



METROPOLITAN COAL CONSTRUCTION MANAGEMENT PLAN

SURFACE WORKS ASSESSMENT FORM

NO.3 SHAFT WORKS

21 October 2025

Metropolitan Coal

Proposed Installation of Enclosed Flares and Ventilation Infrastructure Replacement at No. 3 Shaft.

Background

The subject Surface Works Assessment Form (SWAF) is submitted to Department of Planning, Housing & Infrastructure (DPHI) and WaterNSW to undertake:

- The construction and operation of two enclosed flare units adjacent to the existing Ventilation Shaft No 3 (VS3)
- The replacement of ventilation infrastructure within the existing VS3 area.

The enclosed flare units would achieve a significant reduction in the amount of greenhouse gases (GHGs) that are currently free vented to the atmosphere via the gas drainage plant. The design of enclosed flares allows for the internal combustion of methane within a refractory shell, thereby reducing noise, luminosity and heat radiation. This destruction of the methane from mining activities reduces the global warming potential of the GHGs, with the enclosed flares having a designed methane destruction rate of 90-95%.

The gas composition of the Bulli Seam is incrementally changing from a high percentage of carbon dioxide to greater methane as mining activities progress to the west, meaning that initially the flares may only sustain ignition for limited periods of time, dependent upon the percentage of methane received from the gas drainage plant. It is expected that the enclosed flare units will gradually increase to 24/7 operation over a period of 2-3 years.

Due to the remote location of Ventilation Shaft No. 3, there are no expected noise or material visual impacts from the construction and operation of the enclosed flare units. The proposed design units have a height of up to 13m, and surrounding vegetation in the area is 10-15m in height. Further, the enclosed design of the units minimises noise output.

The construction and installation of the enclosed flare units would require cutting and filling around the site, building an access road that will double as an Asset Protection Zone for the completed infrastructure, as well as and concrete pads.

The existing ventilation infrastructure at VS3 was originally constructed in the 1970s, with the replacement urgently required to maintain a safe working environment underground. The replacement ventilation shaft infrastructure has been designed to ensure no material increase in the height of the current ducts or the operating noise level.

The ventilation infrastructure replacement will involve civil works for the installation and construction, consisting of two centrifugal fans with 1800kW drive motors, ductwork connected to VS3 and the fans, an electrical switch room and vertical discharges with silencers.

Reducing the vegetation disturbance zone of the replacement ducting and discharges was a key design criterion for the project. Among all the options for replacing the ventilation infrastructure, the chosen design causes the least vegetation disturbance, at the cost of reduced ventilation performance.

A summary of the activities proposed in this SWAF is provided in Table 1.

Table 1

Site	Easting	Northing	Vegetation Disturbance	Activities/Instrumentation
Enclosed Flaring Site Disturbance Zone	312334	6213568	0.2645 ha	Installation & construction of Enclosed Flare units.
VS3 Infrastructure Replacement Zone	312398	6213523	0.0555 ha	Installation & construction of ventilation replacement infrastructure.

This SWAF provides details of construction and environmental management measures for the proposed works as outlined in the Metropolitan Coal Construction Management Plan (ConMP), approved by DP&E on 17 April 2018.

Site Location

The site is within the Woronora Special Area in the local government area (LGA) of Wollongong City Council. The Woronora Special Area covers a region of approximately 75 square kilometres (km²) and includes the catchment of Woronora Dam. WaterNSW manages the Woronora Special Area and public access is restricted.

The proposed activities are situated within the Metropolitan Coal mining lease (Consolidated Coal Lease (CCL) 703). The township of Helensburgh is located approximately 5 km to the east.

Site Rehabilitation

Construction sites will be rehabilitated in accordance with Metropolitan Coal's Rehabilitation Management Plan.

Fuel Management

Construction equipment will be regularly inspected for leaks of oil/fuel/coolant. Spill containment/treatment resources (i.e. spill kits) will be provided. The spill kits will include: Organic Oil/Fuel absorbent pads, garbage bags and rags.

Any spill that occurs will be immediately cleaned up and reported to:

- the site supervisor;
- the Metropolitan Coal Environment & Community Superintendent (Stephen Love 0417 584 121); and
- WaterNSW (via the incident Management Number 1800 061 069).

