfire event on every occasion. This is due to the degree of vegetation management, the unpredictable behaviour of bushfires and extreme weather conditions. As such, the author is not liable to any person for any damage or loss whatsoever which has occurred or may occur in relation to the person taking action or not taking action based on the recommendations of this report.

NOTE: *This bush fire assessment shall remain valid for 12 months from the date of issue.*

Executive Summary


Bushfire Consulting Services was commissioned by The GPT Group to provide a bush fire assessment for five warehouses and two into five lot subdivision at Lot 59 & 60 DP 259135, 754-770 & 784-786 Mamre Road Kemps Creek. The subject site is mapped as designated bush fire prone land by Penrith Council and is located within 10 metres of bush fire prone (hazardous) vegetation.

The proposal is a form of “other non-residential” development and subdivision, which under the *EP&A Act*, is defined as the division of land into two or more parts that, after the division, would be adapted for separate occupation, use or disposition. A Bush Fire Safety Authority (BFSA) is required from the NSW RFS for subdivision on Bush Fire Prone Land (BFPL) under *Rural Fires Act*. As such, this report makes recommendations in accordance with the aim and objectives of Chapters 1 and 8 of the NSW RFS document ‘*Planning for Bush Fire Protection*’ (PBP) (NSWRFS 2019). The recommendations address these objectives including:

- afford buildings and their occupants protection from exposure to a bush fire
- provide for a defensible space to be located around buildings
- provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings
- ensure that appropriate operational access and egress for emergency service personnel and occupants is available
- provide for ongoing management and maintenance of BPMs
- ensure that utility services are adequate to meet the needs of firefighters
- Provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation
- Provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development
- 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
- Provide for the storage of hazardous materials away from the hazard wherever possible

Where all recommendations are implemented, the report concludes that the proposal can comply with the aim and objectives of The Rural Fire Service document, PBP.

Compliance Summary

This Assessment has been Certified by: Catherine Gorrie BPAD-Level 3 Accredited Practitioner FPAA Cert No: BPAD20751	
Has a maximum radiant heat level of 29kW/m ² been demonstrated?	Yes
Does this development comply with the aim and objectives of PBP?	Yes
Is referral to the NSW Rural Fire Service (RFS) required?	Yes

List of Abbreviations

AGV	Automated Guided Vehicle
APZ	Asset Protection Zone
AS3959	Australian Standard 3959 – 2018, <i>Construction of Buildings in Bushfire Prone Areas</i>
BAL	Bushfire Attack Level
BPAD	Bushfire Planning and Design (Accreditation Scheme)
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Penrith Council
CDC	Complying Development Certificate
DA	Development Application
DEM	Digital Elevation Model
EP&A Act	<i>Environmental Planning and Assessment Act – 1979</i>
FDI	Fire Danger Index
FPAA	Fire Protection Association of Australia
IPA	Inner Protection Area
kW/m ²	Kilowatts per metre squared
LiDAR	Light Detection and Ranging
LPMA	Land & Property Management Authority
NCC	National Construction Code
PBP	<i>Planning for Bush Fire Protection 2019</i>
RF Act	<i>Rural Fires Act – 1997</i>
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SIX	Spatial Information Exchange
SWS	Static Water Supply

1. Introduction

This report has been commissioned by The GPT Group to provide a bush fire assessment for five warehouses and two into five lot subdivision at Lot 59 & 60 DP 259135, 754- 770 & 784-786 Mamre Road Kemps Creek.

The subject property is “bushfire prone land” as per the local Council bushfire prone land map (Figure 4) as defined by section 10.3 (s10.3) of the *Environmental Planning & Assessment Act* (EP&A) 1979 and therefore the requirements stipulated by legislation apply to any new development on the site.

Planning for Bush Fire Protection 2019 (Chapter 8) describes this type of development as “other non-residential development” and subdivision and therefore the aim and objectives of Chapter 1 and 8 of PBP are applicable.

The bush fire assessment and recommendations are derived from the Rural Fire Service document *Planning for Bush Fire Protection 2019*.

2. Purpose of this Report

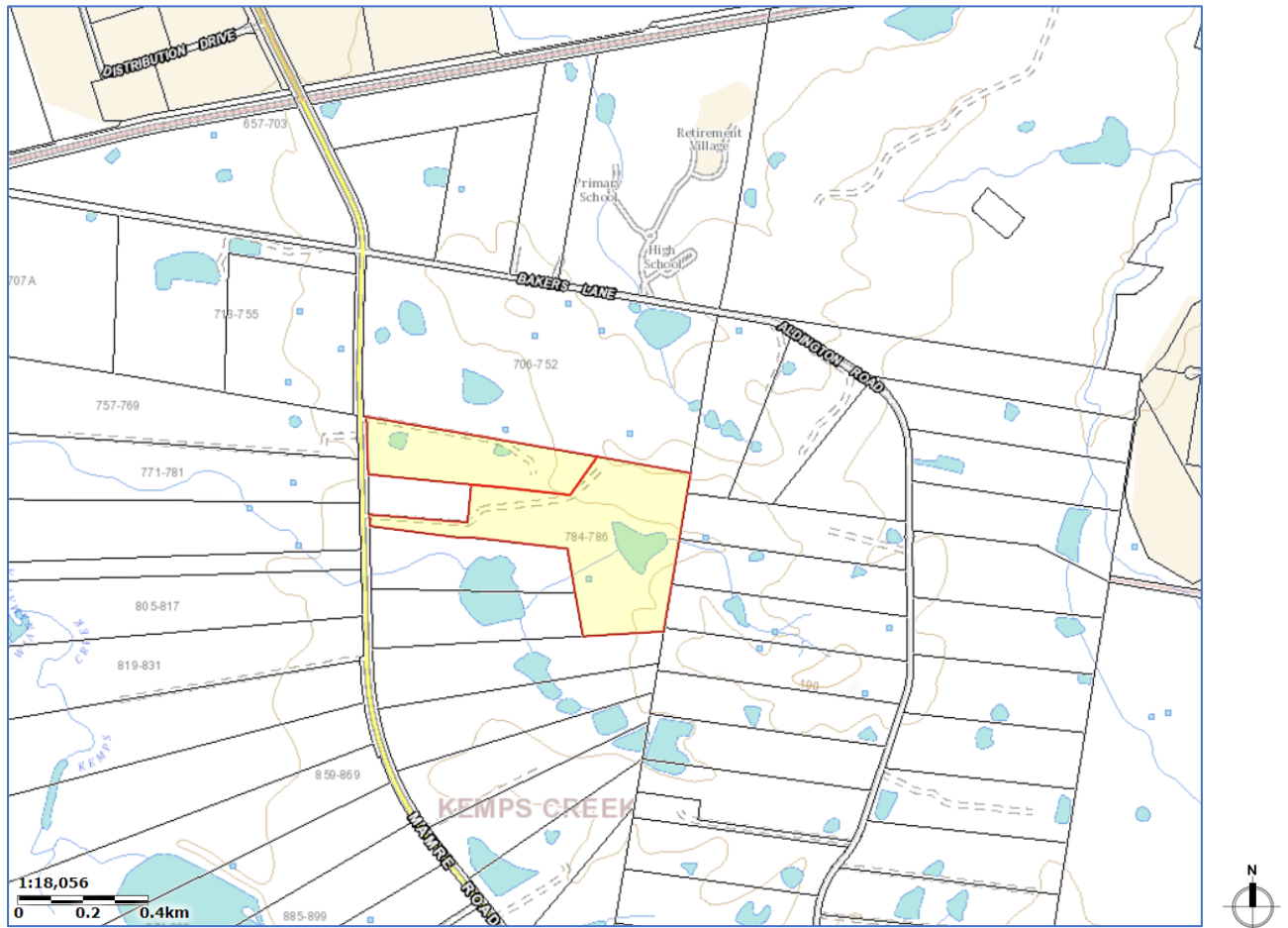
The purpose of this report is to provide the owners, the Consent Authority, the Certifier and the Rural Fire Service with a description of the proposed development as well as the vegetation type, slope and any other factors influencing the likely bushfire behaviour, sufficient to show that the development will be protected from the likely bushfire threat as outlined in current legislation.

