Huntingwood Processing Expansion
Biodiversity Development Assessment Report

Charter Hall Holdings Pty Ltd

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DOCUMENT TRACKING

Project Name	Huntingwood Processing Expansion
Project Number	17644
Project Manager	Belinda Failes
Accredited Assessor Certification	Nicole McVicar (BAAS 18007) 
Prepared by	Diane Campbell and Belinda Failes
Reviewed by	Nicole McVicar
Approved by	David Bonjer
Status	**Final**
Version Number	**3**
Last saved on	**29 July 2021**

This report should be cited as 'Eco Logical Australia. 2021 Huntingwood Expansion Biodiversity Development Assessment Report. Prepared for FDC Construction NSW Pty Ltd and Charter Hall Holdings Pty Ltd.'

ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd with support from FDC Construction NSW Pty Ltd and Charter Hall Holdings Pty Ltd.

Template 2.8.1

Executive Summary

Eco Logical Australia Pty Ltd (ELA) was engaged by FDC Construction NSW Pty Ltd on behalf of Charter Hall Holdings Pty Ltd to prepare a Biodiversity Development Assessment Report (BDAR) for the proposed development at 65 Huntingwood Drive, Huntingwood. The development footprint includes the construction of a new processing facility in the northwest corner of the site, ingredient silo buildings, storage building and smaller processing building, replacement of the on-site detention (OSD) basin with an OSD tank below the basement carpark and landscaped setbacks along both street frontages to screen the new processing facility and loading area.

This BDAR has been prepared to meet the requirements of the Biodiversity Assessment Method (BAM) established under Section 6.7 of the NSW *Biodiversity Conservation Act 2016* (BC Act). Requirements of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), Local Environmental Plan, Development Control Plan and applicable State Environmental Planning Policies have also been addressed in this report.

This BDAR outlines the measures taken to avoid, minimise and mitigate impacts on the vegetation and species habitat present within the development site and measures to minimise impacts during construction and operation of the development.

Due to the presence of only planted native vegetation within the development site, this BDAR was prepared under the streamlined assessment module for planted native vegetation consistent with Appendix D of BAM 2020. The development site includes the area subject to indirect impacts, which includes a 5 m buffer to the development footprint, to allow for construction and operation.

The development site has been subject to extensive previous modification of vegetation. The literature reviewed identified that the vegetation within the development site is not remnant native vegetation. Vegetation has been established through revegetation works. Landscaping works have incorporated planted native species. The field surveys confirmed that the development site does not contain remnant ecological communities or threatened ecological communities. As the site consists entirely of planted native vegetation, the site was assessed in accordance with the BAM 2020 Appendix D *Streamlined assessment module – Planted native vegetation* and determined that they do not require additional considerations or offsets in accordance with the BAM 2020.

No threatened flora or fauna species were recorded within the development site or were considered likely to occur based on literature review and field habitat assessment.

Serious and Irreversible Impacts (SAII) have been considered as part of this assessment. The development site does not contain SAII entities.

One Matters of National Environmental Significance has potential to be affected by the proposal: *Pteropus poliocephalus* (Grey-headed Flying-Fox) An assessment of the Commonwealth Significant Impact Criteria under the EPBC Act was undertaken for this entity and concluded the works are unlikely to have a significant impact on Matters of National Environmental Significance.

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Abbreviations

Abbreviation	Description
BAAS	Biodiversity Accredited Assessor System
BAM	Biodiversity Assessment Method
BAMC	Biodiversity Assessment Method Credit Calculator
BC Act	NSW *Biodiversity Conservation Act 2016*
BDAR	Biodiversity Development Assessment Report
CEEC	Critically Endangered Ecological Community
DAWE	Commonwealth Department of Agriculture, Water and Environment
DPIE	NSW Department of Planning, Industry and Environment
EEC	Endangered Ecological Community

Abbreviation	Description
ELA	Eco Logical Australia Pty Ltd
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
FM Act	NSW *Fisheries Management Act 1994*
GIS	Geographic Information System
GPS	Global Positioning System
IBRA	Interim Biogeographic Regionalisation for Australia
LGA	Local Government Area
LLS	Local Land Service
MNES	Matters of National Environmental Significance
NSW	New South Wales
NOW	NSW Office of Water
OEH	NSW Office of Environment and Heritage
PCT	Plant Community Type
SEPP	State Environmental Planning Policy
SSD	State Significant Development
TEC	Threatened Ecological Community
VIS	Vegetation Information System
WM Act	NSW *Water Management Act 2000*

1. Introduction

This Biodiversity Development Assessment Report (BDAR) has been prepared by Belinda Failes (BAAS18159) and Diane Campbell (BAAS 17069) who are Accredited Persons to apply the Biodiversity Assessment Method (BAM) under the NSW *Biodiversity Conservation Act 2016* (BC Act). The report has been peer reviewed by accredited assessor Nicole McVicar (BAAS 18077).

Definitions of terminology used throughout this report and set out in the Biodiversity Assessment Method (BAM) are presented in Appendix A.

1.1 General description of the development site

The development site is known as 65 Huntingwood Drive, Huntingwood and is legally described as Lot 1 DP 866251.

The site is located within the Huntingwood Industrial Estate, 32km west of the Sydney CBD and 4km south of Blacktown Town Centre. The site is situated along the southern boundary of Huntingwood, bordering the Western Motorway (M4) to the south and Huntingwood Drive to the north.

The site is occupied by the existing Arnott's Biscuits food processing (bakery) facility which operates 24 hours a day, seven days a week. The site currently contains three large freestanding industrial buildings, the main 'L-shaped' processing building to the north and two warehouses to the south. The balance of the site includes small ancillary buildings, car parking, loading areas and privately used open space. The north-west corner of the site currently acts as an OSD basin.

The north-western edge of the site sits up to approximately 4m above the surrounding road reserves. The balance of the site is reasonably flat with a slight fall towards the north-west.

Vehicular access to the site for light vehicles is via an existing entry and exit driveway (Liberty Road) at the Huntingwood Drive frontage. Separate heavy vehicle access to the site is available from Huntingwood Drive adjacent to the eastern boundary. Heavy vehicle access to the high-bay warehouse is also available from Brabham Drive.

1.2 Brief description of the proposal

The proposed development comprises the expansion of the existing food processing operations at 65 Huntingwood Drive, Huntingwood. The development is outlined in the following table:

Table 1: Proposed development

Element	Proposed
Site Preparation	• Removal of existing car parking, driveway and ancillary structures. • Vegetation clearing. • Excavation for car park and bulk earthworks and supporting structures. • Drainage connections. • Land stabilisation.
Development summary	• Construction of a new processing facility (24,775 sqm) with first floor amenities in the northwest corner of the site.

Element	Proposed
	• Construction of a new ingredient silo building (1,000 sqm) along the Huntingwood Drive frontage. • Construction of a storage building (270 sqm) to the east of the existing building. • Construction of a new processing building (1,200 sqm) and ingredient silo building (120 sqm) to the south of the main facility. • Replacement of the existing on-site detention (OSD) basin with an OSD tank below the basement car park. • Landscaped setbacks along both street frontages to screen the new processing facility and loading area.
Access and Parking	• New loading area above two levels of car parking (468 spaces) at the north-west corner of Huntingwood Drive and Brabham Drive. • Trucks will utilise the existing access point adjacent to the eastern boundary of the site. • The existing (westernmost) vehicle access to Huntingwood Drive will be retained and upgraded to provide access to the new basement car park.

This report includes two base maps, the Site Map (Figure 1) and the Location Map (Figure 2).

1.3 Development site footprint

The development site has a total area of 163,933 m^2 (16.4 ha). The current operations on the site involve food processing (bakery) which operates 24 hours a day, seven days a week.

Table 1 describes the development site footprint and Figure 3 includes the:

- operational footprint
- construction footprint indicating clearing associated with temporary construction facilities and infrastructure.

1.4 Sources of information used

The following data sources were reviewed as part of this report:

- BioNet Vegetation Classification System Version 3.1
- BioNet / Atlas of NSW Wildlife 5 km database search (Department of Planning, Industry and Environment (DPIE) 2021a) (accessed October 2020)
- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Protected Matters Search Tool 5 km radius database search (Department of Agriculture, Water and Environment (DAWE) 2021a) (accessed October 2020)
- NSW Government ePlanning Spatial Viewer
- Request for Secretary's Environmental Assessment Requirements for Huntingwood Processing Expansion 65 Huntingwood Drive, Huntingwood
- National Flying-fox Monitoring data (DAWE 2020b) (accessed February 2021)
- Biodiversity Assessment Method 2020
- Biodiversity Assessment Methodology Calculator (BAMC) version 32
- Threatened Biodiversity Data Collection (accessed February 2021)
- NSW Government Biodiversity Values Map (DPIE 2021b) (accessed 3 June 2021)

- Threatened species profiles and recovery plans (DAWE 2021c and DPIE 2021c)
- The Native Vegetation of the Sydney Metropolitan Area (Office of Environment and Heritage (OEH), 2013), Version 2.0
- Arboricultural Impact Assessment Tree Protection Specification (Tree iQ, May 2018)

1.5 Response to SEARs

The *Biodiversity Conservation Act 2016* requires that State Significant Development applications be accompanied by a BDAR unless otherwise specified under the Act. The following table indicates where the relevant Secretary's Environmental Assessment Requirements (SEARs) have been addressed in this BDAR.

Table 2: Response to SEARs

SEARs	Response / Relevant section of this report
Biodiversity impacts related to the proposed development are to be assessed in accordance with Section 7.9 of the *Biodiversity Conservation Act 2016*, the Biodiversity Assessment Method 2020 and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the *Biodiversity Conservation Act 2016* (s6.12), *Biodiversity Conservation Regulation 2017* (s6.8) and Biodiversity Assessment Method 2020.	This document is a BDAR and has been prepared in accordance with BAM 2020. Due to the presence of planted native vegetation within the development site, this BDAR was prepared under the streamlined assessment module for planted native vegetation consistent with Appendix D of BAM 2020.
The BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method 2020.	Refer to Section 6 – Assessment of impacts The development does not impact on any native plant community types but does impact on some planted native vegetation on the site.
The BDAR must include details of the measures proposed to address the offset obligation as follows: • the total number and classes of biodiversity credits required to be retired for the development/project • the number and classes of like-for-like biodiversity credits proposed to be retired • the number and classes of biodiversity credits proposed to be retired in accordance with the variation rules • any proposal to fund a biodiversity conservation action • any proposal to conduct ecological rehabilitation (if a mining project) • any proposal to make a payment to the Biodiversity Conservation Fund.	Refer to Section 7 – Mitigation and management of impacts Impacts are on planted native vegetation, there are no impacts to native vegetation, therefore no offsets are required. The variation rules are not applicable in this case.
The BDAR must be submitted with all spatial data associated with the survey and assessment as per the BAM.	Spatial data is submitted with this BDAR.
The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the *Biodiversity Conservation Act 2016*.	This BDAR was prepared by Belinda Failes (BAAS18159) and Diane Campbell (BAAS17069), Accredited Persons under the *NSW Biodiversity Conservation Act 2016 (BC Act).*

SEARs	Response / Relevant section of this report
Please note in relation to point (4) of the standard EES biodiversity environmental assessment requirements in Attachment A the minimum information and spatial data requirements are in Tables 24 and 25 of the Biodiversity Assessment Method (BAM), and as required more broadly by the revised BAM 2020. Other requirements, such as those relating to the BAM Calculator and Biodiversity Offsets and Agreements Management System (BOAMS), are detailed in various guidelines, practice notes, updates and other advices issued by EES to BAM accredited assessors – see https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/accreditedassessors/assessor-resources.	Because the vegetation on the development site consists of planted native vegetation, the BDAR was prepared in accordance with the minimum information and spatial data requirements in Table 28 of the Biodiversity Assessment Method (BAM) being the streamlined planted native vegetation module, rather than Tables 24 and 25 being for a BDAR, as well as meeting other requirements of the revised BAM 2020. Guidelines, practice notes, updates and other advices issued by EES to BAM accredited assessors, relating to the BAM Calculator and Biodiversity Offsets and Agreements Management System (BOAMS) resources, were addressed in this report.

