



# Bushfire Protection Assessment – Lot 4 Skyline Crescent, Horningsea Park

---

## **Industrial Development**

### **Bringelly Business Hub**

July 2020

---

## DOCUMENT TRACKING

<b>Project Name</b>	<b>Horningsea Park, Lot 4 Skyline Crescent BPA.</b>
<b>Project Number</b>	<b>20WOL-16651</b>
<b>Client Name</b>	<b>ESR</b>
<b>Project Manager</b>	<b>Letara Judd FPAA BPAD Certified Practitioner No. BPAD 46804-L2</b>
<b>Prepared by</b>	<b>Letara Judd FPAA BPAD Certified Practitioner No. BPAD 46804-L2</b>
<b>Reviewed by</b>	<b>Bruce Horkings FPAA BPAD-A Certified Practitioner No. BPAD29962-L3</b>
<b>Approved by</b>	<b>Bruce Horkings FPAA BPAD-A Certified Practitioner No. BPAD29962-L3</b>
<b>Status</b>	<b>Final</b>
<b>Version Number</b>	<b>v2</b>
<b>Last saved on</b>	<b>18 August 2020</b>

This report should be cited as 'Eco Logical Australia 2020. *Horningsea Park, Lot 4 Skyline Crescent BPA.* . Prepared for ESR.

## ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd in conjunction with ESR.

## LIMITATIONS

The bushfire protection measures recommended in this report do not completely remove the risk to life and property, and they do not guarantee that a development will not be impacted by a bushfire event. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions.

### Disclaimer

*This document may only be used for the purpose for which it was commissioned and in accordance with the contract between Eco Logical Australia Pty Ltd and ESR. The scope of services was defined in consultation with ESR, by time and budgetary constraints imposed by the client, and the availability of reports and other data on the subject area. Changes to available information, legislation and schedules are made on an ongoing basis and readers should obtain up to date information. Eco Logical Australia Pty Ltd accepts no liability or responsibility whatsoever for or in respect of any use of or reliance upon this report and its supporting material by any third party. Information provided is not intended to be a substitute for site specific assessment or legal advice in relation to any matter. Unauthorised use of this report in any form is prohibited.*

# Contents

<b>1. Property and proposal .....</b>	<b>1</b>
1.1 Description of proposal .....	1
1.2 Response to SEARs.....	1
1.3 Assessment process.....	2
1.4 Significant environmental features.....	3
<b>2. Bushfire hazard assessment .....</b>	<b>5</b>
2.1 Process.....	5
2.2 Vegetation assessment.....	5
2.3 Slope assessment.....	5
2.4 Summary of assessment .....	5
<b>3. Bushfire protection measures.....</b>	<b>8</b>
3.1 Specific aim and objectives for Industrial/commercial development .....	8
3.2 Specific objectives for Class 5-8 buildings.....	9
3.3 Asset Protection Zones .....	10
3.4 Landscaping .....	10
3.5 Access .....	11
3.6 Water supplies.....	12
3.7 Electricity services .....	12
3.8 Gas services .....	13
3.9 Construction standards.....	13
3.9.1 Fences and gates .....	14
3.10 Emergency Management.....	14
3.11 Flammable Materials .....	14
<b>4. Conclusion .....</b>	<b>15</b>
<b>5. Recommendations.....</b>	<b>16</b>
<b>6. References.....</b>	<b>17</b>
<b>Appendix A - Asset protection zone and landscaping standards .....</b>	<b>18</b>
<b>Appendix B – Flammable Materials.....</b>	<b>19</b>

## List of Figures

Figure 1: Site plan.....	4
Figure 2: Bushfire hazard assessment.....	7
Figure 3: Roller shutter door installation (SA 2018).....	14

## List of Tables

Table 1: Subject site and development proposal summary.....	1
Table 2: SEARs and Relevant Reference.....	2
Table 3: Summary of bushfire protection measures assessed.....	2
Table 4: Bushfire hazard assessment, APZ requirements and BALs .....	6
Table 5: APZ requirements and compliance (adapted from Table 7.4a of PBP) .....	10
Table 6: Landscaping requirements and compliance (adopted from Table 7.4a of PBP) .....	10
Table 7: Property access requirements (adapted from Table 7.4a of PBP) .....	11
Table 8: Water supply requirements (adapted from Table 7.4a of PBP) .....	12
Table 9: Requirements for the supply of Electricity services (adapted from Table 7.4a of PBP) .....	12
Table 10: Requirements for the supply of gas services (adapted from Table 7.4a of PBP) .....	13
Table 11: Development Bushfire Protection Solutions and Recommendations.....	15
Table 12: APZ management specifications .....	18

## Abbreviations

Abbreviation	Description
AS 3959	Australian Standard AS 3959-2018 Construction of buildings in bushfire prone areas
APZ	Asset protection zone
BAL	Bushfire attack level
BFPL	Bush fire prone land
DA	Development application
DtS	Deemed-to-satisfy
EP&A Act	Environmental Planning and Assessment Act 1979
FDI	Fire danger index
IPA	Inner protection area
NASH	National Association of Steel-framed Housing
NCC	National Construction Code
OPA	Outer protection area
PBP	Planning for Bush fire Protection 2019
RFS	NSW Rural Fire Service

## 1. Property and proposal

The table below (**Table 1**) identifies the subject property and outlines the type of development proposed.