This assessment includes an analysis of the hazard, threat and subsequent risk to the development and provides recommendations that satisfy the aim and objectives of Planning for Bush Fire Protection.

3. Location

The site is located and known as Lot 59 & 60 DP 259135, 754- 770 & 784-786 Mamre Road Kemps Creek. The property is part of the Penrith local government area.

Figure 1. Location Map. Source: LPMA SIX Viewer (NSW Government 2020a)



Site location outlined in red

Figure 2. Aerial Map. Source: LPMA SIX Viewer (NSW Government 2020a)



Site location outlined in red

**Figure 3. Bushfire Prone Land Map. Source: NSW Government Planning Portal
(NSW Government 2020b)**



Site location outlined in yellow

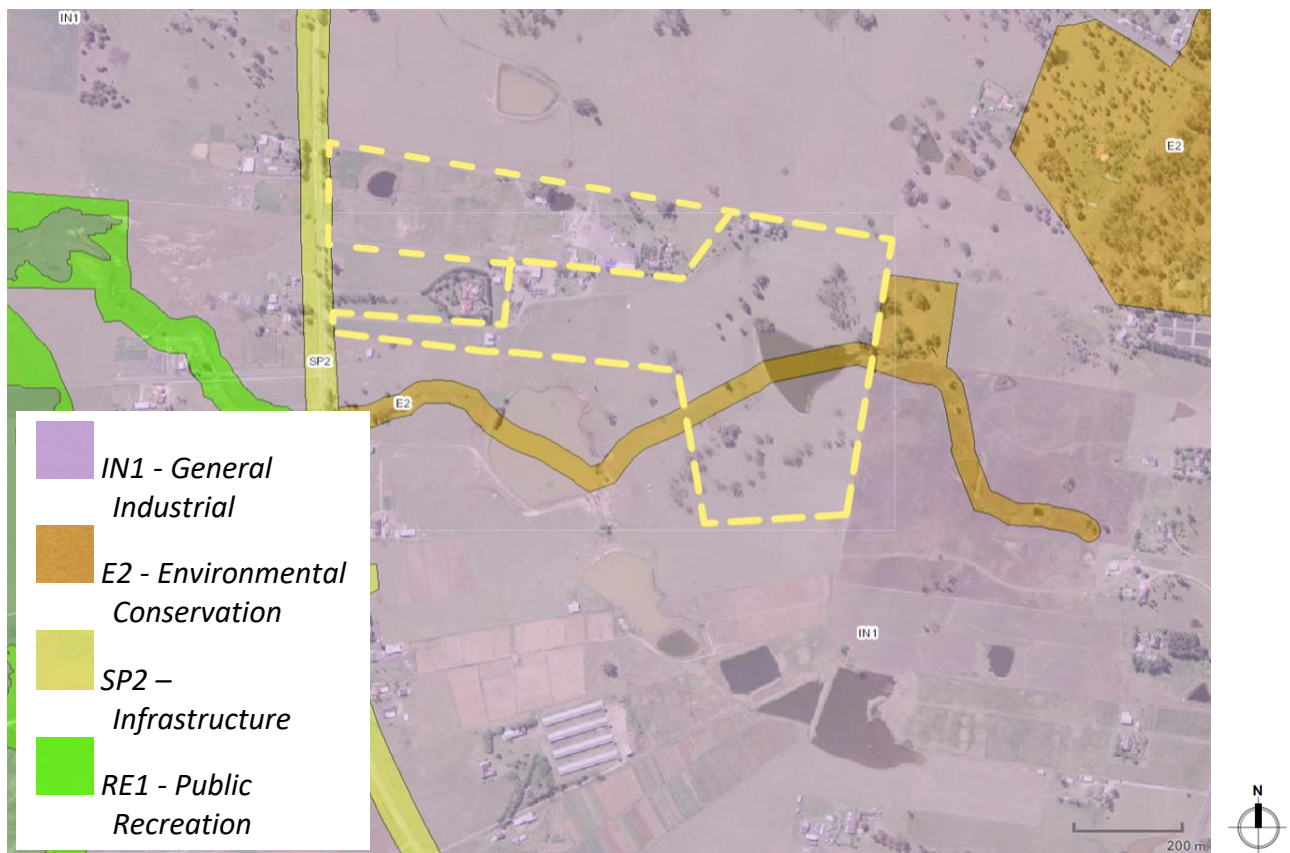
4. Property Description

The property is comprised of Lot 59 & 60 DP 259135, 754- 770 & 784-786 Mamre Road Kemps Creek, covering approximately 33.14 hectares (ha) in area (Figure 2). It is bounded by private allotments being used for agricultural and residential purposes to the approximate north, east, south and part west, and Mamre Road to the approximate part west. These surrounding properties are expected to be redeveloped for industrial uses including the southern property which is currently subject to an SSDA for a warehouse estate. The land currently contains four dwellings and six sheds. All structures on the land are proposed to be demolished.

4.1 Zoning

The land is zoned IN1: General Industrial & E2: Environmental Conservation under State Environmental Planning Policy (Western Sydney Employment Area) Amendment 2020. Adjacent lands to the north, east and south are similarly zoned. Adjacent lands to the west are zoned SP2 – Infrastructure (Figure 4).