The site supervisor and the Metropolitan Coal Environment & Community Superintendent will investigate any spills.

Human Waste Water

A portable toilet will be located at the construction site for the duration of works.

Construction Management Plan Surface Works Assessment Form

**Note, this form must be completed in full
prior to the commencement of surface disturbance works**

Date: 29 August 2025

Name and position: Stephen Love (Environment and Community Superintendent)

RMP register number: 20

Site name:

Ventilation Shaft No. 3

Site type:

Works to be carried out adjacent to existing ventilation shaft No 3.

Site co-ordinates (easting/northing):

Site	Easting	Northing
Enclosed Flaring Site Disturbance Zone	312334	6213568
VS3 Infrastructure Replacement Zone	312398	6213523

Expected duration of works: 72 weeks (weather permitting)

Works schedule:

- Describe the activities (including timing) to be conducted during construction works.

VS3 Ventilation Upgrade

Site preparation will involve:

- Use of trittering attachment to mulch vegetation in-situ
- Larger diameter trees identified during the flora assessment/report will be felled and relocated to the surrounding area for habitat integration.
- Excavator to prepare construction site for new ventilation system
- Erosion and sediment controls

Construction:

- Re-locate underground 11kV cable and complete earthing grid modification
- Installation of 11kV Power Pole to supply power to new switchroom
- Complete civils (concrete footings) for new ventilation system
- Delivery of mechanical and electrical equipment
- Installation of new switchroom and associated electrical equipment
- Installation of mechanical equipment including permitter fencing
- Commissioning of new ventilation system

- De-commissioning of the existing ventilation system
- Site clean-up (e.g. removal of equipment, materials and waste)
- Revegetation of exposed areas with suitable low-lying species.

Enclosed Flares

Site preparation will involve:

- Use of trittering attachment to mulch vegetation in-situ
- Where trittering is not possible, trees will be felled and relocated to the surrounding area for habitat integration.
- Excavator to prepare construction site for enclosed flares
- Erosion and sediment controls

Construction:

- Installation of fill (VENM crushed sandstone) for access road and enclosed flare site
- Where trittering is not possible, trees will be felled and relocated to the surrounding area for habitat integration.
- Complete civils (concrete footings and concrete slabs) for enclosed flare system
- Delivery of mechanical and electrical equipment
- Installation of electrical equipment
- Installation of mechanical equipment including perimeter fencing
- Commissioning of new enclosed flare system
- Site clean-up (e.g. removal of equipment, materials and waste)

Review of baseline information - site features (refer Section 5 of the ConMP)

Are any of the following features located within the proposed disturbance area or immediate surrounds?

Are there occurrences of the Southern Sydney Sheltered Forest on transitional Sandstone Soils EEC in the general area? **Yes**

Are there occurrences of the O'Hares Creek Shale Forest EEC in the general area? **No**

Are upland swamps located in the general area? **No**

Are there records of known threatened flora species in the general area? **Yes**

The proposal aims to avoid threatened flora.

Are there records of known threatened fauna species in the general area? **Yes**

The proposal aims to avoid threatened fauna.

Are existing (or proposed) monitoring sites located nearby? **No**

What vegetation type is present?

- PCT 3591: Southern Sydney Sheltered Forest
- PCT 3595: Sydney Coastal Sandstone Gully Forest
-

Are known Aboriginal heritage sites present? **No**

Is this an area in which disturbance is to be avoided and/or limited? (refer Sections 6.1.1 and 6.1.2 of the ConMP)

No

If the proposed disturbance area is located in an area to be avoided or limited, relocate site where appropriate in accordance with the requirements of the ConMP

Date of survey for threatened flora.

16 June 2025

Name of suitable qualified ecologist conducting survey

Ecology consultants Mandy Melvaine, and Jesse Paton (Niche Environment & Heritage)

Have any threatened flora been identified within the proposed disturbance area or immediate surrounds.

Disturbed and undisturbed TEC Southern Sydney Sheltered Forest on Transitional Sandstone soils in the Sydney Basin Bioregion occurs within the Study Area.

Scientific names of threatened flora species recorded.

N/A

Will works be relocated to avoid or minimise impacts on the threatened flora species? **Yes**

The positioning of infrastructure has been located such as to minimise impacts on surrounding vegetation, and rely on previously disturbed land to the greatest extent possible.