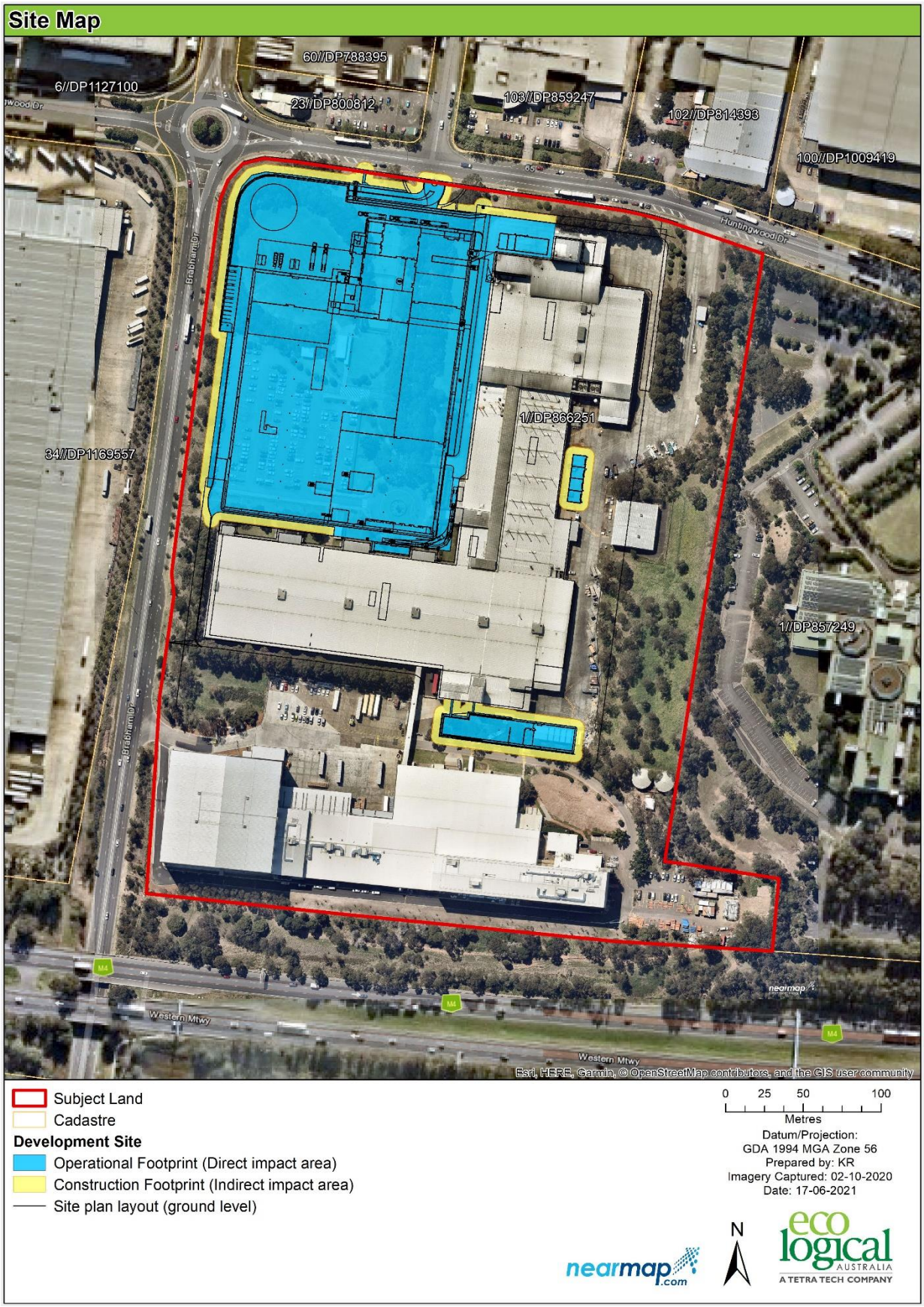

Figure 1: Site Map

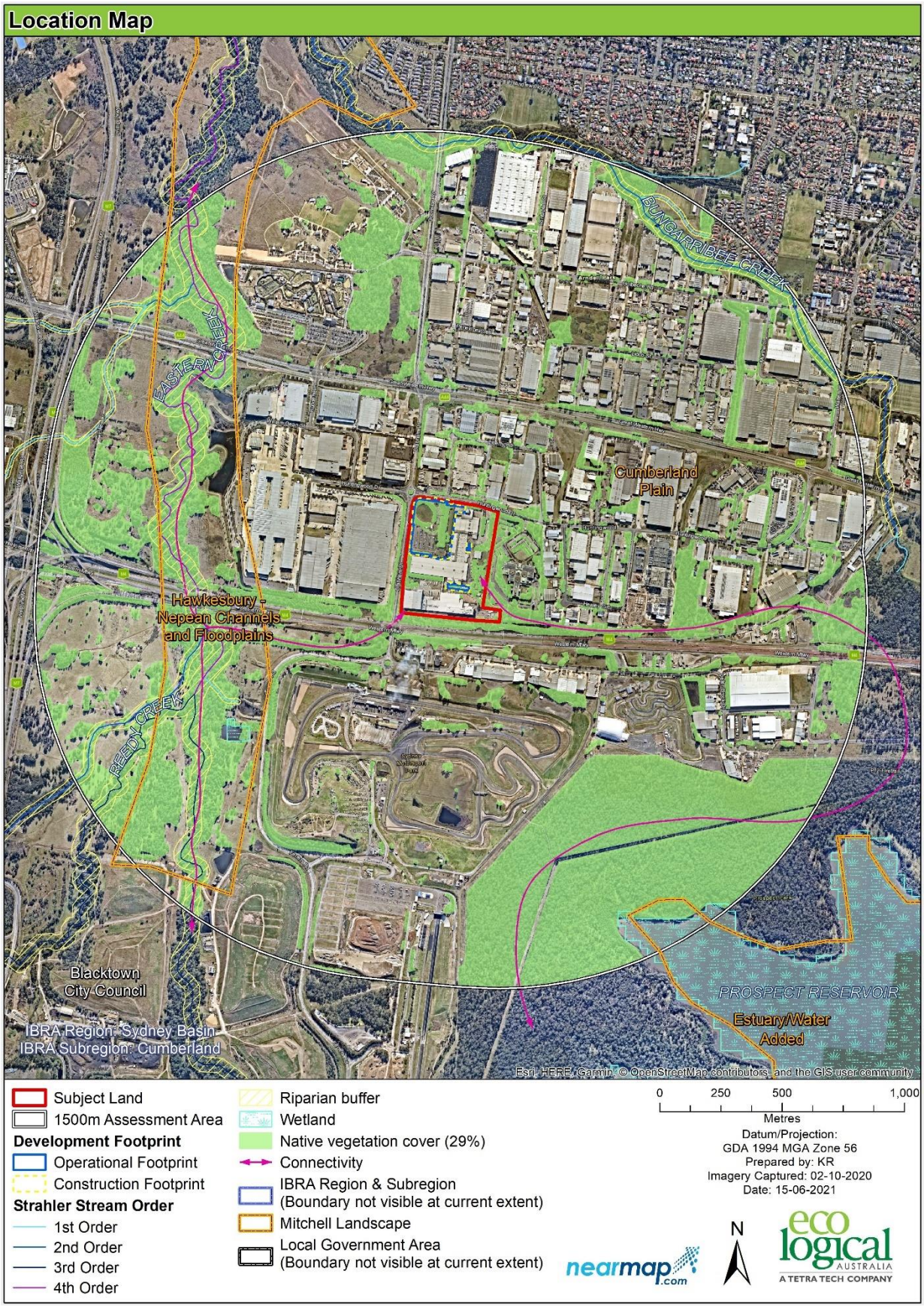

Figure 2: Location map

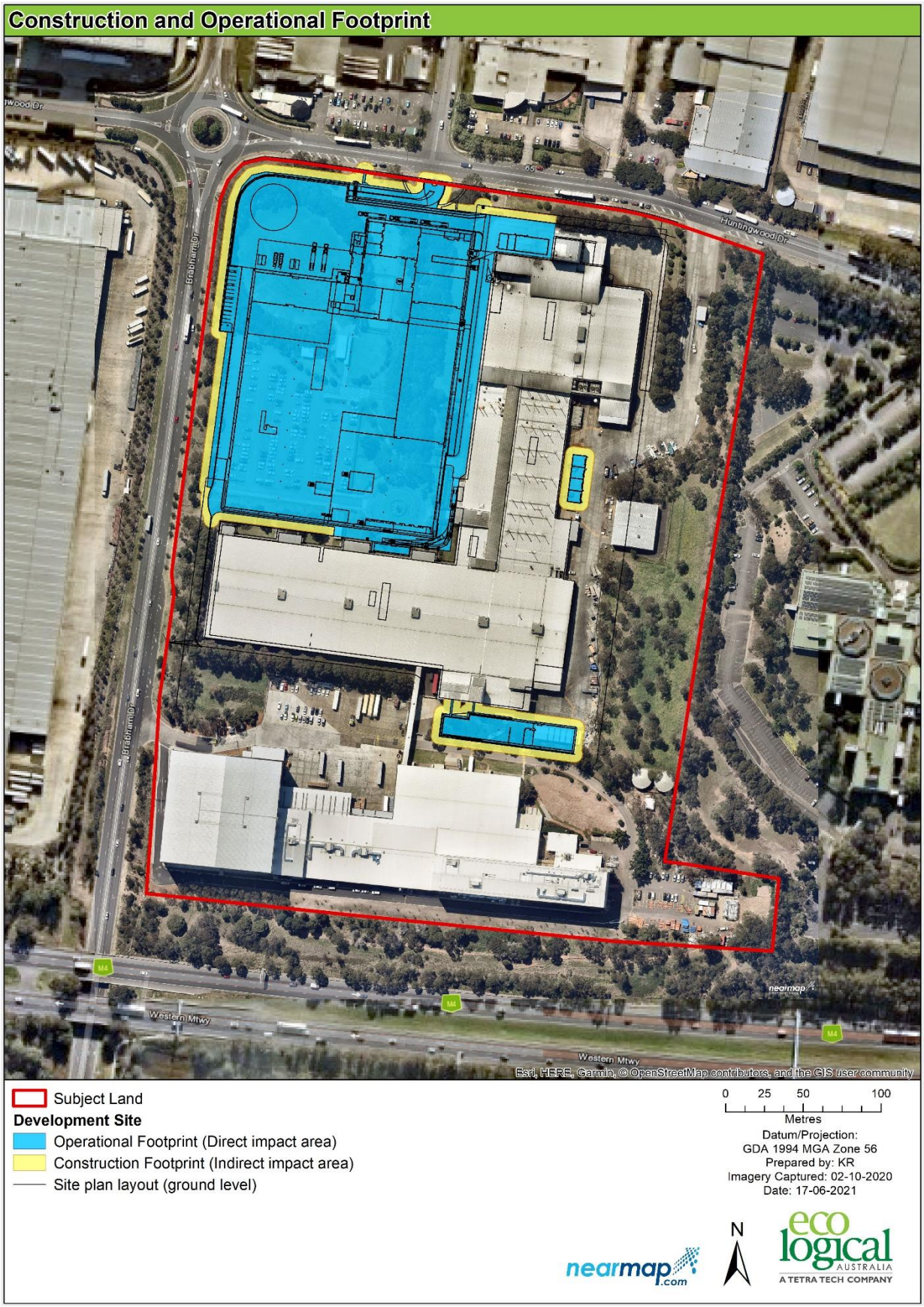

Figure 3: Development footprint and direct impact area shown in blue and indirect impacts shown in yellow

1.6 Legislative context

Legislation relevant to the development site is outlined in Table 3.

