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# Bushfire Protection Assessment – Sydney Business Park Stage 3

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## **Marsden Park Developments**

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## DOCUMENT TRACKING

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Template 2.8.1

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## Abbreviations

Abbreviation	Description
AS 3959	Australian Standard AS 3959-2018 <i>Construction of buildings in bushfire prone areas</i>
APZ	Asset protection zone
BAL	Bushfire attack level
BFPL	Bush fire prone land
CDC	Complying development certification
DA	Development application
DtS	Deemed-to-satisfy
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
FDI	Fire danger index
IPA	Inner protection area
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:	Astoria and Hollinsworth Street, Marsden Park
Postcode:	2765
Lot/DP no:	Lot 4 DP 1210172, Lot 36 DP 262886 and part Lot 5 DP 1210172
Local Government Area:	Blacktown City Council
Fire Danger Index (FDI)	100
Current land zoning:	SP2 Infrastructure, IN1 General Industrial, IN2 Light Industrial
Type of development proposed:	Industrial development (subdivision and construction of 4 warehouses)

### 1.1 Description of proposal

The proposal is for subdivision and construction of 4 industrial warehouses and associated carparking (see **Figure 1**). The proposed subdivision forms Stage 3 of the Marsden Park Industrial Precinct.

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

### 1.2 Assessment process

The proposal was assessed in accordance with Section 4.14 of the *Environmental Planning and Assessment Act 1979* and *Planning for Bush Fire Protection* (RFS 2019), herein referred to as PBP.

The proposal is for an industrial subdivision and construction of 4 warehouses (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.

This assessment is based on the following information sources:

- Background documentation provided by Marsden Park Developments;
- Information contained within the site plan from Orion Consulting (Project 20-0127 Revision 4); and
- GIS analysis including online spatial resources (i.e. Google Earth, SIX Maps, Nearmap and the NSW Government Planning Portal).

**Table 2** identifies the bushfire protection measures proposed and assessed.

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

**Table 2: Summary of bushfire protection measures proposed and assessed**

Bushfire Protection Measure	Report Section
Asset Protection Zones	3.3
Landscaping	3.4
Construction standard	3.5
Access	3.6
Water supply	3.7
Electrical services	3.8
Gas services	3.9

### 1.3 Significant environmental features

The subject land is situated within the Sydney Growth Centres biodiversity certified areas. In August 2017, the *Biodiversity Conservation Act 2016* (BC Act) was gazetted and repealed the *Threatened Species Conservation Act 1995* (TSC Act), however under section 43 of the *Biodiversity Conservation (Savings and Transitional) Regulation 2017*, the repeal of the TSC Act does not affect the operation of part 7 or 8 of Schedule 7 to that Act. The effect is that the Biodiversity Certification of the Growth Centres continues to have effect under the new legislation. Biodiversity certification removes the need to conduct impact assessment on certified land for threatened species population and communities listed under the BC Act.

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. NSW Department of Planning, Industry and Environment (DPIE) is the determining authority for this development; they will assess more thoroughly any potential environmental issues.

### 1.4 Aboriginal cultural heritage

An assessment of any Aboriginal cultural heritage objects (within the meaning of the *National Parks and Wildlife Act 1974*) 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 Development Application (DA) process.

The impact footprint of the bushfire protection measures (e.g. APZ) is clearly identified within this report and therefore capable of being assessed by suitably qualified persons as required. DPIE is the determining authority for this development; they will assess more thoroughly any potential Aboriginal cultural heritage issues.

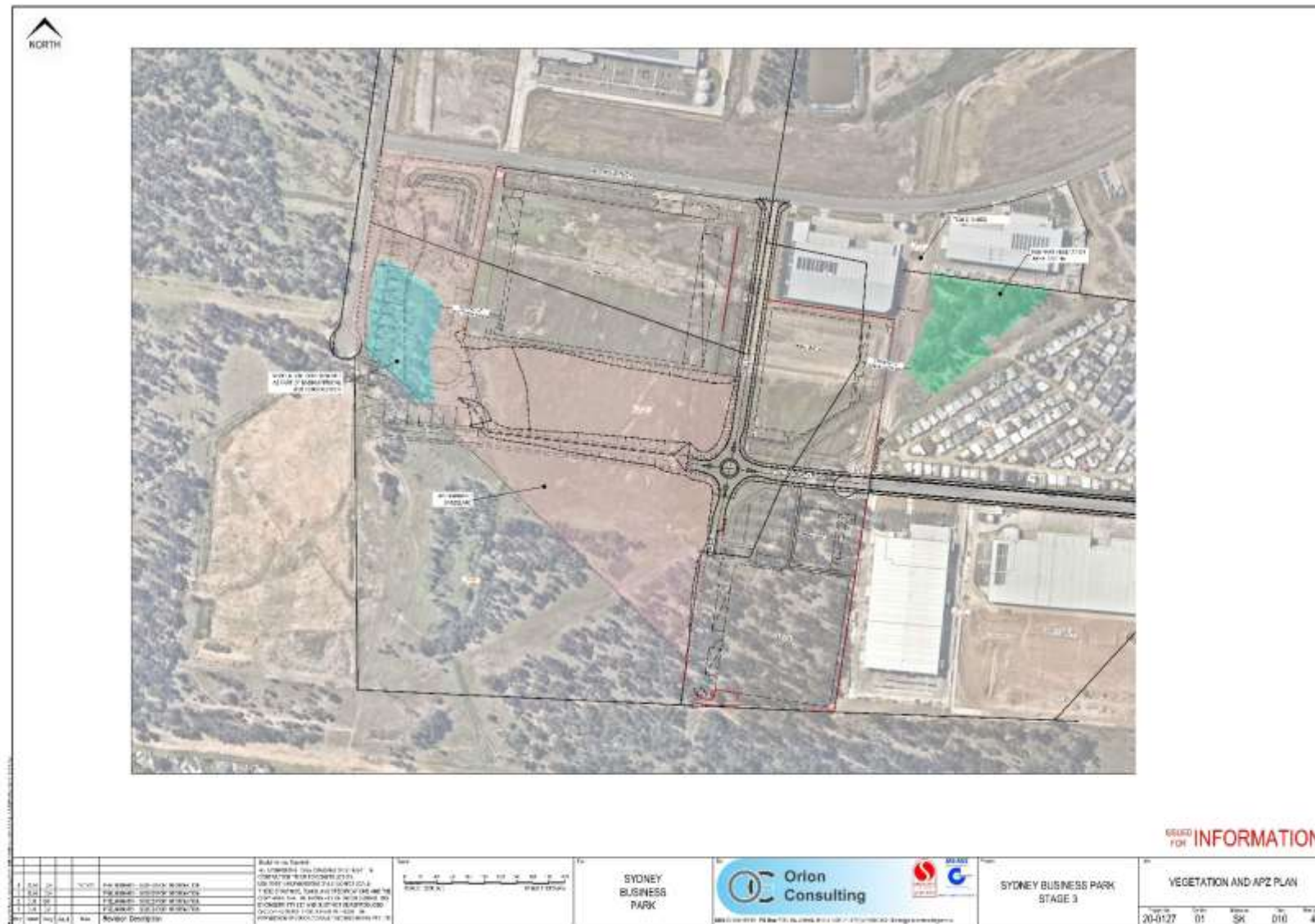


Figure 1: Subdivision layout and built form

## 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 show the effective slope and predominant vegetation representing the highest bushfire threat potentially posed to the subdivision 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 Department of Planning, Industry and Environment mapping (DPIE 2013 and ELA 2020 (**Appendix B**)).