If it is not feasible to relocate the works, have the impacts of the proposed works on the population of the threatened flora species been assessed by a suitably qualified and experienced ecologist?

Yes

If No, do not proceed

Has the assessment concluded that the proposed surface activities are likely to have a significant impact on a population of the threatened flora species?

No

If Yes, the proposed works are to be modified to avoid such an outcome

[Attach any relevant ecological reports to this assessment form]

Surface Works Assessment – No, 3 Shaft Addendum Ecological Assessment Report (Attachment 1)

Vegetation clearance and site access (refer Section 6.1.6 of ConMP)

Is vegetation clearing required for the construction works? If yes, describe extent (e.g. m²) and method of clearing (e.g. slashing/lopping branches/removal)?

Yes

The proposed surface works would result in approximately 0.32 hectares of vegetation clearing. With the proposed mitigation measures in place, the proposal is unlikely to result in any significant impact on any TEC or threatened species listed.

Describe the access requirements for the construction site (e.g. vehicle/pedestrian/helicopter) and where the access will be from (e.g. which fire road).

Access to the No. 3 Ventilation Shaft will be via the existing sealed Fireroad 9J which connects to the Princes Highway.

Is vegetation clearing required for site access? If yes, describe the extent and method of clearing? **No**

Vegetation management measures to be implemented (refer Section 6.1.4 of the ConMP)

Disturbance would be appropriately limited by the following mitigation measures:

- *Minimising the disturbance footprint during the design phase of the project.*
- *Establishing exclusion fencing for the protection of native vegetation, TEC and habitats.*
- *Use of existing sealed Fire trail 9J for access to site.*
- *Project ecologist pre-clearance assessment and supervision of demarcation of clearing limits, and subsequent supervision of vegetation clearing.*
- *Weed control measures.*
- *Erosion and sediment controls to be implemented as appropriate or on downslope sides of the site as per Metropolitan Coal Construction Management Plan to ensure that no sediment from earth works enters adjacent drains. This is assisted by an existing vegetated bund downslope of the construction area.*

Site Layout Plan (refer Section 6.1.5 of ConMP)

Has a Site Layout Plan been prepared and attached to the Works Assessment Form? **Yes**

Refer to Figure in Attachment 2

Have the following been indicated on the Site Layout Plan? **Yes**

- Site location
- Works design
- Management measures (e.g. erosion and sediment controls, spill kits)
- Access track/s (indicate type of access, e.g. pedestrian/vehicle. Also indicate location of nearest fire trail where access will be from)
- Areas of vegetation clearance
- Location of equipment (e.g. pump, generator, fuel storage, portable toilets)
- Equipment storage areas
- Safety equipment (e.g. fire extinguisher and first aid kit)

Attach photographs, where appropriate

See Attachment 1

Aboriginal heritage pre-clearance survey (refer Section 6.2 of the ConMP)

Date of pre-clearance survey for Aboriginal heritage sites.

A visual inspection was conducted on 16 June 2025.

Name of suitably qualified archaeologist conducting survey

Heritage Consultant Isabel Parnell (Niche Environment & Heritage)

Are any Aboriginal heritage sites identified within the proposed disturbance area or immediate surrounds? **No**

Description of recorded Aboriginal heritage sites. **N/A**

Will works be relocated to avoid impacts on the Aboriginal heritage site? **N/A**

If it is not feasible to relocate the works to avoid impacts to the Aboriginal heritage site, management and/or mitigation measures to be implemented in accordance with the Metropolitan Mine Heritage Management Plan. Describe measures below. **N/A**

Where avoidance is not practicable, has a comprehensive baseline record been obtained and salvage considered in consultation with Aboriginal stakeholders prior to disturbance. **N/A**

Metropolitan Surface Works Assessment – No. 3 Shaft Aboriginal Objects Due Diligence Assessment is attached

Known Aboriginal heritage sites located close to surface disturbance works

Details of demarcation (e.g. fencing, sign-posting or temporary flagging) implemented to avoid accidental damage to known Aboriginal heritage sites located close to surface disturbance works.

An Aboriginal Objects Due Diligence Assessment has concluded there will be negligible risk of harm to Aboriginal objects.

Erosion or sediment control measures required?

