

**BUSHFIRE PROTECTION ASSESSMENT
FOR THE PROPOSED
KEMPS CREEK LOGISTICS PARK
ON
LOTS 11, 12 & 13 in DP 253503,
ALDINGTON & ABBOTTS ROAD,
KEMPS CREEK**

Australian Bushfire Protection Planners Pty Limited

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

BUSHFIRE PROTECTION ASSESSMENT

FOR THE PROPOSED

KEMPS CREEK LOGISTICS PARK

ON

LOTS 11, 12 & 13 in DP 253503

ALDINGTON & ABBOTTS ROAD,

KEMPS CREEK

Assessment Number	Document	Preparation Date	Issue Date	Directors Approval
B203549 - 1	Final	01.12.2020	16.12.2020	<i>G.L.Swain</i>

EXECUTIVE SUMMARY

Australian Bushfire Protection Planners Pty Limited, at the request of *ESR*, has undertaken the bushfire consultancy to inform the State Significant Development Application [SSDA] on the bushfire protection measures required for the development of the proposed Kemps Creek Logistics Park, No. 290 – 308 Aldington Road and No. 59 – 62 and No. 63 Abbotts Road, Kemps Creek, here-in known as the 'development site'.

Legally described as Lots 11 – 13 in DP 253503, with an area of approximately 32ha, the site is located to the north, east and southeast of the terminus of Abbott Road, Kemps Creek within the Penrith City Council Local Government Area (LGA).

Lot 13 in DP 253503 has approximately 180m of direct frontage to Aldington Road with Lots 11 & 12 in DP 253503 having frontage to Abbotts Road.

The site is located approximately 4km north-east from the future Western Sydney Nancy-Bird Walton Airport, 13km south-east of the Penrith CBD and 40km west of the Sydney CBD.

Figure 1 – Location of the Kemps Creek Logistics Park



The site forms part of the Mamre Road Precinct and is zoned for IN1 – General Industrial uses as defined within the State Environmental Planning Policy (Western Sydney Employment Area) 2009 (SEPP WSEA).

This report has been prepared to support a State Significant Development Application (SSDA) under Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) for the construction and operations of one (1) industrial warehouse and associated infrastructure.

SSD-9138102 also provides for a Concept Masterplan comprising 7 development lots for 174,187m² of warehouse and office floor space, parking and hardstand areas, landscaping, services and utilities, site-wide development controls and a Stage 1 development including demolition and bulk earthworks, vegetation removal, the internal road, services and utilities works and a warehouse building with a total gross floor area of 27,565m². The SSDA also seeks approval for the construction of the remaining warehouses within the estate.

For a detailed description of the proposal, refer to the Environmental Impact Assessment supporting this DA.

The SSDA for the Kemps Creek Logistics Park incorporates:

- ❖ An **Estate Concept Master Plan** to guide the staged development of the Kemps Creek Logistics Park;
- ❖ A **Stage 1 SSD Plan**.

The SEARS [Secretary's Environmental Assessments Requirements] for the Kemps Creek Logistics Park were issued in 30th September 2020 under SSD-9138102 and contain a requirement that the EIS for the Master Plan and Stage 1 works must include an assessment against the requirements of *Planning for Bushfire Protection 2019*.

The Penrith Council Bushfire Prone Land Map indicates that the site and adjacent lands contains Category 2 Bushfire Prone Vegetation.

Therefore, this report undertakes an assessment to examine the measures required to minimise bushfire risk on the proposed development and determines the deemed-to-satisfy bushfire protection requirements in accordance with the provisions of *Planning for Bushfire Protection 2019* and provides recommendations on the provision of Asset Protection Zones [Defendable Spaces] to the future buildings in the Kemps Creek Logistics Park.

This report also assesses the adequacy of fire-fighting access and water supplies; construction standards of the buildings, the management of the Asset Protection Zones [Defendable Spaces] and evacuation protocols necessary to address the bushfire risk to the proposed development and to address the aim and objectives of *Planning for Bushfire Protection 2019*.

The report has found that the requirements of *Planning for Bushfire Protection 2019* have been met and the Key Issue – Bushfire of the SEARs has been satisfactorily addressed.



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

TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
TABLE OF CONTENTS	6
SECTION 1	7
INTRODUCTION	7
1.1 Aim of this Report.	7
1.2 Statutory Requirements.	7
1.2.1 Legislation.	8
1.2.2 Planning Policies.	8
1.3 Development Proposal.	8
1.4 Documentation reviewed in this Assessment.	10
1.5 Site Inspection.	11
SECTION 2	12
PROPERTY DESCRIPTION	12
2.1 Location.	12
2.2 Existing Land Use.	13
2.3 Adjoining Land Use.	14
2.4 Topography.	14
2.5 Vegetation.	15
2.7 Significant Environmental Features within the Site.	16
2.8 Known Threatened Species, Population or Ecological Community on the Site.	16
2.9 Details and location of Aboriginal Relics or Aboriginal Place.	16
SECTION 3	17
PRECINCT LEVEL ASSESSMENT	17
3.1 Certified Bushfire Prone Land Map.	17
SECTION 4	18
BUSHFIRE PROTECTION ASSESSMENT	18
4.1 Introduction.	18
4.2 The provision of Defendable Space/s [Asset Protection Zones].	19
4.3 Construction Measures to Buildings.	21
4.4 Access Standards for Firefighting Operations.	22
4.5 Water Supplies for Firefighting Operations.	23
4.6 Emergency Management for Fire Protection / Evacuation.	23
4.7 Bushfire Hazard Management.	23
SECTION 5	24
BUSHFIRE MANAGEMENT STRATEGIES	24
5.1 Strategy 1 – Defendable Space management Requirements:	24
5.2 Strategy 2 – Water Supplies/Utilities for Firefighting Operations:	24
5.3 Strategy 3 – Construction Standards to the buildings located adjacent to the bushfire hazard:	24
5.4 Strategy 4 – Access Standards for Firefighting Operations.	26
SECTION 6	27
CONCLUSION	27
REFERENCES:	29