**Table 1: Subject site and development proposal summary**

Street address:	Lot 4 Skyline Crescent, Horningsea Park
Postcode:	2171
Lot/DP no:	Lot 4 (Lot 3, 12 & 13 of DP 29104)
Local Government Area:	Liverpool City Council
Fire Danger Index (FDI)	FDI 100
Current land zoning:	IN1 – General Industrial; E2 – Environmental
Type of development proposed:	Industrial

### 1.1 Description of proposal

The proposal is for the construction of one industrial warehouse building and accompanying facilities, landscaping and onsite parking associated with Lot 4 (**Figure 1**).

It accompanies an Environmental Impact Statement (EIS) in support of State Significant Development Application (8586218) for a new Warehouse on Skyline Crescent, Horningsea Park (the site).

The proposal is for the construction and operation of a warehouse and associated offices. The building is approximately 265 m in length and 135 m wide. The development includes:

- Warehouse;
- Main Office;
- 3 Warehouse/Dock Offices;
- Truck Storage/Hardstand Area;
- Guard house;
- Staff outdoor area;
- Car park; and
- Landscaped area.

The proposed development is located on land classified as bush fire prone on the Liverpool City Council bush fire prone land (BFPL) map<sup>1</sup>.

### 1.2 Response to SEARs

The Bushfire Protection Assessment is required by the Secretary's Environmental Assessment Requirements (SEARs) for SSD (8586218). **Table 2** identifies the relevant SEARs requirement/s and

<sup>1</sup> <https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address>

corresponding reference/s within this report. Consultation with NSW RFS will proceed through the Development Application process.

**Table 2: SEARs and Relevant Reference**

Bushfire	
SEARs Requirement	Report reference
Prepare a bushfire assessment report which provides and assessment of the bushfire hazard, including:	Section 3.9.
<ul style="list-style-type: none"> <li>Details of the storage of flammable materials;</li> </ul>	
<ul style="list-style-type: none"> <li>An assessment against the requirements of Planning for Bushfire Protection 2019, particularly access and provision of water supply for firefighting purposes;</li> </ul>	Bushfire Protection measures detailed in Section 3.
<ul style="list-style-type: none"> <li>A description of measures to ensure the proposal will not increase the bushfire risk to adjoining lands.</li> </ul>	Bushfire Protection measures detailed in Section 3 and compliance with Aims and Objectives of PBP detailed in Section 4.

### 1.3 Assessment process

The proposal was assessed in accord with the *Environmental Planning and Assessment Act 1979* and 'Planning for Bush Fire Protection' (RFS 2019), herein referred to as PBP.

This assessment is based on the following information sources:

- Background documentation provided by ESR;
- Information contained within the site plan from ESR; and
- GIS analysis including online spatial resources (i.e. SIX Maps, Near Maps and the NSW Government Planning Portal); and

The proposal is for an industrial warehouse (no manager's residence) therefore, has been assessed in accordance with the aim and objectives of PBP. Chapter 7 of PBP has been utilised as a guide in developing relevant bushfire protection measures (BMP) commensurate with the bushfire risk to the site.

**Table 3** identifies the bushfire protection measures assessed and whether an acceptable or performance solution is being proposed by the proponent.

**Table 3: Summary of bushfire protection measures assessed**

Bushfire Protection Measure	Report Section
Asset Protection Zones	3.3
Access	3.5
Water supplies	3.6
Electricity services	3.7
Gas services	3.8
Construction standards	3.9
Landscaping	3.4

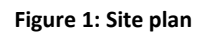
Bushfire Protection Measure	Report Section
Emergency Management	3.10

## 1.4 Significant environmental features

An assessment of significant environmental features, threatened species, populations or ecological communities under the *Biodiversity Conservation Act 2016* that may potentially be affected by the proposed bushfire protection measures has not been undertaken in this report as it is covered by other parts of the SSD process.

