



Travers

bushfire & ecology

Bushfire Protection Assessment

Industrial Development

Food Processing and
Packaging Facility
at Part Lot 2304 DP 1172543
Templar Road, Erskine Park

Under Section 79BA of the EP&A Act



July 2013
(REF: A13074)



Bushfire Protection Assessment

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at Part Lot 2304 DP 1172543
Templar Road, Erskine Park

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Date: 31/07/2013
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The mapping is indicative of available space and location of features which may prove critical in assessing the viability of the proposed works. Mapping has been produced on a map base with an inherent level of inaccuracy, the location of all mapped features are to be confirmed by a registered surveyor.

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Executive Summary

This bushfire protection assessment has been prepared for submission to the NSW Department of Planning and Infrastructure (DoPI) to accompany the application for a state significant development (SSD) for the proposed construction of a fresh food packing centre to be located within the southern portion of Lot 2304 DP 1172543 Templar Road, Erskine Park.

The proposed industrial development is categorised by the NSW Rural Fire Service (RFS) planning policy document *Planning for bush fire protection 2006 (PBP)* as being other development.

The RFS requires that development applications should satisfy the aims and objectives of *PBP*, propose a combination of bushfire protection measures and provide evidence that the intent of each measure can be satisfied.

The assessment found that bushfire can potentially affect the site from the existing and recently revegetated vegetation located to the south and south east, which forms part of the biodiversity corridor that adjoins the site, but this is an acceptable risk if managed in accordance with this report.

The bushfire risk can be mitigated if appropriate bushfire protection measures are put in place and managed in perpetuity.

In conclusion, the assessment has concluded that the proposed development will provide compliance with *PBP*.

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Schedule 1 - Bushfire Protection Measures

List of Abbreviations

APZ	asset protection zone
AS3959	Australian Standard 3959 Construction of buildings in bushfire-prone areas 2009
BCA	Building Code of Australia
BSA	bushfire safety authority
DCP	development control plan
DoPI	Department of Planning and Infrastructure
DPI	Department of Primary Industries
EEC	endangered ecological community
EIS	environmental impact statement
<i>EP&A Act</i>	<i>Environmental Planning & Assessment Act 1979</i>
<i>EPBC Act</i>	<i>Environmental Protection & Biodiversity Conservation Act 1999</i>
EPDCP	Erskine Park Development Control Plan 2006
FDI	fire danger index
IPA	inner protection area
LGA	local government area
LPG	liquid petroleum gas
PLEP	Penrith Local Environmental Plan
OPA	outer protection area
<i>PBP</i>	<i>Planning for bush fire protection 2006</i>
<i>RF Act</i>	<i>Rural Fires Act 1997</i>
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	special fire protection purpose
SSD	state significant development
<i>TSC Act</i>	<i>Threatened Species Conservation Act 1995</i>
WSEA	Western Sydney Employment Area



Introduction

1

Travers bushfire & ecology has been requested by *Commercial & Industrial Property Pty Ltd* to undertake a bushfire protection assessment in support of the proposed construction of the new fresh food packing centre to be located within the southern portion of Lot 2304 DP 1172543 Templar Road, Erskine Park.

1.1 Aims of the assessment

The aims of the bushfire protection assessment are to:

- Review the bushfire threat to the landscape
- Undertake a bushfire attack assessment in accordance with *PBP*
- Provide advice on mitigation measures, including the provision of asset protection zones (APZs), construction standards and other specific fire management issues
- Review the potential to carry out hazard management over the landscape

1.2 Project synopsis

The project is being advanced as a state significant development (SSD) and falls under Schedule 2 Class 3 of SEPP (State and Regional Development) 2011.

The project involves the construction of a new fresh food packing centre where fresh cuts of meat and poultry will be prepared, packaged and labelled before being distributed to stores. The premises will be a receiving facility for already processed bulk red meat and poultry which will be cut and packaged for distribution to retail sales outlets.

The total proposed building area is 21,017m² and comprises the following components:

- 17,735m² processing area
- 1,036m² of office space
- 2,246m² service buildings and amenities

A total of 21,623m² of pavement is proposed accommodating vehicle circulation and car parking. A total of 250 car parking spaces are proposed within the western and southern perimeters of the site.

The site will also accommodate dedicated waste storage and collection housing, waste water treatment facility and gas storage.

The facility is designed to operate 24 hours a day, 7 days a week to support a staff base of approximately 400 full time employees.

Dangerous goods to be housed and used on site will comprise:

- Oxygen tank - 6,000L
- Nitrogen tank - 3,000L
- Carbon dioxide tank - 50,000kg
- Cleaning chemical bulk storage sanitiser - 5,000L
- Hypofoam detergent - 20,000L
- Acid (SAM 401) - 10 x 20L
- Ammonia – 4,800kg