Table 3: Legislative context

Name	Relevance to the project
Commonwealth	
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	Matters of National Environmental Significance (MNES) have been identified on or near the development site. This report assesses impacts to MNES and concludes that the development is not likely to have a significant impact on MNES.
State	
Environmental Planning and Assessment Act 1979 (EP&A Act)	The proposed development is State Significant Development (SSD) and is to be assessed under Part 4.1 of the EP&A Act. Secretary's Environmental Assessment Requirements (SEARs) have been issued. The development requires the preparation of a Biodiversity Development Assessment Report (BDAR), this report.
Biodiversity Conservation Act 2016 (BC Act)	The BC Act seeks to conserve biological diversity at bioregional and State scales; to maintain the diversity and quality of ecosystems and enhance their capacity to adapt to change and provide for the needs of future generations; to assess the extinction risk of species and ecological communities and identify key threatening processes through an independent and rigorous scientific process; and to establish a framework to avoid, minimise and offset the impacts of proposed development and land use change on biodiversity.
Fisheries Management Act 1994 (FM Act)	The development does not involve impacts to Key Fish Habitat, does not involve harm to marine vegetation, dredging, reclamation or obstruction of fish passage. A permit or consultation under the FM Act is not required.
Local land Services Amendment Act 2016 (LLS Act)	The LLS Act does not apply to areas of the state to which the State Environmental Planning Policy (SEPP) Vegetation in Non-Rural Areas 2017 (Vegetation SEPP) applies. The Vegetation SEPP applies to the Blacktown local government area.
Water Management Act 2000 (WM Act)	The project does not involve works on waterfront land. A Controlled Activity Approval under s91 of the WM Act is not required.
Planning Instruments	
State Environmental Planning Policy (SEPP) (Vegetation in Non-Rural Areas) 2017 (Vegetation SEPP)	The Vegetation SEPP applies to development that does not require consent. As this project requires consent under the EP&A Act, the Vegetation SEPP is not relevant.
State Environmental Planning Policy (Coastal Management) 2018 (Coastal Management SEPP)	The SEPP Coastal Management 2018 consolidated SEPP 14 Coastal Wetlands, SEPP 26 Littoral Rainforests and SEPP 71 Coastal Protection. The proposed development is not located on land subject to the Coastal Management SEPP, therefore this SEPP is not applicable.
State Environmental Planning Policy (Koala Habitat Protection) 2021	The proposed development is not located within a local government area to which the SEPP (Koala Habitat Protection) 2021 applies.
Blacktown Local Environment Plan 2015 (LEP)	The development site is zoned IN2 (Light Industrial) under the Blacktown LEP 2015. The objectives of this zoning area as follows: • To provide a wide range of light industrial, warehouse and related land uses. • To encourage employment opportunities and to support the viability of centres.

Name	Relevance to the project
	• To minimise any adverse effect of industry on other land uses. • To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area. • To support and protect industrial land for industrial uses. The proposed works are compatible with the current zoning.
Blacktown Development Control Plan (DCP) 2015	The Blacktown DCP was reviewed. No additional provisions relevant to the development site were noted.

2. Landscape features

The site-based method was applied for this assessment therefore the assessment area is the 1,500 m buffer surrounding the outside edge of the boundary of the subject land.

The landscape features considered for this assessment are presented in Table 4, Figure 1 and Figure 2.

Table 4: Landscape features

Landscape feature	Subject Land/Development Site	Assessment Area	Data source
IBRA Region(s)	Sydney Basin	Sydney Basin	Interim Biogeographic Regionalisation for Australia, Version 7
IBRA subregion(s)	Cumberland	Cumberland	Interim Biogeographic Regionalisation for Australia, Version 7
Rivers and streams	None present in or within 50 m of the development site	Eastern Creek (4th Order)	NSW LPI Waterway mapping, Aerial imagery
Estuaries and wetlands	None present in the development site	Two reservoirs, including Prospect Reservoir	NSW directory of important wetlands, Aerial imagery
Connectivity of different areas of habitat	The development site contains a narrow strip of planted native vegetation on the boundaries and on parts of the site, which exists in a narrow linear band, providing limited connectivity from riparian vegetation along the M4 Western Motorway to the south which connects to riparian vegetation along Eastern Creek to the west.	The assessment area contains narrow sections of vegetation on the boundary of the site, which provides limited connectivity along the M4 Western Motorway east to Prospect Nature Reserve and west to Eastern Creek.	Aerial imagery
Geological features of significance and soil hazard features	The development site area does not contain any geological features of significance (i.e., karst, caves, crevices, cliffs etc.) or soil hazard features.	The assessment area does not contain any geological features of significance (i.e., karst, caves, crevices, cliffs etc.) or soil hazard features.	Aerial imagery NSW Planning Portal EPI Acid Sulfate Soils layer
Biodiversity Values	The development site does not include areas mapped under the NSW Biodiversity Values Map (accessed June 2021).	The assessment area includes areas mapped under the NSW Biodiversity Values Map at Eastern Creek and Prospect Nature Reserve (accessed June 2021).	Biodiversity Values Map and Threshold Tool

Landscape feature	Subject Land/Development Site	Assessment Area	Data source
Areas of Outstanding Biodiversity Value	No (accessed 26 March and 9 June 2021).	No (accessed 26 March and 9 June 2021).	Register of Declared Areas of Outstanding Biodiversity Value (DPIE 2020)
NSW (Mitchell) Landscapes	Cumberland Plain: Low rolling hills and valleys in a rain shadow area between the Blue Mountains and the coast on horizontal Triassic shales and lithic sandstones forming a down-warped block on the coastal side of the Lapstone monocline. Intruded by a small number of volcanic vents and partly covered by Tertiary river gravels and sands (Hawkesbury-Nepean Terrace Gravels landscape). Quaternary alluvium along the mains streams. General elevation 30 to 120 m, local relief 50 m and sometimes affected by salt in tributary valley floors. Pedal uniform red to brown clays on volcanic hills. Red and brown texture-contrast soils on crests grading to yellow harsh texture-contrast soils in valleys. Woodlands and open forest of *Eucalyptus moluccana* (Grey Box), *E. tereticornis* (Forest Red Gum), *E. crebra* (Narrow-leaved Ironbark), *E. eugenioides* (Thin-leaved stringybark), *E. amplifolia* (Cabbage gum) and *Angophora subvelutina* (Broad-leaved apple). Grassy to shrubby understorey often dominated by *Bursaria spinosa* poorly drained valley floors, often salt affected with *Casuarina glauca* (Swamp oak) and *Melaleuca* sp.	Cumberland Plain (89%) – see Subject Land/ Development Site for description Hawkesbury - Nepean Channels and Floodplains (79%): Meandering channel and moderately wide floodplain of the Hawkesbury and Nepean rivers on Quaternary sand and gravel. Sand is dominant upstream of the Warragamba River junction, general elevation 0 to 20 m, local relief <10m. Undifferentiated alluvial sand to poorly structured gradation profiles of sandy loam or clay loam. Forests on the river flats include *E. baueriana* (Blue Box), *Angophora subvelutina* (Broad-leaved Apple), *E. viminalis* (Manna Gum), *E. elata* (River Peppermint) in upstream sectors and dominated by *Casuarina cunninghamiana* (River Oak) possibly originally with rainforest species such as *Melia azedarach* (White Cedar) in the lower sectors. *Phragmites australis* (Common Reed), *Typha orientalis* (Cumbungi) and other aquatic plants are found in the river. Deep organic loams and loamy sands on floodplain with river flat forest of *E. saligna* (Sydney blue gum), *E. deanei* (Round-leaved Gum), *E. tereticornis* (Forest Red Gum), *E. amplifolia* (cabbage gum), *A. subvelutina, A. floribunda* (Roughbarked Apple) and *C. cunninghamiana*. *Tristaniopsis laurina* (Water Gum) in protected channel sections. Large swamps and lagoons on the floodplain and in tributary streams below Richmond dammed by levees on the main stream support *Eleocharis sphacelata* (Tall Spike Rush), *Juncus* sp., *Melaleuca* sp., and *Lepidosperma* sp. Below Pitt Town the river is tidal and *C. glauca* (Swamp Oak), common reed, *Aegiceras corniculatum* (River Mangrove), *Avicennia marina* (Grey Mangrove) and limited salt marsh are found on the muddy sands of the inter-tidal zone.	NSW (Mitchell) Landscapes - version 3.1 (DPIE 2016)

Landscape feature	Subject Land/Development Site	Assessment Area	Data source
		There are no differences between the mapped vegetation extent and the aerial imagery. The development footprint is approximately 2.26 ha and contains approximately 1.14 ha of native vegetation. The assessment area is approximately 975.08 ha and contains approximately 278.48 ha of native vegetation (28.56%).	Calculated using aerial imagery and ArcGIS software

3. Native vegetation

3.1 Survey effort

An ecological assessment within the development site was conducted by Belinda Failes on 6 November 2020. The site was traversed on foot to:

- Determine if any of the vegetation met descriptions for any plant community types (PCTs) and associated threatened ecological communities (TECs)
- Search for any threatened flora species that may be present
- Search for hollows, nests or dreys, or any other habitat feature that may be important for threatened fauna species.

A total of three full-floristic and vegetation integrity plots were surveyed to identify PCTs and TECs on the development site. Due to the linear nature of the vegetation, Plots 1 and 3 were modified BAM vegetation integrity plots. The structure and function plots were modified to a 100 m x 10 m plot, and the composition plots modified to a 40 m x 10 m plot. Plot 2 was a standard BAM 50 m x 20 m and 20 m x 20 m plot.

Tree numbers were noted and compared with the Arboricultural Impact Assessment Tree Protection Specification (Tree iQ, May 2018).

All field data collected at full-floristic and vegetation integrity plots is included in Appendix B.

3.2 Vegetation present

The development site and footprint did not contain any naturally occurring or remnant native vegetation. This means that no PCTs could be assigned to the vegetation present. The vegetation present contained a mix of planted native and non-native plants, located on soil that has been modified as a landscaped industrial development.

The canopy contained planted native trees, including *Eucalyptus tereticornis* (Forest Red Gum), *E. fibrosa* (Red Ironbark), *E. paniculata* (Grey Ironbark), *E. robusta* (Swamp Mahogany), *E. saligna* (Sydney Blue Gum), *Corymbia maculata* (Spotted Gum), *Grevillea robusta* (Silky Oak) *E. moluccana* (Grey Box), and *Ficus microcarpa* var. *hillii* (Hill's Fig).