The impact footprint of the bushfire protection measures (e.g. Asset Protection Zone (APZ)) is clearly identified within this report and therefore capable of being assessed by suitably qualified persons as required. The Department of Planning, Industry and Environment (DPIE) is the determining authority for this development; they will assess more thoroughly any potential environmental issues.





## 2. Bushfire hazard assessment

### 2.1 Process

The site assessment methodology set out in Appendix 1 of PBP has been utilised in this assessment to determine the required APZ and Construction requirements. **Figure 2** and **Table 4** show the effective slope and predominant vegetation representing the highest bushfire threat potentially posed to the proposed development from various directions.

### 2.2 Vegetation assessment

In accordance with PBP, the predominant vegetation formation has been assessed for a distance of at least 140 m from the subject land in all directions.

The predominant vegetation has been determined from the site inspection undertaken for the subdivision of the land and areas of revegetation (ELA 2014).

### 2.3 Slope assessment

In accordance with PBP, the slope that would most significantly influence fire behaviour was determined over a distance of 100 m from the boundary of the proposed development under the classified vegetation.

The effective slope has been determined from 2 m contour data and revised where required by site assessment.

### 2.4 Summary of assessment

Bushfire prone vegetation affecting the proposed development includes vegetation classified as Woodland by PBP on the north and north-east of the subject land.

The effective slope under the vegetation falls into the slope category of '>0-5 degrees downslope'.

In all other directions, there are managed lands in the form of land cleared for future industrial and residential development, public roads and road reserves associated with the existing subdivision construction.

**Table 4: Bushfire hazard assessment, APZ requirements and BALs**

#	Slope	Vegetation Formation	Required APZ	Proposed APZ	Bushfire Attack Level (BAL)	Comments
T1 North	>0° to 5° downslope	Woodland	16 m	≥50 m	BAL-12.5	APZ located within Stuart Road Reserve (15 m) approved at subdivision stage, plus setback within managed subject land.
T2 North-east	>0° to 5° downslope	Woodland	16 m	≥8.5 m	BAL-FZ	The available defensible cleared space is provided by maintained landscaping, boundary fencing and hardstand areas. Of the 265m x 135m building, approximately 30 m of the north east of the building is exposed for BAL-FZ for 7.5m.
All other directions				Managed Land		



