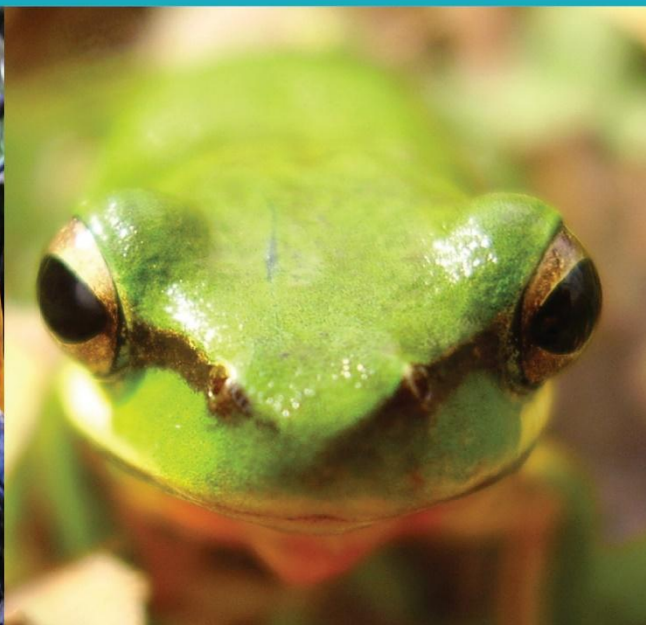




TRAVERS BUSHFIRE & ECOLOGY

A TBE ENVIRONMENTAL COMPANY



BUSHFIRE PROTECTION ASSESSMENT

Proposed Industrial Development

Lot A, DP 406215

230 Martin Road

Badgerys Creek

State Significant Development

Section 4.36 of the EP&A Act 1979

24 April 2026



BUSHFIRE PROTECTION ASSESSMENT

Proposed Industrial Development

230 Martin Road, Badgerys Creek

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Date:	24/04/26
File:	EMKC09BPA
Version:	3.0



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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 is to be confirmed by a registered surveyor.

EXECUTIVE SUMMARY

Travers bushfire & ecology (TBE) has been engaged by EKMC Australia Pty Ltd to prepare a bushfire protection assessment for a proposed industrial development located at Lot A DP 406215, 230 Martin Road, Badgerys Creek. This assessment has been triggered in accordance with State Significant Development (SSD 65529236) dated 21 December 2023.

It is categorised by the NSW Rural Fire Service (NSW RFS) planning policy document *Planning for Bush Fire Protection 2019 (PBP)* as 'other non-residential development', and more specifically 'commercial and industrial development' (Section 8.3.10, *PBP*).

For this type of development, the NSW RFS requires that development applications should satisfy the aims and objectives of *PBP*, propose an appropriate combination of bushfire protection measures and provide evidence that the intent of each measure can be satisfied.

This assessment has found that bushfire can potentially affect the proposed development from the site's west, east and southern aspects, resulting in future buildings being exposed to potential radiant heat and ember attack.

In recognition of the bushfire risk posed to the site by the surrounding bushland, *TBE* identified the following combination of bushfire measures.

- Proposed APZs within final site plans are in accordance with the minimum setbacks outlined within *PBP*. (incorporated)
- Building construction in accordance with the requirements of NCC and ember protection within section 7.5 of *PBP* (to be conditioned).
- Provision of access, water, and electricity supply is in accordance with the acceptable solutions outlined in *PBP* (no reticulated gas to be supplied).
- The proposed development's landscaping plans are in accordance with Appendix 4 of *PBP* as shown in *Schedule 2* noting that street trees can have a 40% projected canopy cover.
- Preparation of a Bushfire Emergency and Evacuation Management Plan in accordance with the requirements of the NSW RFS will need to be prepared, and the plan to be updated, and staff trained on an annual basis prior to the commencement of the Statutory Bush Fire Danger Period (to be conditioned).

The building is to be constructed in accordance with a Type A construction as a large, isolated building under the NCC. This will facilitate access for firefighting to the south of the site.

It is also recommended that the bushfire emergency/evacuation plan be developed and implemented prior to occupation.

Schedule 1 to this report provides the bushfire attack assessment and includes BAL 29 setbacks (also 29kW/m²).

GLOSSARY OF TERMS

AHIMS	Aboriginal Heritage Information System
APZ	asset protection zone
AS1596	<i>Australian Standard – The storage and handling of LP Gas</i>
AS2419	<i>Australian Standard – Fire hydrant installations</i>
AS3745	<i>Australian Standard – Planning for emergencies in facilities</i>
AS3959	<i>Australian Standard – Construction of buildings in bushfire-prone areas 2018</i>
BAL	<i>bushfire attack level</i>
BCA	<i>Building Code of Australia</i>
BSA	bushfire safety authority
DA	development application
DLUP	Development Land Use Plan
EEC	Endangered ecological community
EP&A Act	<i>Environmental Planning & Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
FFDI	forest fire danger index
IPA	inner protection area
LEP	Local Environmental Plan
LGA	local government area
m	metres
NCC	<i>National Construction Code</i>
OPA	outer protection area
PBP	<i>Planning for Bush Fire Protection 2019</i>
RF Act	<i>Rural Fires Act 1997</i>
RFS	NSW Rural Fire Service
SFR	short fire run
SFPP	special fire protection purpose
TBE	<i>Travers bushfire & ecology</i>

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1. INTRODUCTION

Travers bushfire & ecology (TBE) has been engaged to undertake a bushfire protection assessment for the proposed development of two industrial warehouses, located at 230 Martin Road, Badgerys Creek, within the Liverpool City Council LGA. The site has a history of agricultural uses and contains several associated structures and buildings. Site planning history has included previous State Significant Development (SSD) application, SSD-10866203 for the proposed construction and operation of an asphalt plant, known as 'Western Sydney Sustainable Road Resource Centre', on the site. This is now redundant and not operational.

The proposal seeks approval for two contemporary warehouse or distribution centre buildings at 230 Martin Road, Badgerys Creek. Specifically, the development will comprise:

- Site clearance works, including the removal of existing structures and trees
- Bulk earthworks and the installation and augmentation of utilities infrastructure and other services
- Construction and operational use of two warehouse or distribution centres containing ancillary offices, amenities and manufacturing use (in lot 1 only) with associated, parking, landscaping and access
- Other ancillary works

This document has been prepared in consideration of Appendix B of the State Significant Development Guidelines (March 2024) (NSW Government, 2024). The consent authority for the project is NSW the Department of Planning, Housing and Infrastructure. Additionally, this document has been prepared in accordance with requirements stipulated in SSD-65529236 SEARS as follows:

Table 1-1 – Key Issues in accordance with SSD-65529236

Key Issue (SEARS)	Section
<i>"Bush Fire – a bush fire assessment report that addresses the aims and objectives of Planning for Bush Fire Protection 2019, and includes:</i>	
▪ <i>details of proposed operational access for emergency services personnel.</i>	3.2
▪ <i>details of emergency and evacuation arrangements for occupants/visitors.</i>	3.2
• <i>a Bush Fire Emergency Management and Evacuation Plan prepared in accordance with relevant RFS guidance"</i>	4.2

Given the site is an SSD, relevant stakeholders were requested to provide feedback on proposed development. A table which details agency comments during pre-lodgement engagement can be found below.

Table 1-2 – Key Agencies and Summary of Feedback

Agency (SEARS)	Date of Feedback	Summary of Comments
AirServices Australia	15 December 2023	Recommendations for future assessments on construction, particularly related to cranes, and proximity to WSA.
CASA	8 December 2023	Emphasis on the need for an Airport Safeguarding Report to cover NASF Guidelines and assess aviation safety risks.
NSW DPI Agriculture	13 December 2023	Proposal deemed consistent with Greater Sydney Region Plan; no adverse impact on agricultural land.
Fire and Rescue NSW	14 December 2023	Request for fire safety and emergency response management details at preliminary and final design stages.
Heritage NSW (ACH)	11 December 2023	Aboriginal Cultural Heritage Assessment (ACHAR) required with consultation and mitigation measures.
Sydney Water	4 December 2023	Ensure compliance with stormwater and recycled water infrastructure, including impacts on existing water assets.
WaterNSW	7 December 2023	No comments or specific requirements; site not near WaterNSW land or assets.
NSW Rural Fire Service	22 December 2023	Bushfire assessment required to align with Planning for Bush Fire Protection 2019.
Liverpool City Council	21 December 2023	Provided detailed comments on traffic, urban design, environmental health, and contributions planning.
Transport for NSW	10 January 2024	Detailed requirements for traffic impact assessment, including road hierarchy, public transport, and vehicle access.

The proposed development is identified as bush fire prone on the Liverpool City Council Bush Fire Prone Land Map (refer Figure 1-1), although this may change over time with increased developments associated with the general vicinity of the Aerotropolis.

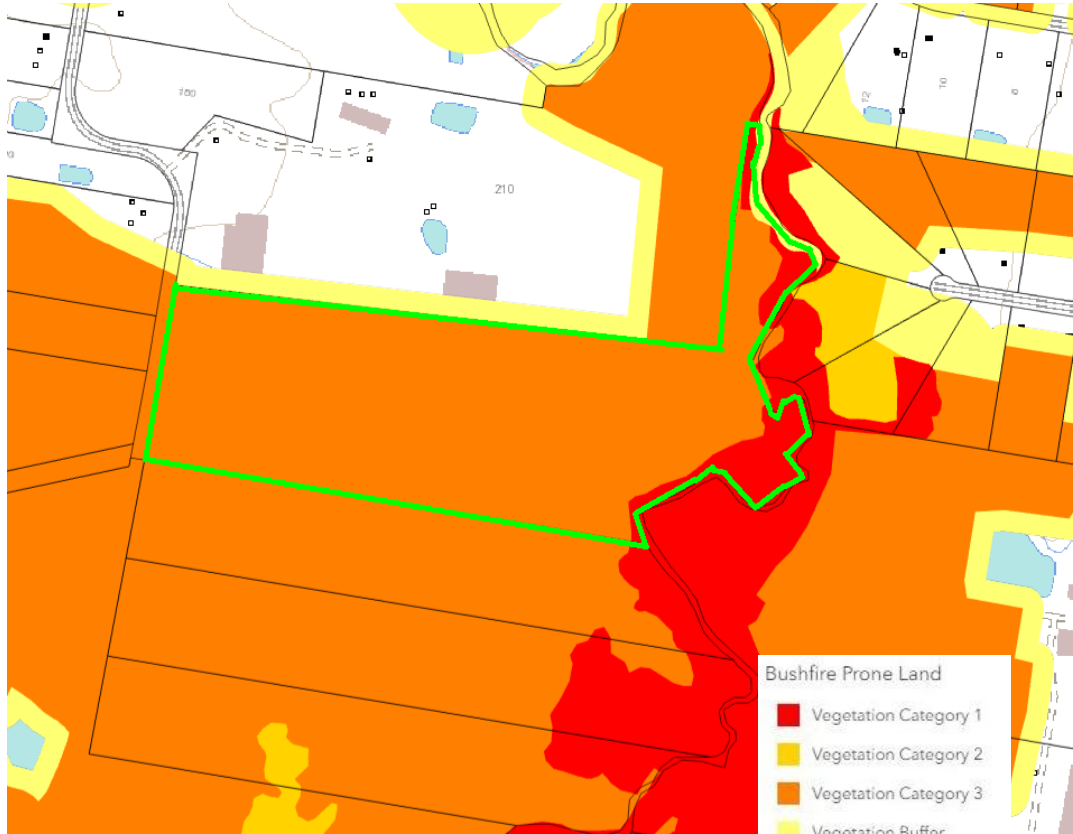


Figure 1-1 – Bushfire Prone Land Map

(Source: NSW Planning Portal 2025, edits by Grahame Douglas 7/21/2025)

This triggers a formal assessment in respect of the NSW Rural Fire Service (RFS) policy against the provisions of Planning for Bush Fire Protection (*PBP*). The development is State Significant Development, and section 4.36 of the EP&A Act applies to the development.