SECTION 1

INTRODUCTION

1.1 Aim of this Report.

The aim of this Bushfire Protection Assessment is to address the requirements of the Secretary's Environment Assessment Requirements [SEARS], Application Number SSD-9138102 – 30th September 2020, which require an assessment to be undertaken against the requirements of *Planning for Bushfire Protection 2019*.

To achieve the specific bushfire requirement of the SEARS the following will be examined:

- Determine the classification of the vegetation on and surrounding the site in accordance with the vegetation classification system contained in *Planning for Bushfire Protection 2019*;
- Undertake an assessment to determine the slope of the land on and surrounding the development site;
- Undertake a Bushfire Protection Assessment to determine bushfire protection strategies for the proposed development that address the following matters:
 - (i) The provision of building setbacks (Defendable Space) from vegetated areas and the siting of buildings to minimize the impact of radiant heat and direct flame contact;
 - (ii) Fire fighting water supplies;
 - (iii) Access requirements for emergency service vehicles;
 - (iv) Construction standards to be used for the future buildings within the proposed development to minimize the vulnerability of buildings to ignition from radiation and ember attack;
 - (v) Land management responsibilities; and
 - (vi) Evacuation management.

1.2 Statutory Requirements.

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

1.2.1 Legislation.

Environmental Planning and Assessment Act - 1979 (EPA Act)

Planning and development within NSW is regulated by the *Environmental Planning & Assessment Act, 1997 (EPA Act)*.

In relation to bushfire planning for new developments (including Industrial Development) in bushfire prone areas in NSW, Section 4.14 of the Act requires a consent authority to determine if a proposed development that is located within a designated Bushfire Prone Area or the buffer zone to the Bushfire Prone Land complies with *Planning for Bushfire Protection 2019*;

1.2.2 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, “*Special Fire Protection*” and Class 5 – 8 and 10 buildings in bushfire prone areas [Industrial buildings are Class 7 as defined by the Building Code of Australia].

These measures include the provision of defendable space requirements and access/water supply provisions to Class 5 – 8 & 10 developments in bushfire prone areas.

Provision for the assessment of construction standards to buildings and management / maintenance of the Asset Protection Zones/defendable space to buildings is also provided.

1.3 Development Proposal.

This report has been prepared to support a State Significant Development Application (SSDA) under Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) for the construction and operations of seven (7) industrial warehouse and associated infrastructure.

The proposal is for SSD 9138102 application for the construction of 174,187m² of warehouse and office floor space, parking and hardstand areas, landscaping, services and utilities, site-wide development controls and a Stage 1 development including demolition and bulk earthworks, vegetation removal, the internal road, services and utilities works and a warehouse building with a total gross floor area of 27.565m².

Refer to Figure 2 – Estate Master Plan of the Kemps Creek Logistics Park on Page 9.

Figure 3 on Page 10 provides a copy of the Stage 1 works.

Figure 2 – SSDA Masterplan of the Kemps Creek Logistics Park.



Figure 3 – SSDA Stage 1 of the Kemps Creek Logistics Park.

1.4 Documentation reviewed in this Assessment.

To achieve the aim of this report, a review of information relevant to the property and proposed development was undertaken. Information sources reviewed included the following documents:

- Secretary's Environmental Assessment Requirements (SEARs) – SDD--9138102 – dated 30th September 2020;
- Concept Master Plan prepared by Nettletontribe Architects – December 2020;
- SSDA - Stage 1 Plan prepared by Nettletontribe Architects – December 2020;
- Mamre Road Precinct Draft Development Control Plan – November 2020;
- Mamre Road Flood, Riparian Corridor & Integrated Water Cycle Management Strategy – October 2020;
- *Planning for Bushfire Protection 2019* prepared by the NSW Rural Fire Service/Planning N.S.W;
- Australian Standard AS3959 - 2018 *Construction of Buildings in Bushfire Prone Areas*;
- *Rural Fires Regulation 2013*;
- Penrith City Council *Certified Bushfire Prone Land Map*.

1.5 Site Inspection.

Graham Swain of ***Australian Bushfire Protection Planners Pty Limited*** inspected the development site on the 15th of August 2020 to assess the topography, gradients of the land within and external to the site and vegetation classification within and adjoining the development property, existing bushfire mitigation measures and a visual assessment of bushfire threat.

The land adjoining the development site was also inspected to determine the surrounding land use / land management practices and extent of bushfire prone vegetation.