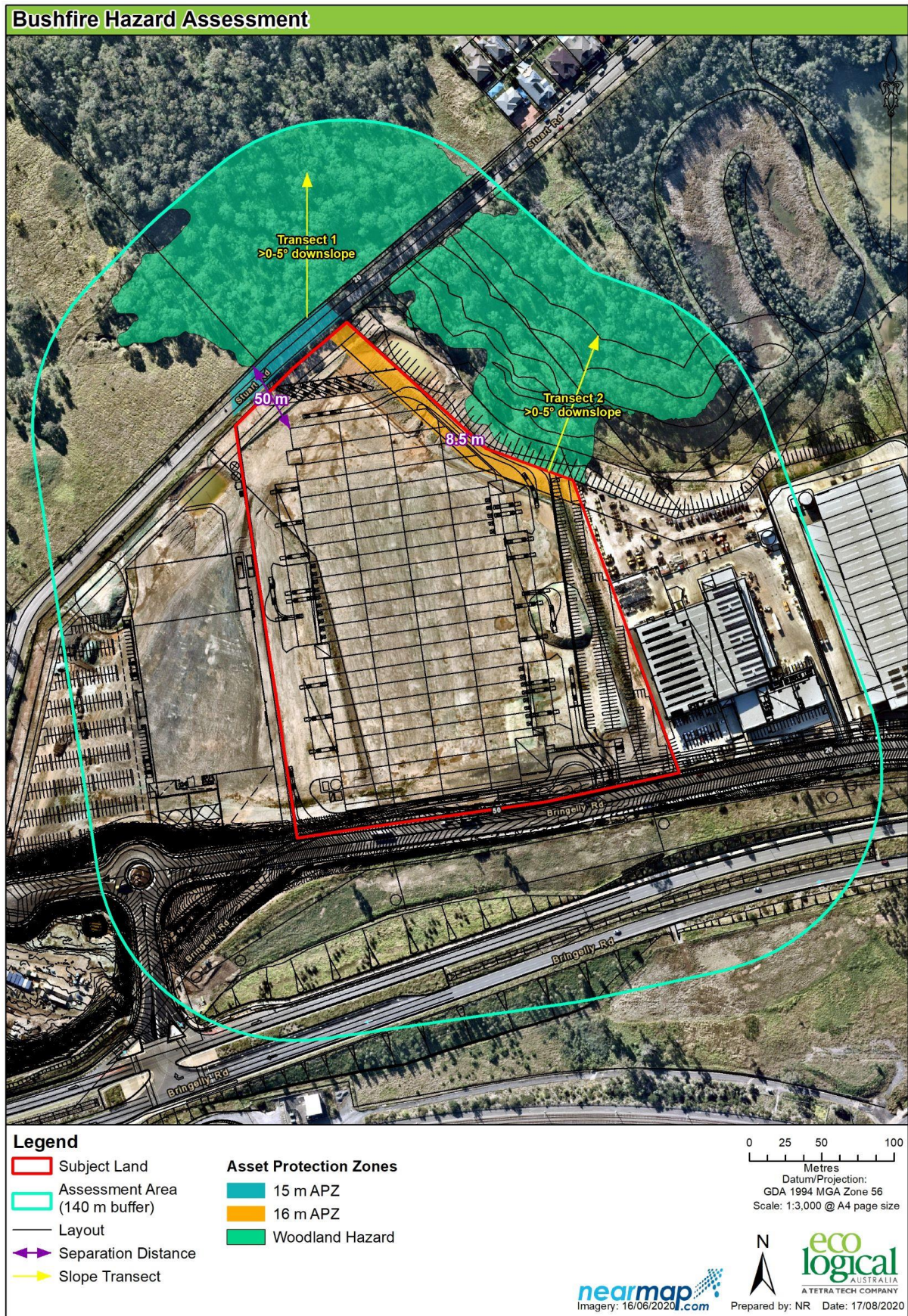


Figure 2: Bushfire hazard assessment



### 3. Bushfire protection measures

#### 3.1 Specific aim and objectives for Industrial/commercial development

Below is the Aim of PBP and the Specific Objectives for industrial/commercial development and a comment on how they are achieved. As directed in section 8.3.10 of PBP, the bushfire protection measures identified in Chapter 7 (of PBP) have been used as the baseline (where applicable), and either the acceptable solution or performance criteria has been achieved:

- **Aim** - 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.
  - The proposed development complies with the aim of PBP by achieving the specific objectives for industrial / commercial development and for Class 5-8 buildings identified below.
- **Specific Objective 1** - afford buildings and their occupants protection from exposure to a bush fire;
  - The building is provided a defensible space by adequate APZ and perimeter access as shown in **Figure 1** and **Figure 2**. All roads link to a public road network and comply with Section 7 of PBP providing safe evacuation routes for occupants.
- **Specific Objective 2** - provide for a defensible space to be located around buildings;
  - Defensible space is provided to the proposed warehouse by way of perimeter access/road and APZ as shown in Figure 1 and Figure 2.
- **Specific Objective 3** - provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;
  - The building has suitable defensible space between hazard and building as well as perimeter access to allow emergency service personnel an adequate operational area for prevention of fire spread.
- **Specific Objective 4** - ensure that appropriate operational access and egress for emergency service personnel and occupants is available;
  - The development has direct access to the public road system affording safe operational access/egress to emergency services as shown in Section 3.5 and demonstrated further in Section 3.5.
- **Specific Objective 5** - provide for ongoing management and maintenance of BPMs; and
  - The entire development will be managed as an IPA as per the specifications outlined in Appendix A.
- **Specific Objective 6** - ensure that utility services are adequate to meet the needs of firefighters.
  - The development is capable of complying with the acceptable solutions for utilities under Section 7 of PBP (Section 3.6, 3.8 and 3.9) and specific objective 3 in Section 3.2.

### 3.2 Specific objectives for Class 5-8 buildings

Below are the Specific Objectives for Class 5-8 buildings and a comment on how they are achieved.

- **Specific Objective 1** - provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation.
  - As shown in **Figure 1** and **Figure 2** and demonstrated further in Section 3.5 of this report, the proposed development has direct access to the public road system providing safe access/egress for both firefighters and occupants.
- **Specific Objective 2** - provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development.
  - An emergency plan meeting requirements of the Work Health safety Regulation 2017 and relevant legislation is to be prepared for each building (refer Section 3.11).
- **Specific Objective 3** - 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.
  - The proposed development will be serviced by reticulated water. Electricity to the development is underground and complies with PBP. Supply of gas (if any) will be installed and maintained in accordance with Section 3.6, 3.8 and 3.9 of this report.
- **Specific Objective 4** - provide for the storage of hazardous materials away from the hazard wherever possible.
  - The proposed development does not include any storage of hazardous materials as confirmed in Appendix B.

### 3.3 Asset Protection Zones

**Table 4** shows the dimensions of the required APZ and where relevant, information on how the APZ is to be provided is included. The footprint of the APZ is also shown on **Figure 2**.

The compliance of the proposed APZ with Section 7.4 of PBP, is detailed in Table 4.

The National Construction Standard (NCC) does not capture bushfire for this type of development, instead the specific objectives in PBP apply (Section 3.1 and 3.2).