### 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 outside edge of the APZ under the classified vegetation.

The effective slope has been determined from 2 m contour data.

### 2.4 Summary of assessment

As shown in **Figure 2** there are two (2) bushfire hazards within 140 m of the proposed development.

To the east and south-west, the vegetation is identified as *Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion* (DPIE 2013) which falls within the Coastal Valley Grassy Woodlands vegetation class (Keith 2004) and classified as ‘woodland’ under PBP. The effective slope under the hazard in the east falls within the PBP slope category of ‘All upslopes and flat land’ whilst to the south-west, ‘>0-5 degrees downslope’.

The secondary hazard is located to the west and south and identified as *Broad-leaved Ironbark - Grey Box - Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland Plain, Sydney Basin Bioregion* (DPIE 2013) which falls within the Cumberland Dry Sclerophyll Forests vegetation class (Keith 2004) and is classified as ‘forest’ under PBP. Some of this vegetation exists within the boundaries of the subject land as shown in **Figure 2**. This vegetation is non-certified and will be retained. The effective slope under this hazard falls within the PBP slope category of ‘>0-5 degrees downslope’.

The grassland hazard to the south of Warehouse 1 and west of Warehouse 2, 3 and 4 (**Figure 2**) will be managed to Inner Protection Area (IPA) standards until development of the area occurs.

In all other directions the land is managed consisting of land cleared for future industrial development and existing residential development and road reserves.

Table 3: Bushfire hazard assessment, APZ requirements and BALs

Transect # (Figure 2)	Slope	Vegetation Formation	Available APZ	Bushfire Attack Level (BAL)	Comments
<b>Warehouse 1</b>					
4 (West)	>0° to 5° downslope	Forest	≥140 m	BAL-LOW	APZ provided wholly within boundaries of subject land.
All other directions		Managed land			
<b>Warehouse 2</b>					
1 (East)	All upslope and flat land	Woodland	≥51 m	BAL-12.5	APZ provided wholly within boundaries of subject land.
All other directions		Managed land			
<b>Warehouse 3</b>					
All directions		Managed land			
<b>Warehouse 4</b>					
2 (South)	>0° to 5° downslope	Forest	≥8-20 m	BAL-FZ	APZ provided wholly within boundaries of subject land. Approximately 0.06% of the building has less than 10 m APZ.
3 (South- west)	>0° to 5° downslope	Woodland	≥27 m	BAL-19	As above
All other directions		Managed land			