Vegetation near the main access road via Huntingwood Drive consisted of linear roadside vegetation of established *Corymbia maculata* (Spotted Gum) with a regularly maintained ground layer (Figure 4). The line of planted *Corymbia maculata* surrounded a large circular mound in the north-west of the development site. A shrub layer was absent from within this vegetation. Understorey consisted of mown grass, with occasional native species of *Einadia hastata* (Berry Saltbush), *Carex inversa* and *Cotula australis* (Carrot Weed).

On a large earth mound, the vegetation consisted of a patch of planted *E. tereticornis* with predominantly exotic ground covers with some native ground layer including *Austrostipa rudis, Chloris truncata* (Windmill Grass)*, Einadia hastata* and *Dichondra repens* (Kidney Weed) (Figure 5).

Vegetation in the south of the development site consisted of a small patch of mixed *Eucalyptus* species within a mulched area. This patch lacked native species within the ground or mid storey except a small patch of *Lomandra longifolia* (Spiny Matt-rush). Although this species is native to the area, it can also be used as a horticultural species for landscaping (Figure 6).

The development site contains land that has been modified through historic clearing, landscaping, maintenance and operation as an industrial site (Figure 7).

Figure 4: Planted native vegetation along the main access driveway looking south

Figure 5: Planted native vegetation around the circular mound looking north-west

Figure 6: Planted native vegetation looking east

Figure 7: Vegetation zones and plots

3.3 Use of streamlined assessment module – Planted native vegetation

Due to the presence of planted native vegetation within the development site, this BDAR was prepared under the streamlined assessment module for planted native vegetation consistent with Appendix D of BAM 2020. This appendix contains a decision-making key which provides a framework for the assessment of planted native vegetation. This framework is applied to the proposal in Table 4.

Table 4: Decision making tool for Planted Native Vegetation in accordance with Appendix D of the BAM 2020

Question	Response and justification
1) Does the planted native vegetation occur within an area that contains a mosaic of planted and remnant native vegetation and which can be reasonably assigned to a PCT known to occur in the same IBRA subregion as the proposal? i Yes – the planted native vegetation must be allocated to the best-fit PCT and the BAM must be applied. ii No – Go to 2.	No, the planted vegetation does not occur in a mosaic of planted and remnant vegetation. The canopy species were planted in rows and as part of industrial site landscaping.
2. Is the planted native vegetation: a. Planted for the purpose of environmental rehabilitation or restoration under an existing conservation obligation listed in BAM Section 11.9(2.), and b. The primary objective was to replace or regenerate a plant community type of a threatened plant species or its habitat? i Yes – the planted native vegetation must be assessed in accordance with Chapters 4 and 5 of the BAM ii No – Go to 3.	No – planted native vegetation was not representative of a PCT. There was a range of planted Eucalypt species and *Callistemon salignus* (Willow Bottlebrush) with the primary purpose of landscaping.
3. Is the planted / translocated native vegetation individuals of a threatened species or other native species planted/ translocated for the purpose of providing threatened species habitat under one of the following: a. A species recovery project b. *Saving our Species* project c. Other types of government funded restoration project d. Condition of consent for a development approval that required those species to be planted or translocated for the purpose of providing threatened species habitat e. Legal obligation as part of a condition of ruling of court. This includes regulatory directed or ordered remedial plantings (e.g. Remediation Order for clearing without consent issued under the BC Act or the Native Vegetation Act) f. Ecological rehabilitation to re-establish a PCT or TEC that was, or is carried out under a mine operations plan, or g. Approved vegetation management plan (e.g. as required as part of a Controlled Activity Approval for works on waterfront land under the NSW *Water Management Act 2000*)? i Yes – the planted native vegetation must be assessed in accordance with Chapters 4 and 5 of the BAM • No – Go to 4.	No – the tree species present are commonly used as street or landscaping trees and are not representative of a PCT or TEC, therefore it is unlikely that they were planted or translocated for any of the purposes listed.
4. Was the planted native vegetation (including individuals of a threatened flora species) undertaken voluntarily for revegetation, environmental	No, the planted native vegetation was not undertaken as part of any conservation or

Question	Response and justification
rehabilitation or restoration within a legal obligation to secure or provide for management of the native vegetation? i Yes – Go to D.2 Assessment of planted native vegetation for threatened species habitat (the use of Chapters 4 and 5 of the BAM are not required to be applied) • No – Go to 5.	rehabilitation projects or to satisfy a legal obligation.
5. Is the planted native vegetation (including individuals of a threatened flora species) planted for functional, aesthetic, horticultural or plantation forestry purposes? This includes examples such as; windbreaks in agricultural landscapes, roadside plantings (including street trees, median stripes, roadside batters), landscaping in parks, gardens and sport fields/complexes, macadamia plantations or teatree farms? i Yes – Go to D.2 Assessment of planted native vegetation for threatened species habitat (the use of Chapters 4 and 5 of the BAM are not required to be applied) ii No – Go to 6.	Yes, the planted native vegetation was established for landscaping for the industrial site.
6. Is the planted native vegetation a species listed as a widely cultivated native species on a list approved by the Secretary of the Department (or an officer authorised by the Secretary)? i Yes – Go to D.2 Assessment of planted native vegetation for threatened species habitat (the use of Chapters 4 and 5 of the BAM are not required to be applied) ii No – There may be other types of occurrences of planted native vegetation that do not easily fit into the decision-making key above.	N/A

4. Threatened species habitat

The development site was surveyed for potential threatened fauna species habitat. Habitat assessments were undertaken during field surveys on 6 November 2020 to determine the likelihood of threatened species utilising the development site on occasion or a permanent basis.

Habitat assessments involved a search for important habitat features for threatened fauna species, such as hollow bearing trees, ephemeral pools, rocky outcrops or deep leaf litter and coarse woody debris. Assessments also included a search for evidence of fauna foraging or roosting such as chewed cones, sap trees, white-wash/pellets and inspections of suitable roosting or breeding habitat for threatened raptor birds (i.e. nest trees) or hollow-bearing trees for microchiropteran bats (microbats). Binoculars were used when required to inspect within high branches in the tree canopies.

A combination of parallel transects and random meanders were undertaken during field survey in search of habitat features and predicted candidate flora species. Mown areas which did not contain suitable habitat were traversed using a random meander.

There were few fauna habitat types present due to the modified and maintained nature of the development site. Fauna habitat features were limited within the development site. The vegetation within the study area contained nectar producing plants (Eucalyptus species) including winter flowering species (*E. tereticornis* in vegetation zone 1). These nectar producing species may provide foraging habitat for highly mobile species such as birds, microbats and flying-foxes.

The native canopy within the development site may be used as potential seasonal foraging habitat for microbats.

No trees appeared to have either potential nesting material or hollows suitable for either threatened fauna or prey items. In general, the development of hollows can take decades and up to 200 years (Mackowski 1984; Menkorst 1984; and Scotts 1991). It is therefore highly unlikely that there would be hollows not visible from the ground. The consulting arborist (Arboricultural Impact Assessment Tree Protection Specification (Tree iQ, May 2018) also noted that there were no tree hollows present.

There were no areas of rock outcrop, waterways, or coarse woody debris. This means that fauna habitats were highly limited and unlikely to support populations of any threatened fauna species.

Pteropus poliocephalus (Grey-headed Flying Fox) has many BioNet records within the 1,500 m assessment area. There are no known camps on the development site and no prospect of a camp developing given the small number of trees present. There is a Nationally Significant Flying Fox Camp is 5 km to the south-east at Wetherill Park.

The buildings in the area affected by the proposal and the development footprint are unlikely to provide habitat for microchiropteran bats.

5. Prescribed biodiversity impacts

5.1 Locating and designing a proposal to avoid and minimise prescribed biodiversity impacts

The development has been located and designed in a way which avoids prescribed biodiversity impacts as outlined in Table 5.

Table 5: Locating and designing a proposal to avoid and minimise prescribed biodiversity impacts

BAM Section 7.2 location and design principles	How addressed / Justification
Locate surface works and design measures to avoid direct impacts on the habitat features identified as potential prescribed biodiversity impacts	The proposed works will not affect native vegetation but will remove planted native vegetation.
Locate subsurface works, in both the horizontal and vertical planes, and design measures to avoid and minimise operations beneath the habitat features identified as potential prescribed biodiversity impacts	N/A – the development site does not include geological features of significance or groundwater-dependent plant communities.
Locate the proposal to avoid severing or interfering with corridors connecting different areas of habitat and migratory flight paths, to important habitat or local movement pathways	The proposed development will remove planted native vegetation which provides, at most, stepping-stone habitat within the fragmented industrial landscape.
Optimise the proposal layout and include design elements to minimise interactions with threatened entities	N/A – the proposed development does not include the construction of structures which could regularly interact with threatened entities (e.g., wind turbines).
Locate the proposal to avoid impacts on water bodies or hydrological processes and design measures that maintain hydrological processes that sustain threatened entities and control the quality of water released from the site, to avoid or minimise downstream impacts on threatened entities	N/A – the development site does not contain water bodies and would not result in prescribed impacts to hydrological processes.
Engineering solutions, such as proven techniques to: • minimise fracturing of bedrock underlying features of geological significance or groundwater-dependent communities and their supporting aquifers • restore connectivity and movement pathways	N/A – the development site does not have prescribed impacts that require engineering solutions.

5.2 Identification and assessment of prescribed biodiversity impacts

The development site has the prescribed biodiversity impacts as outlined in Chapter 6 of the BAM 2020.

Table 6: Prescribed biodiversity impacts

Prescribed biodiversity impact	Threatened entities associated with prescribed impacts	Importance of habitat features to the species	Nature, extent frequency, duration and timing	Predicted consequences of impacts on threatened entities
Karst, caves, crevices, cliffs rock and other geological features of significance	N/A – the development site does not contain geological features of significance			
Occurrences of human-made structures	The human structures are well maintained buildings and therefore do not contain potential habitat for threatened species.			
Occurrences of non-native vegetation	There is non-native vegetation within the development area. The planted native trees may provide seasonal foraging habitat for Grey-headed Flying-fox and microbats.	Planted native trees available as foraging habitat for Grey-headed Flying-fox and microbats within the development site are not of great importance given that remnant native vegetation is available in riparian vegetation along Eastern Creek and within Prospect Nature Reserve in the surrounding area.	Planted native trees are proposed to be removed for the development and some planted native trees will be retained on the development site.	The removal of planted trees will not affect the persistence of Grey-headed Flying-fox or microbats in the locality or bioregion.
Corridors or other areas of connectivity linking habitat for threatened entities / movement of threatened species that maintains their life cycle	Planted native trees within the study area may provide foraging habitat for highly mobile threatened species, including Grey-headed Flying-fox and microbats.	There is connectivity with planted trees on the perimeter and within landscaped parts of the site, to narrow strips of vegetation along the M4 Western Motorway and to Eastern Creek. The planted native vegetation could provide stepping-stone seasonal foraging habitat for Grey-headed Flying-fox and microbats. Part of this habitat will be removed.	The proposed development would result in the removal of some habitat for highly mobile species.	There will be change to the stepping-stone habitat connectivity is proposed under the development.