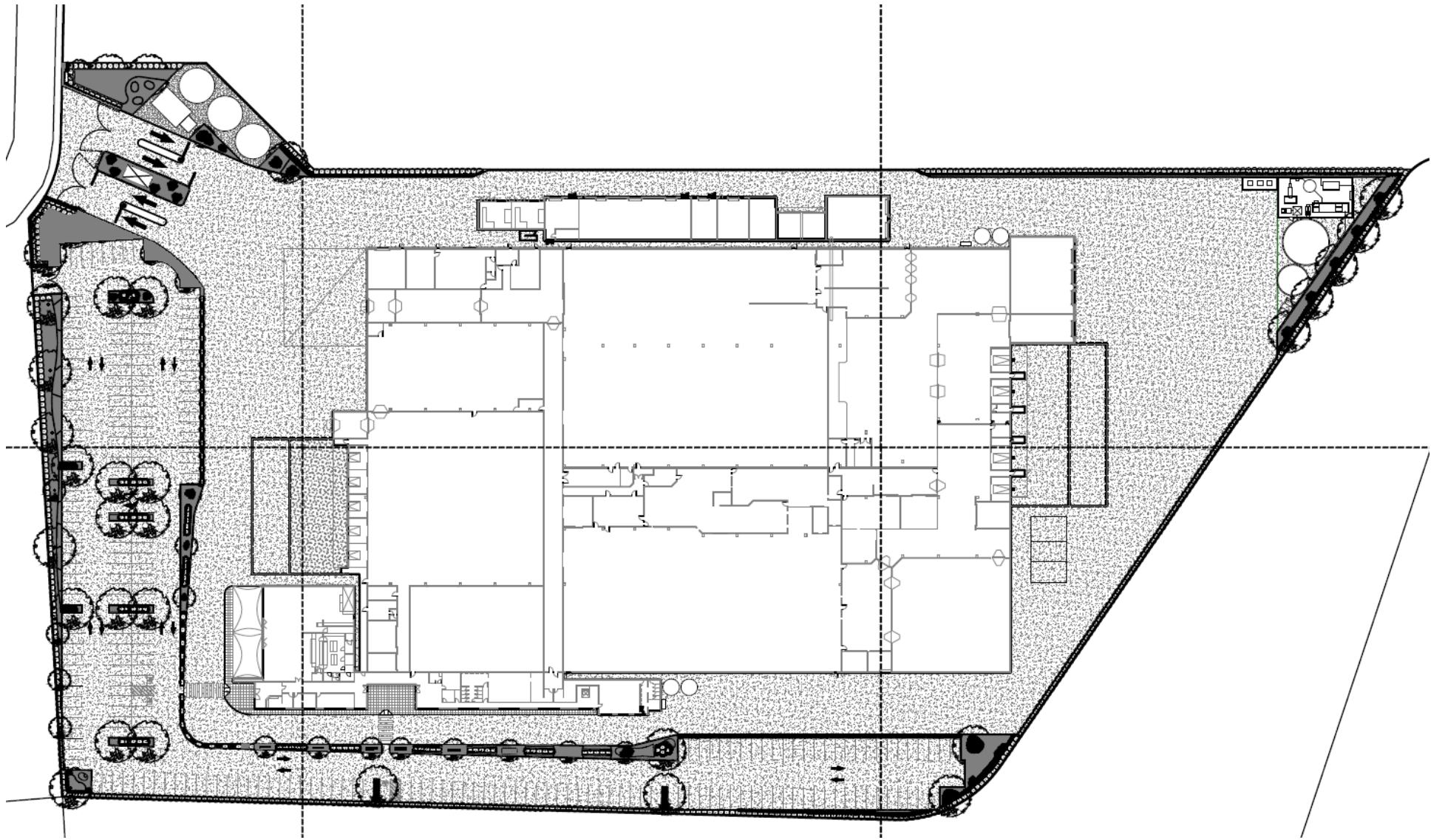


Figure 1.1 – Landscape Plan (source: *Arcadia Landscape Architecture*)

1.3 Information collation

To achieve the aims of this report, a review of the information relevant to the property was undertaken prior to the initiation of field surveys. Information sources reviewed include the following:

- Site plan prepared by *Nicholas & Alexander Architects*, June 2013
- Preliminary Environmental Impact Statement Site G – Lot 2304 Templar Road, Erskine Park prepared by *SJB Planning*, 12 June 2013
- Biodiversity Management Plan Erskine Park Employment Area prepared by *HLA Envirosciences Pty Ltd*, May 2006.
- *Google* aerial photograph
- Topographical maps *DLPI of NSW 1:25,000*
- *Australian Standard 3959 Construction of buildings in bushfire-prone areas 2009 (AS3959)*
- *Planning for bush fire protection 2006 (NSW RFS)*.

An inspection of the proposed development site and surrounds was undertaken on 22 July 2013 to assess the topography, slopes, aspect, drainage, vegetation and adjoining land use. The identification of existing bushfire measures and a visual appraisal of bushfire hazard and risk were also undertaken.

1.4 Site description

The site proposed for development is known as Site G and is located within the southern portion of Lot 2304, DP 1172543, Templar Road, Erskine Park (refer Figure 1.2). The site has a total area of 43,347m² and is located within the Western Sydney Employment Area in the local government area of Penrith.

The existing site is a vacant development parcel which has been cleared and levelled pending its development for industrial purposes.

The site is bound to the north and west by warehouse and industrial development consistent with its location in the Western Sydney Employment Zone.

The southern and south eastern boundary of the site adjoins an existing biodiversity corridor under the Western Sydney Employment Area (WSEA) State Environmental Planning Policy (SEPP) 2009.



Figure 1.2 – Aerial appraisal (source: Department of Lands)