**Figure 4. Zoning Map. Source: NSW Government Planning Viewer
(NSW Government 2020b)**



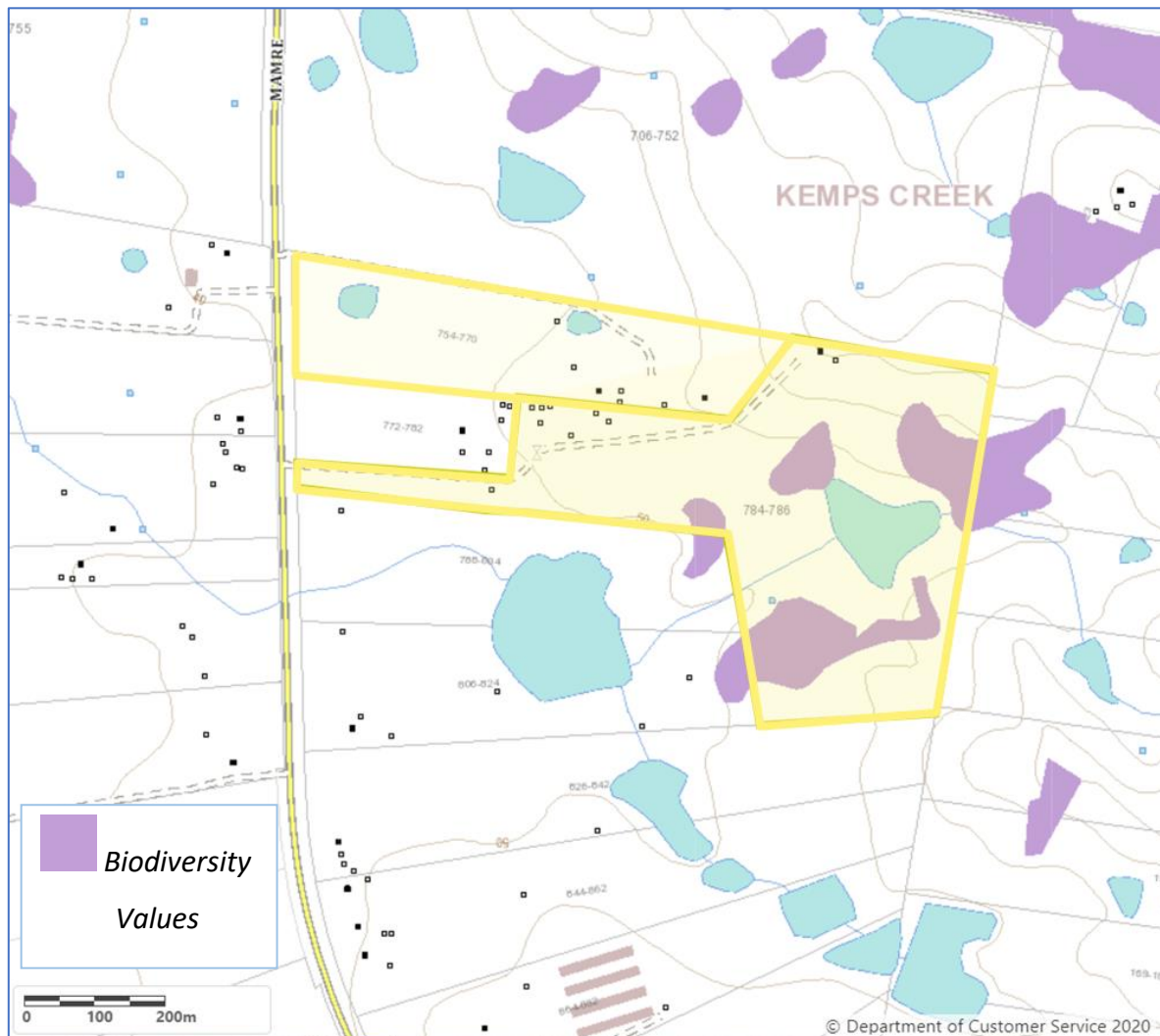
Site location outlined in yellow

4.2 Biodiversity Values

A search of the NSW Office of Environment and Heritage's Biodiversity Values Map has been carried out which indicates land with high biodiversity value, as defined by the *Biodiversity Conservation Regulation 2017*. It may be necessary to engage an accredited assessor to apply the Biodiversity Assessment Method (the BAM) to assess the impacts of the proposed development.

Figure 5: Biodiversity Values Map: NSW Office of Environment and Heritage

<https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BOSETMap>



Site location outlined in yellow

Areas mapped in purple indicate land with high values

4.3 The Proposal

The proposal is for five warehouses and other manufacturing industries, bulk earthworks and retaining walls, stormwater and associated works, internal roads, associated carparking, signage, landscaping and a riparian zone, and a two into five lot subdivision. In terms of the NCC, the classification of the warehouse buildings are either Class 7b or Class 8 dependant on the use of the building. The warehouses may also contain other building classifications such as Class 5 offices within these buildings. The retaining walls are Class 10b.

4.3.1 Automated Guided Vehicle (AVG) Freight Network

In accordance with the Mamre Road Precinct Draft Development Control Plan (November 2020), the development is not to preclude the transition to an automated guided vehicle (AGV) freight network in the long term. This network is provisionally planned to be located within the proposed Asset Protection Zone. A recommendation of this report is that on Extreme or Catastrophic Fire Days the network be kept clear of Guided Vehicles.

5. Site Assessment

Bushfire Consulting Services Pty Ltd attended the site on 26 February 2021. The assessment relates to the new development shown in the site plans (reference Appendix 1 below). The NSW Spatial Services mapping website has also been used as a reference (NSW Government 2020a), and *'Ocean Shores to Desert Dunes'* by David Keith (Keith 2004), in determining the vegetation type.

6. Bush Fire Attack Assessment

6.1 Determine Vegetation Formations

The hazardous vegetation formations for each aspect of the development within 140m of the proposal have been identified according to Keith (2004). The bushfire threat emanates from classified vegetation located in all directions of the subject building/s in the form of Grassland.

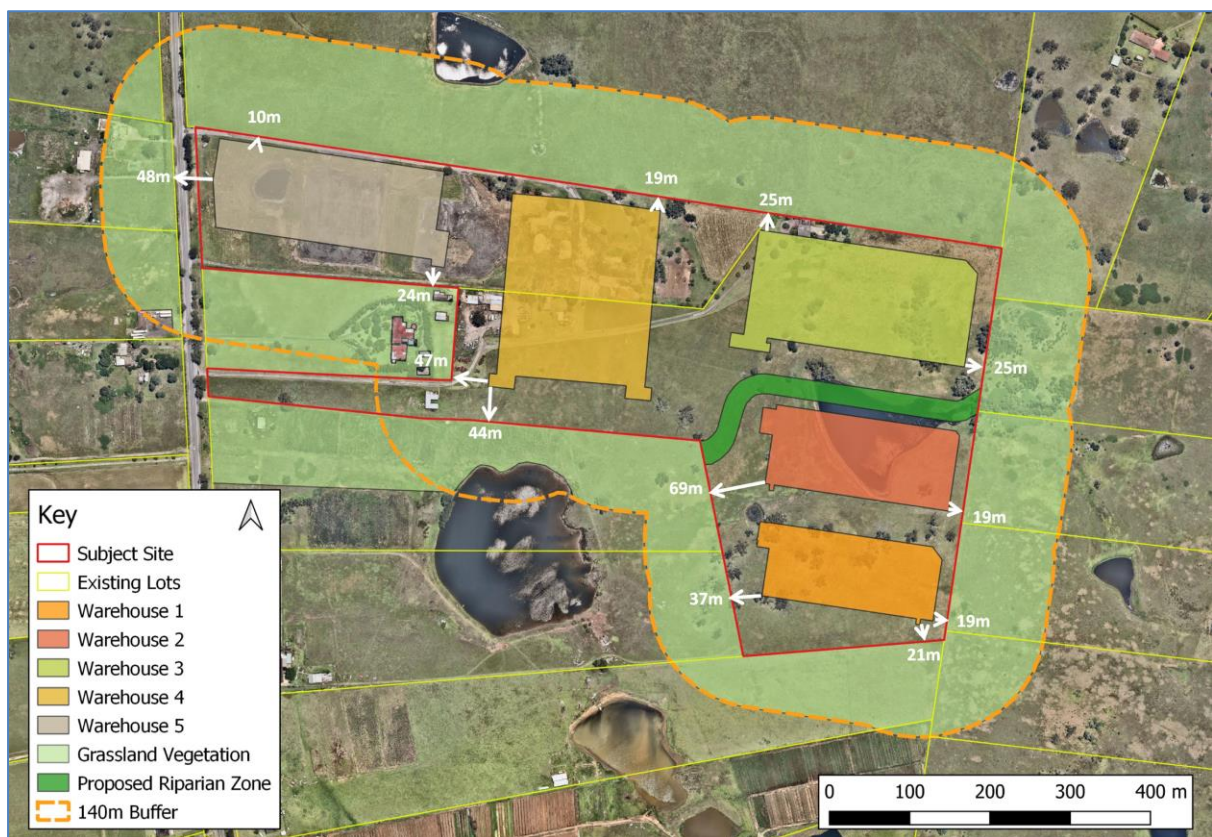
Apart from the hazard, within the 140m study area lots are large lot residential lots being used for agricultural purposes and are predominantly maintained in a hazard reduced state. Based on a site visit and determination of vegetation formation using the Keith (2004) Identification Key, the primary bushland vegetation having the potential to affect the subject building is most representative of Grassland in all directions.

The drainage reserve located on the subject site between the proposed Lot 1 and proposed Lot 2 is proposed to be revegetated according to the proposed vegetation management plan (VMP) by SBA Architects Drawing No. MP 08, Issue P3, dated 06/05/2021. The VMP identifies this area of land as a "riparian corridor". It is noted that the Bush Fire Prone Land map current

at the time of writing (Figure 3) indicates that the vegetation is classified as a Category 2 hazard with a 30m vegetation buffer.