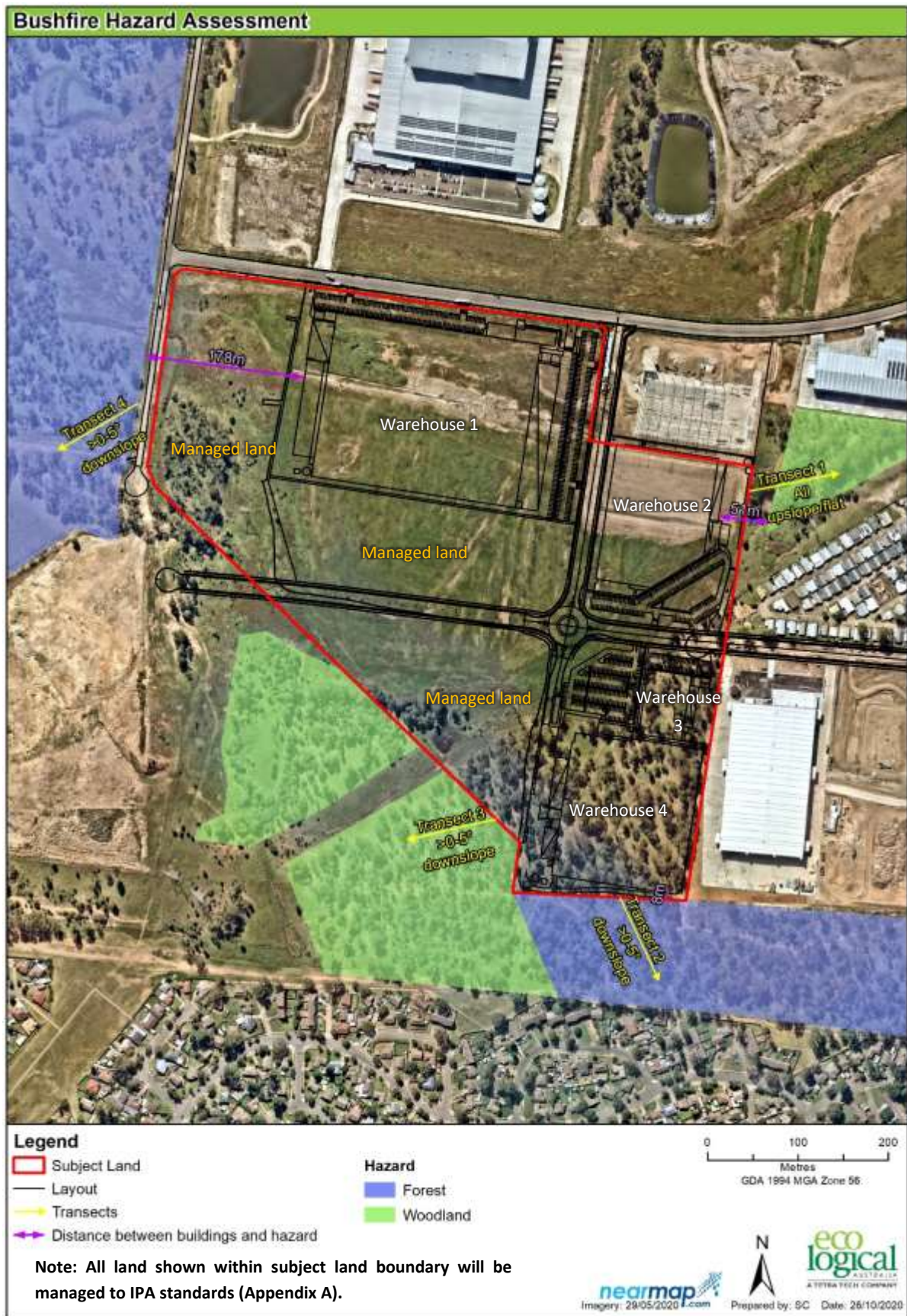


Figure 2: Bushfire hazard assessment

### 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;
  - Each building provides 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 all proposed warehouses by way of perimeter access/road and APZ as shown in **Figure 1** and **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;
  - All buildings have suitable defensible space between hazard and buildings as well as perimeter access around all buildings 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 **Figure 1**, **Figure 2** and demonstrated further in Section 0 meeting the specific objectives under Section 3.2.
- **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 3.7 – 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 0 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 and each building has additional dedicated sprinkler water supply. Electricity to the development is underground and complies with PBP. Supply of gas (if any) will be installed and maintained in accordance with Section 3.9 of this report.
- **Specific Objective 4** - provide for the storage of hazardous materials away from the hazard wherever possible.
  - The buildings within the proposed development will be required to store any hazardous materials (if any) in accordance with the relevant safety guidelines and safety data sheets.

### 3.3 Asset Protection Zones

**Table 3** and **Figure 2** shows the separation distance between the proposed development and the bushfire hazard (APZ) and where relevant, information on how the APZ is to be provided is included.

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

All land within the subject land boundaries (Figure 2) will be managed to IPA standards outlined in Appendix A.

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 4: 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 all proposed warehouses by way of perimeter access/road as shown in <b>Figure 1</b> and <b>2</b> .

Performance Criteria	Acceptable Solutions	Compliance Notes
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 5**.

**Table 5: 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 3.5.3)
	Trees and shrubs are located so that: - the branches will not overhang the roof; - the tree canopy is not continuous; and - any proposed wind break is located on the elevation from which fires are likely to approach.	<b>To comply</b> APZ / Landscaping is to be managed in accordance with PBP. Landscaping specifications provided in <b>Appendix A</b> .

### 3.5 Construction standards

The proposal is exposed to:

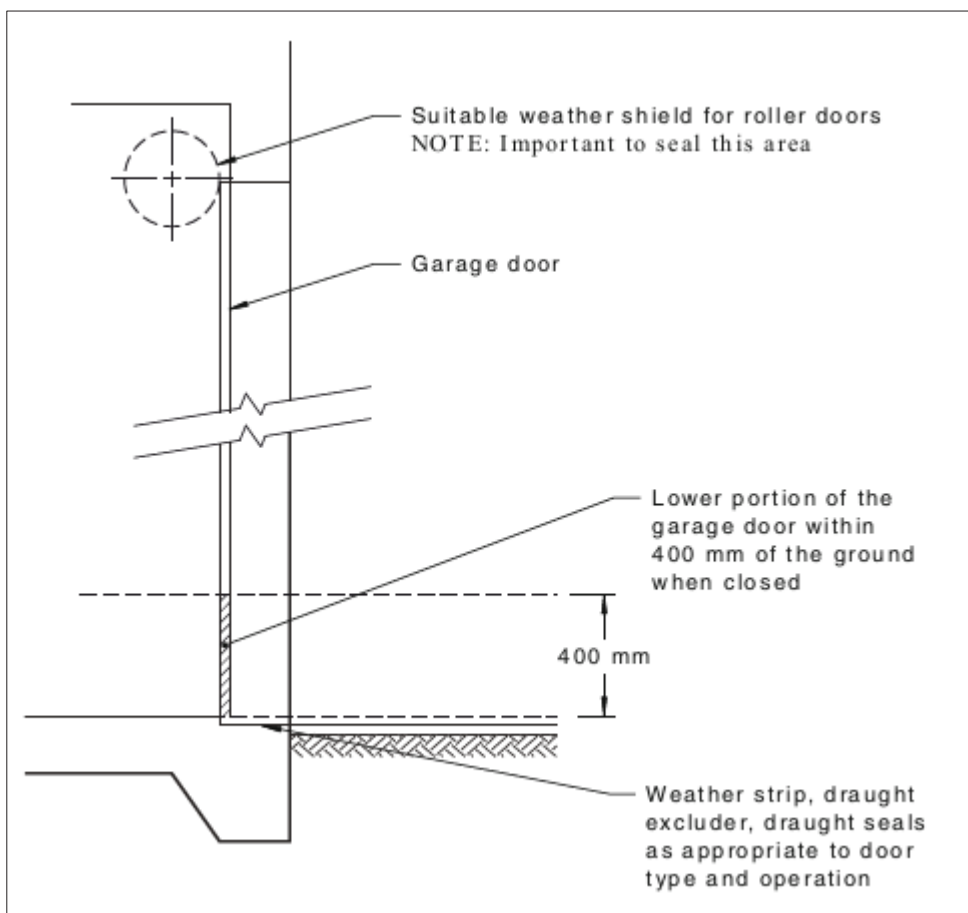
*Warehouse 1 and 3*

- BAL-LOW – no bushfire construction requirements.

## Warehouse 2

The building is exposed to ≤BAL-29 therefore NCC fire safety provisions and ember protection upgrades from AS 3959:2018 are considered suitable for industrial/commercial construction as discussed with RFS (pers comm Adam Small). Ember protection upgrades are as follows:

- All external exposed construction materials shall be of non-combustible material;
- 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)**

#### Warehouse 4

As shown in Figure 4 the warehouse is impacted by BAL-FZ (southern elevation) through to BAL-LOW (northern elevation). The northern elevation is 135 m from the nearest bushfire hazard and is shielded by the other elevations, whilst it is not impacted by a BAL, RFS was consulted (Simon Derevnin 8 December 2020) and recommended BAL-12.5 apply. Construction is recommended as follows:

- Roof, sub floor and southern, eastern and western elevations = BAL-FZ (Section 9);
- Northern elevation = BAL-12.5 (Section 5).

#### 3.5.1 Construction requirements

The Deemed to Satisfy (DtS) provisions of the NCC for construction requirements for buildings in designated bushfire prone areas are specified in:

- AS 3959:2018 Construction of buildings in bushfire prone areas (SA 2018);
- NASH Standard: Steel Framed Construction in Bushfire Areas 2014 (NASH 2014).

#### 3.5.2 Additional construction requirements

For construction complying with the specifications detailed in AS 3959:2018 (SA 2018), the additional ember protection provisions identified in section 7.5 in PBP applies as required.