SECTION 2

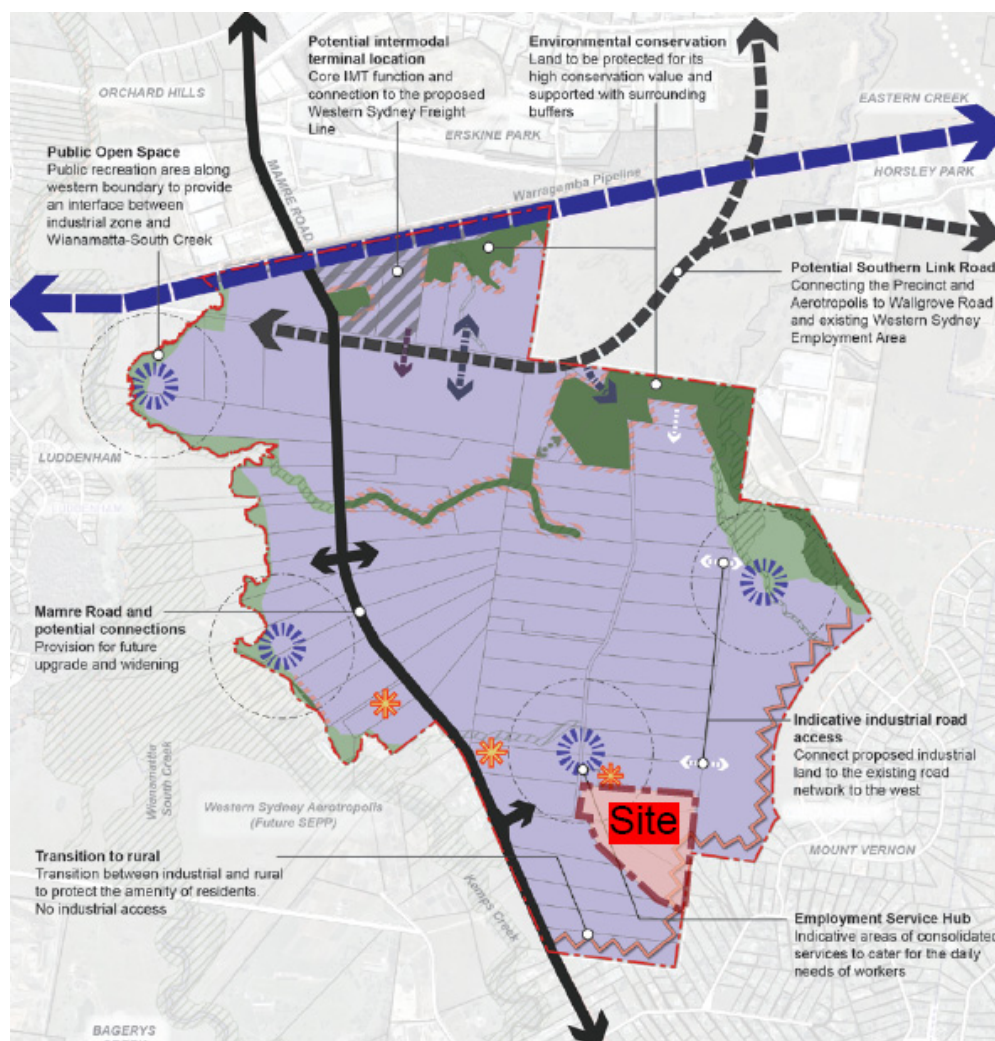
PROPERTY DESCRIPTION

2.1 Location.

The Kemps Creek Logistics Park occupies No. 290 – 308 Aldington Road and No. 59 – 62 and No. 63 Abbotts Road, Kemps Creek, here-in known as the 'development site'. Legally described as Lots 11 – 13 in DP 253503, with an area of approximately 32ha, the site is located to the north, east and southeast of the terminus of Abbott Road, Kemps Creek within the Penrith City Council Local Government Area (LGA).

The site is outlined in red on Figure 4 and forms part of the wider proposed SEPP WSEA amendment to include the entire green area on Figure 4, within the WSEA as IN1 – General Industrial development.

Figure 4 – Location of Development Site within the proposed SEPP WSEA Amendment.



Source of Base Map: NSW Department of Planning, Industry & Environment.

2.2 Existing Land Use.

The site has a frontage to Aldington and Abbots Road and contains existing sheds, dwellings and associated infrastructure with existing landuse consisting of poultry sheds, grazing and market gardens - refer to Figure 5 - Aerial below.

Figure 5 – Aerial Photograph of the Kemps Creek Logistics Park Site showing adjoining landuse



Source of Base Map: SixMaps.

2.3 Adjoining Land Use.

The adjoining properties to the north of the development site contain an existing dwelling on Lots 141 & 142 in DP 1033686 and grazing land within Lot 15 in DP 253503 Aldington Road.

The land to the east, within Lot 4132 in DP 857093, contains vacant farming land zoned IN1 – Industrial. The land to the east of the southern portion of the development site contains rural residential development.

The land to the southwest and west of the development site contains farming land which is zoned IN1 – Industrial.

2.4 Topography.

The landform within the site is undulating, generally sloping to the west at approximately 3 degrees and contains a number of large water storage dams.

The land to the east and southeast rises to the southwest towards Mount Vernon Road