Prescribed biodiversity impact	Threatened entities associated with prescribed impacts	Importance of habitat features to the species	Nature, extent frequency, duration and timing	Predicted consequences of impacts on threatened entities
Water bodies or any hydrological processes that sustain threatened entities	N/A – the development site does not contain water bodies and would not result in prescribed impacts to hydrological processes			
Where the proposed development may result in vehicle strike on threatened fauna or on animals that are part of a threatened ecological community	N/A – the proposed development would be unlikely to result in vehicle striking fauna during construction or during operation as an industrial site.			

6. Stage 2: Impact assessment (biodiversity values)

6.1 Avoiding impacts

6.1.1 Locating and designing a project to avoid and minimise impacts on vegetation and habitat

The project will result in the removal of planted native vegetation from within the development footprint. The project design has avoided or mitigated impacts to biodiversity values as discussed below Table 7.

Table 7: Locating and designing a project to avoid and minimise impacts on vegetation and habitat

Approach	How addressed and justification
Locating the project (including ancillary facilities) in areas where there are no biodiversity values	The SSDA development footprint has been located in areas where there are lower biodiversity values being planted native vegetation.
Locating the project (including ancillary facilities) in areas where the native vegetation or threatened species habitat is in the poorest condition	The SSDA development footprint has been located in areas that contain planted native vegetation which provides limited habitat for threatened species.
Locating the proposal (including ancillary facilities) in areas that avoid habitat for species with a high biodiversity risk weighting or land mapped on the important habitat map, or native vegetation that is a TEC, a highly cleared PCT or an entity at risk of a serious and irreversible impact (SAII)	The SSDA development footprint has been located in areas of planted native vegetation that provides occasional foraging habitat for highly mobile species such as birds and bats.
Locating the proposal in areas outside of the buffer area around breeding habitat features such as nest trees or caves	The SSDA development footprint has been located in areas where there is limited connectivity.
Reducing the proposal's clearing footprint by minimising the number and type of facilities	The SSDA development footprint has been located in areas of planted native vegetation and existing carparks and buildings.
Designing a proposal to include actions and activities that provide for rehabilitation, ecological restoration and/or ongoing maintenance of retained areas of native vegetation, threatened species, threatened ecological communities and their habitat on the subject land	Landscaping with native species is part of the proposed scope for the SSDA.

6.2 Assessment of direct impacts

The proposed development would not directly impact any remnant native vegetation or threatened fauna species. It will impact on 1.14 ha of planted native vegetation that provides occasional foraging habitat for threatened fauna species. Species credits are not required to offset the proposed impacts in accordance with Appendix D.2 of BAM 2020.

6.3 Assessment of indirect impacts

The indirect impacts of the development are outlined below. The project will impact 0.20 ha of planted native vegetation calculated as a 5 m buffer.

Table 8: Assessment of indirect impacts on native vegetation and threatened species

Indirect impacts	Project phase	Nature	Extent	Frequency	Duration of short-term and long-term impacts	Timing
Inadvertent impacts on trees/ planted vegetation	Construction / operation	Runoff during construction works and operation	Sedimentation confined to development site with fencing. Nutrient rich run-off treated prior to leaving the site through stormwater management measures.	During heavy rainfall or storm events	During rainfall events	Short-term impacts
Reduced viability of adjacent habitat due to noise, dust or light spill	Construction / operation	Noise impacts may disturb Grey-headed Flying Fox using foraging habitat; impact of dust on vegetation	Planted vegetation	Daily, or nightly or during construction works and during heavy rainfall or storm events	Throughout construction period	Short-term impacts
Transport of weeds and pathogens from the site to adjacent vegetation	Construction	Spread of weed seed or pathogens	Potential for spread into adjacent habitat	Daily, during construction works	Sporadic throughout construction period	Potentially long-term impacts
Inhibition of nitrogen fixation and increased soil salinity	Construction / operation	Runoff during construction works	Confined to development footprint with sediment fencing	During heavy rainfall or storm events	During rainfall events	Short-term impacts

6.4 Serious and Irreversible Impacts (SAII)

The development has no candidate SAII entities.

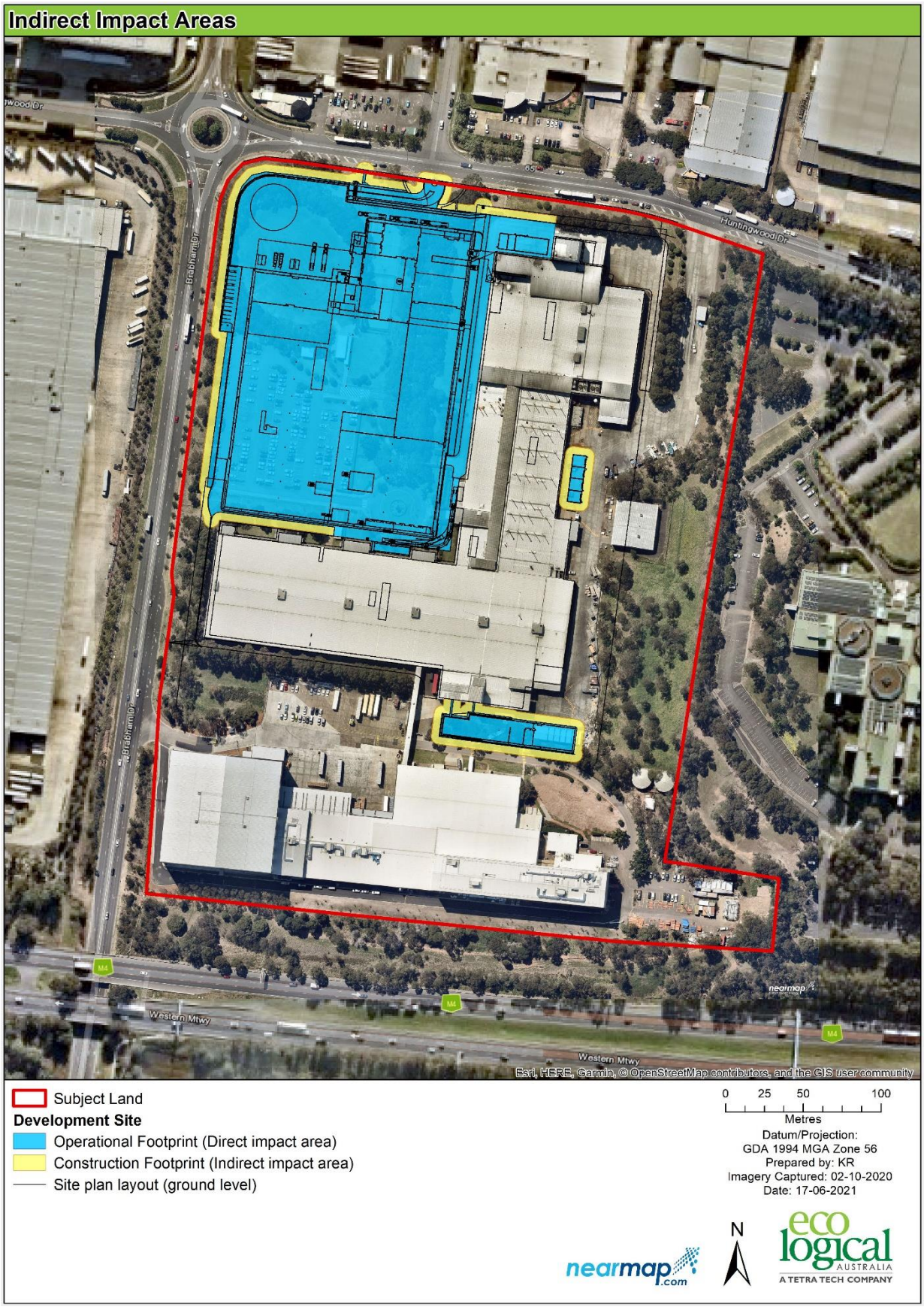

Figure 8: Indirect impact area shown in yellow

6.4.1 Mitigating and managing impacts

Measures proposed to mitigate and manage impacts at the development site before, during and after construction are outlined in Table 9.

Table 9: Measures proposed to mitigate and manage impacts

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Develop and implement a Construction Environmental Management Plan that includes: • tree protection measures recommended in the Arboricultural Development Impact Assessment report (Truth About Trees 2021), consistent with *Australian Standard AS4970-2009 Protection of Trees on Development Sites* • soil erosion and sediment controls	Moderate	Minor	Trees/ vegetation identified for retention should be clearly delineated as a 'No Go' zone with high visibility bunting. Appropriate controls are to be utilised to manage exposed soil surfaces and stockpiles to prevent sediment discharge into waterways. Soil and erosion measures such as sediment fencing, clean water diversion must be in place prior the commencement of the construction work and must be regularly inspected and maintained throughout the development of the site.	Trees/ vegetation to be retained outside of the development site boundary will not be disturbed/impacted. Erosion and sedimentation will be controlled.	Demarcation of trees/ vegetation to be set up prior to any works occurring on site and to remain throughout duration of construction works. Sediment controls to be in place and maintained for the duration of construction works.	Project Manager

7. Consistency with legislation and policy

Additional matters relating to impacts on flora and fauna which are not covered by the BC Act must also be addressed for the proposed development. Potential "Matters of National Environmental Significance" (MNES) in accordance with the EPBC Act have been addressed in Section 2.4.1 below.

7.1.1 *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

The EPBC Act establishes a process for assessing the environmental impact of activities and developments where MNES may be affected. Under the Act, any action which "has, will have, or is likely to have a significant impact on a matter of MNES" is defined as a "controlled action", and requires approval from the Commonwealth DAWE, which is responsible for administering the EPBC Act.

The process includes undertaking an Assessment of Significance for listed threatened species and ecological communities that represent a matter of MNES that will be impacted as a result of the proposed action. Significant impact guidelines that outline a number of criteria have been developed by the Commonwealth, to provide assistance in conducting the Assessment of Significance and help decide whether or not a referral to the Commonwealth is required.

A habitat assessment and Likelihood of Occurrence was completed (Appendix C) and the following MNES was assessed for *Pteropus poliocephalus* (Grey-headed Flying-fox) under the EPBC Act (Table 10).

Pteropus poliocephalus (Grey-headed Flying-fox)

The Grey-headed Flying-fox is listed as a vulnerable threatened species under the EPBC Act. This species utilises a wide variety of habitats (including disturbed areas) for foraging and have been recorded travelling long distances on feeding forays. Fruits and flowering plants of a wide variety of species are the main food source. The species roosts in large 'camps' of up to 200 000 individuals. Camps are usually formed close to water and along gullies, however, the species has been known to form camps in urban areas.

Grey-headed Flying Fox has not been recorded on development site but has been recorded close to the development site. The closest nationally recognised camp is located approximately 4.5 km southeast at Wetherill Park (DAWE 2020c).

The vegetation within the site provides potential foraging habitat in the form of seasonally flowering myrtaceous tree species including *Eucalyptus tereticornis*. It is considered likely that this species would use the site and adjacent areas on occasion for foraging purposes. No roosting camps are located within the site.

Table 10: EPBC Act of Significance for *Pteropus poliocephalus* (Grey-headed Flying-fox)

Criterion	Assessment
An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:	
Criterion a: lead to a long-term decrease in the size of an important population of a species	The Grey-headed Flying-fox is considered one population due to the constant exchange of genetic material between individuals and its movement between camps throughout its entire geographic range (DAWE 2020c). Maternity or other roosting habitat is considered important habitat for this species.