1.1 Aims of the assessment

The aims of the bushfire protection assessment are to:

- review the bushfire threat to the facility
- undertake a bushfire attack assessment in accordance with *PBP*
- propose a suitable package of bushfire protection measures commensurate with the level of risk to the development
- assess the degree to which the proposed package of bushfire protection measures meets the aim and objectives of *PBP* and any relevant performance criteria.

This report has incorporated the requirements of *PBP* into the development as identified by the NSW Rural Fire Service in their letter of 22 December 2023.

1.2 Proposed development

The site is located within the Western Sydney Aerotropolis and is zoned ENT Enterprise and ENZ Environmental and Recreation State Environmental Planning policy (Western Sydney Parklands) 2021.

The proposed development is a state significant development (**SSD-65529236**), in which it is proposed the following:

Construction of two warehouse or distribution centre buildings with ancillary office, amenities and manufacturing use in Lot 1 as described in the table 1-3 below:

Table 1-3 Project details

<i>Descriptor</i>	<i>Project Details</i>	<i>Area</i>
Subject Site Land Area	230 Martin Road, Badgerys Creek Lot A in DP406215	24.28 Ha
Total Gross Floor Area (GFA)	Warehouse or Distribution centre Ancillary office (lot 1 and lot 2). Ancillary manufacturing (lot 1 only)	36,770 m ²
Warehouse or Distribution GFA	Lot 1 Lot 2 Total	16,465 m ² 18,564 m ² 35,029 m ²
Office GFA	Lot 1 Lot 2 Total	600 m ² 1,104 m ² 1,704 m ²
Amenities block GFA	Lot 1	37 m ²
Maximum Building Height	Lot 1 Lot 2	12.95m 12.65m
Car Parking	Lot 1 Lot 2 Total	87 spaces 123 spaces 210 spaces
Landscaped Area	Lot 1 Lot 2 Total	4,169 m ² 3,589 m ² 7,758 m ²

There is also a section within the site's centre that has been set apart as a land reservation. (Refer to figure 1-2).

The site is a short distance east of the new Western Sydney International Airport, which is currently under construction and is expected to be completed by 2026. A new Metropolitan Centre (to be known as 'Bradfield') will be developed to the southwest of the site in the adjoining 'Aerotropolis Core Precinct.'

The Western Sydney Aerotropolis Precinct Plan identifies several other smaller Neighbourhood Centres nearby the site, including centres to the north (around Pitt Street), west and south. (Refer to figure 1-3).

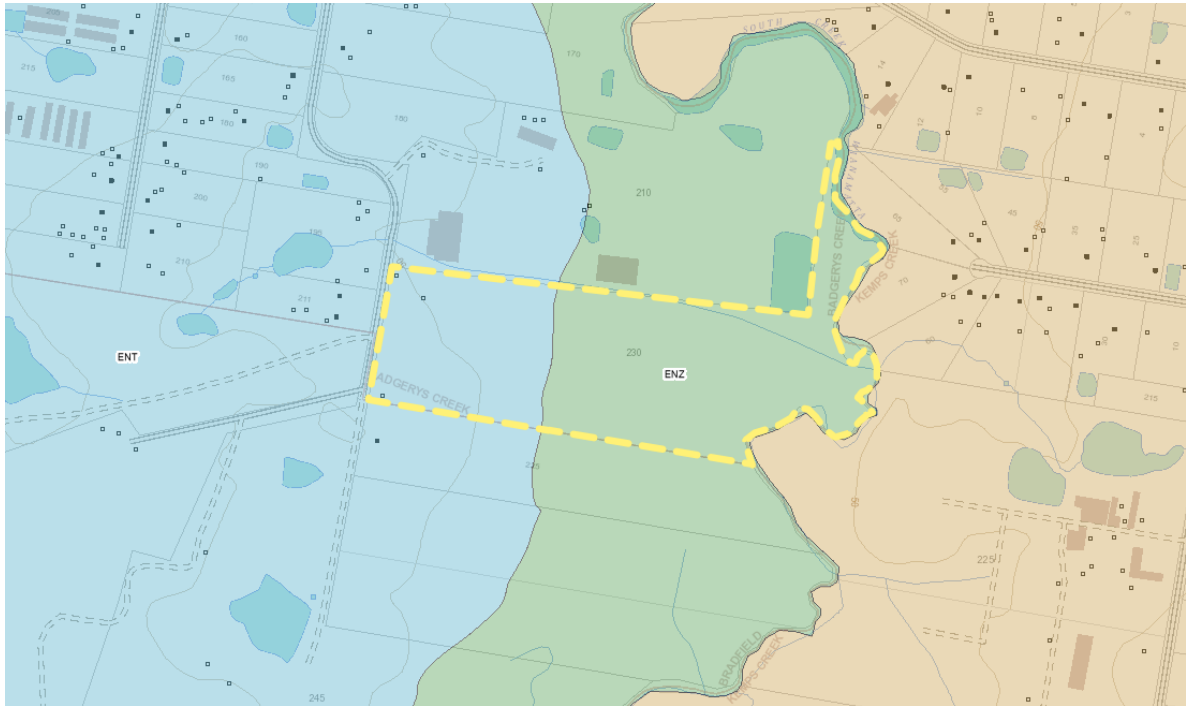


Figure 1-2 – Proposed site within the context of the Western Sydney Aerotropolis

(Source: NSW Planning Portal, SEPP (Precincts – Western Parkland City 2021, edits by Grahame Douglas dated: 7/12/2025).

The objectives for ENT – Enterprise and ENZ – Environment and Recreation zoning are as follows:

ENT (Enterprise) Zone: (Chapter 4)

- To encourage employment and businesses related to professional services, high technology, aviation, logistics, food production and processing, health, education and creative industries.
- To provide a range of employment uses (including aerospace and defence industries) that are compatible with future technology and work arrangements.
- To encourage development that promotes the efficient use of resources, through waste minimisation, recycling and re-use.
- To ensure an appropriate transition from non-urban land uses and environmental conservation areas in surrounding areas to employment uses in the zone.
- To prevent development that is not compatible with or that may detract from the future commercial uses of the land.
- To provide facilities and services to meet the needs of businesses and workers.

ENZ (Environmental and Recreation) Zone: (Chapter 4)

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To protect the ecological, scenic and recreation values of waterways, including Wianamatta–South Creek and its tributaries.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and conserve the environment, including threatened and other species of native fauna and flora and their habitats, areas of high biodiversity significance and ecological communities.

In summary, the proposed use of the land within the context of the proposed development aligns with the objectives for Enterprise (ENT) and Environment and Recreation Zone (ENZ) outlined within the *State Environmental Planning Policy (Western Parkland City 2021)*.

1.3 Legislative context

This bushfire assessment report acknowledges the EP&A Act and RF Act as legal requirements, and the *PBP* as a guideline to assess the suitability and performance of the project. Under section 4.36, matters of State Significant development do not require referral to the NSW RFS under section 4.14 of the EP&A Act.

PBP is applicable to all development on bushfire prone land in NSW. All development on bushfire prone land must satisfy the aims and objectives of *PBP*. The overall aim of *PBP* is to provide for the protection of life (including firefighters) and to minimise impacts on property from the threat of bushfire. To comply with *PBP*, the project would require the following conditions to be met:

- Satisfy the aim and objectives of *PBP*.
- Consider issues listed within *PBP* for the specific purpose for the development (Section 8.3.10, *Commercial and Industrial Development*); and
- Propose an appropriate combination of Bushfire Protection Measures (BPMs), e.g., Asset Protection Zones (APZs), construction, access and landscaping.

An inspection of the proposed development site and surrounds was undertaken by Grahame Douglas on 20 October 2023 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.