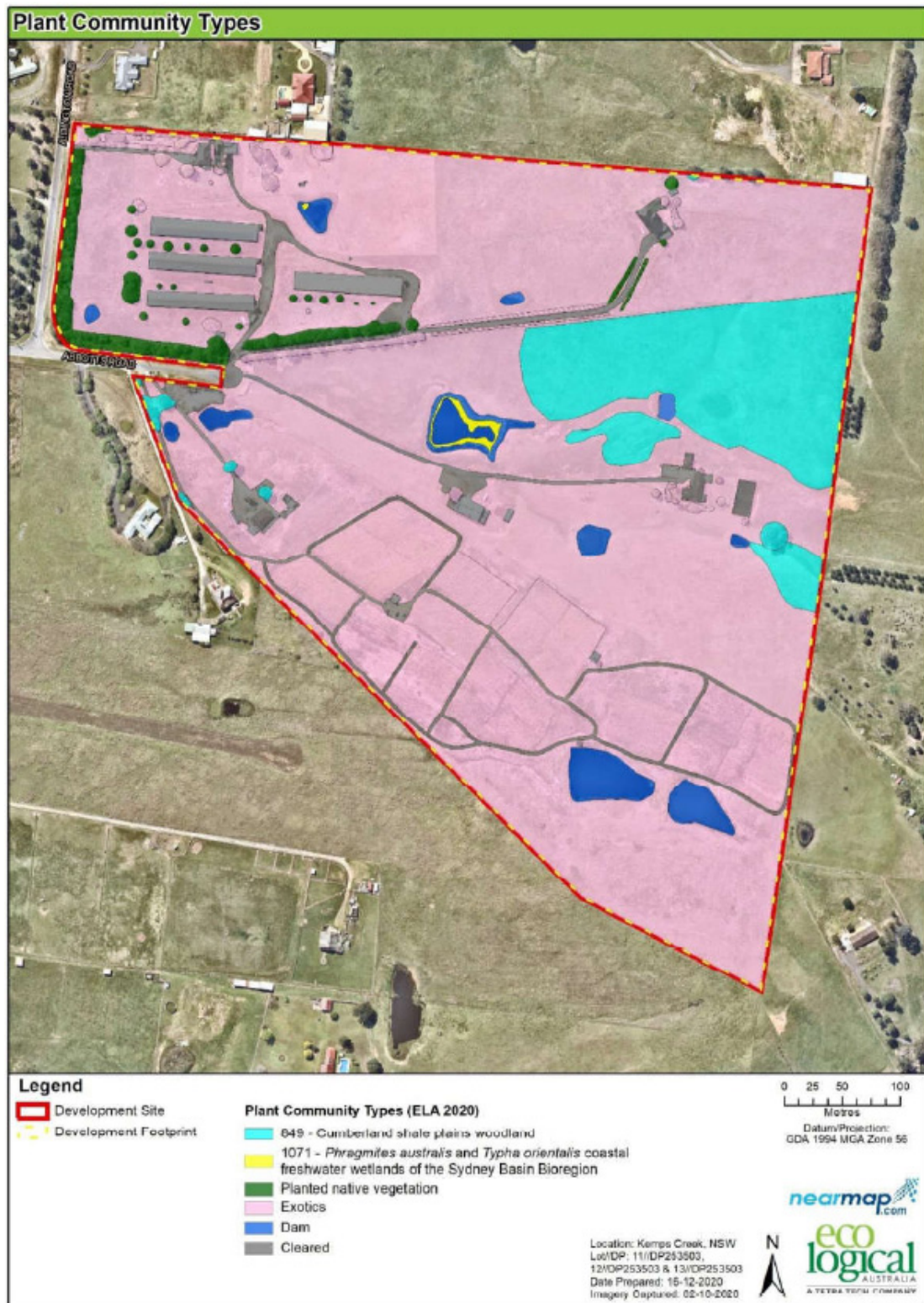
Figure 6 – Topographic Map showing the location of the Kemps Creek Logistics Park outlined in Blue.



2.5 Vegetation.

Ecological Australia has undertaken an assessment of the vegetation communities within the development site – refer to Figure 7 below.

Figure 7 – Vegetation Communities within the Development Site – source ELA.



Except for the area of Cumberland Plain Woodland, the predominant vegetation within the development site consists of grassland and gassy woodland with managed landscape gardens within the curtilage to the existing dwellings.

The adjoining properties to the north contain grassland and managed landscaped gardens within the curtilage to the dwellings.

The land to the east of the northern portion of the development site contains grassland with a wind break along part of the common boundary with Lot 4132 in DP 857093.

The vegetation within the rural residential development to the east of the southern portion of the development site contains grassland and grassy woodland vegetation.

The adjoining properties to the southwest contain grassland and managed landscaped gardens within the curtilage to the dwellings.

The property to the west of the Aldington Road frontage to the development site contains a dwelling set amongst remnant woodland vegetation.

2.7 Significant Environmental Features within the Site.

The land within the development site does not contain significant environmental features such as Koala Habitat; SEPP 14 Wetlands, SEPP 26 Littoral Rainforests; land slip areas or National Parks Estate; areas of geological interest or steep lands [>18 degrees].

A Riparian Constraints Assessment was undertaken by CT Environmental and identified that the development site contains a short length of riparian corridor to an un-named tributary to Kemps Creek. The western portion of the tributary does not exist and has been diverted into a channel that runs to the west along the southern side of Abbots Road.

The short length of riparian corridor within the site has been removed from the Mamre Road Structure Plan.

2.8 Known Threatened Species, Population or Ecological Community on the Site.

There are no known threatened species, population or ecological communities on the development site.

2.9 Details and location of Aboriginal Relics or Aboriginal Place.

There are no known Aboriginal relics or Aboriginal places on the site.