For construction complying with the specifications detailed in the NASH standard (NASH 2014), all gaps in roofing assemblies shall be limited to 2 mm unless protected with ember guards made of non-combustible materials, a mesh or perforated sheet with a maximum aperture of 2 mm made of corrosion-resistant steel or bronze or protected with mineral wool or other non-combustible material.

#### 3.5.3 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.



Figure 4: Bushfire Attack Level – Warehouse 4

### 3.6 Access

Public access to and within the proposed development meets the specific objectives of PBP (Section 3.1 and 3.2) based on the following:

- All access roads within the development are two-wheel drive, all-weather roads;
- The capacity of road surfaces (including bridges/causeways if any) will have minimum carry load of 23 tonnes and bridges/causeways to clearly indicate load rating;
- Hydrants will be provided in accordance with AS 2419:1:2005 (SA 2005);
- There is suitable access for Category 1 fire tanker to access all structures;
- Perimeter access is provided along the hazard interface and around each building for emergency services, at a minimum 6 m wide which complies with 'non-perimeter road' requirements under PBP;
- Internal roads are minimum 6 m wide;
- Public roads are greater than 8 m kerb to kerb, linked to an internal road system at intervals no greater than 500 m;
- All roads within the development meet the acceptable solutions/performance criteria for public roads under Section 7 of PBP.

### 3.7 Water supplies

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

**Table 6: Water supply requirements (adapted from Table 7.4a of PBP)**

Performance Criteria	Acceptable Solution	Compliance Notes
Adequate water supplies is provided for firefighting purposes.	Reticulated water is to be provided to the development where available;  A static water supply is provided where no reticulated water is available.	<b>Complies</b>  Proposal serviced by a reticulated water supply.  Additional sprinkler water tanks are located at each building.
Water supplies are located at regular intervals; and  The water supply is accessible and reliable for firefighting operations.	Fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS 2419.1 (SA 2005);  Hydrants are not located within any road carriageway; and  Reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.	<b>Can comply</b>  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.	Fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1 (SA 2005).	
The integrity of the water supply is maintained.	All above-ground water service pipes are metal, including and up to any taps; and  Above-ground water storage tanks shall be of concrete or metal.	

### 3.8 Electricity services

The compliance of the proposed supply of electricity services with Section 7.4 of PBP is detailed in **Table 7**.

**Table 7: 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.	Where practicable, electrical transmission lines are underground;	<b>Complies</b> Electricity services to the subject site are located underground.
	Where overhead, electrical transmission lines are proposed as follows:  Lines are installed with short pole spacing (30 m), unless crossing gullies, gorges or riparian areas; and  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).	<b>Not applicable.</b>

### 3.9 Gas services

The compliance of the proposed supply of gas services (reticulated or bottle gas) with Section 7.4 of PBP is detailed in **Table 8**.

**Table 8: Requirements for the supply of gas services (adapted from Table 5.3c 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.	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;  All fixed gas cylinders are kept clear of all flammable materials to a distance of 10 m 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.	<b>To comply</b> 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 5.3c of PBP.

### 3.10 Staged development

The proposed development will be constructed in a staged manner and it is the responsibility of the proponent to implement the identified bushfire protection measures to each stage as identified in this assessment. Implementation of these measures may be temporary in nature (i.e. APZ, fire trails, turning areas) until future stages are developed.

### 3.11 Emergency and Evacuation Planning

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 requirements of the Work Health safety Regulation 2017, relevant legislation and building requirement of the NCC is considered suitable and commensurate to risk for this development.

## 4. Conclusion

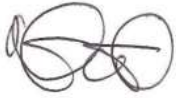
The proposed development meets the specific objectives of *'Planning for Bush Fire Protection 2019'*, as outlined in **Table 9** below.

**Table 9: Development Bushfire Protection Solutions and Recommendations**

Bushfire Protection Measures	Recommendations	Report Section
Asset Protection Zones	This assessment indicates the proposed development will comply with the PBP APZ performance criteria ( <b>Figure 2</b> ). The entire subject land is to be managed to IPA standards in perpetuity to the specifications detailed in <b>Appendix A</b> .	3.3
Landscaping	Any future landscaping meets the requirements of PBP listed in <b>Appendix A</b> .	3.4
Construction standard	Buildings within the development are to be constructed in accordance with Section 3.5 of this report.	3.5
Access	Access to meet specific objectives as per Section 3.2 and 3.5 of this report.	3.6
Water supply	Reticulated water supply to meet PBP acceptable solution specifications for a subdivision.	3.7
Electricity service	Electricity supply located underground.	3.8
Gas service	Gas services are to be installed and maintained in accordance with AS/NZS 1596:2014.	3.9
Emergency and Evacuation Planning	Emergency plan meeting requirements of the Work Health safety Regulation 2017 and relevant legislation is to be prepared for each building.	3.11

## 5. Recommendations

It is recommended that the proposed development be approved with consent conditions based on the findings in **Table 9**.



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## 6. References

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## Appendix A - Asset protection zone and landscaping standards

The following APZ management specifications in **Table 10** apply to the APZs specified in **Table 3** 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 3** 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 10: APZ management specifications**

Vegetation Strata	Inner Protection Area (IPA)
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>
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>
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>

## Appendix B - ELA 2020 Flora and Fauna Assessment / Biodiversity Development Assessment Report

15 July 2020

Our Reference: 20SYD - 16423

Marsden Park Developments Pty Ltd  
920 Richmond Road,  
P.O Box 262, Riverstone  
NSW 2765

Attention: Michael Gray

Dear Michael,

**Sydney Business Park Stage Three State Significant Development Application – Flora and Fauna Assessment / Biodiversity Development Assessment Report Waiver**

This letter describes the assessment of biodiversity values for the above project. The State Significant Development Application (SSDA) will involve the development of large format warehousing and logistics, which will include clearing of vegetation, subdivision of land, road and drainage works, bulk earthworks, building construction and services. It is understood that the proposal may also include a temporary stormwater detention basin and associated infrastructure (Figure 1).

**BIODIVERSITY CERTIFICATION**

Eco Logical Australia has undertaken a review of the proposed development, including the temporary stormwater detention basin, and can confirm that the entire site is 'subject land' according to Part 7 (*Biocertification of the Sydney region growth centres SEPP and related EPIs*) of Schedule 7 to the *Threatened Species Conservation Act 1995* (TSC Act) (Figure 1).

In August 2017 the *Biodiversity Conservation Act 2016* (BC Act) was gazetted and repealed the TSC Act. Under section 43 of the *Biodiversity Conservation (Savings and Transitional) Regulation 2017* (BC (Savings and Transitional) Regulation), the repeal of the TSC Act does not affect the operation of part 7 or 8 of Schedule 7 to that Act.