- Is any erosion or sediment control required? **Yes**
- If yes, has an Erosion and Sediment Control Plan been prepared and attached to the Surface Works Assessment Form? **Yes**

Fuel and spill management measures required?

- Are compressors and pumps bunded and with sufficient capacity? **Yes**
- Where fuels are used, are spill kits available at the construction site? **Yes**
- Have personnel been trained in spill clean-up procedures? **Yes**

List Hazardous Materials and Storage Requirements

- What hazardous materials are required to be used and how will they be stored on site?

If fuel (diesel or petrol) is required at the sites it will be stored on-site during construction works in bunded containers.

- Are Materials Safety Data Sheets (MSDS) for hazardous materials located at the construction site? **Yes**

Bushfire Preparedness and Management

- Have MCPL staff and contractors been provided with fire awareness and fire safety training? **Yes**
- Has a Hot Work Permit been obtained from the Water NSW if required? **N/A**

Erosion and Sediment Control Plan

Purpose

To outline the erosion and sediment control measures to be implemented during the civil and construction phases of infrastructure within the 3 Shaft site, ensuring that any risk of erosion and sedimentation at the site is effectively managed within the scope of this plan.

Objectives

- Minimise sediment runoff beyond the site boundaries
- Revegetation of slopes and disturbed areas once construction is completed.
- Comply with the Blue Book (Volume 1, and Volume 2E), WaterNSW guidelines and MCPL CMP.

Control Measures

The majority of the 3 Shaft site is heavily vegetated with existing drainage, sediment and erosion controls in place.

Prior to any clearing, disturbance footprints will be set out with verification to be undertaken by the Project Manager and Environment & Community Superintendent (or their delegate) in line with the Notification of Surface Works Form.

All proposed erosion and sediment control measures are to be implemented in advance of, or in conjunction with, vegetation clearing, soil removal and construction. Soil that is disturbed will be removed and or reused where possible. MCPL does not envisage the need for stockpiling disturbed soil due to the minimal cut amounts required; however, if required, a temporary stockpile will be demarcated with surface drainage in the vicinity of the stockpile configured to direct any runoff around the area so as not to cause any potential erosion.

Temporary erosion and sedimentation controls, including but not limited to coir logs, bunding and sediment fencing, will be used prior to any construction or soil removal at the 3 Shaft site. These temporary controls will complement existing drainage lines within the 3 Shaft site. The verification of installation of the erosion and sediment controls will be undertaken by the Project Manager and the Environment & Community Superintendent (or their delegate) prior to any construction or soil removal.

At the conclusion of the project, or prior to where possible, revegetation of disturbed soil areas will be undertaken.

Reporting and Review

The effectiveness of sediment and erosion control measures adopted at the 3 Shaft site will be assessed weekly by either the Project Manager or Environment & Community Superintendent (or their delegate). Required corrective actions identified during weekly inspections are to be monitored for completion during subsequent inspections.

Should an emergency response be required, MCPL's Pollution Incident Response Management Plan would be activated.

Step	Frequency	Purpose
Routine Inspections	Weekly and after rainfall >10mm	Check sediment controls, stockpiles, access points.

Vegetation Monitoring	Monthly post-construction until vegetation established	Assess revegetation success and erosion risk.
Final Site Audit	Upon completion	Confirm site stabilisation and control removal.

Training and Communication

Prior to the commencement of any clearing or construction related to the project, a Notification of Surface Works is required to be undertaken. part of the purpose of this document is to identify any potential environmental and or safety impacts associated with the proposed works. In the event that erosion and sediment impacts are identified, then the control measures within this plan will be undertaken. The directives of this plan need to be incorporated into the works and the appropriate erosion and sediment control devices and or equipment used.

A risk assessment must be undertaken prior to any clearing or construction related to the project to identify any potential risks associated with the proposed works, which will include environmental risks. Any corrective actions associated with eroision and sediment controls in the risk assessment will be assigned to either the Project Manager or Environment & Community Superintendent (or their delegate) for completion.

Prior to commencing works within the 3 Shaft Site, all workers will have undertaken:

- WaterNSW induction
- Review of risk assessments & Working in the Woronora Special Area Procedure (ME-ENV-PRO-0778)
- Site Familiarisation and expectations of reporting regarding erosion and sediment controls
- Review of Pollution Incident Response Plan

The Environment & Community Superintendent (or their delegate) will provide the Project Manager with relevant technical support for all Erosion & Sediment Control related issues where required.