SECTION 3

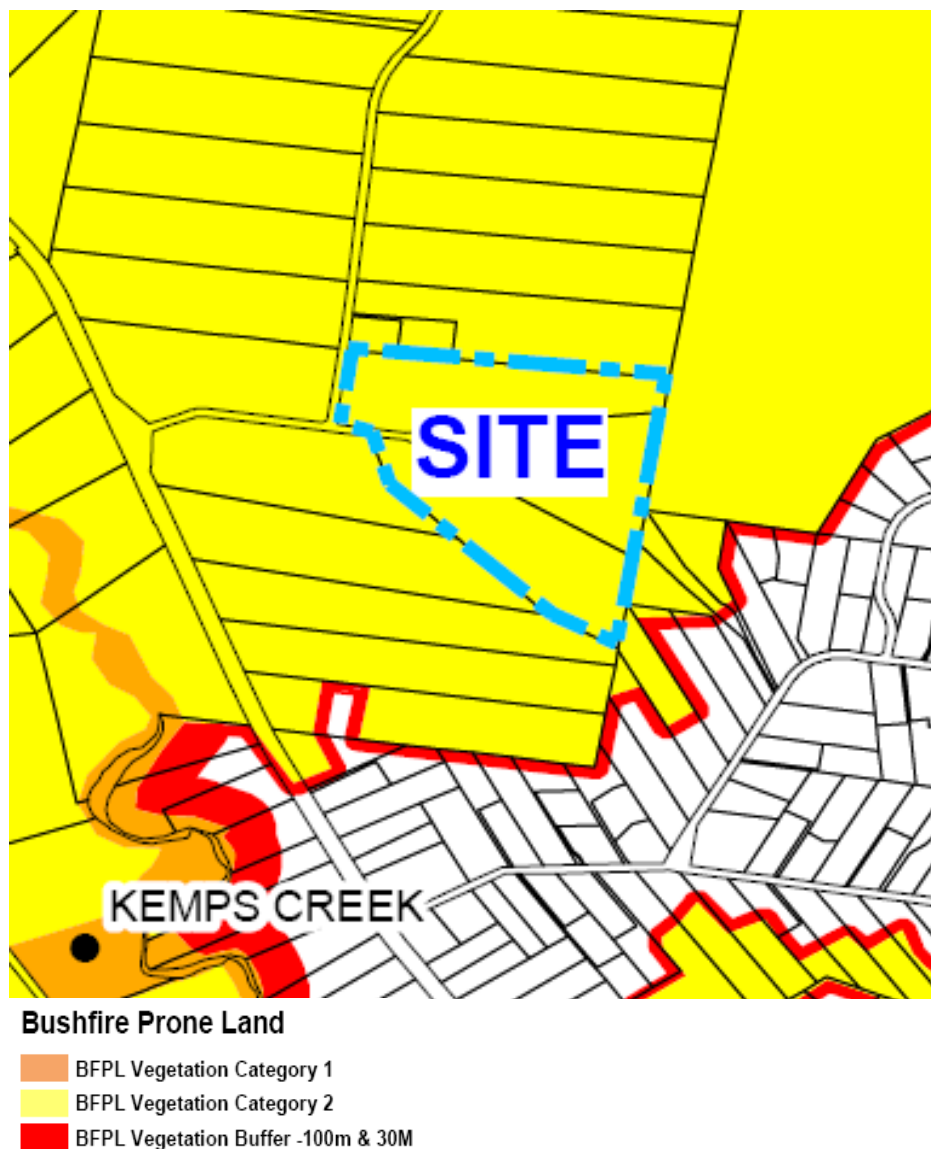
PRECINCT LEVEL ASSESSMENT

3.1 Certified Bushfire Prone Land Map.

Section 10.3 of the *Environmental Planning & Assessment Act 1979* requires councils, where a Bushfire Risk Management Plan applies, to prepare a Bushfire Prone Land Map in consultation with the Commissioner of the NSW Rural Fire Service.

The Commissioner will designate lands to be Bushfire Prone within an area and, when satisfied that the lands have been recorded on a map, will certify the map as a Bushfire Prone Land Map for the purposes of this or any other Act. Figure 8 provides an extract from the Penrith Bushfire Prone Land Map.

Figure 8 – Extract from the Penrith Bushfire Prone Land Map.



SECTION 4

BUSHFIRE PROTECTION ASSESSMENT

4.1 Introduction.

The Penrith Council Bushfire Prone Land Map indicates that the site and adjacent lands contains Category 2 Bushfire Prone Vegetation.

Therefore, the construction of the proposed Warehouse buildings is required to comply with the provisions of Section 4.14 of the *Environmental Planning & Assessment Act 1979*.

Section 4.14 of the *Environmental Planning and Assessment Act* requires that the proposed development comply with the requirements of *Planning for Bushfire Protection 2019* with respect to the protection of persons, property and the environment from the danger that may arise from a bushfire.

The aim of *Planning for Bushfire Protection 2019* is to 'provide for the protection of human life and minimise impacts on property from the threat of bushfire while having due regard to development potential and protection of the environment'.

Bushfire protection can be achieved through a combination of strategies which are based on the following principles:

- (i) Control the types of development permissible in bushfire prone areas;
- (ii) Minimise the impact of radiant heat and direct flame contact by separating development from bushfire hazards;
- (iii) Minimise the vulnerability of buildings to ignition and fire spread from flames, radiant heat and embers;
- (iv) Enable appropriate access and egress for the public and fire-fighters;
- (v) Provide adequate water supplies for bushfire suppression and operations;
- (vi) Focus on property preparation, including emergency planning and property maintenance requirements; and
- (vii) Facilitate the maintenance of Asset Protection Zones (APZs), fire trails, access for fire-fighting and on site equipment for fire suppression.