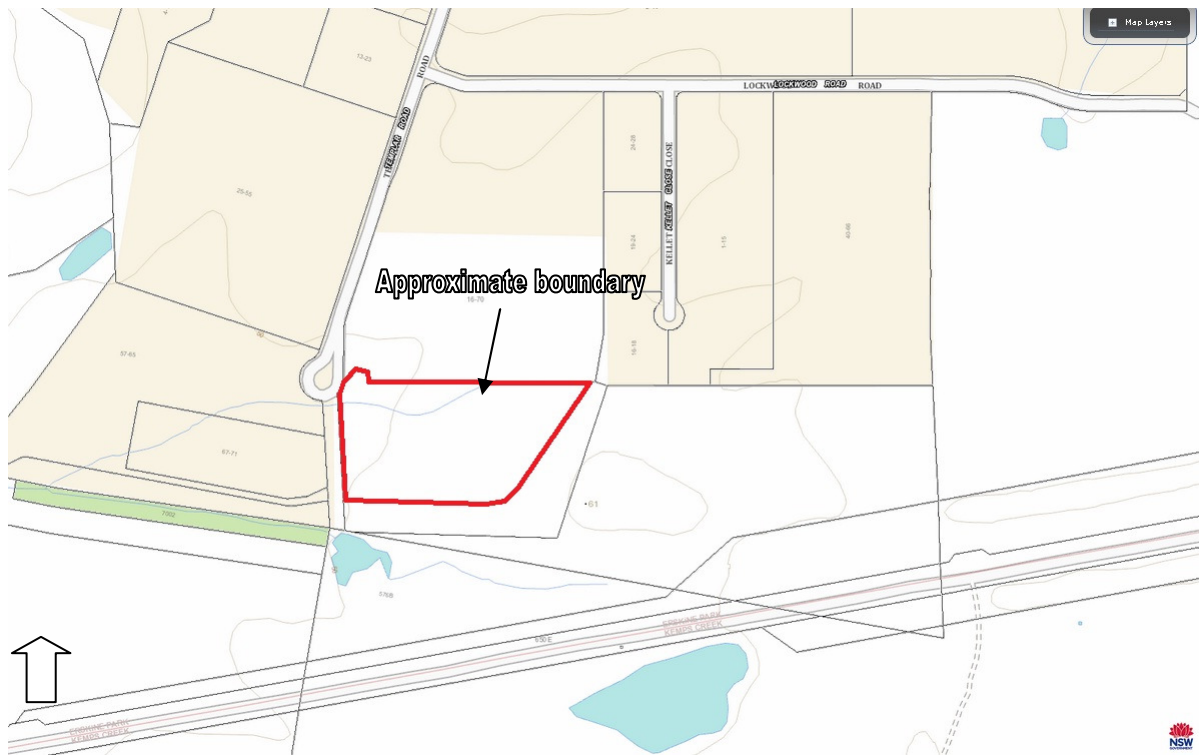


Figure 1.3 – Topography (source: Department of Lands)

1.5 Legislation and planning instruments

1.5.1 Environmental Planning and Assessment Act (EP&A Act)

The *Environmental Planning and Assessment Act (EP&A Act)* governs environmental and land use planning and assessment within New South Wales. It provides for the establishment of environmental planning instruments, development controls and the operation of construction controls through the Building Code of Australia (BCA). The identification of bushfire prone land is required under Section 146 of the *EP&A Act*.

1.5.2 Bushfire prone land

Bushfire prone land maps provide a trigger for the development assessment provisions.

The proposed industrial development is located on land mapped by *Penrith City Council* as being bushfire prone. This triggers assessment of the development in accordance with *PBP*, as required by Section 79BA of the *EP&A Act*.

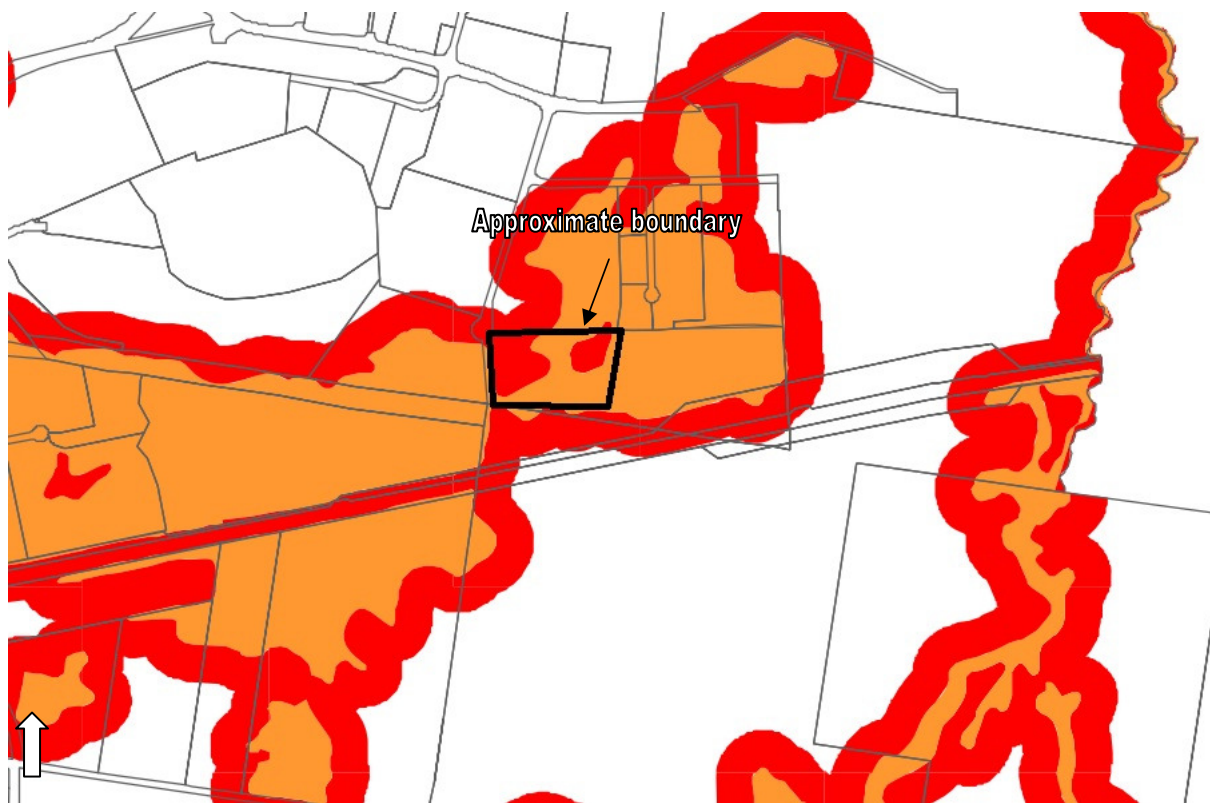


Figure 1.4 – Bushfire prone land map
(source: *Penrith Council website*)

1.5.3 State Environmental Planning Policy (State and Regional Development) 2011

The aims of this policy are to identify development that is SSD, to identify development that is state significant infrastructure and critical state significant infrastructure and to confer functions on joint regional planning panels to determine development applications. Clause 8, Part 2 of the State Environmental Planning Policy (SEPP) states that a project will be determined as an SSD if it is listed in Schedule 1 or 2 of the policy.