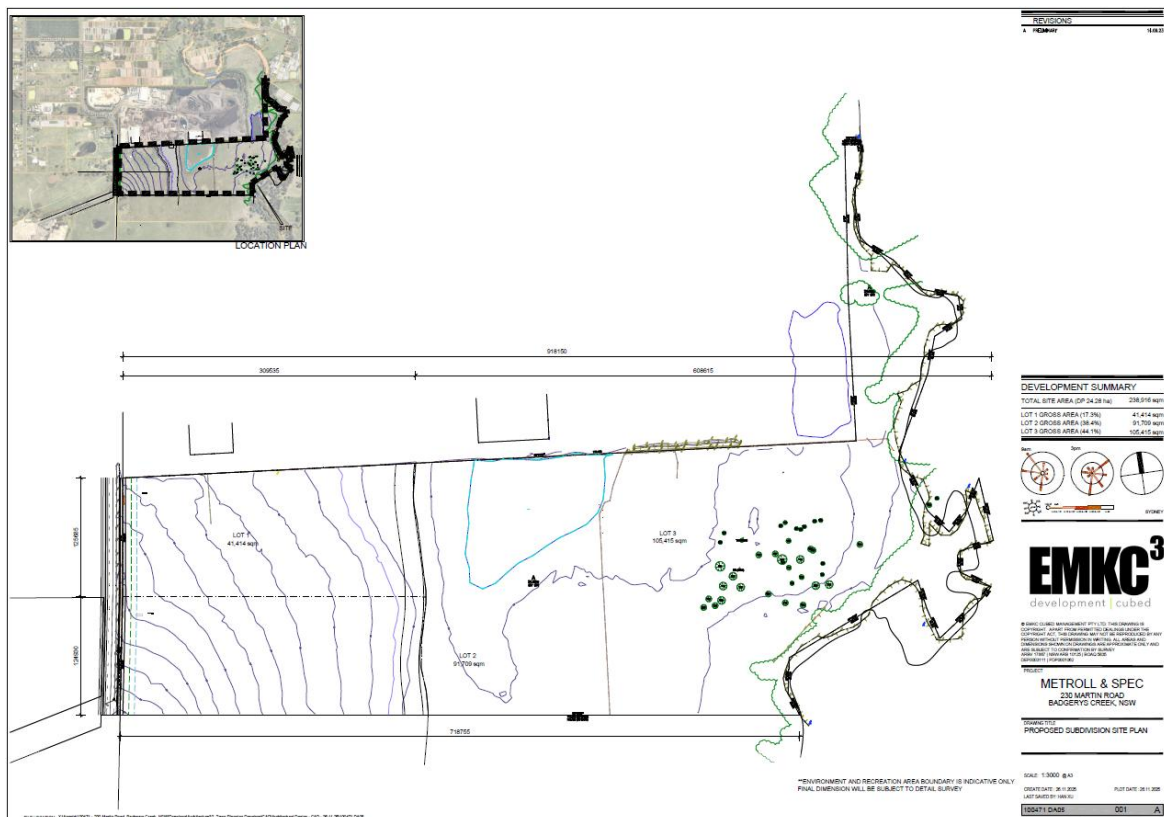


Figure 1-3 – Proposed lot subdivision (Final)

(Source: EMKC³ development cubed, Proposed Lot Subdivision, rev. A, dated: 26.11.25)

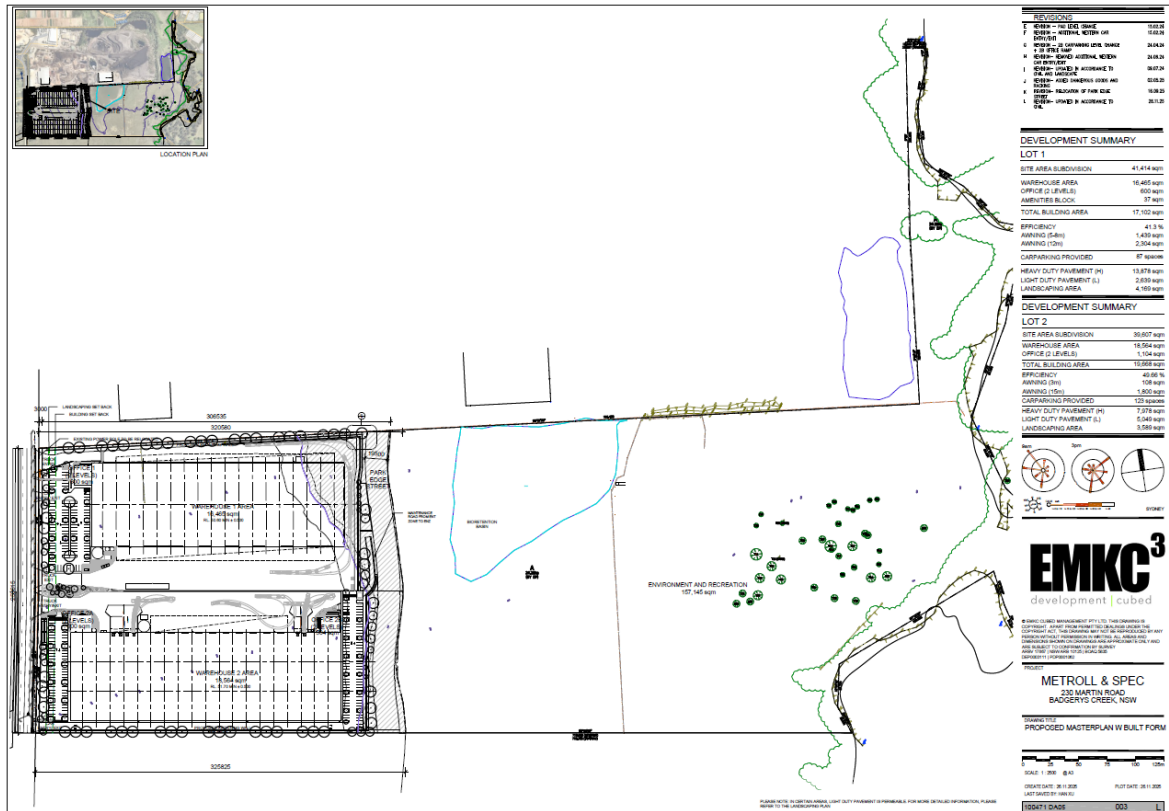


Figure 1-4 – Proposed development masterplan (Final)
(Source: EMKC³ development cubed, Masterplan Built Form, no. 100471 DA01, rev. L, dated: 26/11/2025)

1.4 Project description

Table 1-4 – Project Description

Descriptor	Site Details
Land Configuration	The site has an area of approximately 24.28ha. It is irregular in shape. The eastern boundary corresponds with the alignment of South Creek.
Existing Attributes	Agricultural land with an existing farm dam and associated structures. The Wianamatta South Creek vegetated riparian corridor runs along the eastern boundary
Existing Site Access	Access to the site is currently provided from Martin Road (north-south), connecting to Elizabeth Drive and the future Eastern Ring Road.
Local Context	The land immediately adjoining the site forms part of the Western Sydney Aerotropolis and is expected to undergo significant transformation. The surrounding locality is described below: ▪ North: The adjacent site is operated by Australian Native Landscapes (ANL), a landscaping, agricultural and gardening supplier. It includes several 'warehouse' buildings. Aerial imagery shows large stockpiles on the site. Further north, the area is characterised by agricultural landholdings and some dwellings. ▪ East: The Wianamatta South Creek waterway runs north to south along the sites eastern boundary and is Crown Land. An agricultural research station and cemetery is located beyond on its eastern bank. ▪ South: The adjacent land currently comprises agricultural farm holdings, with South Creek beyond. ▪ West: A large brick manufacturing facility operated by CSR (comprising several structures and existing dams) is located to the southwest of the site on the opposite side of Martin Road.
Regional Context	The site is located within the Western Sydney Aerotropolis and is a short distance east of the new Western Sydney International Airport, which is currently under construction and is expected to be completed and operational in 2026. Approximately 11,000 hectares of land was rezoned for employment uses in 2020 under the Precincts SEPP to support the WSI. A new Metropolitan Centre (to be known as 'Bradfield') will be developed to the southwest of the site in the adjoining 'Aerotropolis Core Precinct'. The Western Sydney Aerotropolis Precinct Plan identifies several other smaller Neighbourhood Centres nearby the site, including centres to the north (around Pitt Street), west and south.

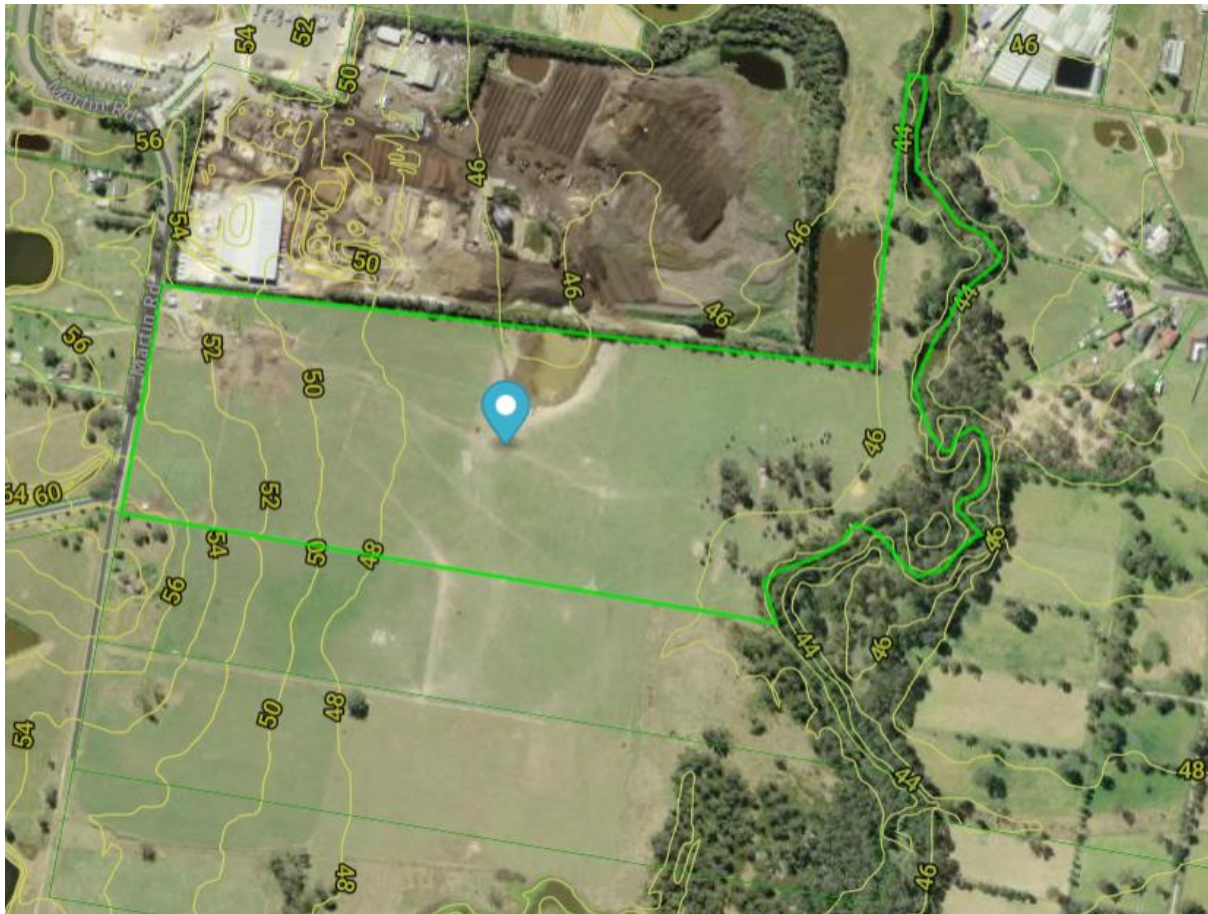


Figure 1-5 – Aerial Appraisal
(Source: Mecone Mosaic 2023)

1.5 Legislation and planning instruments

Table 1-5: Legislation and planning

Is the site mapped as bushfire prone?	Yes
Proposed development type	Industrial/warehousing (Inclusion of ancillary manufacturing (Lot 1 only) and office use)
Is the development considered integrated for the purposes of Section 100B of the <i>Rural Fires Act 1997</i> ?	No - considered state significant development (SSD- 65529236). If 50 or more unique submissions are received and/ or Liverpool City Council object to the application, the SSDA will be determined by an independent planning commission.
Is the proposal located in an Urban Release Area as defined under Clause 273 of the EP&A Regulations?	No
Zoning	ENT- Enterprise ENZ- Environmental and Recreation
Significant environmental features	Yes- refer to section 1.6
Details of any Aboriginal heritage	Yes- refer to section 1.6
Does the proposal rely on a performance solution?	No.