The document provides the following objectives for Class 5 to 8 buildings:

- (i) *Provide safe access to/from the public road system for fire-fighters providing property protection during bushfire and for occupant egress for evacuation;*
- (ii) *Provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development;*
- (iii) *Provide adequate services of water for protection of buildings during and after the passage of bushfire and to locate gas and electricity so as not to contribute to the risk of a fire to a building; and*
- (iv) *Provide for the storage of hazardous materials away from the hazard.*

The general fire safety construction provisions of the NCC are taken as acceptable solutions, however construction requirements for bushfire protection will need to be considered on a case by case basis.

Planning for Bushfire Protection 2019 does not specify specific deemed-to-satisfy protection measures for Class 5 to 8 buildings as defined by the Building Code of Australia. However, compliance with A.S.3959 - 2018 must be considered when meeting the aims and objectives of *Planning for Bushfire Protection 2019*.

Section 4.2 of this report examines the Kemps Creek Logistics Park layout in relation to the provision of a suitable “defendable space” between the bushfire hazard and the industrial buildings, construction standards to the buildings is examined in Section 4.3, the provision of access and water supplies for fire-fighting operations management of the defendable space [Asset Protection Zone] and evacuation planning are examined in Sections 4.4 – 4.9 of this report.

4.2 The provision of Defendable Space/s [Asset Protection Zones].

Defendable Spaces/Asset Protection Zones [APZs] have been assessed for the future industrial development in accordance with *Planning for Bushfire Protection 2019* and Australian Standard A.S. 3959 – 2018 (using effective slope and predominant vegetation communities).

The assessment is based on the predominant vegetation on the adjoining land being grassland.

The NSW Rural Fire Service’s requirement for industrial buildings is to provide a setback from bushfire prone vegetation which will minimise flame contact on a building. Table A1.12.5 of *Planning for Bushfire Protection 2019* identifies that to prevent flame contact on the future warehouses located adjacent to unmanaged grassland vegetation a minimum defendable space width of 9.0 metres is required.

This requirement applies to:

- The northern aspect of Lot 1 and Lots 2a, 2b and Lot 3, pending construction of industrial development on the adjoining IN1 zoned land;
- Eastern aspect to Lot 3 (pending construction of industrial development on the adjoining IN1 zoned land) and eastern aspect to Lot 4;
- South-western aspect to Lots 4 – 6, (pending construction of industrial development on the adjoining IN1 zoned land).

The Defendable Space to the west of Lot 1 is provided by Aldington Road.

Figure 9 – Plan of Defendable Space.



4.3 Construction Measures to Buildings.

Table 1 examines the bushfire construction standards required to be implemented to comply with A.S. 3959 – 2018 – ‘Construction of Buildings in Bushfire Prone Areas’.

These standards will be applicable pending development of the adjoining IN1 zoned land to the north, east and southwest of the development site.

Table 1. Determination of Bushfire Construction Standards.

Aspect	Vegetation within 140m of development	Predominant Vegetation Formation Class	Effective Slope of Land	Width of Defendable Space provided to fixed assets	Bushfire Construction Standard – A.S. 3959 – 2018
North of Lot 1	Unmanaged Grassland	Grassland	Upslope	> 10 metres	BAL 29 to northern elevation
North of Lot 2a & 2b	Unmanaged Grassland	Grassland	Upslope	> 12 metres	BAL 29 to northern elevation
North of Lot 3 East of Lot 3	Unmanaged Grassland	Grassland	Upslope	> 15 metres	BAL 19 to northern elevation
				> 22 metres	BAL 12.5 to northern elevation
East of Lot 4	Unmanaged Grassland	Grassland	Upslope	30 metres	BAL 12.5 to eastern elevation
Southwest of Lot 4	Unmanaged Grassland	Grassland	Downslope < 5 degrees	> 17 metres	BAL 19 to south-western elevation
Southwest of Lot 5	Unmanaged Grassland	Grassland	Downslope < 5 degrees	> 14 metres	BAL 29 to south-western elevation
Southwest of Lot 6	Unmanaged Grassland	Grassland	Downslope < 5 degrees	> 12 metres	BAL 29 to south-western elevation
Southwest of Cafe on Lot 7	Unmanaged Grassland	Grassland	Downslope < 5 degrees	> 12 metres	BAL 29 to south-western elevation

The non-exposed elevations of the warehouse building shall be constructed to one level less than the BAL rating for the hazard side of the building e.g. the BAL rating to the northern elevation of the warehouse on Lot 1 is BAL 29 therefore the remaining elevations shall be constructed to BAL 19 standards in accordance with A.S. 3959 – 2018 – ‘Construction of Buildings in Bushfire Prone Areas’.

The following additional measures also apply:

- Access doors [PA and Vehicle] to the buildings shall be fitted with seals that seal the bottom, stiles and head of the door against the opening/frame to prevent the entry of embers into the building.

Particular attention shall be given to the gap at the head of the curtain of the roller doors, where mohair type seals can be used;

- External timber doors shall be fitted with a stainless steel/Colorbond kick plate of 400mm high on the outside of the door;
- External glazed doors and windows shall comply with the requirements for glazing less than 400mm above finished ground level; paths / pavement and elevated roofs;
- Any external vents, grilles and ventilation louvres shall have stainless steel mesh with a maximum aperture of 2mm square fitted to prevent the entry of embers into the building or be fitted with a louvre system which can be closed in order to maintain a maximum aperture or gap of no more than 2mm.

Should the available Defendable Space widths increase from the widths listed in Table 1 or the adjacent land is developed and the bushfire hazard is removed from the neighbouring properties, reassessment of the construction standards shall be undertaken.