The proposal meets the requirements of Class 3 (Schedule 2) as it has a capital investment value over \$30 million.

1.5.4 State Environmental Planning Policy (Western Sydney Employment Area) 2011

This SEPP promotes economic development and the creation of employment in the Western Sydney Employment Area (WSEA). The policy provides for coordinated planning, development and rezoning of land for employment or environmental conservation purposes.

The site, under the terms of the SEPP, is zoned IN1 General Industrial.

The proposed use of the site is consistent with the objectives that underpin the IN1 zone.

1.5.5 Penrith Local Environmental Plan 2010 (PLEP)

The site is zoned according to the WSEA SEPP 2009 as IN1 General Industrial. Therefore, the local zoning provisions of the Penrith Local Environmental Plan (PLEP) 2010 are not applicable to the project.

1.5.6 Erskine Park Development Control Plan 2006 (EPDCP)

The EPDCP provides local planning controls for the Erskine Business Park, and is the development control plan (DCP) that is referenced under Clause 18 of the WSEA SEPP 2009.

The development controls outlined within the EPDCP that must also be considered in relation to bushfire protection relate to the landscaping requirements within the site.

Landscaped area is defined as: *'in relation to a site, means that part of the site not occupied by any building, but including the landscaped areas over any covered car park, except for open air recreation facilities or paved pedestrian areas, which is to be landscaped by way of the planting of gardens, lawns, shrubs and trees and is to be available for the use and enjoyments by the occupants of the building to be erected on the site but does include so much of the site as is to be used for driveways, parking, loading or maneuvering areas.'*

Section 3.3 of this report outlines the requirements for landscaping within the APZs in accordance with the bushfire requirements.

1.5.7 Building Code of Australia (BCA) and the Australian Standards AS3959

The BCA is given effect through the *EP&A Act* and forms part of the regulatory environment of construction standards and building controls. The BCA outlines objectives, functional statements, performance requirements and *deemed to satisfy* provisions.

In NSW, the construction of buildings in bushfire prone areas relates to Classes 1, 2, 3, 4 and Class 9 buildings that are a special fire protection purpose (SFPP) or a Class 10a building or deck associated with aforementioned building classes. The design and construction manual for the deemed to satisfy requirements is the *Australian Standard AS3959 Construction of buildings in bushfire-prone areas 2009 (AS3959)*. These classes of buildings must therefore be constructed in accordance with *AS3959*.

The BCA does not provide for any bushfire specific performance requirements for commercial and industrial buildings (Classes 5–8) and, as such, *AS3959* does not apply as a set of deemed to satisfy provisions. The general fire safety construction provisions are taken as acceptable solutions.

1.5.8 Planning for bush fire protection 2006 (PBP)

PBP outlines the bushfire protection measures required to be assessed for new development in bushfire prone areas. The range of bushfire protection measures include:

- asset protection zones (APZs)
- building construction and design
- access arrangements
- water supply and utilities
- landscaping, and
- emergency management arrangements.

PBP stipulates that applications that are not residential / rural subdivision, special fire protection purposes or residential infill should:

- note the range of available bushfire protection measures (refer dot points above)
- satisfy the aims and objectives of *PBP* (refer Section 2 and addressed in Section 4 below): and
- propose an appropriate combination of bushfire protection measures, with evidence that the intent of each measure (with reference to Sections 4.1.3 and 4.2.7 of *PBP*) is satisfied (refer Section 3 below).

1.6 Environmental constraints

The site has been cleared and benched and does not contain any significant vegetation. As a result, the proposal will not result in adverse flora and fauna impacts.

The biodiversity corridor located south and south east of the property boundary is defined within the EPDCP (refer Figure 1.5). The area is known to accommodate remnant Cumberland Plain Woodland, a threatened ecological community under the provisions of the *Threatened Species Conservation Act (TSC Act)*; and a critically endangered community as listed by commonwealth legislation under the *Environmental Protection and Biodiversity Conservation Act (EPBC Act)*.

The Erskine Business Park Biodiversity Corridor is in Department of Primary Industries (DPI) ownership and is managed by *Greening Australia*. Whilst this vegetation does not occur within the site it does pose an existing and future bushfire risk to the site to some extent (refer Photo 1).