**Table 5: APZ requirements and compliance (adapted from Table 7.4a of PBP)**

Performance Criteria	Acceptable Solutions	Compliance Notes
The intent may be achieved where:		
APZs are provided commensurate with the construction of the building; and A defensible space is provided;	An APZ is provided in accordance with Table A1.12.2 or A1.12.3 in Appendix 1.	<b>Complies</b> with performance criteria and achieves PBP specific objectives (refer Section 3.2)  Defensible space is provided to proposed warehouse by way of perimeter access/road as shown in Figure 1 and Figure 2.
APZs are managed and maintained to prevent the spread of a fire towards the building.	APZs are managed in accordance with the requirements of Appendix 4 of PBP.	<b>To Comply</b> Proposed APZ to be managed in accordance with PBP. Fuel management specifications provided in <b>Appendix A</b> .
The APZ is provided in perpetuity.	APZs are wholly within the boundaries of the development site.	<b>Complies</b> Proposed APZ wholly within boundaries of development site.
APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised.	APZs are located on lands with a slope less than 18 degrees.	<b>Complies</b> APZ is not located on slopes greater than 18°.

### 3.4 Landscaping

The compliance of the proposed landscaping with Section 7.4 of PBP is detailed in **Table 6**.

**Table 6: Landscaping requirements and compliance (adopted from Table 7.4a of PBP)**

Performance Criteria	Acceptable Solutions	Compliance Notes
The intent may be achieved where:		
Landscaping is managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.	Compliance with the NSW RFS 'Asset protection zone standards' (Appendix 4 PBP);  A clear area of low-cut lawn or pavement is maintained adjacent to the house;	<b>To comply</b> APZ / Landscaping is to be managed in accordance with PBP. Landscaping specifications provided in <b>Appendix A</b> .
	Fencing is constructed in accordance with Section 7.6 of PBP.	<b>To comply</b> Fencing to be constructed in accordance with Section 7.6 of PBP (see section 3.9.1)

Performance Criteria	Acceptable Solutions	Compliance Notes
	<p>Trees and shrubs are located so that:</p> <ul style="list-style-type: none"> <li>- the branches will not overhang the roof;</li> <li>- the tree canopy is not continuous; and</li> <li>- any proposed wind break is located on the elevation from which fires are likely to approach.</li> </ul>	<p><b>To comply</b></p> <p>APZ / Landscaping is to be managed in accordance with PBP. Landscaping specifications provided in <b>Appendix A</b>.</p>

### 3.5 Access

Access to the subject land is via Skyline Crescent. A fire tanker or pumper would attend to a property fire via the public road, and have direct access to buildings via future driveways, which are designed as truck access points to the proposed warehouse. The proposed internal access provides perimeter loop access around the entire proposed development of minimum 8.5m in width.

The compliance of the proposed property access with regard to Section 7.4 of PBP is detailed in **Table 7**.

**Table 7: Property access requirements (adapted from Table 7.4a of PBP)**

Performance Criteria	Acceptable Solutions	Compliance notes
The intent may be achieved where:		
Firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.	Firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.	Complies Subject land can be access by public road. A sealed, all weather internal road provides a perimeter looped access around the development.
The capacity of access roads is adequate for firefighting vehicles	The capacity of road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes), bridges and causeways are to clearly indicate load rating.	Can comply The advice of a relevant authority or suitably qualified professional should be sought, for certification of design and installation in accordance with relevant legislation, Australian Standards and Table 7.4a of PBP.
There is appropriate access to water supply.	<p>Hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005;</p> <p>There is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.</p>	<p>Can comply</p> <p>NA – reticulated water supply</p>
Firefighting vehicles can access the dwelling and exit the property safely.	<p>At least one alternative property access road is provided for individual dwellings or groups of dwellings that are located more than 200 metres from a public through road;</p> <p>There are no specific access requirements in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph)</p>	<p>NA – consists of 1 warehouse building</p> <p>NA – The subject land provides a looped perimeter access road of 8.5 width for truck access, which is expected to be utilised by emergency service.</p>



Performance Criteria	Acceptable Solutions	Compliance notes
	that supports the operational use of emergency firefighting vehicles.	

### 3.6 Water supplies

The compliance of the proposed water supply with regards to Section 7.4 of PBP is detailed in **Table 8**.