This report therefore acknowledges that the future riparian corridor, planted according to the requirements of the VMP, contains low threat vegetation that does not represent a bushfire hazard.

Figure 6. Hazardous vegetation affecting the subject building. Source: NearMap (2020) with overlays by BFCSP/L. Aerial Photography date: 27/12/2020



Combined subject site outlined in red. Vegetation was assessed to a distance of 140m from the subject building/s

6.2 The effective slope

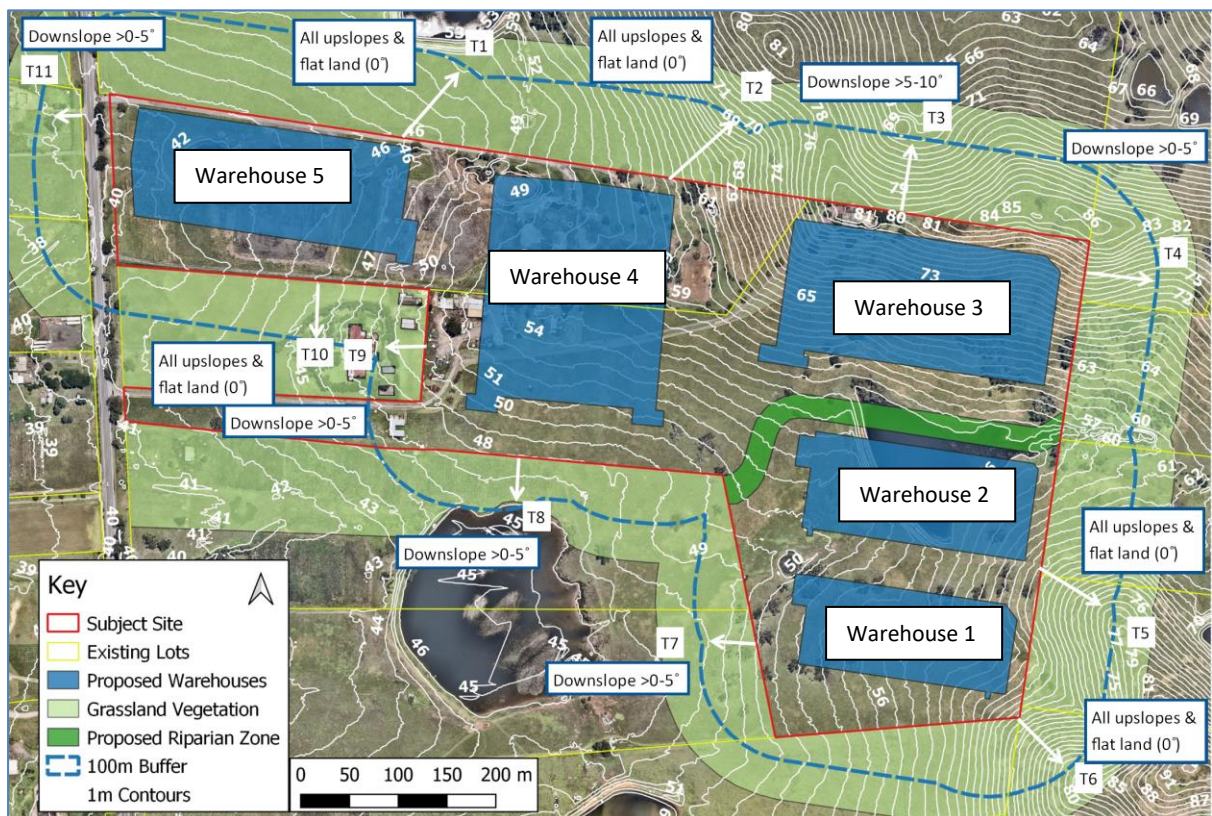
The slope of the land under the classified vegetation has a direct influence on the rate of fire spread, the intensity of the fire and the level of radiant heat flux. The effective slope of the land from the new building for a distance of 100m is derived from a site assessment combined with the most detailed contour data available. The slope is then categorised into one of following classes, relative to the location of the hazard:

- all upslope vegetation (considered 0 degrees)
- >0 to 5 degrees downslope vegetation
- >5 degrees to 10 degrees downslope vegetation
- >10 degrees to 15 degrees downslope vegetation, and
- >15 degrees to 20 degrees downslope vegetation.

1m DEM data is sourced from NSW Spatial Services which is captured using LiDAR and has a horizontal accuracy of 0.3m and vertical accuracy of 0.8m at 95%.

The effective slope has been measured manually on site over a distance of 100m from the proposed development where accessible, under the classified vegetation community constituting the hazard. The slope was found to be consistent with the topographical information from NSW Spatial Services LiDAR data.

Figure 7. Slope Diagram. Source: NearMap (2020) and LiDAR (NSW Government 2020a) with overlays by BFCs P/L: Aerial Photography Date: 27/12/2020



Site location outlined in red, 1m contours

T1 Northeast Slope is All Upslopes & Flat Land (0°)

T2 Northeast Slope is All Upslopes & Flat Land (0°)

T3 North Slope is $((81-70)/76.282 \times 1/\tan = \text{Downslope } 8.2^\circ$

T4 East Slope is $((79-75)/70.503 \times 1/\tan = \text{Downslope } 3.2^\circ$

T5 East Slope is All Upslopes & Flat Land (0°)

T6 Southeast Slope is All Upslopes & Flat Land (0°)

T7 West Slope is $((51-48)/49.426 \times 1/\tan = \text{Downslope } 3.5^\circ$
T8 South Slope is $((48-46)/49.558 \times 1/\tan = \text{Downslope } 2.3^\circ$
T9 West Slope is $((50-48)/47.823 \times 1/\tan = \text{Downslope } 2.4^\circ$
T10 South Slope is All Upslopes & Flat Land (0°)
T11 West Slope is $((41-40)/27.094 \times 1/\tan = \text{Downslope } 2.1^\circ$

Direction from Building Footprint	Slope Description
North of Warehouse 3	Downslope >5- 10°
Northeast of Warehouses 4 & 5	All upslopes & flat land (0°)
East of Warehouse 3	Downslope >0- 5°
East of Warehouse 1 & 2	All upslopes & flat land (0°)
Southeast of Warehouse 1	All upslopes & flat land (0°)
South of Warehouse 4	Downslope >0- 5°
South of Warehouse 5	All upslopes & flat land (0°)
West of Warehouse 1, 2, 4 & 5	Downslope >0- 5°

6.3 Fire Weather

The development is located in the Penrith Council area, a part of the Greater Sydney Region, which has a Fire Danger Index of 100.

6.4 Determination of APZs

An Asset Protection Zone (APZ) is a fuel-reduced area surrounding a built asset or structure. An APZ provides a buffer zone between a bush fire hazard and an asset and an area of reduced bush fire fuel that allows suppression of fire. It also provides an area from which backburning or hazard reduction can be conducted, and allows emergency services access as well as providing a relatively safe area for firefighters and occupants to defend their property.

Potential bush fire fuels should be minimised within an APZ. This is so that the vegetation within the planned zone does not provide a path for the transfer of fire to the asset either from the ground level or through the tree canopy. PBP has minimum specifications for APZs to be established around a building to be managed as an Inner Protection Area (IPA).

An IPA should provide a tree canopy cover of less than 15% and should be located greater than 2 metres from any part of the roofline of a dwelling. Garden beds or flammable shrubs are not to be located under trees and should be no closer than 10m from an exposed window or door. Trees should have lower limbs removed up to a height of 2m above the ground.