1.5.1 National Construction Code (NCC) and the Australian Standard AS3959:2018

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

The NCC does not provide for any bushfire specific performance requirements for commercial and industrial buildings (Classes 5-8) and, as such, AS3959:2018 does not specifically apply as a set of deemed to satisfy provisions. However, compliance with the AS3959 Standard must be considered when meeting the aims and objectives of *PBP*.

Alternatively, the existing construction types (Type A, B or C) may apply in conjunction with appropriate aspects of AS3959:2018. In this regard, the most important consideration is ember protection associated with the main building. In this case buildings are to be constructed to Type A standards.

The general fire safety construction provisions of the NCC in relation to a fire source feature are taken as acceptable solutions however construction requirements for bush fire protection will need to be considered on a case-by-case basis. The warehouses are considered large, isolated Class 7 buildings.

For a Class 7 or 8 building the requirements for a building of less than 18,000 m² is:

“(1) An open space required by C3D4 must—

- (a) be wholly within the allotment except that any road, river, or public place adjoining the allotment, but not the farthest 6 m of it may be included; and*
- (b) include vehicular access in accordance with (2); and*
- (c) not be used for the storage or processing of materials; and*
- (d) not be built upon, except for guard houses and service structures (such as electricity substations and pump houses) which may encroach upon the width of the space if they do not unduly impede firefighting at any part of the perimeter of the allotment or unduly add to the risk of spread of fire to any building on an adjoining allotment.*

(2) Vehicular access required by this Part—

- (a) must be capable of providing continuous access for emergency vehicles to enable travel in a forward direction from a public road around the entire building; and*
- (b) must have a minimum unobstructed width of 6 m with no part of its furthest boundary more than 18 m from the building and in no part of the 6 m width be built upon or used for any purpose other than vehicular or pedestrian movement; and*
- (c) must provide reasonable pedestrian access from the vehicular access to the building; and*
- (d) must have a load bearing capacity and unobstructed height to permit the operation and passage of fire brigade vehicles; and*
- (e) must be wholly within the allotment except that a public road complying with (a), (b), (c) and (d) may serve as the vehicular access or part thereof.”*

It is noted that ancillary manufacturing uses are proposed in one of the warehouses.

These are not bushfire matters but may impact on the implementation of bushfire protection firefighting access. The requirements of FRNSW in relation to firefighting arrangements satisfy the aim and objectives in relation to access, firefighting and defendable space. The distance between the off-site vegetation and the building can be determined such that a distance complying with BAL-29 setback satisfies a reduction in the spread of fire, and prevention of ignition objectives of *PBP* in conjunction

with the NCC requirements for Type of Construction. Flame length approximates the distance for 29 kW/m².

1.5.2 Planning for Bush Fire Protection 2019 (PBP)

PBP outlines the bushfire protection measures required to be assessed for new development in bush fire prone areas.

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 general objectives for any proposal are to:

- Afford buildings and their occupants protection from exposure to a bush fire.
- Provide for defensible space to be located around buildings.
- Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings.
- Ensure that appropriate operational access and egress for emergency services personnel and occupants is available.
- Provide for ongoing management and maintenance of BPMs; and
- Ensure that utility services are adequate to meet the needs of firefighters. (*PBP*, p.10)

For buildings identified as Class 5 to 8 under the NCC the following (additional) objectives will be applied in relation to access, water supply and services, and emergency and evacuation planning:

- to provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation.
- to provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development.
- to 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; and
- provide for the storage of hazardous materials away from the hazard wherever possible.

In accordance with section 8.3.10 of *PBP* a suitable package of bushfire protection measures should be proposed commensurate with the level of risk to the development. The provisions of Chapter 7 of *PBP* should be used as a base for the development of this package of measures.

1.6 Environmental and Aboriginal Heritage Constraints

The following environmental and heritage considerations have been identified as having the potential to be a constraint for implementing APZs within the site and may require further assessments before construction proceeds within a site:

- identification of any significant environmental features on the property.
- the details of any threatened species, population or ecological community identified under the Biodiversity Conservation Act 2009 that is known to the Applicant to exist on the property.

- the details and location of any Aboriginal object (within the meaning of the National Parks and Wildlife Act 1974) or Aboriginal place (within the meaning of that Act) that is known to the Applicant to be situated on the property.

The following sources databases were reviewed to determine whether any environmental and Aboriginal heritage constraints were present within the proposed site:

Potential Constraint	Database
Aboriginal Heritage significant sites and places	Aboriginal Heritage Information Management System (AHIMS)
Threatened Ecological Communities (TECs)	Threaten Ecological Communities Greater Sydney Dataset (NSW SEED Portal)
Threatened Species (flora and fauna)	NSW BioNet Species Sightings Data Collection (NSW SEED Portal)
Watercourses	NSW Hydrography Dataset (NSW SEED portal)

A basic search of the AHIMS database identified the presence of 1 known significant Aboriginal site within a 50m buffered zone from the site boundaries. (Refer to Schedules 1 and 3). There were two watercourses identified to run through the site; South Creek/ Wianamatta along the site's eastern edge and an unidentified stream that runs along the northern boundary into South Creek/Wianamatta.

The following threatened ecological communities and threatened species were identified within a 50m buffered zone of the site boundaries:

- Threatened Ecological Communities*
 - River-Flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and Southeast Corner bioregions.
- Threatened Species*
 - Grey-headed Flying-fox (*Pteropus poliocephalus*)- vulnerable.
 - Southern Myotis (*Myotis macropus*)- vulnerable.

The Aboriginal site, threatened ecological community and threatened species, as well as the South Creek/ Wianamatta watercourse identified above are not considered a constraint to implementing APZs within the site. They are located a considerable distance to the east of the proposed development footprint within the western section of the site and in the separate area of the site zoned as ENZ- Environment and Recreation.

Details on any ecological and Aboriginal values should reviewed in the EIS and other relevant documentation.

2. BUSHFIRE THREAT ASSESSMENT

To assess the bushfire threat and to determine the required width of an APZ for a development, an assessment of the potential hazardous vegetation and the effective slope within the vegetation is required. These elements include the potential hazardous landscape that may affect the site and the effective slope within that hazardous vegetation.

2.1 Vegetation

PBP guidelines require the identification of the predominant vegetation formation in accordance with David Keith (2004) when using the simplified acceptable solutions in *PBP*. The vegetation is calculated for a distance of at least 140m from a proposed building envelope. The identified vegetation within 140m of the site was identified from the Geocortex viewer within the NSW SEED Portal which includes layers relating to NSW BioNet PCT sites and NSW State Vegetation Mapping. The vegetation formations were then assessed considering Appendix 1 of *PBP* and at a site visit. This includes the future Environment and Recreation (ENZ) zoned area within the western section of the site. The vegetation within 140m posing a bushfire threat to the proposed development includes:

Table 2-1 – Existing Surrounding Vegetation

<i>Vegetation community</i>	<i>Vegetation formation</i>	<i>Vegetation classification</i>	<i>PBP Classification</i>	<i>Acceptable fuel loads surface/ elevated (t/ha) (PBP)</i>
Cumberland Shale Plains Woodland (PCT 3320)	Grassy Woodlands	Coastal Valley Grassy Woodland	Grassy Woodland	10.5/ 20.2
Cumberland Red Gum Riverflat Forest (PCT 4025)	Forested Wetland	Coastal Floodplain Wetland	Forested Wetland	8.0/ 15.1
Unmanaged Grassland	Grassland			6.0/ 6.0

The site has vegetation to its west, south and east. (Refer to the discussion in section 1.2). The site and much of the surrounding land is currently a paddock with unmanaged grassland vegetation.

2.2 Landscaping

The proposed landscape plans for the site by Geoscapes, Rev.6, 2026 emphasise both environmental sustainability and aesthetic enhancement. The plans retain existing grassland and vegetation, including the central dam, which remains an important feature.

Significant areas are designated for shade trees like *Brachychiton populneus* in car parks and *Eucalyptus tereticornis* in the front landscape setback. Clusters of trees, including species like *Casuarina glauca* and *Melaleuca decora*, are planned along the site's boundaries, with spaces between them to adhere to bushfire guidelines. The plantings must be in accordance with Inner Protection Areas (IPAs) within Appendix 4 of *PBP* as follows:

- tree canopy cover should be less than 15% at maturity.
- trees at maturity should not touch or overhang the building.
- lower limbs should be removed up to a height of 2m above the ground.
- tree canopies should be separated by 2 to 5m; and preference should be given to smooth barked and evergreen trees.
- Shrubs create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided.
- shrubs should not be located under trees.
- shrubs should not form more than 10% ground cover; and clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.
- grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
- leaves and vegetation debris should be removed.

The design also features Indigenous artwork opportunities and entry signage. In flood-prone zones, species adapted to boggy soils, such as *Casuarina* and *Melaleuca*, will be planted. Overall, the canopy cover will achieve 15% of the total site area, incorporating both proposed and existing trees.

The land to the south is predominantly a rural paddock with unmanaged grassland. The lots of land to the west on the opposite side of Martin Road are also rural paddocks but with a grassy woodland component. There is a presence of clusters of trees, primarily being Eucalypts that sparsely separated from one another. These areas are zoned as enterprise (ENT) under the *State Environmental Planning Policy (Western Parkland City) 2021* and are expected to be developed in the future. (Refer to figure 2-1 and 2-2).