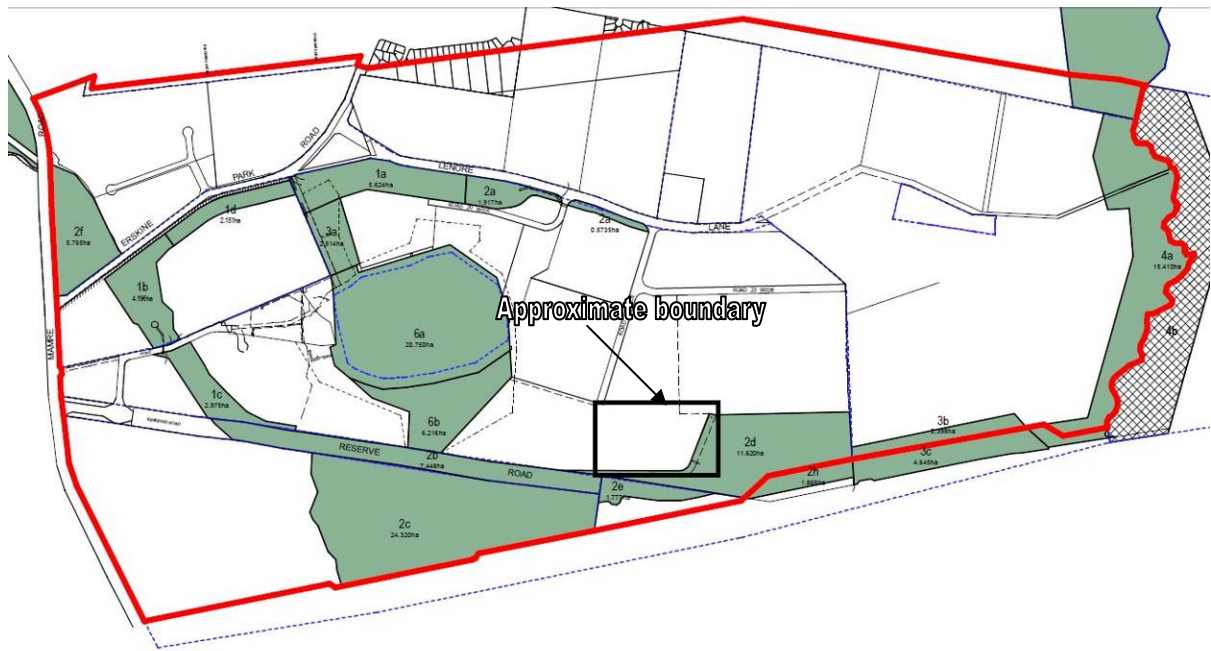


Figure 1.5 – Proposed biodiversity areas
 (source: *Biodiversity Management Plan Erskine Park Employment Area, 2006*)



Photo 1 – Re-vegetation within the creek line to the south



Bushfire Threat Assessment

2

Bushfire protection planning requires the consideration of the RFS planning document entitled *Planning for bush fire protection 2006 (PBP)*. *PBP* provides planning controls for building in bushfire prone areas, as well as guidance on effective bushfire protection measures.

The policy aims to provide for the protection of human life (including fire fighters) and to minimise impacts on property and the environment from the threat of bushfire, while having due regard to development potential, on site amenity and protection of the environment. More specifically, the aims and objectives for all development (including industrial and commercial buildings) located on bushfire prone land should:

1. Afford occupants of any building adequate protection from exposure to a bushfire.
2. Provide for a defensible space to be located around buildings.
3. Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition.
4. Ensure that safe operational access and egress for emergency service personnel and residents is available.
5. Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads in the APZ.
6. Ensure that utility services are adequate to meet the needs of fire fighters (and others who may assist in bushfire fighting).

Development in bushfire prone areas requires consideration of the overall threat upon a site and the way occupants of a site are potentially able to cope in the event of a bushfire.

To assess the bushfire threat that is likely to occur and thus affect the subject site, a review of the elements that comprise the overall threat needs to be completed. These elements include the potential hazardous landscape that may affect the site, the subsequent extent of the bushfire risk and the expected level of vulnerability that is likely to affect occupants and / or fire fighters.

2.1 Hazardous fuels

The bushfire hazard is defined as the potential severity of a bushfire and is measured in terms of the potential fire intensity and the resultant radiant heat flux emanating from the fire. (Planning for bush fire protection 2006)

The factors that influence bushfire hazard are primarily the type of vegetation (fuel) and the effective slope that contributes to increasing bushfire behaviour. Factors such as wind velocity and fuel dryness also significantly contribute to the hazard achieving maximum intensity levels.

The hazardous fuels are categorised according to vegetation descriptions identified by David Keith, 2004. These units have been defined in accordance with their ability to cause different levels of fire intensity based essentially on their sustained flammability. This arises from the extent of fine fuel presence and weight.

Hazardous fuels are primarily the bushland areas external to the site's southern and south eastern boundary. These areas are zoned Biodiversity Corridor and are currently being remediated and replanted.



Photo 2 – Re-vegetation within the creek line to the south

2.2 Bushfire attack assessment

The RFS requires that a development application must include a bushfire attack assessment to determine the possible impact or vulnerability of a structure from fire.

PBP provides a methodology to determine the size of any APZ that may be required to offset possible bushfire attack. The assessment uses the vegetation type and slope gradient to determine the size of the APZ. Vegetation type is assessed for a distance of 140m external to the proposed development area, whilst the effective slope is assessed for 100m. Effective slope refers to that slope which provides the most effect upon likely fire behaviour. A mean average slope may not in all cases provide sufficient information such that an appropriate assessment can be determined.

The slope within the hazardous vegetation affecting the proposed development varies between 0 – 10 degrees downslope towards the creek line. This downhill slope is between 10-20m in length before continuing upslope on the opposing side of the creek line. The effective slope has therefore been determined as 0 – 5 degrees.

A fire danger index (FDI) of 100 has been used to calculate bushfire behaviour on the site based on its location within the Greater Sydney region.

Table 2.1 provides a summary of the bushfire attack assessment and the suggested minimum APZs for the development.

Note: There are no predetermined minimum APZ requirements for industrial development under *PBP*. The distances provided in Column 5 (of Table 1) will provide appropriate defensible space for the industrial building. The defensible space is designed to allow fire fighters room and safety to fight fires.