**Table 8: Water supply requirements (adapted from Table 7.4a of PBP)**

Performance Criteria	Acceptable Solution	Compliance Notes
An adequate water supply is provided for firefighting purposes.	<ul style="list-style-type: none"> <li>Reticulated water is to be provided to the development, where available;</li> <li>A static water supply is provided where no reticulated water is available.</li> </ul>	Complies Proposal serviced by reticulated water.
Water supplies are located at regular intervals; and the water supply is accessible and reliable for firefighting operations	<ul style="list-style-type: none"> <li>Fire hydrant spacing, design and sizing comply with the Australian Standard AS 2419.1 (SA 2005);</li> <li>Hydrants are not located within any road carriageway; and</li> <li>Reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.</li> </ul>	Can comply The advice of a relevant authority or suitably qualified professional should be sought, for certification of design and installation in accordance with relevant legislation, Australian Standards and Table 7.4a of PBP.
Flows and pressure are appropriate	<ul style="list-style-type: none"> <li>Fire hydrant flows and pressures comply with AS 2419.1 (SA 2005).</li> </ul>	
The integrity of the water supply is maintained	<ul style="list-style-type: none"> <li>All above-ground water service pipes are metal, including and up to any taps.</li> </ul>	

### 3.7 Electricity services

The compliance of the proposed supply of electricity services with regards to Section 7.4 of PBP is detailed in **Table 9**.

**Table 9: Requirements for the supply of Electricity services (adapted from Table 7.4a of PBP)**

Performance Criteria	Acceptable Solution	Compliance Notes
Location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.	<p>Where practicable, electrical transmission lines are underground; and</p> <p>Where overhead, electrical transmission lines are proposed as follows:</p> <p>Lines are installed with short pole spacing (30 m), unless crossing gullies, gorges or riparian areas; and</p> <p>No part of a tree is closer to a power line than the distance set out in ISSC3 Guide for the Management of Vegetation in the Vicinity of Electricity Assets (ISSC3 2016).</p>	Complies Electricity services to the subject site are located underground.

### 3.8 Gas services

The compliance of the proposed supply of gas services (reticulated or bottle gas) with regards to Section 7.4 of PBP is detailed in **Table 10**:

**Table 10: Requirements for the supply of gas services (adapted from Table 7.4a of PBP)**

Performance Criteria	Acceptable Solution	Compliance Notes
Location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.	<p>Reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 – The Storage and handling of LP gas, the requirements of relevant authorities, and metal piping is used;</p> <p>All fixed gas cylinders are kept clear of all flammable materials to a distance of 10 m and shielded on the hazard side;</p> <p>Connections to and from gas cylinders are metal;</p> <p>Polymer-sheathed flexible gas supply lines are not used; and</p> <p>Above-ground gas service pipes are metal, including and up to any outlets.</p>	<p>Can comply</p> <p>The advice of a relevant authority or suitably qualified professional should be sought, for certification of design and installation in accordance with relevant legislation, Australian Standards and Table 7.4a of PBP.</p>

### 3.9 Construction standards

The NCC does not require this type of building class to comply with AS 3959:2018, so this should be used as a guide as often the nature of this construction type (i.e. industrial building using concrete tilt slab with metal roofing) meets the requirements of AS 3959:2018.

The proposed construction shall achieve an FRL of 30/30/30 and be constructed of non-combustible materials (masonry, concrete, earth wall etc min 90mm). Windows / openings / vents shall not be on the building facing the bushland along the interface area. All proposed fencing should be non-combustible.

The general fire safety construction provisions for this building type are considered suitable (acceptable solutions) and modified to incorporate the following ember protection upgrades from AS 3959-2018:

- The roof/wall junctions are to be sealed/screened with aluminium, steel or bronze mesh with a minimum aperture size of 2 mm;
- All openable portions of windows to be screened with aluminium, steel or bronze mesh with a minimum aperture size of 2 mm;
- The base of side-hung external doors shall be fitted with draught excluders/draught seals/weather strips;
- Gutters should be fitted with non-combustible gutter guard to prevent the build-up of combustible material;
- The rollers doors shall be protected with suitable weather strips/draught excluders/draught seals or brushes (Figure 3). If fitted with guide tracks no edge gap protection required; and
- Roller shutter doors with ventilation slots shall be protected with non-combustible mesh with 2 mm aperture.