Section 8.4(2) of the BC Act describes the effect of biodiversity certification in relation to development under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This section states '*an assessment of the likely impact on biodiversity of development on biodiversity certified land is not required for the purposes of Part 4 of the EP&A Act 1979*'.

Within the wider study area, there is an area to the west of the development, which is not biodiversity certified. The proposal does not involve disturbance to this area. Therefore, there will be no impacts to biodiversity values in the non-certified land.

### STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY REGION GROWTH CENTRES) 2006

The *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (Sydney Region Growth Centres SEPP) Appendix 5 *Marsden Park Industrial Precinct Plan* contains controls for the clearing of Existing Native Vegetation (ENV) and Native Vegetation Retention Areas (NVR) as shown on the Native Vegetation Protection Map.

Clause 6.5(4) of the Precinct Plan states:

*The consent authority must not grant development consent for development on land to which this clause applies unless it is satisfied that the proposed development will not result in the clearing of any existing native vegetation (within the meaning of the relevant biodiversity measures under Part 7 of Schedule 7 to the Threatened Species Conservation Act 1995).*

Although there is an area mapped as ENV in the wider study area, west of the development, (Figure 1), the proposal does not involve disturbance to this area. It is the understanding of the proponent that Blacktown City Council are currently undertaking studies to design a regional stormwater basin within this area, as outlined within the Indicative Layout Plan (ILP). There is no mapped NVR within the wider study area or development site. Therefore, these clauses do not apply.

### SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS AND THE BIODIVERSITY CONSERVATION ACT 2016

In accordance with Clause 7.9(2) of the BC Act, an application for State Significant Development is *to be accompanied by a biodiversity development assessment report (BDAR) unless the Planning Agency Head and the Environmental Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values.*

A Fact Sheet for BDAR Waivers advises:

*A BDAR waiver will only be issued in limited circumstances where it is clearly demonstrated, based on information provided by a proponent in accordance with this fact sheet, that the proposed development is not likely to have any significant impact on biodiversity values. For example, internal works to an existing building or development on a brownfield site with no threatened species habitat. Development that requires clearing of native vegetation is likely to require a BDAR. If there is doubt regarding potential impacts, or where information is not made available, a BDAR waiver will not be issued.*

This letter has therefore addressed Section 1.5 of the BC Act and Clause 1.4 of the *Biodiversity Conservation Regulation 2017* (BC Regulation), within Appendix B to assess the biodiversity values on site. As there are no impacts to biodiversity on non-certified land, this letter concludes that there will not be a significant impact to biodiversity values and that the proponent should seek a waiver from the Department of Planning, Industry and Environment (DPIE) for the preparation of a BDAR. This letter should be submitted in support of that application for a BDAR waiver.

### BLACKTOWN CITY COUNCIL GROWTH CENTRE PRECINCTS DEVELOPMENT CONTROL PLAN 2010

Section 2.3.4.2 of the Blacktown City Council Growth Centres Precinct Development Control Plan 2010 (Blacktown Growth Centres DCP) contains provisions relating to native bushland and fauna habitat preservation. Table 1 outlines how the proposed development has considered such provisions.

**Table 1: Blacktown Growth Centre Precincts DCP Controls**

Liverpool Growth Centres Precinct DCP Clause	Comments
<p>Native trees and other vegetation are to be retained where possible by careful planning of subdivisions to incorporate trees into areas such as road reserves and private or communal open space.</p>	<p>The development site is wholly biodiversity certified. Retainment of existing trees will be considered within the Landscape Plans. Although patches of native vegetation are proposed for removal, this will be compensated through the planting of endemic street trees (where feasible) as well as the protection and management of mapped ENV areas in the vicinity of the development. Furthermore, the loss of native vegetation within biodiversity certified lands has been compensated through the strategic planning of the North West Growth Centre, through the use of biodiversity offsets.</p>
<p>Where practical, prior to development commencing, applicants are to:</p> <ul style="list-style-type: none"> <li>• provide for the appropriate re-use of native plants and topsoil that contains known or potential native seed bank; and</li> <li>• relocate native animals from development sites. Applicants should refer to OEH's <i>Policy on the Translocation of Threatened Fauna in NSW</i>.</li> </ul>	<p>The development site is wholly biodiversity certified. Retainment of existing trees will be considered within the Landscape Plans. Although patches of native vegetation are proposed for removal, this will be compensated through the planting of endemic street trees (where feasible) as well as the protection and management of mapped ENV areas in the vicinity of the development. Furthermore, the loss of native vegetation within biodiversity certified lands has been compensated through the strategic planning of the North West Growth Centre, through the use of biodiversity offsets.</p> <p>If required, pre-clearance works to avoid accidental harm to native fauna species will be undertake prior to construction.</p>
<p>Within land that is in a <b>Riparian Protection Area</b> as shown on the figure in the relevant Precinct Schedule:</p> <ul style="list-style-type: none"> <li>• all existing native vegetation is to be retained and rehabilitated, except where clearing is required for essential infrastructure such as roads; and</li> <li>• native vegetation is to be conserved and managed in accordance with the Riparian Protection Area controls at <b>Appendix B</b>.</li> </ul>	<p>The development site is not within land that is mapped as a Riparian Protection Area. Therefore, this clause does not apply.</p>
<p>Development on land that adjoins land zoned E2 Environmental Conservation is to ensure that there are no significant detrimental impacts to the native vegetation and ecological values of the E2 zone.</p>	<p>The development site area does not adjoin land zoned as E2 (Environmental Conservation). Therefore, this clause does not apply.</p>
<p>All subdivision design and bulk earthworks are to consider the need to minimise weed dispersion and eradication. If council believes that a significant weed risk exists, a Weed Eradication and Management Plan outlining weed control measures during and after construction is to be submitted with the subdivision DA.</p>	<p>If required, the proponent will prepare and implement a Weed Eradication and Management Plan.</p>
<p>A landscape plan is to be submitted with all subdivision development applications, identifying:</p> <ul style="list-style-type: none"> <li>• all existing trees on the development site and those that are proposed to be removed or retained;</li> </ul>	<p>A Landscape Plan will be submitted with the SSDA.</p>

Liverpool Growth Centres Precinct DCP Clause	Comments
<ul style="list-style-type: none"> <li>the proposed means of protecting trees to be retained during both construction of subdivision works and construction of buildings;</li> <li>proposed landscaping including the locations and species of trees, shrubs and ground cover to be planted as part of subdivision works; and</li> <li>the relationship of the proposed landscaping to native vegetation that is to be retained within public land, including factors such as the potential for weed or exotic species invasion and the contribution of the proposed landscaping</li> </ul>	

The selection of trees and other landscaping plants is to consider: A Landscape Plan will be submitted with the SSDA.