To avoid potential flame contact with future building assets, PBP provides minimum APZ distances. To identify the appropriate APZ, the relevant FFDI, vegetation formation and effective slope are matched using Table A1.12.2 of PBP.

Table A1.12.2 of PBP - Minimum distances for APZs, FFDI 100 ($\leq 29\text{kW/m}^2$, 1090K)

Proposed Lot 1:

Aspect	Vegetation Classification	Slope Under Classified Vegetation	APZ required
North of Lot 1	Grassland	Downslope $>5-10^\circ$	13m
East of Lot 1	Grassland	Downslope $>0-5^\circ$	12m
South of Lot 1	N/A – Proposed Lot 2	N/A	N/A
West of Lot 1	N/A – Proposed Lot 3	N/A	N/A

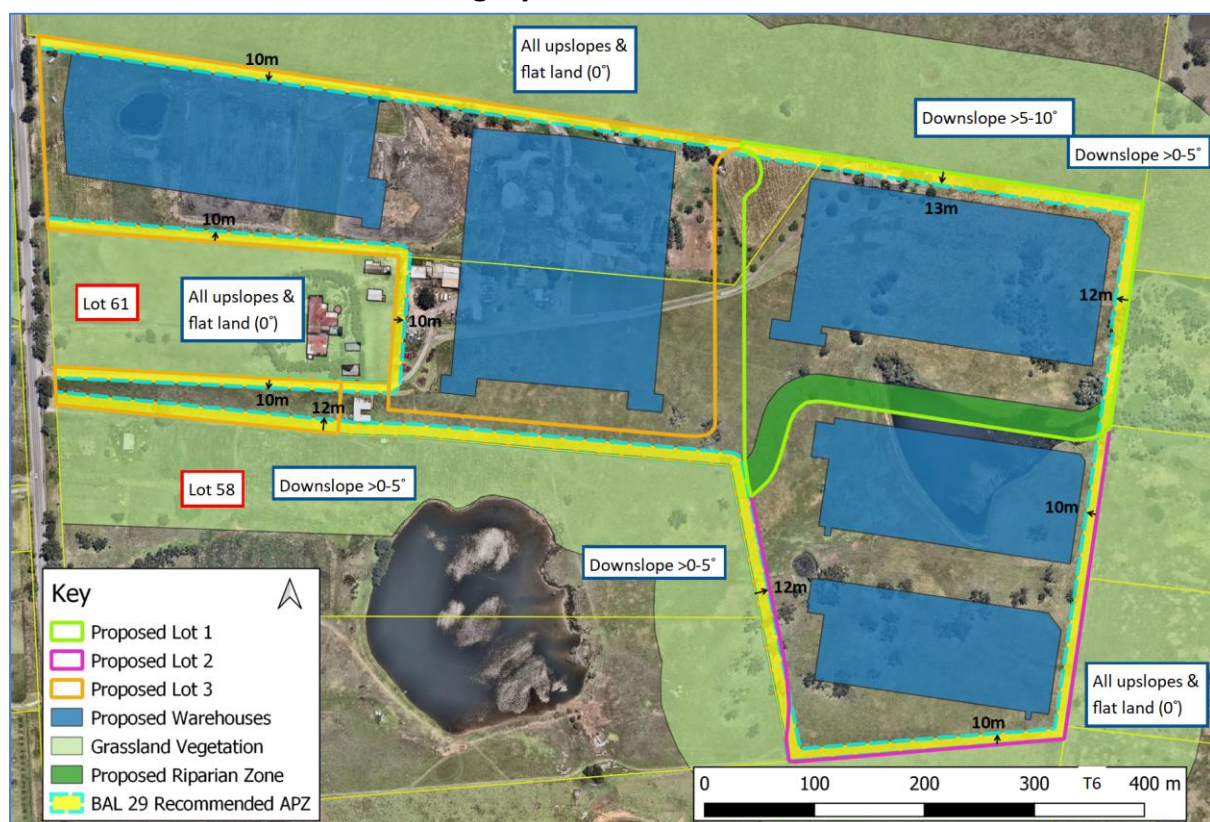
Proposed Lot 2:

Aspect	Vegetation Classification	Slope Under Classified Vegetation	APZ required
North of Lot 2	N/A – Proposed Lot 1	N/A	N/A
East of Lot 2	Grassland	All upslopes & flat land (0°)	10m
South of Lot 2	Grassland	All upslopes & flat land (0°)	10m
West of Lot 2	Grassland	Downslope $>0-5^\circ$	12m

Proposed Lot 3:

Aspect	Vegetation Classification	Slope Under Classified Vegetation	APZ required
North of Lot 3	Grassland	All upslopes & flat land (0°)	10m
East of Lot 2	N/A – Proposed Lot 1	N/A	N/A
Lot 61 South of Lot 3	Grassland	All upslopes & flat land (0°)	10m
Lot 58 South of Lot 3	Grassland	Downslope >0- 5°	12m
Lot 61 West of Lot 3	Grassland	All upslopes & flat land (0°)	10m

**Figure 8. Recommended APZ. Source: NearMap (2020) with overlays by BFCS P/L:
Imagery Date: 27/12/2020**



In this instance, for proposed Lot 1, an APZ of 13m from the north boundary and 12m from the east boundary. For proposed Lot 2, an APZ of 10m from the east and south boundaries and 12m to the west boundary. For proposed Lot 3, an APZ of 10m from the north boundaries and south and west boundaries adjoining Lot 61 and 12m from the south boundary adjoining Lot 58 (Figure 8). This may be achieved by onsite APZs.

6.5 Defendable Space

Defendable space is an area within the Inner Protection Area (IPA) of an APZ adjoining a building. This space provides a safe working environment in which efforts can be undertaken to defend the structure, before and after the passage of a bush fire. The development has sufficient defendable space in the form of hardstand areas of at least 10m between all buildings and hazards.

The site has been cleared for development and currently contains no vegetation requiring modification. As previously stated in section 6.1 of this document the riparian corridor vegetation within the southern end of the proposed Lot 1 on the subject site does not constitute a bushfire hazard and is considered to be managed land.

7. Relevant objectives of PBP

The objectives for buildings of Class 5-8 are outlined in PBP Chapter 1 and 8.

Objective	Comment
Provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation	Can Comply, the lot has direct access to Mamre Road, which is a public road. Internal access provides a minimum road width of approximately 6m, with hard surfaces around the development, sufficient for fire trucks and other emergency vehicles to enter and egress the lot in a forwards direction. Suitable access for fire-fighting vehicles and evacuation is available
Provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development	Can Comply, the need to formulate an emergency evacuation plan is suggested. To do so, occupants can complete a Bush Fire Safety Plan on the NSW RFS Website http://www.rfs.nsw.gov.au/ under publications / bushfire safety

Objective	Comment
Provide adequate services of water for the protection of buildings during and after the passage of bush fire	<p>Can Comply, the development includes provision of the following;</p> <p>Warehouse 1, 130kL</p> <p>Warehouse 2, 100kL</p> <p>Warehouse 3, 160kL</p> <p>Warehouse 4, 140kL</p> <p>Warehouse 4b, 140kL</p> <p>Warehouse 5, 275kL</p> <p>These supplies exceed PBP requirements for water supply</p> <p>Tanks are to be located with a hardened ground surface for truck access within 4m of the access hole. The tank is to be concrete or metal and all exposed water pipes external to the building are metal, including any fittings</p> <p>Fire services are to be provided as set out in the Fire Safety Strategy by Core Engineering Group numbered F201556_FSS_01 dated 7/04/2021, which includes provision of fire hydrant systems</p>
To locate electricity so as not to contribute to the risk of fire to a building	Where practical, electrical transmission lines are underground
To locate gas services so as not to contribute to the risk of fire to a building	<p>If applicable, reticulated or bottled gas is installed and maintained in accordance with <i>AS/NZS 1596:2014 - The storage and handling of LP Gas</i>, the requirements of relevant authorities, and metal piping is used, all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side, connections to and from gas cylinders are metal, polymer-sheathed flexible gas supply lines are not used, and above-ground gas service pipes are metal, including and up to any outlets</p>