Attachment 1

*Ecological and Archaeological Assessments – Metropolitan Coal No 3 Shaft Surface Works
27 August 2025*

Surface Works Assessment – No. 3 Shaft

Addendum Ecological Assessment Report

Prepared for Metropolitan Collieries Pty Ltd
29 August 2025





Document control

Project number	Client	Project manager	LGA
9221	Metropolitan Collieries Pty Ltd	Mandy Melvaine	Wollongong

Version	Author	Review	Status	Comments	Date
R0	Jesse Cass, Mandy Melvaine	Kayla McGregor	Draft	Draft issued	01 July 2025
R1	Mandy Melvaine	Kayla McGregor	Final	Final issued	21 July 2025
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Executive Summary

Niche Environment and Heritage (Niche) was commissioned by Metropolitan Collieries Pty Ltd (Metropolitan Coal) to undertake an Addendum Ecological Assessment (the addendum) to the previous Metropolitan Coal Gas Drainage Plant Environmental Assessment (prepared by Niche in 2018).

The addendum ecological assessment aims to assess the potential impact of the proposed surface works at the existing Metropolitan No. 3 Shaft (the Project). The Project aims to install two enclosed flare units as part of the existing gas drainage plant and replace existing ventilation infrastructure.

Vegetation removal is required as part of the Project, to provide adequate space for installation, as well as providing a 10 metre (m) Asset Protection Zone (APZ) to provide a buffer and protect assets from bushfire. The Project seeks to minimise disturbance as much as practical by utilising previously cleared areas.

Methods

A site assessment was conducted on 16 June 2025, by Mandy Melvaine and Jesse Paton (Niche ecologists). The assessment included a total of 19 Rapid Data Points (RDPs) to identify plant community types (PCTs), habitat mapping, and a random meander for direct or indirect signs threatened species (flora and fauna).

Key results

Two PCTs were recorded within the Study Area:

- PCT 3591 - Southern Sydney Sheltered Forest
- PCT 3595 - Sydney Coastal Sandstone Gully Forest.

PCT 3591 is associated with the Endangered Ecological Community, *Southern Sydney Sheltered Forest on Transitional Sandstone Soils in the Sydney Basin Bioregion* (listed under the NSW *Biodiversity Conservation Act 2016* [BC Act]). PCT 3595 is not associated with any Threatened Ecological Communities (TECs). -.

No direct or indirect signs of threatened species presence were identified within the Study Area during the assessment.

Impact assessment

The Project would result in approximately 0.32 hectares (ha) of vegetation clearance, including 0.04 ha of PCT 3591 - Southern Sydney Sheltered Forest and 0.28 ha of PCT 3595 - Sydney Coastal Sandstone Gully Forest. Nine *Eucalyptus pilularis* trees (Trees 1-7, 9 and 10) would be removed, none of which contain hollows. Trees 1-5 and 9 are within PCT 3591 in disturbed condition and trees 6, 7 and 10 are on the periphery between disturbed and more intact PCT 3591. No hollow-bearing trees would be impacted by the Project.

The Project would result in approximately 0.04 ha of the EEC *Southern Sydney Sheltered Forest on Transitional Sandstone Soils in the Sydney Basin Bioregion* being removed.

Assessments of Significance were conducted for:

- Southern Sydney Sheltered Forest in the Sydney Basin Bioregion (Endangered, BC Act)
- *Genoplesium baueri* - Bauer's Midge Orchid (Endangered, under the BC Act and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* [EPBC Act])

The AoS assessments determined that the Project is unlikely to have a significant impact on the above entities.



Mitigation measures and conclusion

Mitigation measures for the proposed activities include:

- Avoidance of the TEC where possible
- Establishing exclusion fencing for the protection of native vegetation, TEC and habitats
- Project ecologist pre-clearance assessment and supervision of demarcation of clearing limits prior to clearing
- Project ecologist supervision of vegetation clearing
- Weed control measures
- Erosion and sedimentation controls.