This re-assessment is likely to remove the requirement to apply bushfire construction standards to the warehouse buildings.

4.4 Access Standards for Firefighting Operations.

Appendix 3 “Access” of *Planning for Bushfire Protection 2019* provides specifications on the access provisions for fire-fighting operations within developments which are subject to bushfire attack.

Vehicular access to the proposed Kemps Creek Logistics Park will be provided from Abbotts Road.

The proposed internal access roads will be constructed to provide heavy rigid and articulated vehicle access to each of the proposed buildings. This internal road network provides suitable access for fire-fighting appliances similar to NSW Rural Fire Service Category 1 Tankers and Fire & Rescue NSW Composite and Aerial Appliances.

Fire Appliance access shall be provided to the perimeter of each building, either by a perimeter road or by vehicular access to the future buildings or parking areas incorporated into the defendable space setback.

4.5 Water Supplies for Firefighting Operations.

A reticulated water supply for potable water supply and fire hydrants is to be extended into the site.

The fire-fighting water supply to the new buildings shall comply with the Building Code of Australia [BCA] and A.S. 2419.1 – 2005.

4.6 Emergency Management for Fire Protection / Evacuation.

The new buildings located adjacent to the bushfire hazard are unlikely to be subject to a fire event that may necessitate evacuation of the buildings.

Due to the low bushfire risk there is no requirement for the preparation of a specific Bushfire Evacuation Plan or a Bushfire Management Plan for the estate.

4.7 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 occupants and fire-fighters.

The management of the Defendable Spaces and the lots generally shall comply with the recommendations of Appendix 4 of *Planning for Bushfire Protection 2019* and *Standards for Asset Protection Zones*.

Management of the Defendable Spaces within the development shall comply with the following:

- Maintain a clear area of low cut lawn or pavement adjacent to the buildings; Utilise non-flammable materials such as Scoria, pebbles and recycled crushed bricks as ground cover to landscaped gardens in close proximity to building;
- Keep areas under shrubs and trees raked and clear of combustible fuels;
- Trees and shrubs should be maintained in such a manner that tree canopies are separated by 2 metres and understorey vegetation is not continuous [retained as clumps].

SECTION 5

BUSHFIRE MANAGEMENT STRATEGIES

Bushfire management strategies for the estate are as follows:

5.1 Strategy 1 – Defendable Space management Requirements:

Management of the defendable spaces/landscaped areas within the development site shall comply with the following:

- Maintain a clear area of low cut lawn or pavement adjacent to the building;
- Keep areas under shrubs and trees raked and clear of combustible fuels;
- Utilise non-flammable materials such as Scoria, pebbles and recycled crushed bricks as ground cover to landscaped gardens in close proximity to building;
- Trees and shrubs should be maintained in such a manner that tree canopies are separated by 2 metres and understorey vegetation is not continuous [retained as clumps].

5.2 Strategy 2 – Water Supplies/Utilities for Firefighting Operations:

The fire-fighting water supply to the proposed buildings shall comply with the Building Code of Australia [BCA] and Australian Standard A.S. 2419.1 – 2005.

Electricity and gas supplies will be laid underground and therefore address the performance standard of Chapter 4 of *Planning for Bushfire Protection 2019*.

5.3 Strategy 3 – Construction Standards to the buildings located adjacent to the bushfire hazard:

Table 2 identifies the bushfire construction standards required to be implemented to comply with A.S. 3959 – 2018 – ‘*Construction of Buildings in Bushfire Prone Areas*’.

Table 2. Bushfire Construction Standards.

Aspect	Vegetation within 140m of development	Predominant Vegetation Formation Class	Effective Slope of Land	Width of Defendable Space provided to fixed assets	Bushfire Construction Standard – A.S. 3959 – 2018
<i>North of Lot 1</i>	Unmanaged Grassland	Grassland	Upslope	> 10 metres	BAL 29 to northern elevation
<i>North of Lot 2a & 2b</i>	Unmanaged Grassland	Grassland	Upslope	> 12 metres	BAL 29 to northern elevation
<i>North of Lot 3 East of Lot 3</i>	Unmanaged Grassland	Grassland	Upslope	> 15 metres	BAL 19 to northern elevation
				> 22 metres	BAL 12.5 to northern elevation
<i>East of Lot 4</i>	Unmanaged Grassland	Grassland	Upslope	30 metres	BAL 12.5 to eastern elevation
<i>Southwest of Lot 4</i>	Unmanaged Grassland	Grassland	Downslope < 5 degrees	> 17 metres	BAL 19 to south-western elevation
<i>Southwest of Lot 5</i>	Unmanaged Grassland	Grassland	Downslope < 5 degrees	> 14 metres	BAL 29 to south-western elevation
<i>Southwest of Lot 6</i>	Unmanaged Grassland	Grassland	Downslope < 5 degrees	> 12 metres	BAL 29 to south-western elevation
<i>Southwest of Cafe on Lot 7</i>	Unmanaged Grassland	Grassland	Downslope < 5 degrees	> 12 metres	BAL 29 to south-western elevation

The non-exposed elevations of the warehouse building shall be constructed to one level less than the BAL rating for the hazard side of the building e.g. the BAL rating to the northern elevation of the warehouse on Lot 1 is BAL 29 therefore the remaining elevations shall be constructed to BAL 19 standards in accordance with A.S. 3959 – 2018 – ‘Construction of Buildings in Bushfire Prone Areas’.

The following additional measures also apply:

- Access doors [PA and Vehicle] to the buildings shall be fitted with seals that seal the bottom, stiles and head of the door against the opening/frame to prevent the entry of embers into the building.