Criterion	Assessment
	No roosting habitat (i.e. camps) have been recorded within the development site. According to the National Flying-fox Monitoring Program, no camps currently occur or have ever been recorded within the development site (DAWE 2020b). The nearest active Grey-headed Flying-fox camp occurs approximately 15 km to the east of the development site, within Wetherill Park (DAWE 2020b). The development site contains 1.34 ha of potential foraging habitat for the Grey-headed Flying-fox. Additional foraging habitat was recorded within the broader locality of the development site. Given the proximity of more suitable habitat within the assessment area, the removal of this potential foraging habitat would not lead to the long-term decrease in the size of an important population of Grey-headed Flying-fox.
Criterion b: reduce the area of occupancy of an important population	The proposed development will reduce the extent of available foraging habitat for the Grey-headed Flying-fox. About 1.34 ha of potential foraging habitat will be impacted. The vegetation within the development site may provide supplementary foraging habitat for this species. The development site does not contain breeding or sheltering habitat (i.e. bat camps). The Grey-headed Flying-fox is known to fly long distances (up to 50 km per night) and move between bat camps. As such this species is likely to utilise a large extent of habitat around the Wetherill Park camp which may include some habitat within the development site and a large amount of habitat in adjacent lands. Due to the extent of habitat within a 50 km radius of the known bat camp at Wetherill Park, the removal of a small amount of native planted vegetation is unlikely to significantly reduce the extent of occupancy for this species.
Criterion c: fragment an existing important population into two or more populations	The proposed development will result in the loss of 1.34 ha of potential foraging habitat in the form of native species and exotic vegetation within the development site. The proposed works will not affect camps. Additionally, due to the planted and highly urbanised nature of the vegetation within the development site, it is likely that the vegetation affected by the development is considered marginal or supplementary foraging habitat for this species. The Grey-headed Flying-fox is a highly mobile species and is considered part of one large population. As the vegetation within the development site is considered supplementary habitat for this species, it is unlikely that the proposed works will result in the fragmentation of populations for this highly mobile species.
Criterion d: adversely affect habitat critical to the survival of a species	The Draft Recovery Plan for the Grey-headed Flying-fox 2017 identifies 'a continuous temporal sequence of productive foraging habitats, linked by migration corridors or stopover habitats, and suitable roosting habitat within nightly commuting distance of foraging areas' as habitat critical to the survival of the species. No camps will be affected by the proposed action. The proposed action will affect 1.34 ha of vegetation, some of which comprises suitable foraging habitat for the Grey-headed Flying-fox. The Grey-headed Flying-fox is recorded as travelling long distances (50 km) on feeding forays and suitable habitat is available outside of the development site.
Criterion e: disrupt the breeding cycle of an important population	The proposed action will affect 1.34 ha of vegetation, some of which comprises suitable foraging habitat for the Grey-headed Flying-fox. The proposed action will not disrupt the breeding cycle of the Grey-headed Flying-fox given that no camps will be impacted by the proposed action and suitable foraging habitat is available adjacent to the development site.
Criterion f: Adversely affect habitat critical to the survival of a species; modify, destroy, remove or isolate or decrease the availability or quality of	The proposed action will affect 1.34 ha of vegetation, including foraging habitat for the Grey-headed Flying-fox. Grey-headed Flying-fox camps will not be removed or disturbed, and suitable habitat is available outside of the development site.

Criterion	Assessment
habitat to the extent that the species is likely to decline	
Criterion g: Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	The proposed action is unlikely to result in the establishment of an invasive species that is harmful to the Grey-headed Flying-fox.
Criterion h: Introduce disease that may cause the species to decline	Grey-headed Flying-fox are reservoirs for the Australian bat lyssavirus and can cause clinical disease and mortality in Grey-headed Flying-fox. The proposed action would not increase the incidence of this disease.
Criterion i: Interfere substantially with the recovery of the species	A Draft National Recovery Plan for the Grey-headed Flying-fox was developed in 2017. The relatively small amount of foraging habitat to be removed is unlikely to substantially interfere with the recovery of this species.
Conclusion	No. The proposed action is unlikely to have a significant impact on the Grey-headed Flying-fox for the following reasons: • No camps will be removed by the proposed action. More suitable foraging habitat for this highly mobile species is available outside of the development site.

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Appendix A Definitions

Terminology	Definition
Biodiversity credit report	The report produced by the Credit Calculator that sets out the number and class of biodiversity credits required to offset the remaining adverse impacts on biodiversity values at a development site, or on land to be biodiversity certified, or that sets out the number and class of biodiversity credits that are created at a biodiversity stewardship site.
BioNet Atlas	The BioNet Atlas (formerly known as the NSW Wildlife Atlas) is the OEH database of flora and fauna records. The Atlas contains records of plants, mammals, birds, reptiles, amphibians, some fungi, some invertebrates (such as insects and snails) and some fish
Broad condition state:	Areas of the same PCT that are in relatively homogenous condition. Broad condition is used for stratifying areas of the same PCT into a vegetation zone for the purpose of determining the vegetation integrity score.
Connectivity	The measure of the degree to which an area(s) of native vegetation is linked with other areas of vegetation.
Credit Calculator	The computer program that provides decision support to assessors and proponents by applying the BAM, and which calculates the number and class of biodiversity credits required to offset the impacts of a development or created at a biodiversity stewardship site.
Development	Has the same meaning as development at section 4 of the EP&A Act, or an activity in Part 5 of the EP&A Act. It also includes development as defined in section 115T of the EP&A Act.
Development footprint	The area of land that is directly impacted on by a proposed development, including access roads, and areas used to store construction materials.
Development site	An area of land that is subject to a proposed development that is under the EP&A Act.
Ecosystem credits	A measurement of the value of EECs, CEECs and threatened species habitat for species that can be reliably predicted to occur with a PCT. Ecosystem credits measure the loss in biodiversity values at a development site and the gain in biodiversity values at a biodiversity stewardship site.
High threat exotic plant cover	Plant cover composed of vascular plants not native to Australia that if not controlled will invade and outcompete native plant species.
Hollow bearing tree	A living or dead tree that has at least one hollow. A tree is considered to contain a hollow if: (a) the entrance can be seen; (b) the minimum entrance width is at least 5 cm; (c) the hollow appears to have depth (i.e. you cannot see solid wood beyond the entrance); (d) the hollow is at least 1 m above the ground. Trees must be examined from all angles.
Important wetland	A wetland that is listed in the Directory of Important Wetlands of Australia (DIWA) and SEPP 14 Coastal Wetlands
Linear shaped development	Development that is generally narrow in width and extends across the landscape for a distance greater than 3.5 kilometres in length
Local population	The population that occurs in the study area. In cases where multiple populations occur in the study area or a population occupies part of the study area, impacts on each subpopulation must be assessed separately.
Local wetland	Any wetland that is not identified as an important wetland (refer to definition of Important wetland).
Mitchell landscape	Landscapes with relatively homogeneous geomorphology, soils and broad vegetation types, mapped at a scale of 1:250,000.

Terminology	Definition
Multiple fragmentation impact development	Developments such as wind farms and coal seam gas extraction that require multiple extraction points (wells) or turbines and a network of associated development including roads, tracks, gathering systems/flow lines, transmission lines
Operational Manual	The Operational Manual published from time to time by OEH, which is a guide to assist assessors when using the BAM
Patch size	An area of intact native vegetation that: a) occurs on the development site or biodiversity stewardship site, and b) includes native vegetation that has a gap of less than 100 m from the next area of native vegetation (or ≤30 m for non-woody ecosystems). Patch size may extend onto adjoining land that is not part of the development site or stewardship site..
Proponent	A person who intends to apply for consent to carry out development or for approval for an activity.
Reference sites	The relatively unmodified sites that are assessed to obtain local benchmark information when benchmarks in the Vegetation Benchmarks Database are too broad or otherwise incorrect for the PCT and/or local situation. Benchmarks can also be obtained from published sources.
Regeneration	The proportion of over-storey species characteristic of the PCT that are naturally regenerating and have a diameter at breast height <5 cm within a vegetation zone.
Remaining impact	An impact on biodiversity values after all reasonable measures have been taken to avoid and minimise the impacts of development. Under the BAM, an offset requirement is calculated for the remaining impacts on biodiversity values.
Retirement of credits	The purchase and retirement of biodiversity credits from an already-established biobank site or a biodiversity stewardship site secured by a biodiversity stewardship agreement.
Riparian buffer	Riparian buffers applied to water bodies in accordance with the BAM
Sensitive biodiversity values land map	Development within an area identified on the map requires assessment using the BAM.
Site attributes	The matters assessed to determine vegetation integrity. They include: native plant species richness, native over-storey cover, native mid-storey cover, native ground cover (grasses), native ground cover (shrubs), native ground cover (other), exotic plant cover (as a percentage of total ground and mid-storey cover), number of trees with hollows, proportion of over-storey species occurring as regeneration, and total length of fallen logs.
Site-based development	a development other than a linear shaped development, or a multiple fragmentation impact development
Species credits	The class of biodiversity credits created or required for the impact on threatened species that cannot be reliably predicted to use an area of land based on habitat surrogates. Species that require species credits are listed in the Threatened Biodiversity Data Collection.
Subject land	Is land to which the BAM is applied in Stage 1 to assess the biodiversity values of the land. It includes land that may be a development site, clearing site, proposed for biodiversity certification or land that is proposed for a biodiversity stewardship agreement.
Threatened Biodiversity Data Collection	Part of the BioNet database, published by OEH and accessible from the BioNet website.
Threatened species	Critically Endangered, Endangered or Vulnerable threatened species as defined by Schedule 1 of the BC Act, or any additional threatened species listed under Part 13 of the EPBC Act as Critically Endangered, Endangered or Vulnerable.