- The prescribed trees in **Appendix D**;
- The use of locally indigenous species where available;
- Contribution to the management of soil salinity, groundwater levels and soil erosion.

#### COMMONWEALTH STRATEGIC ASSESSMENT (ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999 (EPBC ACT))

On 28<sup>th</sup> February 2012, the Commonwealth Minister for the Environment announced that the program of development activities within the Growth Centres was approved under the EPBC Act Strategic Assessment process. Specifically, all actions associated with the development of the Western Sydney Growth Centres as described in the Sydney Growth Centres Strategic Assessment Program Report (Nov 2010) have been assessed at the strategic level and approved in regard to their impact on the following Matters of National Environmental Significance:

- World Heritage Properties
- National Heritage Places
- Wetlands of International Importance
- Listed threatened species and communities
- Listed migratory species

These decisions indicate that the Commonwealth is satisfied that the conservation and development outcomes that will be achieved through the Western Sydney Growth Centres Program will satisfy their requirements for environmental protection under the EPBC Act. Provided that development activity proceeds in accordance with the Growth Centres requirements (such as the Biodiversity Certification Order, the Growth Centres SEPP and DCPs, Growth Centres Development Code etc.) there is no requirement to assess the impact of development activities on Matters of National Environmental Significance within the Growth Centres and no requirement for referral of activities to the Commonwealth Department of Environment.

The site is therefore exempt from further assessment of threatened species and endangered ecological communities listed under the NSW BC Act or Commonwealth EPBC Act.

Where habitat for native fauna is to be removed such as hollow-bearing trees or dams, the works should be done in such a manner that minimises the risk of risk of injury or death to native fauna. For this site we would recommend undertaking tree removal with the supervision of a qualified ecologist or fauna spotter/catcher to ensure fauna is relocated in an appropriate manner and that appropriate measures are taken to minimise fauna injury or death.

Should you have any questions on this matter, please contact me on (02) 9259 3745.

Regards,

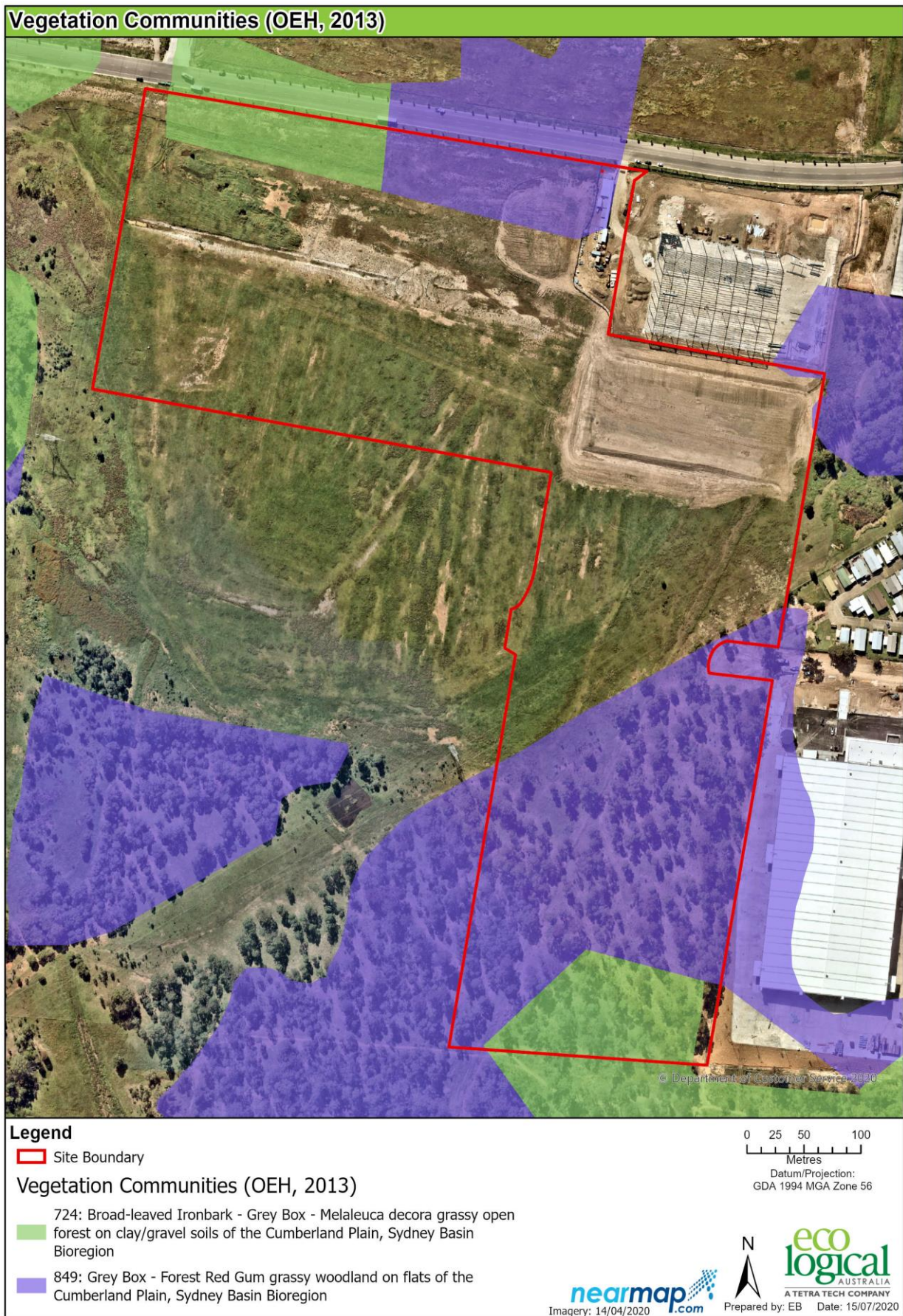
A handwritten signature in black ink, appearing to read 'Rebecca', with a stylized flourish at the end.