Figure 2 Site Photographs



Picture 1 View of site from Martin Road (NW corner)

Source: Google Streetview 2023



Picture 2 Existing structure located on the site

Source: Google Streetview, 2023



Picture 3 View of site from Martin Road

Source: Google Streetview, 2023



Picture 4 View of site from Martin Road (SW corner)

Source: Google Streetview, 2023

Figure 2-1 – Proposed site vegetation

(Source: URBIS, 230 Martin Road, Badgerys Creek, dated: 17 November 2023)

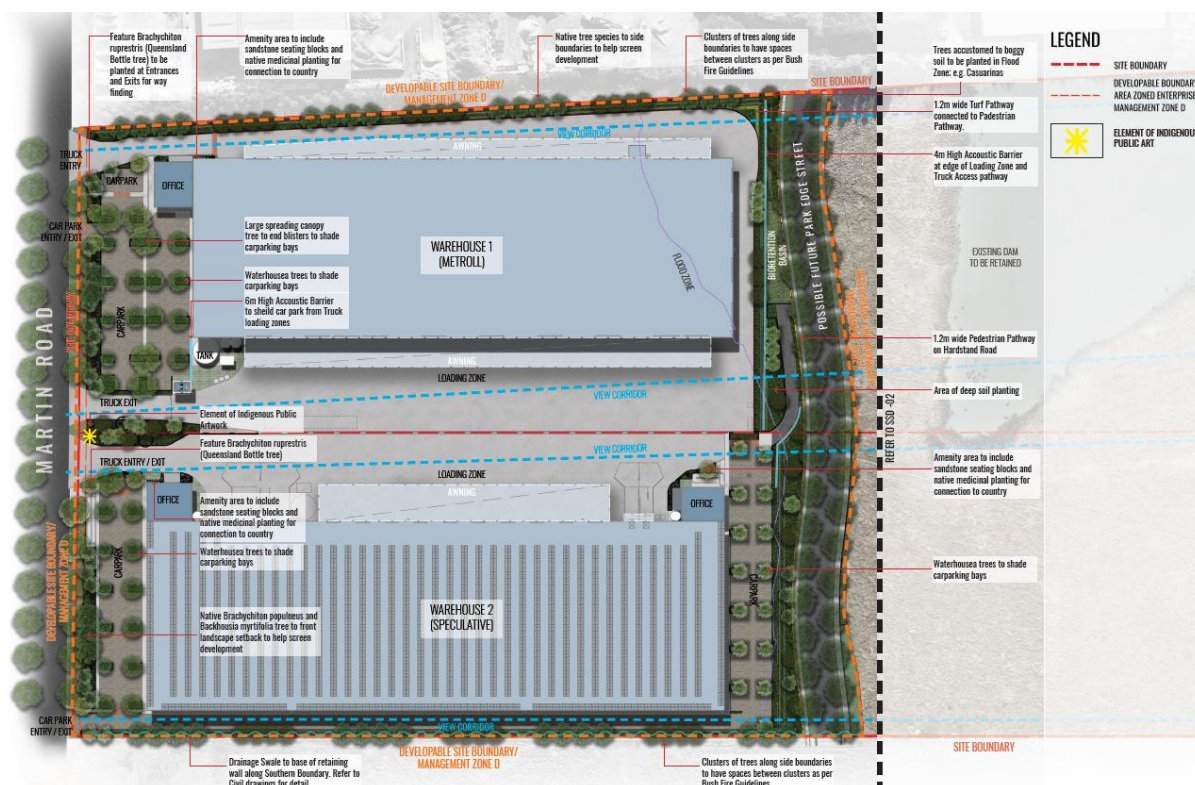


Figure 2-2 – Proposed landscaping plan

(Source: Geoscapes, Proposed landscaping plans, Rev.6, 2026)

2.3 Effective slope

The effective slope has been assessed for up to 100m from the development site. 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 effective slope within the hazardous vegetation is described in detail within Table 2-2 below.

2.4 Bushfire attack assessment

Table 2-2 provides a summary of the bushfire attack assessment based on residential development and the methodologies used. The following assessment has determined the APZ and BAL levels via the following approaches.

- 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 A1.12.2 of *PBP*.

The APZ's are required to be wholly within the site's boundaries and should not rely on being on adjoining land. APZ's can extend beyond a site's boundaries in cases where structures or features of a landscape are considered permanent and act as barriers against fire spread. Examples are road carriageways, urban landscapes or land with vegetation that is considered

managed. The minimum APZ setback required for a non-residential building is a rating of BAL-29, which ensures buildings are not exposed to a radiant heat flux exceeding 29 kW/m².

Land being retained for environment and recreation is assessed as a grassy woodland.

Table 2-2 – Bushfire Attack Assessment

Aspect	Vegetation Formation	Effective Slope	Recommended APZ Required ¹ (BAL-29)	APZ Provided ²	Comment
North	Managed land	N/A ³			
East	Grassy Woodland	0-5° downslope	16m	49m	The APZ provided includes the potential Park Road and carpark area.
South	Grassland	Flat/ upslope	10m	10m	The APZ provided includes a 10m setback zone from the edge of warehouse 2 and the site's southern boundary.
West	Grassy Woodland	Flat/ upslope	12m	>28m	The APZ provided includes the Martin Road reserve and carpark areas.

1. Recommended APZ: the minimum APZ setback that ensures buildings are not exposed to a radiant heat flux exceeding 29kW/ m².

2. APZ required: The minimum setback distance required from the site's boundaries in order to achieve the respective BAL ratings.

3. N/A: Not Applicable

For a more detailed depiction of the bushfire protection measures, refer to schedule 1.

The site north of the proposed development is owned and operated by Australian Native Landscapes (ANL) which supplies landscaping and building materials. Aerial imagery of the site viewed on Nearmap on 5 December 2023 shows the site lacks vegetation, has several warehouse structures and stockpiles of materials which are likely to include flammable organic mulches and soils. *Section A1.10* stipulates that commercial nurseries can be excluded as a low vegetation threat and hence is considered managed land.



Figure 2-3 – Australian Native Landscapes (ANL) to the sites north

(Source: NearMap 2023)

In accordance with the *PBP* guidelines for commercial and industrial development, the proposed landscape plans have been designed to ensure fire safety through appropriate setbacks and compliance with bushfire protection measures. A minimum setback for APZs of 10 metres has been incorporated, which includes provision for a perimeter road, ensuring separation between vegetation and buildings.

Additionally, where the surrounding hardstand apron is used for storage or parking of vehicles, the guidelines specify an additional setback of 16 metres outside the apron. If the area is designated as no parking or storage, a minimum clearance of 8 metres on the hardstand apron is required. These measures are crucial in preventing direct flame contact with structures, meeting the objectives of *PBP*.

3. SPECIFIC PROTECTION ISSUES

The intent of bushfire protection measures for this development is to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities.

In accordance with section 8.3.10 of *PBP* a suitable package of bushfire protection measures proposed are commensurate with the level of risk to the development, with the provisions of Chapter 7 of *PBP* (related to Residential Infill) to be used as a base for the development of this package of measures.

This section outlines the proposed package of bushfire protection measures and where possible assesses their compliance with the relevant performance criteria by comparison to the acceptable solutions for residential infill development.

Where issues listed for the specific development purpose have no specific performance criteria the proposed performance solutions are assessed by comparison to the relevant Australian Standards.

3.1 Asset protection zones (APZs)

The bushfire attack assessment in section 2.3 demonstrates that all APZs can be contained wholly within the site boundaries and ensure buildings are not exposed to a radiant heat flux exceeding 29 kW/m². See landscape plans for ongoing maintenance of landscaping and riparian areas.

Table 3-1 – Performance criteria for asset protection zones (PBP)

<i>Performance criteria</i>	<i>Acceptable solutions</i>	<i>Acceptable solution</i>	<i>Comment</i>
APZs are provided commensurate with the construction of the building; and a defensible space is provided.	Table A1.12.5 <i>PBP</i> to ensure buildings are exposed to a radiant heat flux no greater than 29 kW/m ² . Note this will entail some (low) possibility of flame contact.	☑	Appropriate. All building's will not be exposed to a radiant heat flux of greater than 29 kW/m ² .
APZs are managed and maintained to prevent the spread of a fire to the building.	APZs to be managed in accordance with the requirements of Appendix 4 of <i>PBP</i> .	☑	Complies. The site's landscaping plans tree canopy cover is 15% in IPA. Shrubs to be located outside of tree canopy extends to a maximum of 10% of IPA area. as stipulated within Appendix 4 of <i>PBP</i> and as shown in schedule 2 of this report. (Refer to proposed developments current landscape plans)

Performance criteria	Acceptable solutions	Acceptable solution	Comment
The APZ is provided in perpetuity. APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised	APZs are wholly within the boundaries of the development site.	☑	Complies. All APZs can be maintained wholly within the site boundaries. (Refer to SCHEDULE 1).
	APZ are located on lands with a slope less than 18 degrees.	☑	All slopes are less than 18 degrees.

3.2 Landscaping

The provision of suitable landscaping is crucial to the provision of appropriate bushfire mitigation both on-site and on adjoining areas, notably to the east. The SEARS make specific reference to landscaping and bushfire identifying: *“Landscape areas on site will include native planting as well as species indigenous to site. Bush fire requirements as per Planning for Bush Fire Protection 2019 have been incorporated. Refer to SSD-01”*.

An overview of the landscaping plan with canopy cover and bush fire management arrangements is shown in figure 3-1 below.