Table 1 – Bushfire attack assessment

Aspect	Vegetation within 140m of development	Effective slope of land	Suggested minimum APZ (metres)	Defendable space provided (metres)
North & west	Industrial development	Level to upslope	N/A	N/A
East	Biodiversity corridor / replanting to Forest	0 – 5 ^{0D}	20	17- 70
South	Biodiversity corridor / replanting to Forest	0 – 5 ^{0D}	20	23 - 35

Notes: * Slope is either 'U' meaning upslope or 'C' meaning cross slope or 'D' meaning downslope

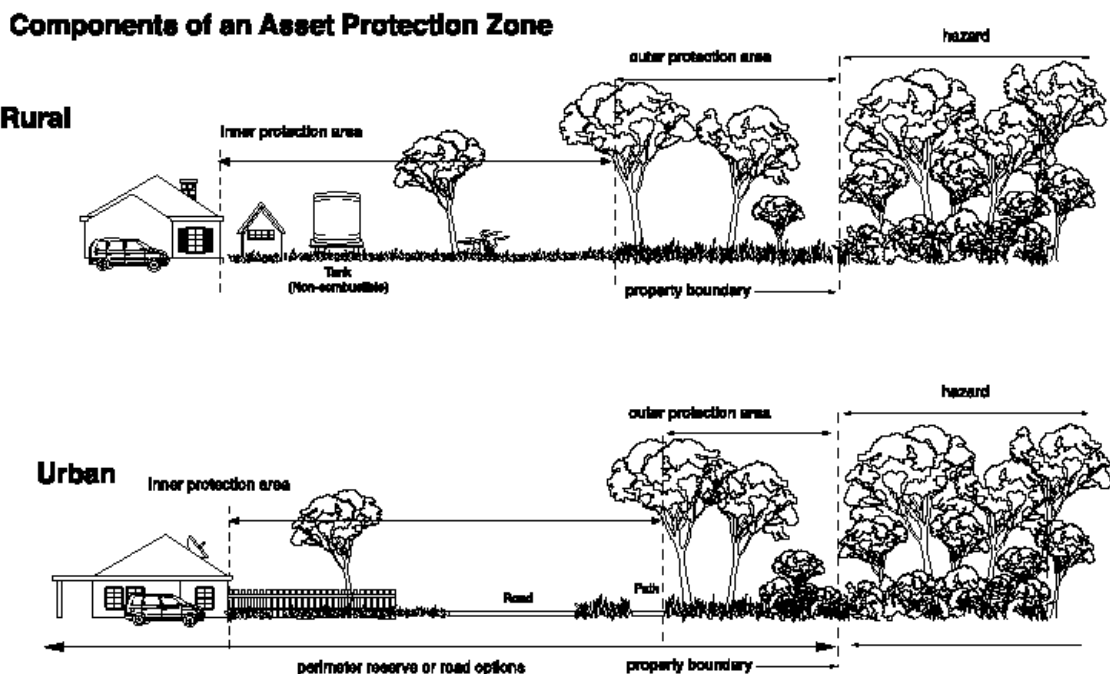


Specific Protection Issues

3

3.1 Asset protection zones

APZs are areas of defensible space separating hazardous vegetation from buildings. The APZ generally consists of two subordinate areas, an inner protection area (IPA) and an outer protection area (OPA). The OPA is closest to the bush and the IPA is closest to the building. A typical APZ and therefore defensible space is graphically represented below:



Source: RFS, 2006

Note: Vegetation management as shown is for illustrative purposes only. Specific advice is to be sought in regard to vegetation removal and retention from a qualified and experienced expert to ensure APZs comply with the *RFS* performance criteria.

The APZs provided for the industrial development consist of roadways, hardstand and car parking areas. Whilst the minimum APZ (20m) complies with most aspects of the development, there are areas of the facility which are within 20m of vegetation. This applies to the south eastern corner of the building. This area is exposed to potential flame zone attack and, as such, appropriate building construction standards will apply to the facility (refer Section 3.2 for detail).

In accordance with *PBP* appropriate *defendable space* has been provided between hazardous vegetation and the industrial development to comply with the aims and objectives of *PBP*.

3.2 Building protection

The BCA does not provide any bushfire specific requirements for Classes 5-8 industrial / commercial buildings. The general fire safety construction provisions are taken as acceptable solutions.

PBP recommends that bushfire construction standards for Classes 5-8 buildings should be considered on a case by case basis. Bushfire construction recommendations are dependent on the level of bushfire risk and the provision of adequate access opportunities. Although adequate access is provided around the perimeter of the development, there is some risk posed by the adjoining vegetation, particularly by the forest vegetation to the south-east. As a result, the following construction requirements are recommended:

- The south eastern corner of the building (within 20m of the boundary) is to be constructed with non-combustible materials
- All external doors of the building are fitted with weather strips (where the doors do not close on a rebated edge).
- Roller doors are to be boxed in or sealed in a manner that restricts ember penetration e.g. screening.

3.3 Landscaping and hazard management

Should the development be approved, the owner or occupier of the building / development will be required to manage the APZs to the specifications of the approval.

In terms of implementing and / or maintaining APZs, there is no physical reason that would constrain hazard management from being successfully carried out mainly due to the fact that the APZ consists of proposed access roads and car parking areas.

The landscaping plan, as provided by *Arcadia Landscape Architecture*, complies with Appendix 5 of *PBP* and the following additional recommendations.

- Planting of trees and shrubs should not occur within 10m of the facility.
- Planting is to be minimal using plants that are less flammable in preference to highly flammable species. Less flammable species include those that have a high moisture content, high levels of salt, low volatile oil content of leaves, smooth barks without 'ribbons' hanging from branches or trunks, dense crown and elevated branches (*RFS Standards for Asset Protection Zones 2006*).
- Organic mulch should not be used, alternatives include non-flammable materials that will not easily ignite.

3.4 Access for fire fighting operations

Access to the site is provided from the end of Templar Road where it forms a cul-de-sac. At this point there is approximately 24m of frontage which is sufficient for dual roadways for heavy vehicles.