Rebecca Ben-haim  
Environmental Consultant

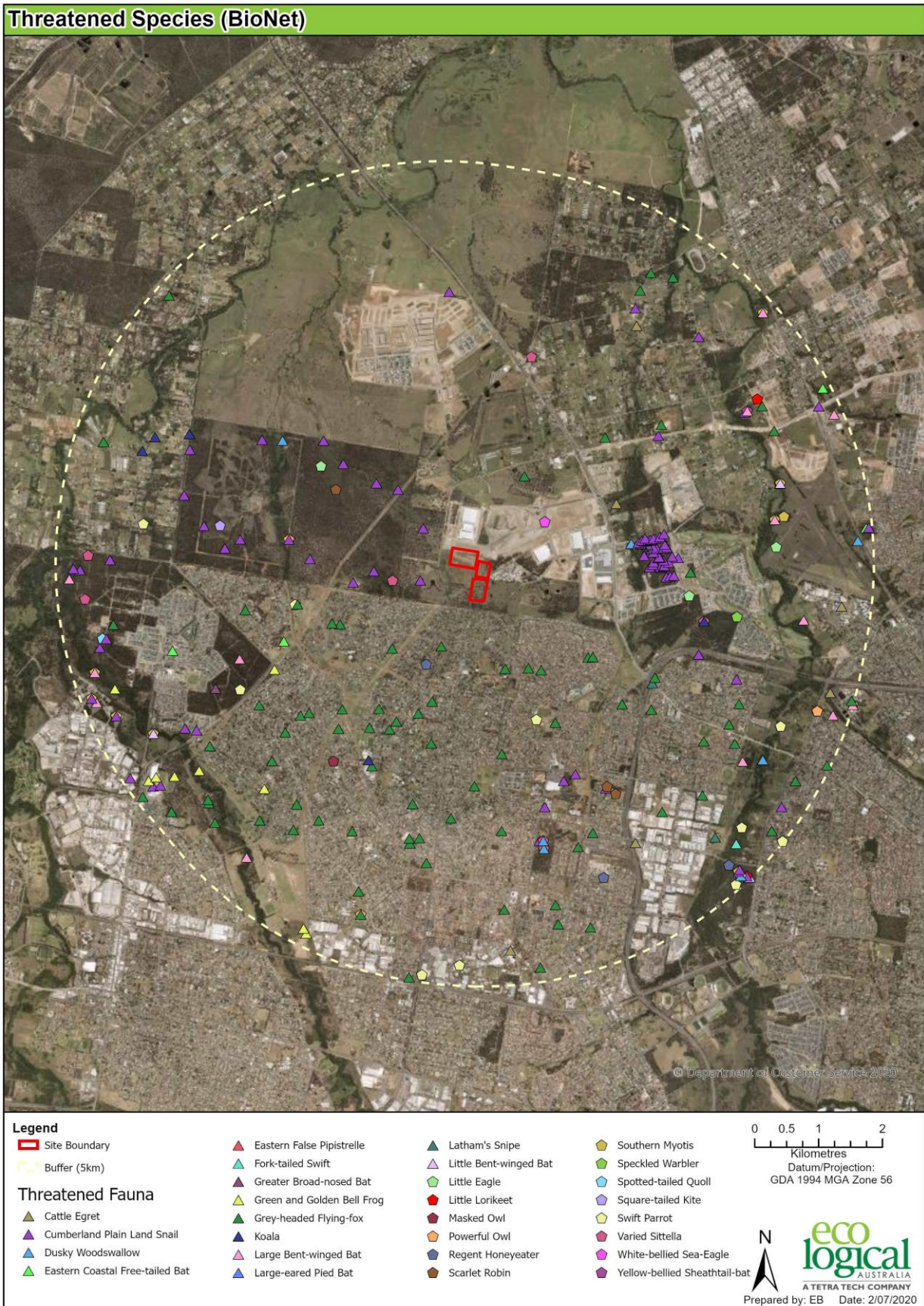
## Appendix A Figures



**Figure 1 Biodiversity Certified Land and mapped Existing Native Vegetation in relation to the development area**

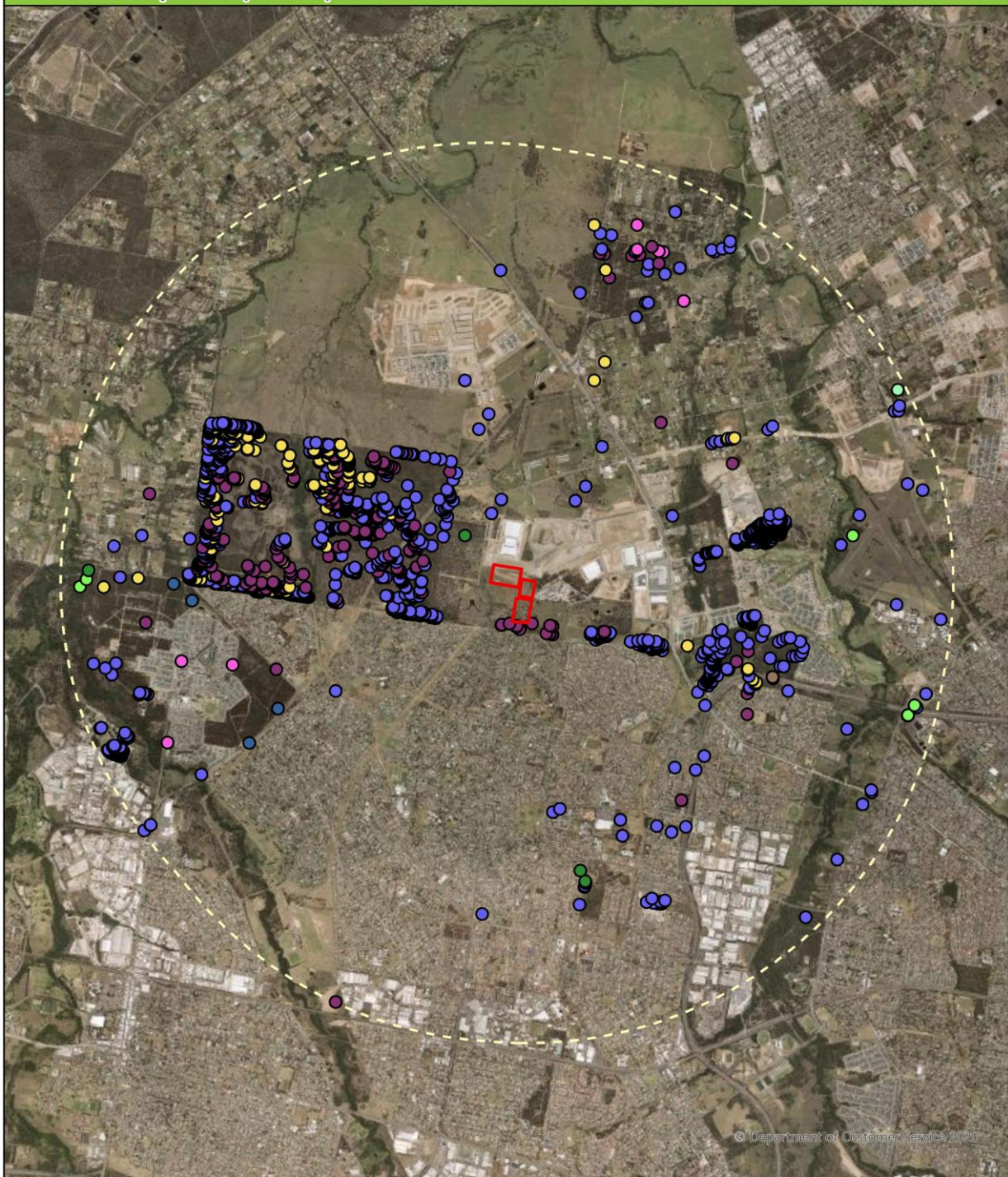


**Figure 2: Previously mapped vegetation communities within the study are (OEH, 2013)**



**Figure 3: Previously recorded threatened fauna species within a 5 km buffer of the study area (BioNet)**

## Threatened Species (BioNet)



### Legend

Site Boundary

Buffer (5km)