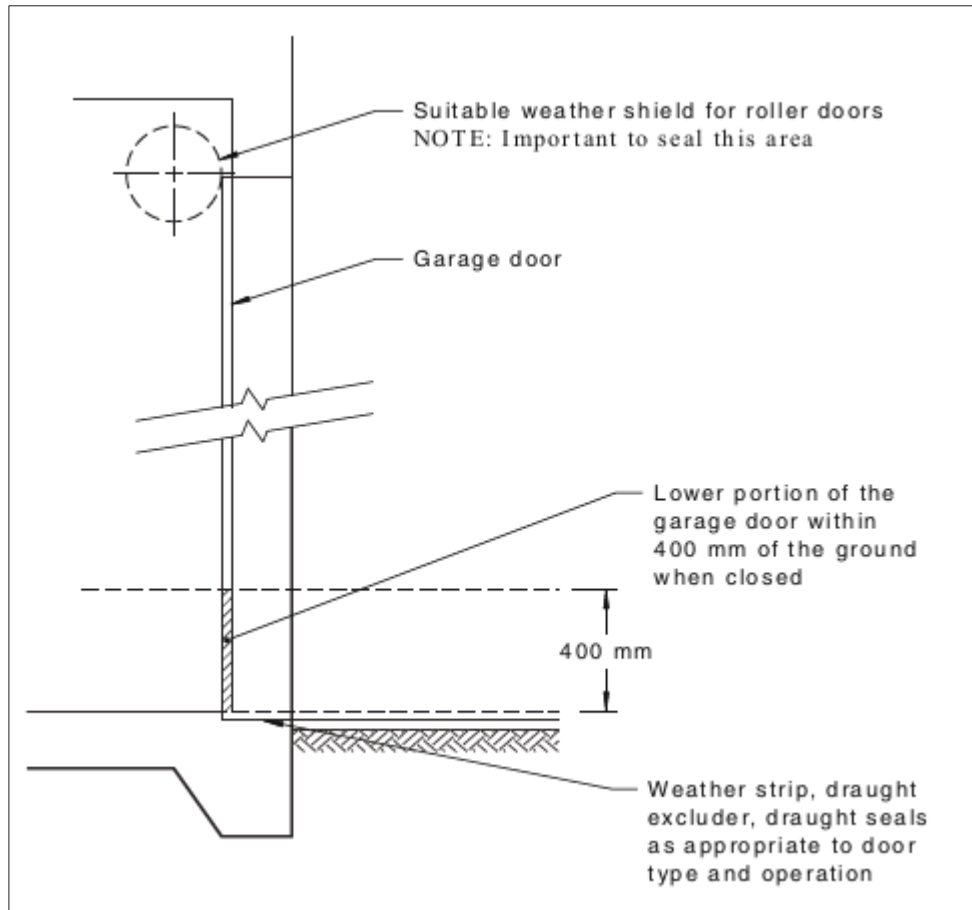


Figure 3: Roller shutter door installation (SA 2018)

### 3.9.1 Fences and gates

To comply with Section 7.6 of PBP, all fencing and gates within bushfire prone areas are to be constructed of hardwood or non-combustible material. Where fencing is within 6 m of a building, they should be made of non-combustible material only.

## 3.10 Emergency Management

Due to the nature and use of the proposed development and due to the surrounding bushfire hazard being removed/reduced over time, an emergency plan meeting the requirements of the Work Health safety Regulation 2017, relevant legislation and building requirements of the NCC is considered suitable and commensurate to risk for this development.

## 3.11 Flammable Materials

The proposed development does not include the storage of flammable materials/dangerous goods as confirmed by Riskcon Engineering Pty Ltd Letter dated 17 July 2020 as shown in Appendix B.

## 4. Conclusion

The proposed new industrial building meets the objectives of *‘Planning for Bush Fire Protection 2019’*, as outlined in **Table 11** below.

**Table 11: Development Bushfire Protection Solutions and Recommendations**

Bushfire Protection Measures	Recommendations	Report Section
Asset Protection Zones	APZ dimensions are detailed in <b>Table 4</b> and shown in <b>Figure 2</b> . Identified APZ to be maintained in perpetuity to the specifications detailed in <b>Appendix A</b> .	3.3
Access	Access meets PBP acceptable solution specifications identified in Table 7.4a of PBP.	3.5
Water supplies	Reticulated water supply to meet PBP acceptable solution specifications identified in Table 7.4a of PBP.	3.6
Electricity service	Electricity supply located underground.	3.7
Gas service	Gas services are to be installed and maintained in accordance with AS/NZS 1596:2014.	3.8
Construction standard	NCC construction requirements for this building class and the additional recommendations as indicated in <b>Section 3</b> will suffice.	3.9
Landscaping	Any future landscaping meets the requirements of PBP listed in <b>Appendix A</b> and fencing to be constructed from non-combustible material.	3.4
Emergency Management	An emergency plan meeting the requirements of the Work Health safety Regulation 2017, relevant legislation and building requirements of the NCC is considered suitable and commensurate to risk for this development.	3.10

## 5. Recommendations

It is recommended that the proposed development be approved with consent conditions based on the findings in Table 11.