Objective	Comment
Provide for the storage of hazardous materials away from the hazard wherever possible	Can comply, as wherever possible, the storage of hazardous materials will be away from the hazard

8. Objectives of Chapter 1

Objective	Comment
Afford buildings and their occupants protection from exposure to a bush fire	The non-habitable structures are separated from the hazard by sufficient distance of at least 10m as indicated in (Figures 8 & 9), which affords buildings and their occupants protection from exposure to a bush fire
Provide for a defendable space to be located around buildings	A defendable space of at least 10m is proposed around the building, which meets the requirements of PBP
Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings	The relevant FFDI (100), vegetation formation and effective slope have been matched using Table A1.12.2 of PBP, and the available separation distance between the building and the hazard of at least 10m, exceeds the minimum distance for APZs to all parts of the proposal, indicating that direct flame contact on the building ($\leq 29\text{kW/m}^2$) is not anticipated, see below
Ensure that appropriate operational access and egress for emergency service personnel and occupants is available	Can comply as road widths, curvatures and grades and swept paths enable appropriate operational access and egress for emergency service personnel and occupants
Provide for ongoing management and maintenance of BPMs, and	Normal property maintenance will ensure that BPMs are maintained

Objective	Comment
ensure that utility services are adequate to meet the needs of firefighters	Can comply, see above

To ensure that flame contact is not anticipated, the relevant FFDI, vegetation formation and effective slope are matched using Table A1.12.2 of PBP.

Table A1.12.2 of PBP - Minimum distances for APZs, FFDI 100 areas (<29kW/m², 1090K)
Grassland

Building	Aspect	Slope Under Classified Vegetation	APZ required	APZ Attainable
Warehouse 1	East, south and west	Maximum Downslope >0- 5°	12m	21-29m
Warehouse 2	East and west	Maximum Downslope >0- 5°	12m	28-58m
Warehouse 3	North and east	Maximum Downslope >5- 10°	13m	28m
Warehouse 4	North, south and west	Maximum Downslope >0- 5°	12m	14-49m
Warehouse 5	North and south	All upslopes & flat land (0°)	10m	10-38m
Warehouse 5	West	Downslope >0- 5°	12m	61m

In all cases, the available separation distance is greater than the APZ required

8.8 Identify Construction Requirements

The NCC does not provide for any bush fire specific performance requirements for these particular classes of buildings. The general fire safety construction provisions of the NCC are taken as acceptable solutions, and AS 3959 and the NASH Standard are not considered as a set of Deemed to Satisfy provisions for this non-residential proposal.

9. Recommendations

The following recommendations are made for the bushfire measures for the proposed development of a warehouse at Lot 59 & 60 DP 259135, 754- 770 & 784-786 Mamre Road Kemps Creek, and are based upon the relevant provisions of the NSW Rural Fire Service Guideline entitled *Planning for Bush Fire Protection 2019*.

1. Asset Protection Zones

At the commencement of the development, and in perpetuity, each of proposed lots 1 – 5 shall be managed as an Inner Protection Area (IPA) Asset Protection Zone in their entirety.

2. Water Supply

Hydrants are to be provided in accordance with the relevant clauses of AS 2419.1:2005 - Fire hydrant installations System design, installation and commissioning, and are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression.

3. Electricity and Gas Services

Where practicable, electrical transmission lines are underground.

Where applicable, reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is used.

All fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side, connections to and from gas cylinders are metal.

Polymer-sheathed flexible gas supply lines are not used, and above-ground gas service pipes are metal, including and up to any outlets.

4. Fences and gates

All fences and gates are constructed of non-combustible material.

5. Storage of Hazardous Materials

Wherever possible, the storage of hazardous materials will be away from the hazard.

6. Automated guided vehicle (AGV) freight network

If the development transitions to the inclusion of an automated guided vehicle (AGV) freight network, on Extreme or Catastrophic Fire Days the network is to be kept clear of Guided Vehicles.

7. Emergency and Evacuation Planning

The need to formulate an emergency evacuation plan is suggested. To do so, occupants can complete a Bush Fire Safety Plan on the NSW RFS Website <http://www.rfs.nsw.gov.au/> under publications / bushfire safety.

10. Summary

This report consists of a bush fire assessment for the proposed development five warehouses and two into five lot subdivision at Lot 59 & 60 DP 259135, 754- 770 & 784-786 Mamre Road Kemps Creek. The report concludes that the proposed development is on designated bushfire prone land and the legislative requirements for development in bushfire prone areas are applicable.

The development provides for an onsite Asset Protection Zone, ensuring that the proposed buildings will be subject to radiant heat levels of $\leq 29\text{kW/m}^2$ and will therefore avoid flame contact during a potential bush fire. The development fully satisfies the Objectives and Performance requirements of Planning for Bush Fire Protection 2019, subject to implementation of the recommendations made by this report.

Notwithstanding the precautions adopted, it should always be remembered that bushfires burn under a wide range of conditions and an element of risk, no matter how small, always remains and although the standard is designed to improve the performance of such buildings, there can be no guarantee because of the variable nature of bushfires that any one building will withstand bushfire attack on every occasion.

This report is a bush fire assessment that provides the required information to assist local Council and the Rural Fire Service in determining compliance in accordance with Planning for

Bush Fire Protection. The local Council is the final consenting authority and the construction of the building must comply with the recommendations included in the Council's conditions of consent.



Catherine Gorrie



(a person who is recognised by the NSW Rural Fire Service as a suitably qualified consultant in bush fire risk assessment)

Accredited Bushfire Planning and Design Practitioner

Fire Protection Association Australia BPAD-Level 3 (BPAD 20751)

Grad Dip Bushfire Protection (UWS 2010)

Diploma Environmental Health & Building Surveying (TAFE 2005)

Corporate Bronze Member Fire Protection Association Australia

Bushfire Consulting Services Pty Ltd

Mob: 0425 833 893

11. References

Keith D 2004, *Ocean Shores to Desert Dunes, the Native Vegetation of NSW and the ACT*, Department of Environment and Conservation, Sydney

NearMap 2020, *NearMap Photomap Aerial Imagery*, NearMap Australia, Barrangaroo, NSW

NSW Government 2020a, *NSW Spatial Services*, NSW Department of Finance, Services and Innovation.

NSW Government 2020b, *NSW Planning Portal*, NSW Department of Planning and Environment.

NSW Government 2020c, *Biodiversity Values Map*, NSW Department of Environment and Heritage.

NSW Government 2020d, *Western Sydney Employment Area Mamre Road Precinct Draft Development Control Plan*, Sydney

NSW RFS 2019, *Planning for Bush Fire Protection*, NSW Rural Fire Service, Sydney.

Standards Australia 2018, *Australian Standard AS 3959-2018 'Construction of Buildings in Bushfire Prone Areas'*, SAI Global, Australia.