The proposed access complies with the following acceptable solutions of *PBP*.

- Public roads are two wheel drive, all weather roads.
- Perimeter roads are two way (carriageway 8m minimum kerb to kerb).
- Perimeter road is linked with the internal road system at an interval of no greater than 500m in urban areas.
- Traffic management devices are constructed to facilitate access by emergency services.
- Public roads have a cross fall not exceeding 3 degrees.
- All roads are through roads. If unavoidable, dead end roads are not more than 200m in length, incorporate a minimum 12m outer radius turning circle, sign posted dead end and directing traffic away from the hazard.
- Curves of roads (other than perimeter) have a minimum inner radius of 6m and are minimal in number.
- The minimum distance between inner and outer curves is 6m.
- Maximum grades for sealed roads do not exceed 15 degrees and an average grade of not more than 10 degrees.
- Minimum vertical clearance of 4m above the road.
- The capacity of road surfaces and bridges is sufficient to carry fully loaded fire fighting vehicles (15 tonnes). Bridges clearly indicate load rating.

3.5 Water supplies

Town reticulated water supply is available to the development in the form of an underground reticulated water system. The performance criteria for reticulated water supply are that *'water supplies are easily accessible and located at regular intervals'*. The acceptable solutions are:

- Reticulated water supply uses a ring main system for areas with perimeter roads
- Fire hydrant spacing, sizing and pressures comply with AS2419.1 (2005)
- Hydrants are not placed within any road carriageway
- All above ground water and gas pipes external to the building are metal, including and up to taps
- The provisions of parking on public roads are met.

The proposal must comply with the above requirements.

In addition, three (3) 350kl fire fighting storage tanks are also proposed by the applicant.

To ensure that this supply is compatible with fire fighting connections it should comply with the following:

- A 65mm Storz outlet with a gate or ball valve is provided as a suitable connection for fire fighting purposes within the APZs.
- Gate or ball valve and pipes are metal (not plastic) and are adequate for water flow.

- Underground tanks have an access hole of 200mm to allow tankers to refill straight from the tank. A hardened ground surface for truck access is supplied within 4m of the access hole.
- Above ground tanks are concrete or metal and raised tanks have their stands protected. Tanks on the hazard side of the building are provided with shielding to protect fire fighters.
- All above ground water pipes external to the water pipe are metal including and up to any taps. Pumps are shielded.

3.6 Gas

The proposal also involves the provision of oxygen, nitrogen and carbon dioxide tanks to be housed within a gas tank enclosure adjacent to the eastern boundary of the site.

PBP outlines the following *performance criteria* for gas services:

- Location of gas services is not to lead to the ignition of surrounding bushland land or the fabric of buildings.
- Gas bottles are to be maintained in accordance with AS1596 (2002). Metal piping is to be used.
- All fixed LPG tanks are to be kept clear of flammable materials and located on the non-hazard side of the building.
- If gas cylinders are to be kept close to the building, the release valves must be directed away from the building.
- Polymer sheathed flexible gas supply lines to gas meters adjacent to buildings are not to be used.

The proposal must comply with the above requirements.

3.7 Emergency and evacuation planning

Although the site is exposed to an acceptable bushfire risk, it is recommended that an emergency / evacuation plan is prepared consistent with the *RFS Guidelines for the Preparation of Emergency / Evacuation Plan* to ensure the safety of staff and visitors to the site.



Conclusion & Recommendations

4

This bushfire protection assessment has been prepared for submission to the NSW Department of Planning and Infrastructure (DoPI) to accompany the application for a state significant development (SSD) for the proposed construction of a fresh food packing centre to be located within the southern portion of Lot 2304 DP 1172543 Templar Road, Erskine Park.

The assessment found that bushfire can potentially affect the site from the existing and recently revegetated vegetation located to the south and south east, which forms part of the biodiversity corridor that adjoins the site, but this is manageable.

The bushfire risk can be mitigated if the bushfire protection measures recommended in this report are put in place and managed in perpetuity.

The assessment has concluded that the proposed development will provide:

- Compliance with *Planning for bush fire protection, 2006 (PBP)*.

The following illustrates the proposals compliance with *PBP*.

Afford occupants of any building adequate protection from exposure to a bushfire

Response: Adequate defensible space has been provided for the development and building construction standards have been recommended for the facility

Provide for a defensible space to be located around buildings

Response: APZs have been provided in accordance with *PBP*.

Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition

Response: APZs have been recommended in accordance with *PBP* and building construction measures will be applied in accordance with the recommendations of this report.

Ensure that safe operational access and egress for emergency service personnel and residents is available

Response: Adequate access has been provided in the form of a perimeter road, hardstand areas and car parking facilities.

Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads in the APZ

Response: Fuel management can be undertaken by the land owners in accordance with Appendix 5 of *PBP* and as outlined within *NSW RFS* publications such as *Standards for Asset Protection Zones* available from the *RFS* website at www.rfs.nsw.gov.au.

Ensure that utility services are adequate to meet the needs of fire fighters (and others who may assist in bushfire fighting).

Response: Water supply, electricity and gas services are to comply with *PBP*.

The following recommendations are provided to ensure that the development is in accord with or greater than the requirements of *PBP*.

Recommendation 1 – APZs are to be provided for future development. The APZs, as recommended within Table 1, are to be measured from the exposed wall of the facility toward the hazardous vegetation.

Recommendation 2 – Fuel management within the APZs will be maintained by regular maintenance of the landscaped areas. The landscaping plan as supplied by *Arcadia Landscape Architecture* complies with Appendix 5 of *PBP*.

Recommendation 3 – The following building construction standards are to be applied to reduce the impact of radiant heat, flame and ember attack on the facility.