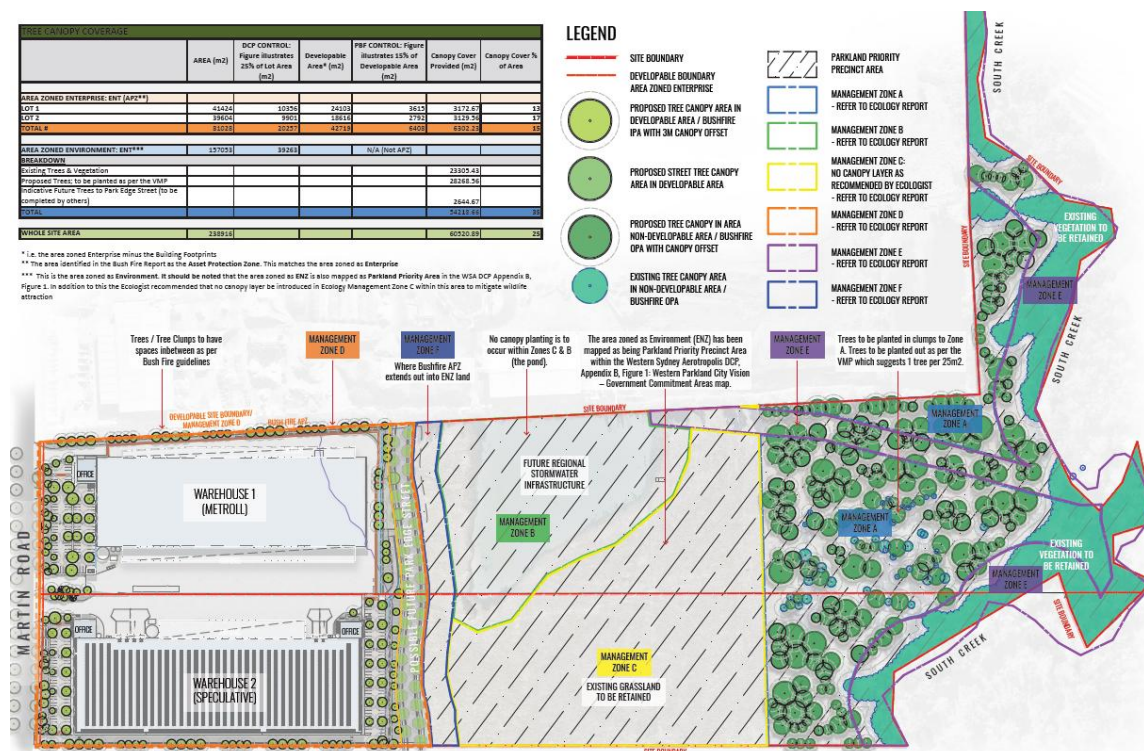


Figure 3-1: Canopy Cover Calculations (Geoscapes on behalf of EMKC³, 20.3.2026)

Street trees have been identified for planting along Martin Road, carparking areas and eastern boundary as shown above. Planting are also aimed at reducing the heat island effects in Western Sydney through denser canopy cover. Where denser plantings occur in linear features, these are akin to windbreaks and are acceptable. Where plantings occur over extended landscaping, care needs to be identified that canopy cover (projected) does not exceed 15%. This is identified in Figure 3-1 above. The proposed landscaping will need to be maintained over time however, the current schema is consistent with the requirements of Appendix 4 of PBP.

3.3 Access for firefighting operations

Lot's containing warehouses 1 and 2 will have separate access/ egress that are site specific. (Refer to figure 1-3 and 1-4). For the site of Warehouse 1, there will be a single access/ egress point from Martin Road in the north-west to the rear as a perimeter road in its western section. There will also be a separate egress points for trucks in its southern western corner from Martin Road. The width of the perimeter road for the Warehouse 1 site will vary but will not be less than 6m wide. Carparking for Lot 1 is to the front of the site (west) near the northern entry point.

The site for Warehouse 2 will have a single access/ egress point for trucks from Martin Road, situated in its northwestern corner. The internal access road which runs parallel to the southern boundary and provides access to the car parks which are located at the western and eastern ends of the lot. These points will have specific routes for cars and trucks. There is no perimeter road for the warehouse 2 site other than offered by the carpark. There is an area of hard standing to the north of the warehouse. The widths of these roads within the warehouse 2 site will vary but won't be less than 8 metres wide.

The access provisions for both the warehouse 1 and 2 sites are designed to provide frontage access to the main bushfire threats to the west, east and south of the development. The proposed Park Road that will run along both sites eastern aspect will provide additional frontage access and create an additional buffer zone between the bushfire threat to the east and the development.

Given that this site is a large, isolated lot in accordance with NCC, access will be dictated by NCC provisions, rather than solely relied upon by *PBP*. *PBP* does not stipulate access widths, however the site should provide capacity and adequate access for Fire and Rescue NSW fire fighting vehicles. The surrounding area will be further developed and the site will become a fire district under the Fire Brigades Act due to the nature of stored materials.

The proposal's compliance with the acceptable solutions outlined in *PBP* is detailed within Table 3-2 below.

Table 3-2 – Standards for access within PBP

	<i>Performance criteria</i>	<i>Acceptable solution</i>	<i>Acceptable solution</i>	<i>Comment</i>
ACCESS (GENERAL REQUIREMENTS)	Firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.	Property access roads are two-wheel drive, all weather roads.	☑	Appropriate. It is noted that NCC provisions apply.
	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.	☑	This is considered compliant due to the nature of the warehouse which will carry other heavy vehicles.
	There is appropriate access to water supply.	Hydrants are provided in accordance with the relevant clauses of AS 2419.1:2021.	☑	NCC matter. Must comply.

Performance criteria		Acceptable solution	Acceptable solution	Comment
		There is suitable access for a RFS Category 1 (or FRNSW) appliance within 4m of the static water supply where no reticulated supply is available.	☑	Appropriate.
	Firefighting vehicles can access the building/s and exit the property safely.	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:	☑	NCC matter. Must comply.
		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) that supports the operational use of emergency firefighting vehicles.	☑	NCC matter. Must comply.

In summary, access to the site is largely dictated by the requirements of the NCC (Vol1) and should be used as the primary determinant of firefighting access.

3.4 Water supplies

The intent of measures is to provide adequate services of water for the protection of buildings during and after the passage of bushfire. Potable water is intended to be supplied to the development from a new connection to the municipal water network, subject to Sydney Water requirements (*Arcadis, 2023*). Each site includes additional water for firefighting sprinkler systems (not for bushfire protection).

Table 3-3 outlines the proposal's compliance with the acceptable solutions for reticulated water supply. Note that the requirements of the NCC also apply to this development.

Table 3-3 – Standards for reticulated water supplies (PBP)

Performance criteria	Acceptable solutions	Acceptable solution	Comment
Adequate water supplies are provided for firefighting purposes.	Reticulated water is to be provided to the development, where available.	☑	Appropriate. Reticulated will be provided to the site once Sydney Water provide infrastructure to the site.
	A static water supply is provided for non-reticulated developments or where reticulated water supply cannot be guaranteed	☑	Appropriate. Tank water will be provided to the site as an interim solution until reticulated water can be supplied to the site.
Water supplies are located at regular intervals.	Fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS 2419.1:2021.	☑	NCC Requirement. Must comply.
The water supply is accessible and reliable for firefighting operations.	Hydrants are not located within any road carriageway.	☑	Spacing of hydrants as per NCC. Must Comply
	Reticulated water supply to urban subdivisions uses a ring main system for areas for areas with perimeter roads.	☑	Compliance with the NCC provisions.
Flows and pressure are appropriate.	Fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2021.	☑	Compliance with the NCC provisions.
The integrity of the water supply is maintained.	All above-ground water service pipes are metal, including and up to any taps.	☑	Recommended to comply.
	Above ground water storage tank shall be of concrete or metal. Fittings to be suitable for FRNSW and RFS.	☑	Compliance with the NCC provisions.
A static water supply is provided for firefighting purposes in areas	Where no reticulated water supply is available, water for firefighting purposes is provided in accordance with Table 5.3d.	☑	Recommended to comply. Water tanks for firefighting to comply with NCC

<i>Performance criteria</i>	<i>Acceptable solutions</i>	<i>Acceptable solution</i>	<i>Comment</i>
where reticulated water is not available.	A connection for firefighting purposes is located within the IPA or non-hazard side and away from the structure; 65mm Storz outlet with a ball valve is fitted to the outlet.		requirements on both warehouse 1 and 2 sites should have a minimum capacity of 20 000L.
	Ball valve and pipes are adequate for water flow and are metal.		
	Supply pipes from tank to ball valve have the same bore size to ensure flow volume.		
	Underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank.		
	A hardened ground surface for truck access is supplied within 4m.		
	Above-ground tanks are manufactured from concrete or metal.		
	Raised tanks have their stands constructed from non-combustible material.		
	Unobstructed access can be provided at all times.		
	Underground tanks are clearly marked.		
	Tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters.		
	All exposed water pipes external to the building are metal, including any fittings.		
	Where pumps are provided, they are a minimum 5hp or 3kW petrol or diesel-powered pump and are shielded against bush fire attack; any hose and reel for firefighting connected to the pump shall be 19mm internal diameter.		
	Fire hose reels are constructed in accordance with AS/NZS 1221:1997 and installed in accordance with the relevant clauses of AS 2441:2005.		

3.5 Gas

The intent of measures is to locate natural/LPG gas so as not to contribute to the risk of fire to a building. Table 3-4 outlines the required acceptable solutions for gas supply. Jemena gas assets are near the site (Urbis, 2023). It is recommended that unless essential to the development, that bottled or reticulated gas not be supplied to the development.

Table 3-4 – Standards for gas supplies (PBP)

<i>Performance criteria</i>	<i>Acceptable solutions</i>	<i>Acceptable solution</i>	<i>Comment</i>
Location of gas services will not lead to the ignition of surrounding bushland or the fabric of buildings.	Reticulated or bottled gas are to be installed and maintained in accordance with <i>AS/NZS 1596 (2014)</i> , the requirements of relevant authorities and metal piping is to be used.	☑	There are currently no plans to have gas supplied to the site and will only be made available if the future tenant requires it. However, Gas supply is not recommended.
	All fixed gas cylinders are to be kept clear of flammable materials to a distance of 10m and shielded on the hazard side.	☑	Not recommended as per above.
	Connections to and from gas cylinders are metal.	☑	
	Polymer sheathed flexible gas supply lines are not used.	☑	
	Above ground gas service pipes are metal, including and up to any outlets.	☑	

3.6 Electricity

The intent of measures is to locate electricity so as not to contribute to the risk of fire to a building. Table 3-5 outlines the required acceptable solutions for the subdivision's electricity supply.

Table 3-5 – Standards for electricity services (PBP)

<i>Performance criteria</i>	<i>Acceptable Solutions</i>	<i>Acceptable solution</i>	<i>Comment</i>
Location of electricity services limit the possibility of ignition of surrounding bushland or the fabric of buildings.	Where practicable, electrical transmission lines are underground.	☑	Appropriate. Electrical transmission lines will be underground.
	Where overhead electrical transmission lines are proposed: lines are installed with short pole spacing (30m), 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 Guideline for Managing Vegetation Near Power Lines.	☑	Not applicable. Electrical transmission lines will be underground.