Terminology	Definition
Vegetation Benchmarks Database	A database of benchmarks for vegetation classes and some PCTs. The Vegetation Benchmarks Database is published by OEH and is part of the BioNet Vegetation Classification.
Vegetation zone	A relatively homogenous area of native vegetation on a development site, land to be biodiversity certified or a biodiversity stewardship site that is the same PCT and broad condition state.
Wetland	An area of land that is wet by surface water or ground water, or both, for long enough periods that the plants and animals in it are adapted to, and depend on, moist conditions for at least part of their life cycle. Wetlands may exhibit wet and dry phases and may be wet permanently, cyclically or intermittently with fresh, brackish or saline water
Woody native vegetation	Native vegetation that contains an over-storey and/or mid-storey that predominantly consists of trees and/or shrubs

Appendix B Vegetation plot data

Table 11: Species matrix (species recorded by plot)

Stratum	Form Group	Species name	Exotic (*)	High Threat Weed (*)	Plot 1 Cover %	Plot 2 Cover %	Plot 3 Cover %
G		*Bromus catharticus*	*			0.1	0.1
G	Grass and grasslike	*Carex inversa*				0.1	
G		*Conyza bonariensis*	*			0.1	
U	Tree	*Corymbia maculata*				30	
G	Forb	*Cotula australis*				0.1	
G	Grass and grasslike	*Cynodon dactylon (note planted)*			0.2	50	0.2
G		*Ehrharta erecta*	*	*		0.1	0.1
G	Forb	*Einadia hastata*				0.2	0.2
U	Tree	*Eucalyptus moluccana*				5	7
U	Tree	*Eucalyptus paniculata subsp. paniculata*			15	5	
U	Tree	*Eucalyptus tereticornis*				1	0.3
G		*Lolium spp.*	*			1000	
G		*Lycium ferocissimum*	*	*		0.1	0.5
G		*Lysimachia arvensis*	*			0.1	0.1
G		*Malva neglecta*	*			0.1	0.5
G		*Oxalis corniculata*	*			0.1	0.2
G		*Paronychia spp.*	*			10	
G		*Paspalum dilatatum*	*	*		0.2	0.1
G		*Poa annua*	*			0.1	
G		*Polygonum arenastrum*	*			0.1	
G		*Solanum nigrum*	*			0.1	0.1
G		*Sonchus oleraceus*	*			0.1	0.1
G		*Trifolium repens*	*			0.1	
G		*Verbena officinalis*	*			0.1	0.1

Table 12: Vegetation integrity data (Composition, Structure and function)

Plot location data							
Plot no.	PCT	Vegetation Zone	Condition	Zone	Easting	Northing	Bearing (°)
1	-	-	Planted native vegetation_sprayed	56	303047	6258032	76
2	-	-	Planted native vegetation	56	302959	6258388	123

Plot location data							
3	849	1	Planted native vegetation	56	302896	6258184	354

Composition (number of species)						
Plot no.	Tree	Forb	Shrub	Grass	Other	Fern
1	2	0	0	2	1	0
2	3	2	0	1	0	0
3	3	4	2	5	0	0

Structure (Total cover %)						
Plot no.	Tree	Forb	Shrub	Grass	Other	Fern
1	30	0	0	0.4	0	0
2	31	0.3	0	0.1	0	0
3	13.3	7.7	032	30.4	0	0

Function												
Plot no.	Large Trees (dbh > 50 cm)	Hollow trees	Litter Cover (%)	Length Fallen Logs (m)	Tree Stem 5-9 cm	Tree Stem 10-19 cm	Tree Stem 20-29 cm	Tree Stem 30-49 cm	Tree Stem 50-79 cm	Tree Stem 80+ cm	Tree Regen	High Threat Weed Cover (%)
1	0	0	100	0	0	1	1	1	0	0	0	0.2
2	0	0	12	0	0	1	1	1	0	0	0	0.4
3	1	0	38	0	0	0	0	1	1	0	0	1.9

FOR STEM SIZE CLASSES: 0 = ABSENCE, 1 = PRESENCE.

Appendix C EPBC Act Likelihood of Occurrence

An assessment of likelihood of occurrence was made for threatened and migratory species identified from the Protected Matters Search Tool. Five terms for the likelihood of occurrence of species are used in this report. This assessment was based on database or other records, presence or absence of suitable habitat, features of the proposal site, results of the site inspection and professional judgement. Some Migratory or Marine species identified from the Commonwealth database search have been excluded from the assessment, due to lack of habitat. The terms for likelihood of occurrence are defined below:

- 'known' = the species was or has been observed on the site
- 'likely' = a medium to high probability that a species uses the site
- 'potential' = suitable habitat for a species occurs on the site, but there is insufficient information to categorise the species as likely to occur, or unlikely to occur
- 'unlikely' = a very low to low probability that a species uses the site
- 'no' = habitat within the study area and in the vicinity is unsuitable for the species.

A test of significance was conducted for threatened species or ecological communities that were recorded within the study area or had a higher likelihood of occurring and were not recorded during the site visit. It is noted that some threatened fauna species that are highly mobile, wide ranging and vagrant may use portions of the study area intermittently for foraging. For these fauna species, the habitat present and likely to be impacted is not considered to be important to the threatened species, particularly in relation to the amount of similar habitat remaining in the surrounding landscape. As such, a test of significance in reference to Commonwealth legislation was not considered necessary.

Scientific Name	Common Name	EPBC Act Status	Distribution and Habitat	Likelihood of occurrence on site	Habitat on site directly or indirectly impacted	Impact Assessment Required
			FAUNA			
Actitis hypoleucos	Common Sandpiper	M	Summer migrant. In NSW, widespread along coastline and also occurs in many areas inland. Coastal wetlands and some inland wetlands, especially muddy margins or rocky shores. Also, estuaries and deltas, lakes, pools, billabongs, reservoirs, dams and claypans, mangroves.	Unlikely - suitable habitat not identified within the site.	N/A	No.
Anthochaera phrygia	Regent Honeyeater	CE	Inland slopes of south-east Australia, and less frequently in coastal areas. In NSW, most records are from the North-West Plains, North-West and South-West Slopes, Northern Tablelands, Central Tablelands and Southern Tablelands regions; also recorded in the Central Coast and Hunter Valley regions. Eucalypt woodland and open forest, wooded farmland and urban areas with mature eucalypts, and riparian forests of *Casuarina cunninghamiana* (River Oak).	Unlikely - suitable habitat not identified within the site.	N/A	No.
Apus pacificus	Fork-tailed Swift	M	Recorded in all regions of NSW. Riparian woodland, swamps, low scrub, heathland, saltmarsh, grassland, Spinifex sandplains, open farmland and inland and coastal sand-dunes.	Unlikely - suitable habitat not identified within the site.	N/A	No.
Botaurus poiciloptilus	Australasian Bittern	E	Found over most of NSW except for the far north-west. Permanent freshwater wetlands with tall, dense vegetation, particularly *Typha* spp. (bullrushes) and *Eleocharis* spp. (spikerushes).	Unlikely - suitable habitat not identified within the site.	N/A	No.
Calidris acuminata	Sharp-tailed Sandpiper	M	Summer migrant. Widespread in most regions of NSW, especially in coastal areas, but sparse in the south-central Western Plain and east Lower Western Regions. Shallow fresh or brackish wetlands, with	Unlikely - suitable habitat not identified within the site.	N/A	No.

Scientific Name	Common Name	EPBC Act Status	Distribution and Habitat	Likelihood of occurrence on site	Habitat on site directly or indirectly impacted	Impact Assessment Required
			inundated or emergent sedges, grass, saltmarsh or other low vegetation.			
Calidris ferruginea	Curlew Sandpiper	CE, M	Occurs along the entire coast of NSW, and sometimes in freshwater wetlands in the Murray-Darling Basin. Littoral and estuarine habitats, including intertidal mudflats, non-tidal swamps, lakes and lagoons on the coast and sometimes inland.	Unlikely - suitable habitat not identified within the site.	N/A	No.
Calidris melanotos	Pectoral Sandpiper	M	Summer migrant to Australia. Widespread but scattered in NSW. East of the Great Divide, recorded from Casino and Ballina, south to Ulladulla. West of the Great Divide, widespread in the Riverina and Lower Western regions. Shallow fresh to saline wetlands, including coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands.	Unlikely - suitable habitat not identified within the site.	N/A	No.
Chalinolobus dwyeri	Large-eared Pied Bat	V	Recorded from Rockhampton in Qld south to Ulladulla in NSW. Largest concentrations of populations occur in the sandstone escarpments of the Sydney basin and the NSW north-west slopes. Wet and dry sclerophyll forests, Cyprus Pine dominated forest, woodland, sub-alpine woodland, edges of rainforests and sandstone outcrop country.	Unlikely - suitable habitat not identified within the site.	N/A	No.
Dasyornis brachypterus	Eastern Bristlebird	E	Central and southern populations inhabit heath and open woodland with a heathy understorey. In northern NSW, habitat comprises open forest with dense tussocky grass understorey.	Unlikely - suitable habitat not identified within the site.	N/A	No.
Dasyurus maculatus (SE mainland population)	Spotted-tail Quoll	E	Found on the east coast of NSW, Tasmania, eastern Victoria and north-eastern Qld.	Unlikely - suitable habitat not identified within the site.	N/A	No.

Scientific Name	Common Name	EPBC Act Status	Distribution and Habitat	Likelihood of occurrence on site	Habitat on site directly or indirectly impacted	Impact Assessment Required
Gallinago hardwickii	Latham's Snipe	C, J, K	A variety of permanent and ephemeral wetlands, preferring open freshwater wetlands with nearby cover. Occupies a variety of vegetation around wetlands including wetland grasses and open wooded swamps. Can occur in habitats that have saline or brackish water, such as saltmarsh, mangrove creeks, around bays and beaches, and at tidal rivers. They are regularly recorded in or around modified or artificial habitats including pasture, ploughed paddocks, irrigation channels and drainage ditches and sewage and dairy farms. They can also occur in various sites close to humans or human activity (e.g. near roads, railways, airfields, commercial or industrial complexes).	Unlikely - suitable habitat not identified within the site.	N/A	No.
Grantiella picta	Painted Honeyeater	V	Widely distributed in NSW, predominantly on the inland side of the Great Dividing Range but avoiding arid areas. Boree, Brigalow and Box-Gum Woodlands and Box-Ironbark Forests.	Unlikely - suitable habitat not identified within the site.	N/A	No.
Haliaeetus leucogaster	White-bellied Sea-Eagle	C	Freshwater swamps, rivers, lakes, reservoirs, billabongs, saltmarsh and sewage ponds and coastal waters. Terrestrial habitats include coastal dunes, tidal flats, grassland, heathland, woodland, forest and urban areas.	Unlikely - suitable habitat not identified within the site.	N/A	No.
Heleioporus australiacus	Giant Burrowing Frog	V	South eastern NSW and Victoria, in two distinct populations: a northern population in the sandstone geology of the Sydney Basin as far south as Ulladulla, and a southern population occurring from north of Narooma through to Walhalla, Victoria. Heath, woodland and open dry sclerophyll forest on a variety of soil types except those that are clay based.	Unlikely - suitable habitat not identified within the site.	N/A	No.
Hirundapus caudacutus	White-throated Needletail	M	All coastal regions of NSW, inland to the western slopes and inland plains of the Great Divide. Occur most often over open forest and rainforest, as well as heathland, and remnant vegetation in farmland.	Unlikely - suitable habitat not identified within the site.	N/A	No.