- The south eastern corner of the building (within 20m of the boundary) is to be constructed with non-combustible materials
- All external doors of the building are fitted with weather strips (where the doors do not close on a rebated edge).
- Roller doors are to be boxed in or sealed in a manner that restricts ember penetration e.g. screening.

Recommendation 4 – A hydrant water supply will be installed in accordance with AS2419.1. The mains and static water supply is to comply with Section 3.5 of this report.

Recommendation 5 – Although the site is exposed to an acceptable bushfire risk, it is recommended that an emergency / evacuation plan is prepared consistent with the *RFS Guidelines for the Preparation of Emergency / Evacuation Plan* to ensure the safety of staff and visitors to the site.

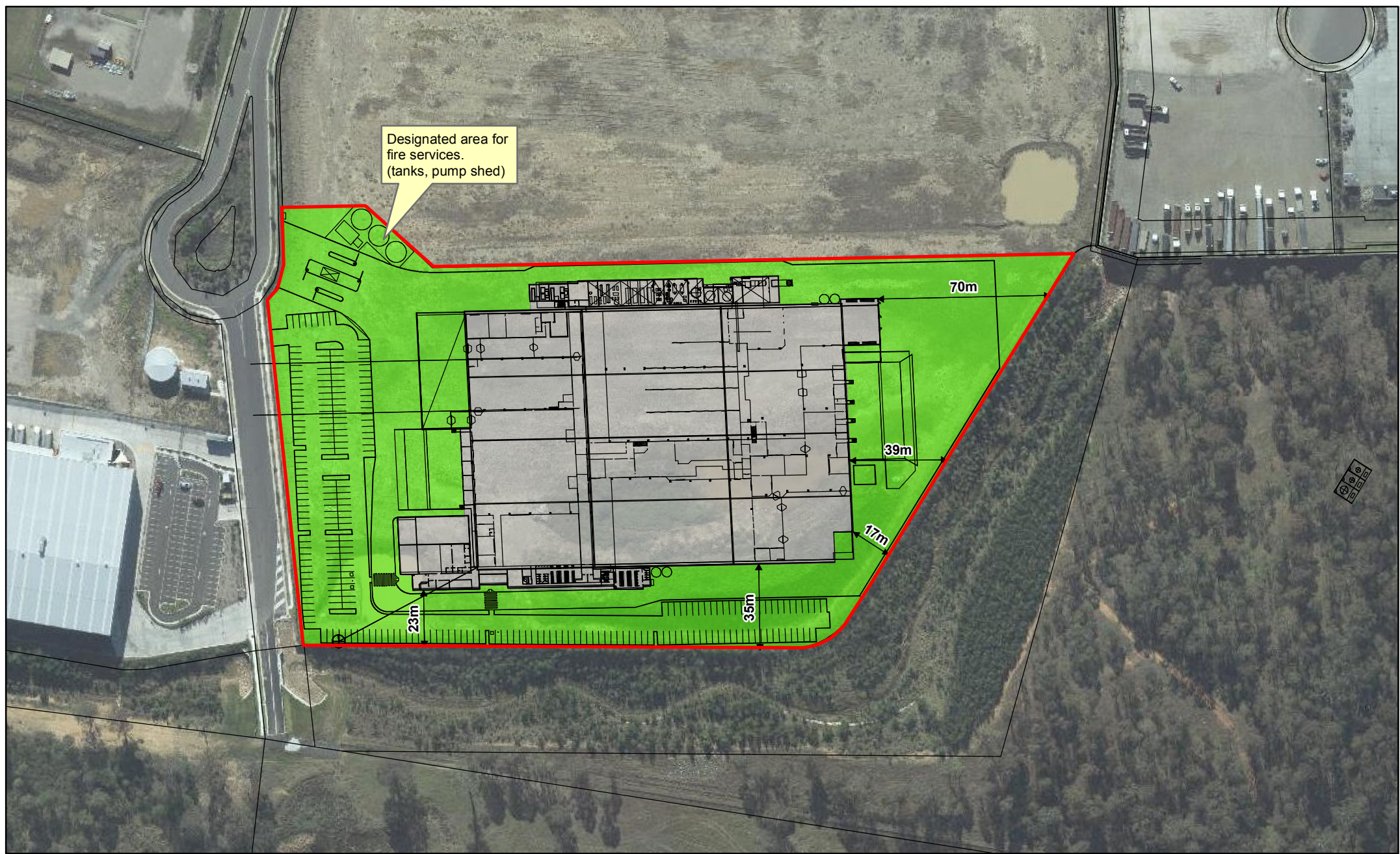
Recommendation 6 – The landowner / manager is to be made aware of their liability to manage the development lands for the ongoing protection of themselves and their neighbours (refer Section 63(2) *Rural Fires Act (RF Act)*).

References

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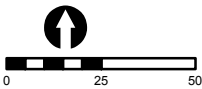


Plan of Bushfire Protection Measures



Designated area for fire services.
(tanks, pump shed)

- Legend**
- Subject Site
 - Building Footprint
 - Asset Protection Zone



Disclaimer: The mapping is indicative of available space and location of features which may prove critical in assessing the viability of the proposed works. Mapping has been produced on a map base with an inherent level of inaccuracy, the location of all mapped features are to be confirmed by a registered surveyor.

Aerial source:

PROJECT & MXD REFERENCE
Templar Rd, Erskine Park
A13074_BF001

DATE & ISSUE NUMBER
29/07/2013
Issue 1

SCALE & COORDINATE SYSTEM
1:2,000 @ A4
GDA 1994 MGA Zone 56

TITLE
Schedule 1 - Bushfire Protection Measures

Document Path: N:\GIS_STORAGE\N Drive\A13074 TemplarRd_ErskinePark\MXD\A13074_BF001.mxd