3.7 Construction standards

The NCC does not provide any bushfire specific requirements for buildings of Class 5-8 and as such AS 3959 and the NASH Standard are not considered as a set of Deemed to Satisfy provisions. Compliance with the AS3959 Standard must, however, be considered when meeting the aims and objectives of *PBP* for ‘*Other Classes of Buildings*’. Bushfire construction recommendations are dependent on the level of bushfire risk and the provision of adequate access opportunities. The building is a warehouse and is understood will comply with Type A construction. This, however, does not make provision for ember protection.

Table 3-6 outlines the proposed solution and compliance with the performance criteria for construction standards.

Table 3-6 – Standards for construction (PBP)

<i>Performance criteria</i>	<i>Solution</i>	<i>Compliance</i>	<i>Comment</i>
The proposed building can withstand bush fire attack in the form of embers, radiant heat and flame contact.	Construction is determined in accordance with NCC requirements for a Type A construction plus ember protection. Tables A1.12.5 to A1.12.7; and construction provided in accordance with the NCC and as modified by section 7.5 of <i>PBP</i> in relation to ember protection. All sarking to be non-combustible.	☑	NCC Type of Construction to be confirmed. Ember protection to be provided for any non-open-air buildings.
Proposed fences and gates are designed to minimise the spread of bush fire.	Fencing and gates are non-combustible. No internal fencing of timber or other combustibles to be used.	☑	Non-Combustible security fencing.

<i>Performance criteria</i>	<i>Solution</i>	<i>Compliance</i>	<i>Comment</i>
Proposed Class 10a buildings are designed to minimise the spread of bush fire.	Class 10a buildings are constructed in accordance with section 8.3.2 of <i>PBP</i> .	☑	N/A

3.8 Issues specific to buildings of Class 5 to 8 under the NCC

Whilst bush fire is not captured in the NCC for Class 5-8 buildings, a number of objectives are applied under section 8.3.1 of *PBP* in relation to access, water supply and services, and emergency and evacuation planning. Table 3-7 outlines the proposed performance solutions and compliance with the specific objectives for buildings of Class 5-8.

Table 3-7– Objectives and proposed solutions specific to buildings of Class 5-8 under the NCC

<i>Objective</i>	<i>Solution</i>	<i>Compliance</i>	<i>Comment</i>
To provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation.	Access provided in accordance with section 3.2 of this report. The site will have multiple, yet separate access/ egress points and frontage access to the main bushfire threat from the site's west. The site will also have a perimeter road for firefighting vehicles. However, the perimeter road widths vary between 6.0-6.875m.	☑	<i>PBP</i> does not stipulate road widths in accordance with Chapter 7, which is used as a basis for Commercial and Industrial Development (8.3.10). It is recommended that the perimeter roads constructed and maintained in accordance with NCC provisions and building certifier to validate/approval. (Refer to the discussion within section 3.2).

Objective	Solution	Compliance	Comment
To provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development.	A Bush Fire Emergency Management and Evacuation Plan is prepared by the operator consistent with the NSW RFS publication: <i>A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan</i> , and AS3745:2010.	☑	Recommended to comply. A bushfire emergency plan can be prepared prior to occupation. This should be reviewed annually
To 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	Services to be provided in accordance with sections 3.3-3.5 of this report. Gas cylinders and reticulated gas not to be provided. Water supplies to meet the requirements of the NCC.	☑	NCC requirements apply.
Provide for the storage of hazardous materials away from the hazard wherever possible.	No above ground storage of hazardous materials and no filling/dispensing points for underground storage to be permitted within the APZs. Storage and handling of hazardous materials in accordance with: AS1940:2017 The storage and handling of flammable and combustible liquids	☑	NCC requirements apply.
Care should also be taken to ensure that such facilities do not impact on existing developments.	No impact identified in terms of fire related issues. The site adjoins similar types of development and does not surround residential areas.	☑	NCC requirements apply.

4. CONCLUSION & RECOMMENDATIONS

4.1 Conclusion

This bushfire protection assessment has been undertaken for the proposed construction of two warehouses which will facilitate ancillary works and manufacturing (steel cutting) at Lot A DP 406215, 230 Martin Road, Badgerys Creek.

This assessment has found that bushfire can potentially affect the proposed development from the vegetation along the site's west, east and southern aspects, potentially resulting in future buildings being exposed to potential radiant heat and ember attack.

In recognition of the bushfire risk posed to the site by the surrounding bushland, *TBE* identified the following combination of bushfire protection measures:

- APZs are in accordance with the minimum setbacks outlined within *PBP*.
- The site's current landscaping plans will comply with *Appendix 4* of *PBP* and shown in Figure 3-1.
- Building construction will be in accordance with the requirements of NCC and ember protection within section 7.5 of *PBP* (sarking to be non-combustible).
- Provision of access, water, and electricity supply is in accordance with the acceptable solutions outlined in *PBP* (no gas to be supplied).

Cumulative impacts of nearby developments (e.g., Elizabeth Drive upgrades, M12 Motorway, and Western Sydney International Airport) have been considered. These projects increase human and vehicle activity in the area, necessitating a robust bushfire response plan.

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

4.2 Recommendations

Recommendation 1 - The development is as generally indicated on the attached SCHEDULE 1 – Bushfire Protection Measures and plans for the development provided in this report.

Recommendation 2 - APZs are to be provided to the proposed development as generally depicted within SCHEDULE 1 and maintained in perpetuity. Landscaping plans for the site shall be maintained in compliance with *Appendix 4* of *PBP*.

Recommendation 3 - Access is to be provided in accordance with section 3.2 of this report and set out in SCHEDULE 1. All perimeter roads vary in width, in which *PBP* does not stipulate specific measurements (Chapter 7) for Class 5-8 buildings, however NCC provisions for emergency services should be applied and building certifier to further validate and approve.

Recommendation 4 - Water and electricity supply is provided in accordance with sections 3.3 & 3.6 of this report. Water supplies to conform to the requirements of the NCC. Street hydrants are not to be located in roadways.

Recommendation 5 - A Bushfire Emergency and Evacuation Plan be prepared for and implemented for the site and subject to regular review, and training of staff and finalised prior to occupation and updated annually prior to the statutory Bush Fire Danger Period.

5. INFORMATION

5.1 Bibliography

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- Rural Fire Service (2019) - *Planning for bush fire protection – a guide for councils, planners, fire authorities and developers*. NSW Rural Fire Service.
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5.2 Information collation

Information sources reviewed for the preparation of this report include the following:

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- AirServices Australia. *Response to SEARs for 230 Martin Road Industrial Development, dated 15 December 2023*.
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- Australian Standard 3959 Construction of buildings in bushfire-prone areas (2018)*.
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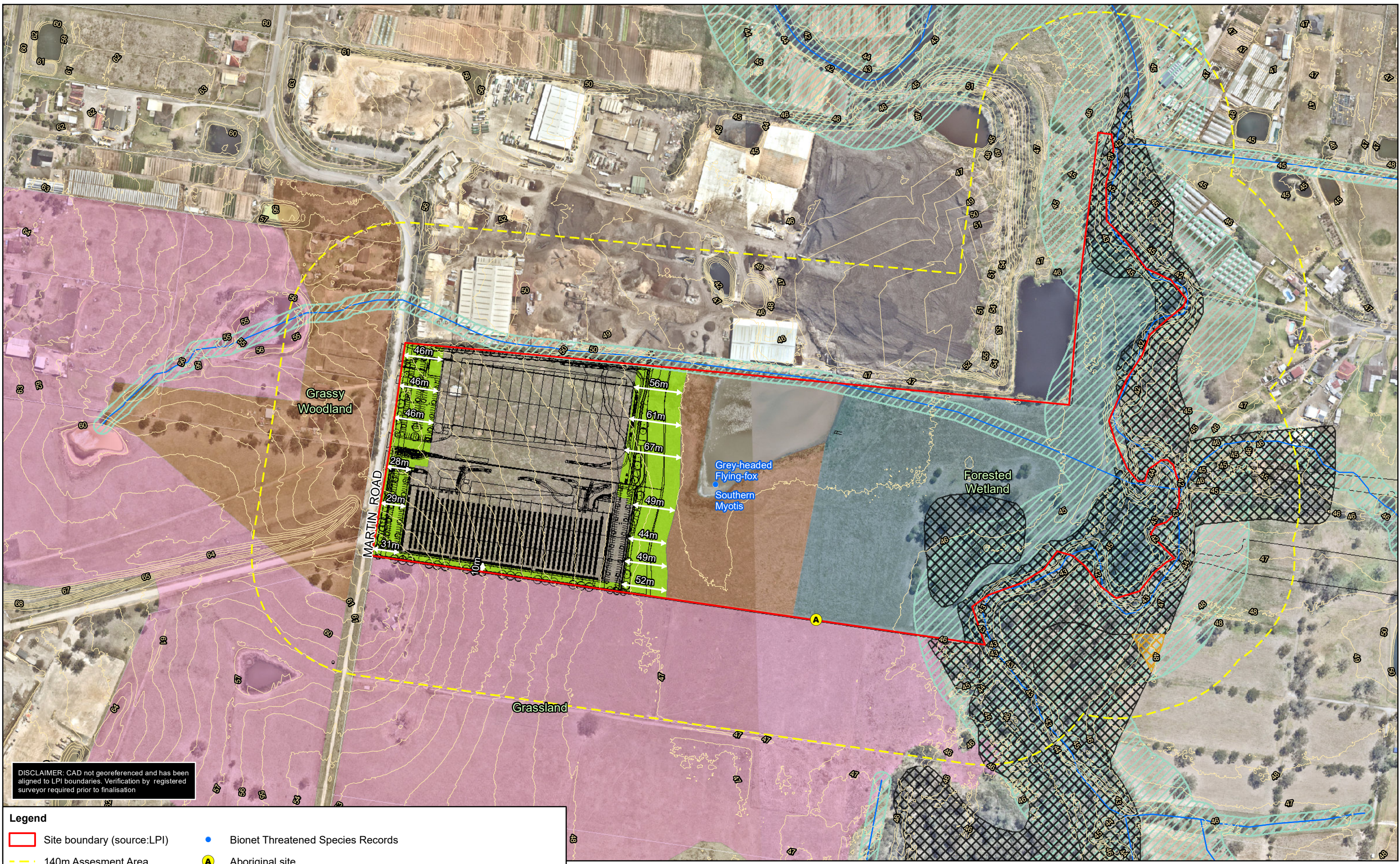
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Urbis. *230 Martin Road, Badgerys Creek: State Significant Development: Scoping Report. Final, dated 17 November 2023.*

WaterNSW. *Comments on SEARs for 230 Martin Road Industrial Development, dated 7 December 2023.*

SCHEDULE 1. PLAN OF BUSHFIRE PROTECTION MEASURES



DISCLAIMER: CAD not georeferenced and has been aligned to LPI boundaries. Verification by registered surveyor required prior to finalisation

Legend

Site boundary (source:LPI)

140m Assesment Area

Contour 1m (source:LiDAR)

Watercourses

Riparian corridor buffer

10 - Shale Plains Woodland

11 - Alluvial Woodland

Bionet Threatened Species Records

Aboriginal site

Asset Protection Zone (APZ)

Vegetation Formations

Forested Wetland

Grassland

Grassy Woodland

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.