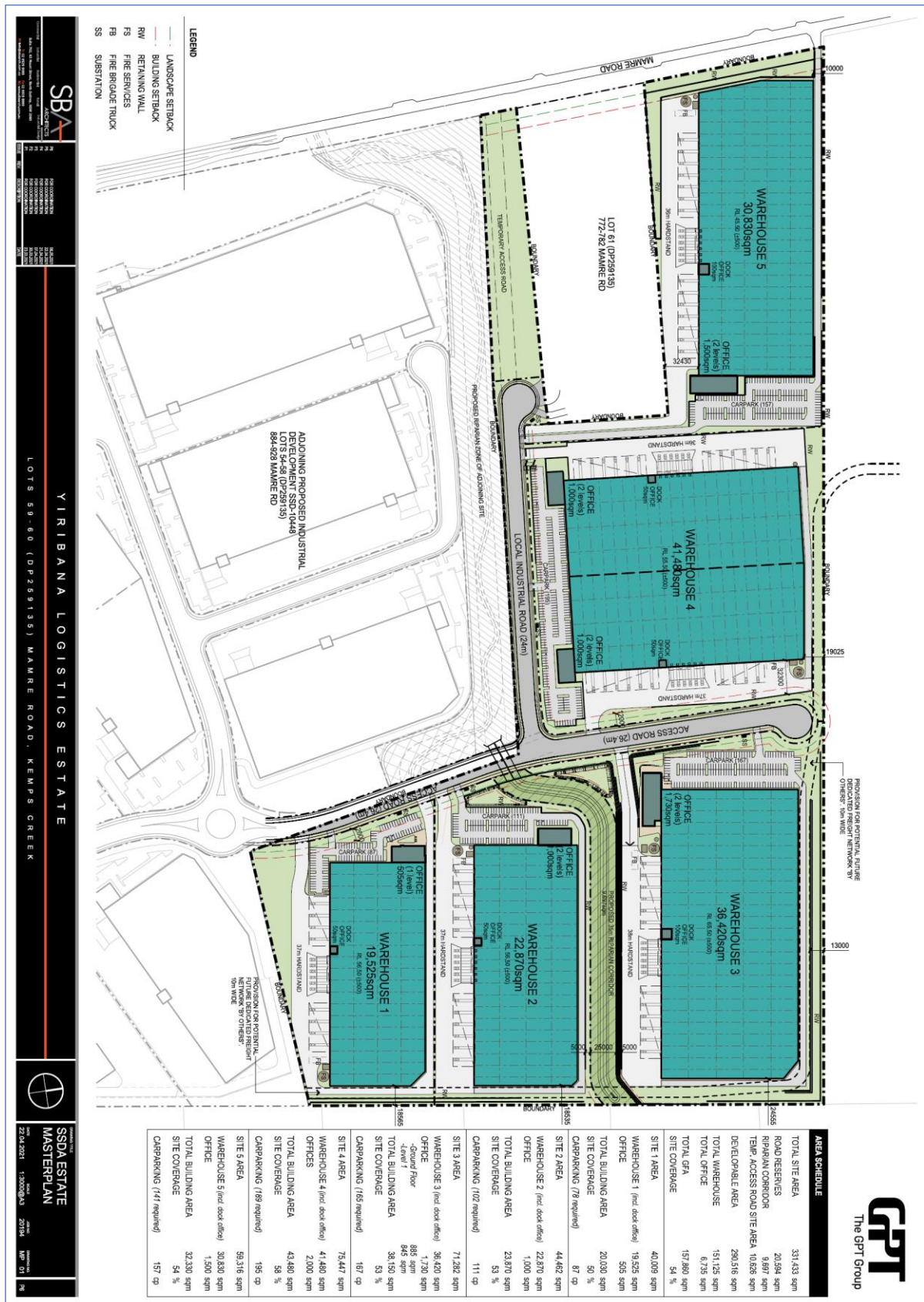
12. Legislation

Environmental Planning & Assessment Act 1979

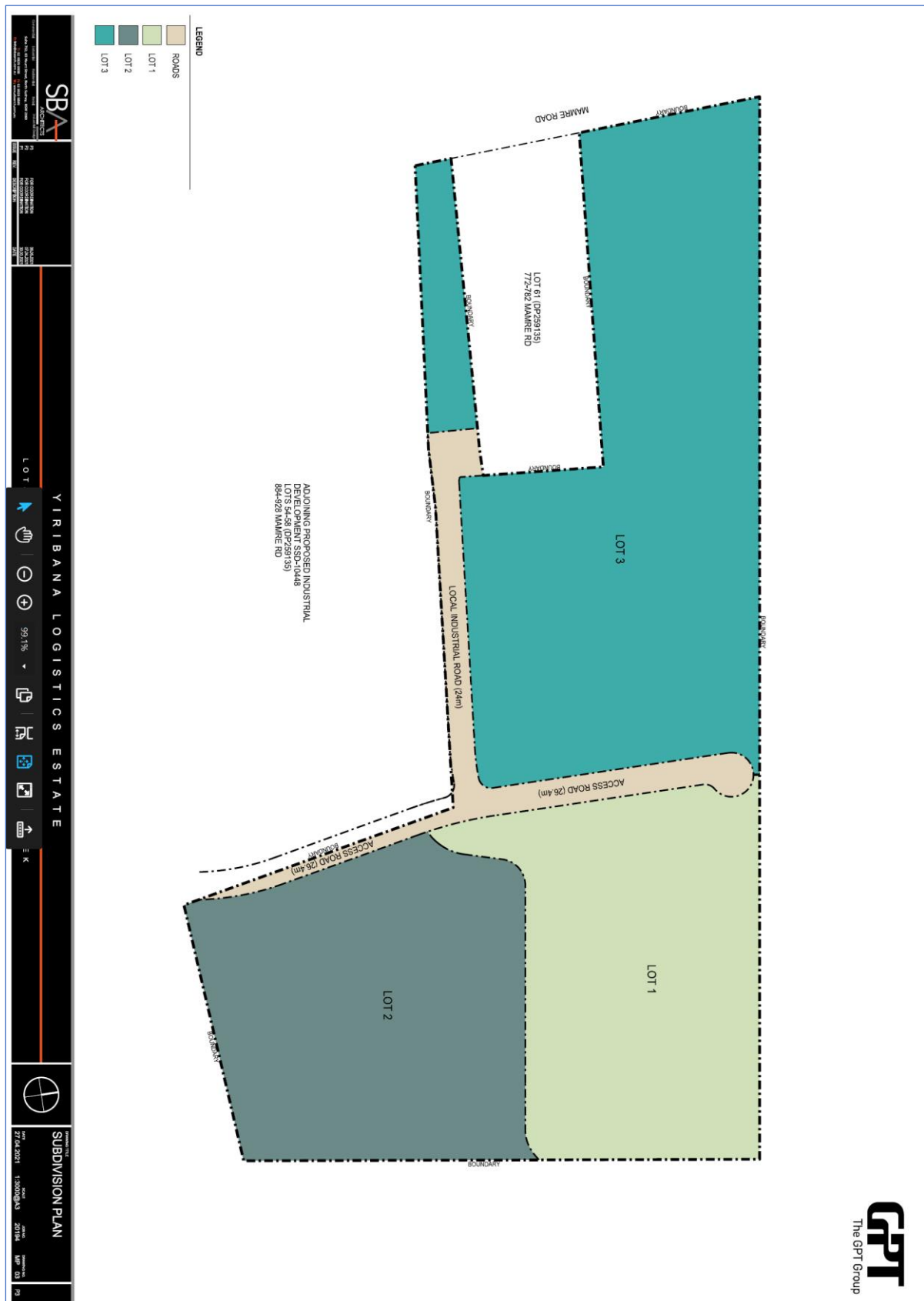
Rural Fires Act 1997

Rural Fires Regulation 2013

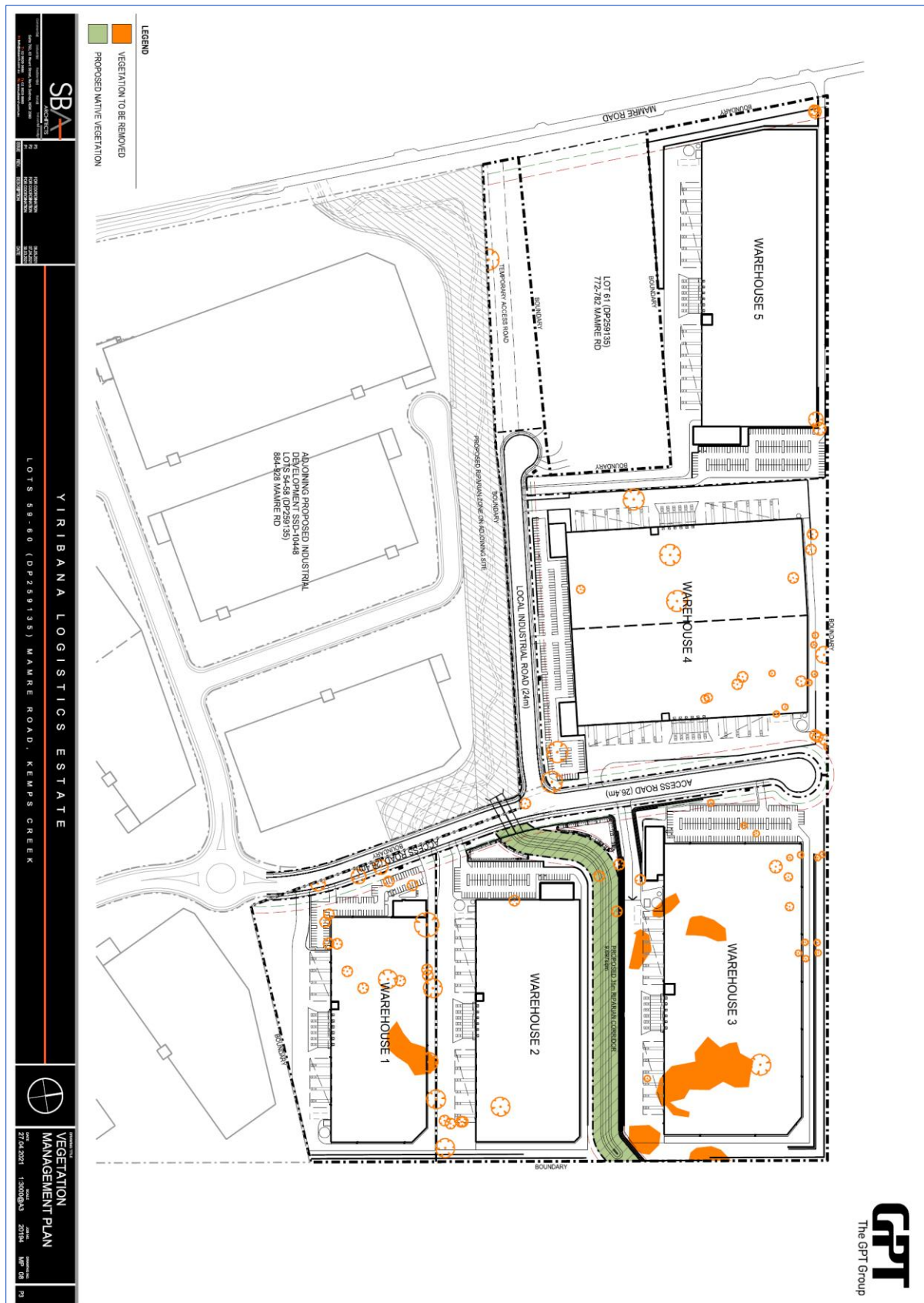
Appendix 1 – Master Plan



Appendix 2 – Subdivision Plan



Bushfire Consulting Services Pty Ltd Report No. 21/0148



Appendix 4 – Photos of Site and Surrounds

Source: BFCS P/L 23/02/2021



Access to subject site near proposed Warehouse 5



Temporary secondary access to subject site south of Lot 61 DP 259135



View to the southeast of the proposed location for Warehouse 5



View to the east of the proposed location for Warehouse 4



View to the northeast of the grassland vegetation north of Warehouses 4 & 5



View to the northwest of the grassland vegetation northwest of Warehouse 3



View to the north of the grassland vegetation north of Warehouse 3



View to the east of the grassland vegetation in the front yard of Lot 61 DP 259135



View to the northeast of the low-threat windbreak trees in the front yard of Lot 61



View to the south of the grassland vegetation south of the temporary secondary access to subject site (Lot 58 DP 259135)



View to the west from the approximate location of Warehouse 3 looking at the location of Warehouses 4 & 5 and Lot 61 DP 259135



View to the south from the approximate location of Warehouse 4 looking at the grassland vegetation on Lot 56 to 58 DP 259135



View to the south from the approximate location of Warehouse 3 looking at the location of Warehouses 1 & 2, proposed riparian corridor and grassland vegetation on Lots 34 to 37 DP 258949 & Lot 56 to 58 DP 259135



View to the south from the approximate location of Warehouse 3 looking at the location of Warehouses 1 & 2, proposed riparian corridor and grassland vegetation on Lots 34 to 37 DP 258949 & Lot 56 to 58 DP 259135



View to the southeast from the approximate location of Warehouse 3 looking at the grassland vegetation east of Warehouse 3

Appendix 5 – Bushfire Risk Assessment Certificate

This form is completed by a recognized consultant in bushfire risk assessment in accordance with section s4.14 of the *Environmental Planning and Assessment Act 1979 No 203*

PROPERTY ADDRESS:	Lot 59 & 60 DP 259135 754- 770 & 784-786 Mamre Road Kemps Creek
DESCRIPTION OF PROPOSAL:	five warehouses and two into five lot subdivision