Particular attention shall be given to the gap at the head of the curtain of the roller doors, where mohair type seals can be used;

- External timber doors shall be fitted with a stainless steel/Colorbond kick plate of 400mm high on the outside of the door;
- External glazed doors and windows shall comply with the requirements for glazing less than 400mm above finished ground level; paths / pavement and elevated roofs;
- Any external vents, grilles and ventilation louvres shall have stainless steel mesh with a maximum aperture of 2mm square fitted to prevent the entry of embers into the building or be fitted with a louvre system which can be closed in order to maintain a maximum aperture or gap of no more than 2mm.

NOTE: Should the available Defendable Space widths increase from the widths listed in Table 1 or the adjacent land is developed and the bushfire hazard is removed from the neighbouring properties, reassessment of the construction standards shall be undertaken.

This re-assessment is likely to remove the requirement to apply bushfire construction standards to the warehouse buildings.

5.4 Strategy 4 – Access Standards for Firefighting Operations.

Fire Appliance access shall be provided to the perimeter of each lot, either by a perimeter road or by vehicular access to the future buildings or parking areas incorporated into the defendable space setback.

The Fire Brigade access adjacent to the southern and eastern boundaries shown on the Master Plan shall be linked across the lot boundaries to provide continuous access for fire appliances.

The access provisions shall satisfy the NSW Rural Fire Service and Fire & Rescue NSW appliance requirements.

SECTION 6

CONCLUSION

A State Significant Development Application [SSDA] is being lodged for the development of the proposed Kemps Creek Logistic Park on Lots 11, 12 & 13 in DP 253503, Abbots Road, Kemps Creek.

The SEARS [Secretary's Environmental Assessments Requirements] were issued in 30 September 2020 under SSD-9138102 and contain a requirement that the EIS for the Master Plan and Stage 1 works must include an assessment against the requirements of *Planning for Bushfire Protection 2019*.

The Penrith Bushfire Prone Land Map records the development site and adjacent land as containing Category 2 bushfire prone vegetation.

The proposed development, not being the subdivision of bushfire prone land for the purpose of rural residential or residential development or for the construction of a 'Special Fire Protection Purpose Development' is not integrated development as defined by Section 4.46 of the *Environmental Planning & Assessment Act 1979*.

The subdivision of bushfire prone land for industrial purposes is assessed under the provisions of Section 4.14 of the *Environmental Planning & Assessment Act 1979* and requires compliance with the aim and objectives of *Planning for Bushfire Protection 2019*.

This report has examined the objectives of *Planning for Bushfire Protection 2019*, in relation to the provision of bushfire protection measures to the future construction of industrial buildings on the lots created in the subdivision, and has provided recommendations on:

- The provision of a combination of defensible space [separation of the buildings from the bushfire hazard] and the construction standards to the buildings;
- Access and water supply provisions for fire-fighting operations;
- Management of the fire protection measures, including the defensible spaces; and
- Emergency management [evacuation] planning.

Table 3 summarises the extent to which the development conforms to the aim and objectives of *Planning for Bushfire Protection 2019* in order to address the SEARS.

Table 3. Compliance with the aim and objectives of *Planning for Bushfire Protection 2019*.

Bushfire Protection Measure	Compliance with the aim and objectives of <i>Planning for Bushfire Protection 2019</i>.
Defendable Space setbacks/construction standards to future industrial buildings	The combination of a Defendable Space and construction standards to the future industrial buildings located adjacent to the bushfire hazard addresses the requirement that the occupants are afforded adequate protection from exposure to a bushfire and that the buildings will not be exposed to material ignition.
Access for fire-fighting operations	The proposed public access roads comply with the specifications of Appendix 3 of <i>Planning for Bushfire Protection 2019</i> and provide satisfactory emergency access for fire-fighting appliances. Access for fire-fighting operations to be provided to the perimeter of the lots adjoining the bushfire hazard [located within the Defendable Space setback]. Positive Covenant to be recorded on title of each lot located adjacent to the bushfire hazard for access for fire-fighting operations.
Water supplies for fire fighting	Hydrant supply to be installed in accordance with AS 2419.1 – 2005.
Management of the fire protection measures, including the defendable spaces	Each lot owner responsible for the maintenance of the recommended fire protection measures and provision of the perimeter fire access road. Positive Covenant to be recorded on title of each lot.
Emergency Management	Owners of buildings shall address protocols for the management of staff and site facilities during bushfire occurrences

I confirm that the proposed development complies with the aim and objectives of *Planning for Bushfire Protection 2019* and the deemed to satisfy requirements of Section 8.3.10 of *Planning for Bushfire Protection 2019* – Buildings of Class 5 to 8 and Class 10 of the Building Code of Australia in respect to the provision of asset protection zones [defendable spaces], access and water/utilities as required by the SEARS.



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

Fire Protection Association Australia Member No: 48781

REFERENCES:

- N.S.W Rural Fire Service – *Planning for Bushfire Protection 2019*;
- *Environmental Planning & Assessment Act – 1979*;
- *Rural Fires Act – 1997*;
- *Rural Fires Regulation 2013*;
- NSW Rural Fire Service – *Guideline for Bushfire Prone Land Mapping 2015*;
- *Bushfire Environmental Assessment Code 2006*;
- Building Code of Australia;
- Australian Standard A.S 3959-2018 “*Construction of Buildings in Bushfire Prone Areas*”;
- *Penrith City Council Bushfire Prone Land Map*.