Letara Judd

**Bushfire Consultant**

**FPAA BPAD Certified Practitioner No. BPAD 46804-L2**



Bruce Horkings

**Senior Bushfire Consultant**

**FPAA BPAD-A Certified Practitioner No. BPAD29962-L3**



## 6. References

Eco Logical Australia (ELA).2014. Bushfire Protection Assessment –Bringelly Road Business Hub (14SUTECO-0010). Prepared for Western Sydney Parklands Trust

Industry Safety Steering Committee 3 (ISSC3). 2016. ISSC3 Guide for the Management of Vegetation in the Vicinity of Electricity Assets. November 2016. NSW.

NSW Rural Fire Service (RFS). 2019. Planning for Bush Fire Protection: A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners - issued December 2019. Australian Government Publishing Service, Canberra.

Riskcon Engineering Pty Ltd, 2020, RE: State Environmental Planning Policy No. 33 for Lot 4, 50 Bringelly Road

Standards Australia (SA). 2005. *Fire hydrant installations - System design, installation and commissioning*, AS 2419.1, SAI Global, Sydney.

Standards Australia (SA). 2014. *The storage and handling of LP Gas*, AS/NZS 1596:2014. SAI Global, Sydney.

Standards Australia (SA). 2018. *Construction of buildings in bushfire-prone areas*, AS 3959:2018. SAI Global, Sydney.

## Appendix A - Asset protection zone and landscaping standards

The following APZ management specifications in **Table 12** apply to the APZs specified in **Table 4** and shown in **Figure 2**. These APZ management specifications should be considered for any landscaping and ongoing management within the subject land.

The APZs identified in **Table 4** are to be maintained in perpetuity and management undertaken on an annual basis (as a minimum) and prior to the commencement of the fire season.

Further details on APZ implementation and management can be found on the NSW RFS website (<https://www.rfs.nsw.gov.au/resources/publications>).

**Table 12: APZ management specifications**

Vegetation Strata	Inner Protection Area (IPA)	Outer Protection Area (OPA)
Trees	<p>Tree canopy cover should be less than 15% at maturity;</p> <p>Trees (at maturity) should not touch or overhang the building;</p> <p>Lower limbs should be removed up to a height of 2 m above ground;</p> <p>Canopies should be separated by 2 to 5 m; and</p> <p>Preference should be given to smooth barked and evergreen trees.</p>	<p>Tree canopy cover should be less than 30%; and</p> <p>Canopies should be separated by 2 to 5 m.</p>
Shrubs	<p>Create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided;</p> <p>Shrubs should not be located under trees;</p> <p>Shrubs should not form more than 10% ground cover; and</p> <p>Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.</p>	<p>Shrubs should not form a continuous canopy; and</p> <p>Shrubs should form no more than 20% of ground cover.</p>
Grass	<p>Should be kept mown (as a guide grass should be kept to no more than 100 mm in height); and</p> <p>Leaves and vegetation debris should be removed.</p>	<p>Should be kept mown to a height less than 100 mm; and</p> <p>Leaf and other debris should be removed.</p>

## Appendix B – Flammable Materials



Riskcon Engineering Pty Ltd  
Unit 19/5 Pyrmont Bridge Road  
Camperdown NSW 2050  
ABN 74 626 753 820  
[www.Riskcon-eng.com](http://www.Riskcon-eng.com)

17 July 2020

Riley Sampson  
ESR Australia Pty Ltd  
Level 29, 20 Bond St  
Sydney NSW 2000

**RE: State Environmental Planning Policy No. 33 for Lot 4, 50 Bringelly Road**

I am writing to you in relation to the request for a State Environmental Planning Policy No. 33 (SEPP 33) assessment for Lot 4, 50 Bringelly Road, Horningsea Park, NSW. This assessment is required as part of a Development Application (DA) where materials are stored which are classified as Dangerous Goods (DGs) per the classification within the National Transport Commission "Australian Dangerous Goods Code". The purpose of the assessment is to determine the potential for impact from the subject site upon the adjacent land uses.

Based upon information provided to Riskcon Engineering Pty Ltd, it is understood that there will be no DGs stored at the site as part of the proposed tenant's operations. Therefore, the site would not be subject to SEPP 33 and would therefore not require an assessment.

This letter has been prepared to close out the Secretary Environmental Assessment Requirements (SEARs) which requires the preparation of a SEPP 33 for the site. As there are no DGs stored at the site, it is considered that this letter should be sufficient to address the SEAR relating to the SEPP 33 assessment.

Yours faithfully,

**Riskcon Engineering Pty Ltd**  
ABN 74 626 753 820

A handwritten signature in black ink, appearing to be "Renton Parker".

**Renton Parker**  
Director – Risk Engineering  
Riskcon Engineering Pty Ltd  
+61 438 749 181  
[www.Riskcon-eng.com](http://www.Riskcon-eng.com)