### Threatened Flora

● *Dillwynia tenuifolia*

● *Grevillea juniperina* subsp. *juniperina*

● *Hibbertia puberula*

● *Isotoma fluviatilis* subsp. *fluviatilis*

● *Marsdenia viridiflora* subsp. *viridiflora*

● *Micromyrtus minutiflora*

● *Persoonia nutans*

● *Pimelea curviflora* var. *curviflora*

● *Pimelea spicata*

● *Pultenaea parviflora*

● *Syzygium paniculatum*

0 0.5 1 2  
Kilometres

Datum/Projection:  
GDA 1994 MGA Zone 56

N  
**eco**  
**logical**  
AUSTRALIA  
A TETRA TECH COMPANY  
Prepared by: EB Date: 2/07/2020

Figure 4: Previously recorded threatened flora species within 5 km of the study area (BioNet)

## Appendix B BDAR Waiver

**Table 2 Criteria to assess biodiversity under the BC Act and BC Regulation**

Biodiversity Value	Meaning	Relevant	Discussion of values within subject site
<b>Biodiversity Conservation Regulation (Clause 1.4)</b>			
a) Threatened Species Abundance	The occurrence and abundance of threatened species or threatened ecological communities, or their habitat, at a particular site.	Yes	<p>Although there is existing threatened ecological communities present within the site (Figure 2), being Cumberland Plain Woodland, which is critically endangered under both the BC Act and EPBC Act and Shale Gravel Transition Forest, which is endangered under the BC Act and critically endangered under the EPBC Act, the entire development site is biodiversity certified.</p> <p>Section 8.4(2) of the BC Act describes the effect of biodiversity certification in relation to development under Part 4 of EP&amp;A Act. This section states ‘<i>an assessment of the likely impact on biodiversity of development on biodiversity certified land is not required for the purposes of Part 4 of the EP&amp;A Act 1979</i>’.</p> <p>One portion of the wider study area, west of the development site, is not biodiversity certified and is also mapped as ENV. No works are proposed within this area. It is the understanding of the proponent that Blacktown City Council are currently undertaking studies to design a regional stormwater basin within this area, as outlined within the ILP.</p> <p>No threatened species have previously been recorded within the study area. However, there is a population of <i>Pultenaea parviflora</i> directly south of the study area (Figure 4), which is endangered under the BC Act and vulnerable under the EPBC Act. The proposed development is not anticipated to impact on this species.</p> <p>Furthermore, the large patch of non-biodiversity certified vegetation to the west of the study area will be protected.</p>
b) Vegetation Abundance	The occurrence and abundance of vegetation at a particular site.	Yes	<p>Although the vegetation within the subject site is of relatively high abundance and biodiversity quality, the entirety of the development site is biodiversity certified. Areas within the wider study area to the west of the development site, that are not biodiversity certified, are not proposed to be impacted by the proponent and are intended to be protected and managed through the requirements of the Sydney Region Growth Centres SEPP. Furthermore, the patches of vegetation to the west and directly south of the study area, which are not biodiversity certified, are intended to be protected.</p>
c) Habitat Connectivity	The degree to which a particular site connects different areas of habitat of threatened species to	N/A	<p>Although the vegetation within the subject site is connected to a larger patch directly south of the study area, the vegetation proposed to be impacted is wholly biodiversity certified. There still remains existing vegetation between the two remnant patches to the west and south of the study area, which would be currently utilised by threatened species.</p>

Biodiversity Value	Meaning	Relevant	Discussion of values within subject site
	facilitate movement of those species across their range.		Section 8.4(2) of the BC Act describes the effect of biodiversity certification in relation to development under Part 4 of EP&A Act. This section states ' <i>an assessment of the likely impact on biodiversity of development on biodiversity certified land is not required for the purposes of Part 4 of the EP&amp;A Act 1979</i> '.
d) Threatened Species Movement	The degree to which a particular site contributes to the movement of threatened species to maintain their lifecycle.	N/A	The site contains remnant threatened ecological communities, which would provide habitat for the movement of threatened species. However, the majority of the study area is biodiversity certified. No areas of non-biodiversity certified land are proposed to be impacted by the proponent.
e) Flight Path Integrity	The degree to which the flight paths of protected animals over a particular site are free from interference.	N/A	The site contains remnant threatened ecological communities, which would provide habitat for the movement of threatened species. However, the entirety of the development site is biodiversity certified. No areas of non-biodiversity certified land are proposed to be impacted by the proponent.
f) Water Sustainability	The degree to which water quality, water bodies and hydrological processes sustain threatened species and threatened ecological communities at a particular site.	N/A	No natural water courses are present within the site. In its current state, the site does not contain water bodies or contribute to hydrological processes that sustain threatened species or ecological communities within or adjacent to the site.
<b>Biodiversity Conservation Act (Clause 1.5 (2))</b>			
a) Vegetation Integrity	The degree to which the composition, structure and function of vegetation at a particular site and the surrounding landscape has been altered from a near natural state.	N/A	Although there is existing threatened ecological communities present within the site (Figure 2), being Cumberland Plain Woodland and Shale Gravel Transition Forest, the entire development site is biodiversity certified.  Section 8.4(2) of the BC Act describes the effect of biodiversity certification in relation to development under Part 4 of EP&A Act. This section states ' <i>an assessment of the likely impact on biodiversity of development on biodiversity certified land is not required for the purposes of Part 4 of the EP&amp;A Act 1979</i> '.
b) Habitat Suitability	The degree to which the habitat needs of threatened species are present at the particular site.	N/A	The study area is likely to provide suitable habitat for threatened species however, the proposed development is within biodiversity certified land.  Section 8.4(2) of the BC Act describes the effect of biodiversity certification in relation to development under Part 4 of EP&A Act. This section states ' <i>an assessment of the likely impact on biodiversity of development on biodiversity certified land is not required for the purposes of Part 4 of the EP&amp;A Act 1979</i> '.