PLAN REFERENCE: (relied upon in report preparation)	Plans by SBA Architects, Job No. 20194, Drawing No. MP 01, Issue P6, dated 06/05/2021, Drawing No. MP 03, Issue P3, dated 06/05/2021 & MP 08, Issue P3, dated 06/05/2021, Subdivision Plan by SBA Architects Issue P3 dated 6/05/2021
DOES THE PROPOSAL RELY ON ALTERNATE SOLUTIONS:	YES <input checked="" type="radio"/> NO (Circle the relevant response) (If YES the application is to be referred to NSW RFS for assessment.)

I, Catherine Gorrie, of Bushfire Consulting Services Pty Ltd, have carried out a bushfire risk assessment on the above mentioned proposal and property. A detailed Bushfire Assessment Report is attached which includes the submission requirements set out in Appendix 2 of Planning for Bushfire Protection 2019 together with recommendations as to how the relevant aim and objectives are to be achieved.

REPORT REFERENCE:	21/0148
REPORT DATE:	8/03/2021
CERTIFICATION NO/ACCREDITED SCHEME:	BPAD-Level 3 Accredited Practitioner FPAA Cert No: BPAD20751

Note: this certificate must be completed and signed by a person recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment in accordance with s4.14 of the *EP&A Act 1979 No 203*.

I hereby certify, in accordance with Section 4.14 of the Environmental Planning and Assessment Act 1979 No 203:

That I am a person recognised by the NSW Rural Fire Service as a qualified consultant in bushfire risk assessment; and

That subject to the recommendations contained in the attached Bushfire Risk Assessment Report the proposed development conforms to the relevant specifications and requirements*.

* The relevant specifications and requirements being; specifications and requirements of the document entitled Planning for Bush Fire Protection prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and any other document as prescribed by Section 4.14 of the Environmental Planning and Assessment Act 1979 No 203.

I am aware that the bush fire assessment report, prepared for the above mentioned site is to be submitted in support of a development application for this site and will be relied upon by Council as the basis for ensuring that the bushfire risk management aspects of the proposed development have been addressed in accordance with Planning for Bush Fire Protection 2019.

Attachments:



Bush Fire Risk Assessment Certificate



Recommendations

SIGNATURE:

DATE: 8/03/2021