Scientific Name	Common Name	EPBC Act Status	Distribution and Habitat	Likelihood of occurrence on site	Habitat on site directly or indirectly impacted	Impact Assessment Required
Lathamus discolor	Swift Parrot	CE	Migrates from Tasmania to mainland in Autumn-Winter. In NSW, the species mostly occurs on the coast and south west slopes. Box-ironbark forests and woodlands.	Unlikely - suitable habitat not identified within the site.	N/A	No – impacts are negligible for this mobile species.
Litoria aurea	Green and Golden Bell Frog	V	Since 1990, recorded from ~50 scattered sites within its former range in NSW, from the north coast near Brunswick Heads, south along the coast to Victoria. Records exist west to Bathurst, Tumut and the ACT region. Marshes, dams and stream-sides, particularly those containing *Typha* spp. (bullrushes) or *Eleocharis* spp. (spikerushes). Some populations occur in highly disturbed areas.	Unlikely – farm dams did not contain suitable fringing aquatic habitat for this species.	N/A	No.
Litoria raniformis	Growling Grass Frog	V	Permanent or ephemeral Black Box/Lignum/Nitre Goosefoot swamps, Lignum/Typha swamps and River Red Gum swamps or billabongs along floodplains and river valleys. Also found in irrigated rice crops.	Unlikely - suitable habitat not identified within the site.	N/A	No.
Monarcha melanopsis	Black-faced Monarch	M	In NSW, occurs around the eastern slopes and tablelands of the Great Divide, inland to Coutts Crossing, Armidale, Widden Valley, Wollemi National Park and Wombeyan Caves. It is rarely recorded farther inland. Rainforest, open eucalypt forests, dry sclerophyll forests and woodlands, gullies in mountain areas or coastal foothills, Brigalow scrub, coastal scrub, mangroves, parks and gardens.	Unlikely - suitable habitat not identified within the site.	N/A	No
Motacilla flava	Yellow Wagtail	M	Regular summer migrant to mostly coastal Australia. In NSW recorded Sydney to Newcastle, the Hawkesbury and inland in the Bogan LGA. Swamp margins, sewage ponds, saltmarshes, playing fields, airfields, ploughed land, lawns.	Unlikely - suitable habitat not identified within the site.	N/A	No
Myiagra cyanoleuca	Satin Flycatcher	M	In NSW, widespread on and east of the Great Divide and sparsely scattered on the western slopes, with very occasional records on the western plains. Eucalypt-dominated forests, especially near wetlands, watercourses, and heavily-vegetated gullies.	Unlikely - suitable habitat not identified within the site.	N/A	No

Scientific Name	Common Name	EPBC Act Status	Distribution and Habitat	Likelihood of occurrence on site	Habitat on site directly or indirectly impacted	Impact Assessment Required
Numenius madagascariensis	Eastern Curlew	CE	Summer migrant to Australia. Primarily coastal distribution in NSW, with some scattered inland records. Estuaries, bays, harbours, inlets and coastal lagoons, intertidal mudflats or sandflats, ocean beaches, coral reefs, rock platforms, saltmarsh, mangroves, freshwater/brackish lakes, saltworks and sewage farms.	Unlikely - suitable habitat not identified within the site.	N/A	No
Petauroides volans	Greater Glider	V	This population on the south coast of NSW is bounded by the Moruya River to the north, Coila Lake to the south and the Princes Highway and cleared land exceeding 700 m in width to the west. Eucalypt forests and woodlands.	Unlikely - suitable habitat not identified within the site.	N/A	No
Petrogale penicillata	Brush-tailed Rock-wallaby	V	In NSW they occur from the Qld border in the north to the Shoalhaven in the south, with the population in the Warrumbungle Ranges being the western limit. Rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges.	Unlikely - suitable habitat not identified within the site.	N/A	No
Phascolarctos cinereus (combined populations of Qld, NSW and ACT)	Koala (combined populations of Qld, NSW and ACT	V	In NSW it mainly occurs on the central and north coasts with some populations in the west of the Great Dividing Range. There are sparse and possibly disjunct populations in the Bega District, and at several sites on the southern tablelands. Eucalypt woodlands and forests.	Unlikely - suitable habitat not identified within the site.	Unlikely	No
Pseudomys novaehollandiae	New Holland Mouse	V	Fragmented distribution across eastern NSW. Open heathlands, woodlands and forests with a heathland understorey, vegetated sand dunes.	Unlikely - suitable habitat not identified within the site.	N/A	No
Pteropus poliocephalus	Grey-headed Flying-fox	V	Along the eastern coast of Australia, from Bundaberg in Qld to Melbourne in Victoria. Subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops.	Unlikely – no breeding or sheltering habitat on site. seasonal foraging habitat available within the study	N/A	No

Scientific Name	Common Name	EPBC Act Status	Distribution and Habitat	Likelihood of occurrence on site	Habitat on site directly or indirectly impacted	Impact Assessment Required
				area. No camps identified within study area.		
Rhipidura rufifrons	Rufous Fantail	M	Wet sclerophyll forests, subtropical and temperate rainforests. Sometimes drier sclerophyll forests and woodlands.	Unlikely - suitable habitat not identified within the site.	N/A	No
Rostratula australis	Australian Painted Snipe	E	In NSW most records are from the Murray-Darling Basin. Other recent records include wetlands on the Hawkesbury River and the Clarence and lower Hunter Valleys. Swamps, dams and nearby marshy areas.	Unlikely - suitable habitat not identified within the site.	N/A	No
Synemon plana	Golden Sun Moth	CE	It is found in native open temperate grasslands and open grassy woodlands dominated by *Austrodanthonia* spp.	Unlikely - suitable habitat not identified within the site.	N/A	No
Tringa nebularia	Common Greenshank	M	Summer migrant to Australia. Recorded in most coastal regions of NSW; also widespread west of the Great Dividing Range. Found in terrestrial wetlands and sheltered coastal habitats.	Unlikely - suitable habitat not identified within the site.	N/A	No
			FLORA			
Acacia bynoeana	Bynoe's Wattle	V	Found in central eastern NSW, from the Hunter District (Morisset) south to the Southern Highlands and west to the Blue Mountains. Heath or dry sclerophyll forest on sandy soils.	Unlikely - suitable habitat not identified within the study area.	N/A	No
Acacia pubescens	Downy Wattle	V	Restricted to the Sydney region around the Bankstown-Fairfield-Rookwood and Pitt Town area, with outliers occurring at Barden Ridge, Oakdale and Mountain Lagoon. Open woodland and forest, including Cooks River/Castlereagh Ironbark Forest, Shale/Gravel Transition Forest and Cumberland Plain Woodland. Occurs on alluviums, shales and at the intergrade between shales and sandstones.	Unlikely - suitable soils not identified within the study area.	N/A	No

Scientific Name	Common Name	EPBC Act Status	Distribution and Habitat	Likelihood of occurrence on site	Habitat on site directly or indirectly impacted	Impact Assessment Required
Allocasuarina glareicola	-	E	Primarily restricted to the Richmond (NW Cumberland Plain) district, but with an outlier population found at Voyager Point, Liverpool. Castlereagh woodland on lateritic soil. Found in open woodland with *Eucalyptus parramattensis*, *Eucalyptus fibrosa*, *Angophora bakeri*, *Eucalyptus sclerophylla* and *Melaleuca decora*.	Unlikely - suitable habitat not identified within the study area.	N/A	No
Cynanchum elegans	White-flowered Wax Plant	E	*Cynanchum elegans* is a twiner with a corky bark when mature. Restricted from Brunswick Heads to Gerroa. It inhabits littoral rainforests, coastal scrub and open forests and woodlands.	Unlikely - suitable habitat not identified within the study area.	N/A	No
Genoplesium baueri	Bauer's Midge Orchid	E	Has been recorded from locations between Nowra and Pittwater and may occur as far north as Port Stephens. Dry sclerophyll forest and moss gardens over sandstone.	Unlikely - suitable habitat not identified within the site.	N/A	No
Grevillea parviflora subsp. *parviflora*	Small-flower Grevillea	V	Heath and shrubby woodland to open forest on sandy or light clay soils usually over thin shales.	No – lack of suitable habitat recorded within the development site, species not observed during surveys.	N/A	No
Haloragis exalata subsp. *exalata*	Square Raspwort	V	Disjunct distribution in the Central Coast, South Coast and North Western Slopes botanical subdivisions of NSW. Protected and shaded damp situations in riparian habitats.	No - suitable habitat not recorded within the development site, species not observed during surveys, no local records.	N/A	No
Isotoma fluviatilis subsp. *fluviatilis*	-	X	Damp places on the Cumberland Plain, including freshwater wetland, grassland/alluvial woodland, and alluvial woodland/shale plains woodland.	Unlikely - suitable habitat not identified within the site.	N/A	No

Scientific Name	Common Name	EPBC Act Status	Distribution and Habitat	Likelihood of occurrence on site	Habitat on site directly or indirectly impacted	Impact Assessment Required
Persicaria elatior	Tall Knotweed	V	In south-eastern NSW recorded from Mt Dromedary, Moruya State Forest near Turlinjah, the Upper Avon River catchment north of Robertson, Bermagui, and Picton Lakes. In northern NSW known from Raymond Terrace (near Newcastle) and the Grafton area (Cherry Tree and Gibberagee State Forests). Beside streams and lakes, swamp forest or disturbed areas.	Unlikely - suitable habitat not identified within the site.	N/A	No
Persoonia hirsuta	Hairy Geebung	E	Scattered distribution around Sydney, from Singleton in the north, along the east coast to Bargo in the south and the Blue Mountains to the west. Sandy soils in dry sclerophyll open forest, woodland and heath on sandstone.	Unlikely - suitable habitat not identified within the site.	N/A	No
Persoonia nutans	Nodding Geebung	E	Northern populations: sclerophyll forest and woodland (Agnes Banks Woodland, Castlereagh Scribbly Gum Woodland and Cooks River / Castlereagh Ironbark Forest) on aeolian and alluvial sediments. Southern populations: tertiary alluvium, shale sandstone transition communities and Cooks River / Castlereagh Ironbark Forest.	Unlikely - suitable habitat not identified within the site.	N/A	No
Pimelea curviflora var. *curviflora*	-	V	Confined to the coastal area of the Sydney and Illawarra regions between northern Sydney and Maroota in the north-west and Croom Reserve near Albion Park in the south. Woodland, mostly on shaley/lateritic soils over sandstone and shale/sandstone transition soils on ridgetops and upper slopes.	Unlikely - suitable habitat not identified within the site.	N/A	No
Pimelea spicata	Spiked Rice-flower	E	Two disjunct areas; the Cumberland Plain (Marayong and Prospect Reservoir south to Narellan and Douglas Park) and the Illawarra (Lansdowne to Shellharbour to northern Kiama). Well-structured clay soils. *Eucalyptus moluccana* (Grey Box) communities and in areas of ironbark on the Cumberland Plain. Coast Banksia open woodland or coastal grassland in the Illawarra.	Unlikely - suitable habitat not identified within the site.	N/A	No

Scientific Name	Common Name	EPBC Act Status	Distribution and Habitat	Likelihood of occurrence on site	Habitat on site directly or indirectly impacted	Impact Assessment Required
Pomaderris brunnea	Brown Pomaderris	V	Moist woodland or forest on clay and alluvial soils of flood plains and creek lines.	Unlikely - suitable habitat not identified within the site.	N/A	No
Pterostylis gibbosa	Illawarra Greenhood	E	Known from a small number of populations in the Hunter region (Milbrodale), the Illawarra region (Albion Park and Yallah) and the Shoalhaven region (near Nowra). All known populations grow in open forest or woodland, on flat or gently sloping land with poor drainage.	Unlikely - suitable habitat not identified within the site.	N/A	No
Pterostylis saxicola	Sydney Plains Greenhood	E	Restricted to western Sydney between Freemans Reach in the north and Picton in the south. There are very few known populations and they are all very small and isolated. Restricted to western Sydney between Freemans Reach in the north and Picton in the south. There are very few known populations and they are all very small and isolated.	Unlikely - suitable habitat not identified within the site.	N/A	No
Pultenaea parviflora	-	V	Dry sclerophyll forest, especially Castlereagh Ironbark Forest, Shale Gravel Transition Forest and transitional areas where these communities adjoin Castlereagh Scribbly Gum Woodland.	Unlikely - suitable habitat not identified within the site.	N/A	No
Syzygium paniculatum	Magenta Lilly Pilly	V	Only in NSW, in a narrow, linear coastal strip from Upper Lansdowne to Conjola State Forest. Subtropical and littoral rainforest on gravels, sands, silts and clays.	Unlikely - suitable habitat not identified within the site.	N/A	No
Thesium australe	Austral Toadflax	V	In eastern NSW it is found in very small populations scattered along the coast, and from the Northern to Southern Tablelands. Grassland on coastal headlands or grassland and grassy woodland away from the coast.	Unlikely - suitable habitat not identified within the site.	N/A	No

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