PROJECT & MXD REFERENCE

Martin Road Badgerys Creek
EMKC09_BF001

DATE & ISSUE NUMBER

8/12/2025
Issue 1

SCALE & COORDINATE SYSTEM

1:4,000 @A3
GDA2020 MGA Zone 56

TITLE

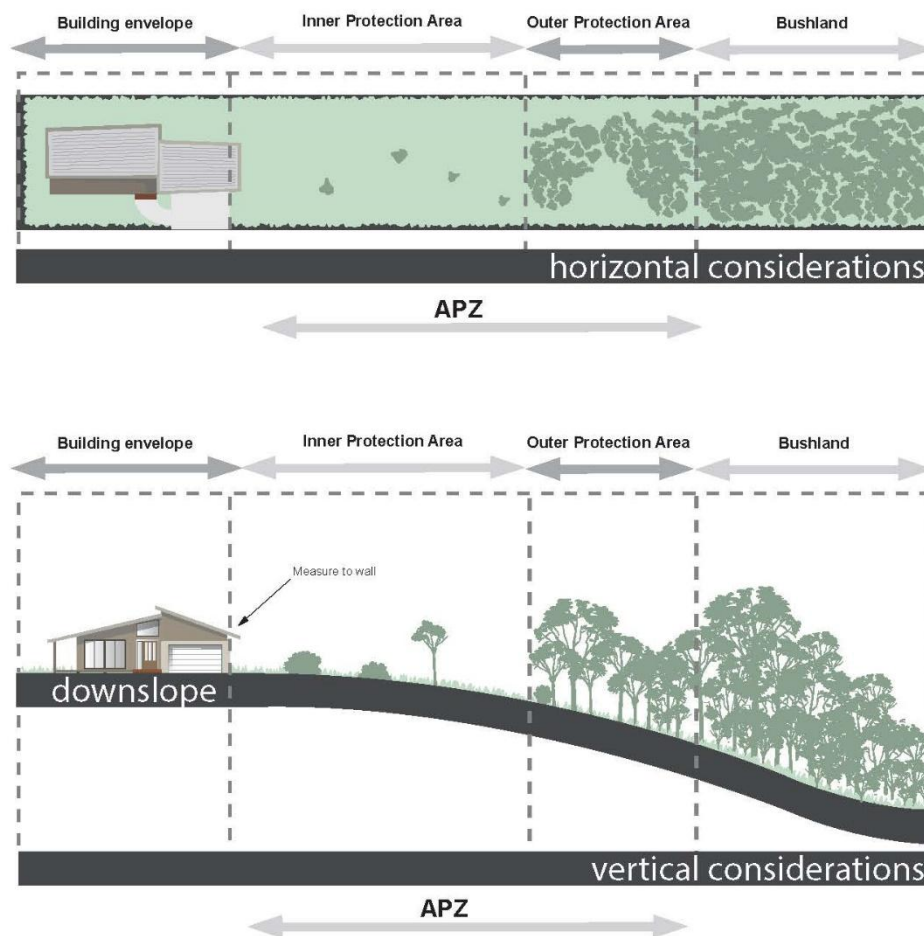
Schedule 1 - Bushfire Protection Measures

Document Path: N:\GIS STORAGE\N Drive\1_GDA2020_Mapping\Projects\EMKC09_MartinRd_BadgerysCreek\MXDs\EMKC09_BF001.mxd

SCHEDULE 2. MANAGEMENT OF ASSET PROTECTION ZONES

The RFS provides basic advice in respect of managing APZs through documents such as, *Standards for Asset Protection Zones* (RFS, 2005), with landscaping to comply with Appendix 4 of *PBP*.

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 dwellings. The property is to be managed to IPA standards only. A typical APZ is graphically represented below.



APZs and progressive reduction in fuel loads

(Source: *PBP*, 2019)

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

The following table adapted from *PBP* provides maintenance advice for vegetation within the IPA and OPA. The APZ is to be maintained in perpetuity and maintenance should be undertaken regularly, particularly in advance of the bushfire season

	Inner Protection Area	Outer Protection Area
Trees	➤ Tree canopy cover should be less than 15% at maturity. ➤ Trees at maturity should not touch or overhang the building. ➤ Lower limbs should be removed up to a height of 2m above the ground. ➤ Tree canopies should be separated by 2 to 5m; and ➤ Preference should be given to retaining smooth barked and evergreen trees.	➤ Tree canopy cover should be less than 30%; and ➤ Canopies should be separated by 2 to 5m.
Shrubs	➤ Large discontinuities or gaps in the vegetation should be provided to slow down or break the progress of fire towards buildings. ➤ Shrubs should not be located under trees. ➤ Shrubs should form less than 10% ground cover; and ➤ Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.	➤ Shrubs should not form a continuous canopy; and ➤ Shrubs should form less than 20% of ground cover.
Grass and Leaf Litter	➤ Grass should be kept mown to a height of less than 100mm; and ➤ Leaves and other debris should be removed	➤ Grass should be kept mown to a height of less than 100mm; and ➤ Leaf and other debris should be removed.
	All Management Zones	
Weeds	➤ All weeds should be removed in accordance with best practice guidelines, and measures taken to prevent their further spread	
Landscaping	➤ Suitable impervious areas being provided immediately surrounding the building such as courtyards, paths and driveways. ➤ Restrict planting in the immediate vicinity of the building which may over time and if not properly maintained come into contact with the building. ➤ When considering landscape species consideration needs to be given to estimated size of the plant at maturity. ➤ Avoid species with rough fibrous bark, or which retain/shed bark in long strips or retain dead material in their canopies. ➤ Use smooth bark species of trees species which generally do not carry a fire up the bark into the crown. ➤ Avoid planting of deciduous species that may increase fuel at surface / ground level (i.e. leaf litter). ➤ Avoid climbing species to walls and pergolas. ➤ Locate combustible materials such as woodchips / mulch, flammable fuel stores away from the building. ➤ Locate combustible structures such as garden sheds, pergolas and materials such timber garden furniture way from the building; and ➤ Use of low flammability vegetation species.	

SCHEDULE 3. AHIMS SEARCH

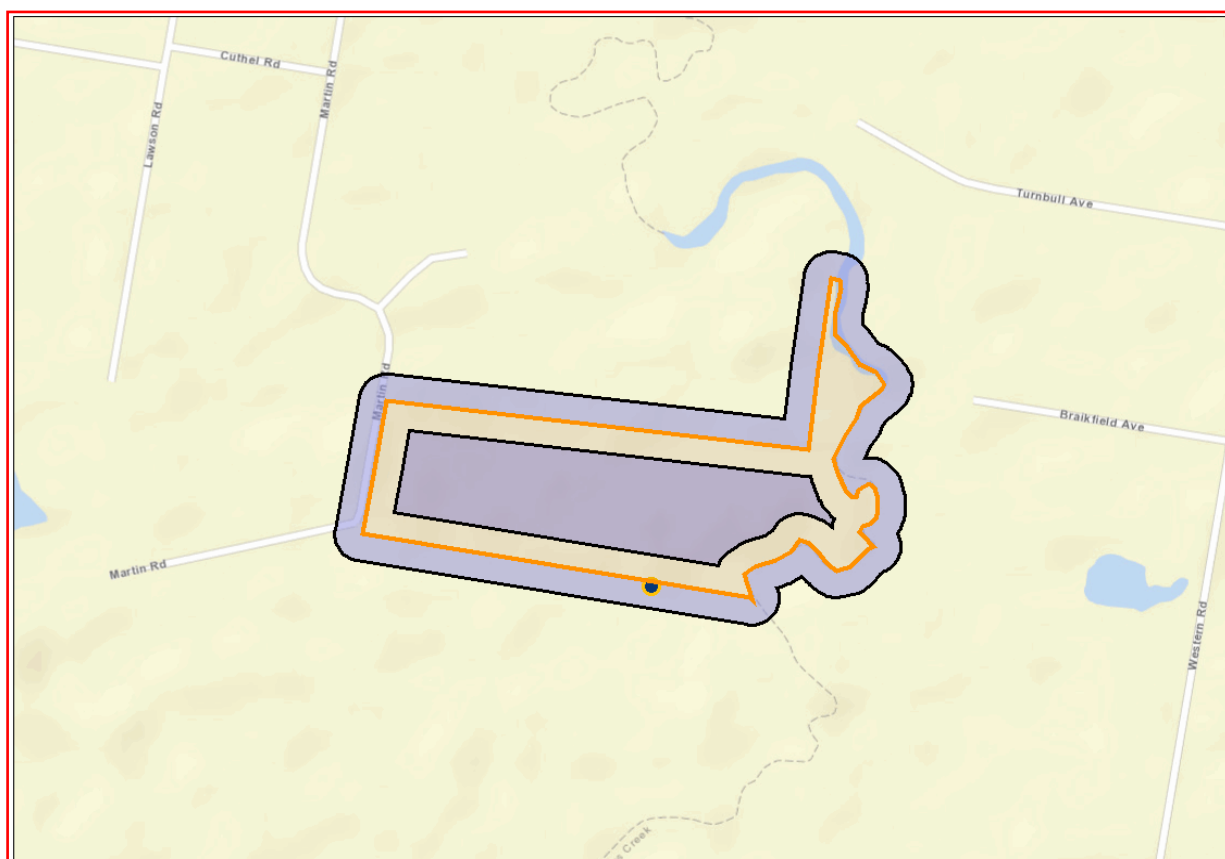
Luke Simpson
52 The Avenue
Karing New South Wales 2250
Attention: Luke Simpson
Email: lsimpson@traverseecology.com.au

Date: 27 November 2023

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : A, DP:DP406215, Section : - with a Buffer of 50 meters, conducted by Luke Simpson on 27 November 2023.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

1	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(https://www.legislation.nsw.gov.au/gazette\)](https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.