Glossary and list of abbreviations

Term or abbreviation	Definition
APZ	Asset Protection Zone
BAM	Biodiversity Assessment Method
BC Act	Biodiversity Conservation Act 2016
BDAR	Biodiversity Development Assessment Report
BOS	Biodiversity Offset Scheme
BV	Biodiversity Values
CE	Critically Endangered
Cth	Commonwealth
DBH	Diameter at breast height
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DPI	Department of Primary Industries (now DPIRD)
DPIE	Department of Planning, Industry and Environment
DPIRD	Department of Primary Industries and Regional Development (formerly DPI)
E	Endangered
EEC	Endangered Ecological Community
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999
HBT	Hollow-bearing Tree
IBRA	Interim Biogeographic Regionalisation for Australia
LGA	Local Government Area
MNES	Matters of National Environmental Significance
NSW	New South Wales
PCT	Plant Community Type
PMST	Protected Matters Search Tool
RDP	Rapid Data Point
SEPP	State Environmental Planning Policy
SVTM	State Vegetation Type Map
TBDC	Threatened Biodiversity Database Collection
TEC	Threatened Ecological Community
V	Vulnerable
WoNS	Weeds of National Significance



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1. Introduction

1.1 Context

Niche Environment and Heritage (Niche) was commissioned by Metropolitan Collieries Pty Ltd (Metropolitan Coal) to undertake an Addendum Ecological Assessment (the addendum) to the previous Metropolitan Coal Gas Drainage Plant Environmental Assessment (prepared by Niche in 2018). The addendum ecological assessment aims to assess the potential impact of the proposed surface works at the existing Metropolitan No. 3 Shaft (the Project).



2. Background

The Project is an extension of the existing Gas Drainage Plant (GDP), which would reduce the carbon impact on the environment by combusting methane passing through the existing GDP within a system of enclosed flares.

The existing ventilation infrastructure at the No. 3 Shaft has been in place since its construction in the 1970s. The replacement of the aging infrastructure is urgently required to maintain a safe working environment underground.

2.1 Location and Study Area

The Project is located at the No. 3 Vent Shaft site at the Metropolitan Coal Gas Drainage Plant, located within Lot 2 DP 240006 and Lot 1 DP830604 off the Princes Highway, Woronora Dam NSW (The Study Area). The Study Area is located approximately 2 kilometres (km) southwest of the township of Helensburgh, 25.3 km northeast of the Wollongong central business district (CBD) and 43.5 km southwest of the Sydney CBD (Annex 1, Figure 1). The Study Area is situated between the Illawarra Escarpment State Conservation Area (SCA) to the south, Garawarra SCA to the north and Dharawal National Park to the west. As such, the Study Area is highly connected to large areas of native vegetation.

The Study Area also exists within the Wollongong Local Government Area (LGA) and the Sydney Cataract IBRA (Interim Biogeographic Regionalisation for Australia) subregion.

The Study Area includes the Vegetation Exclusion Zone (areas of proposed clearing) and areas within 50 m of the GDP, all located within the site extent (Figure 2). The disturbance footprint (Figure 2) shows the maximum northern extent of vegetation clearing proposed for installation of the enclosed flares.

2.2 Proposed works

2.2.1 Proposed civil works

The civil works for the enclosed flares consists of cutting and filling the site, building an access road and building concrete pads for the flares.

- Cutting and filling of the site is as per below:
- Cutting out approximately 43 cubic meters due to topography contours.
- Filling in with approximately 1,109 cubic meters to create foundations and a flat surface for the access road and flare pads
- Grading the edge of the fill

Civils construction works of the site is as per below:

- Earthworks for the new the enclosed flares pads, filter station pads and water tank pads
- Earthworks for the access road around the western side of the enclosed flares and the gas drainage plant.

There would be significant truck and machine movements required for the civil works. Machines would be required to cut the site to meet the required reduced levels. Machines would be required to remove spoil and to supply fill for the new road and pads. Machinery would be required for the construction of the access road and pads.



2.2.2 Vegetation clearing

Vegetation clearing - Asset Protection Zone for Enclosed Flares

A cleared fire break or asset protection zone (APZ) with a radius of 10 m around the enclosed flares has been nominally adopted around the enclosed flares to ensure that a bushfire break is maintained between vegetation and the GDP infrastructure.

A 10 m fire break is proposed for the rest of the gas drainage plant for asset protection from a bush fire.

Vegetation clearing - access road

Clearing is required for the new access road which would be installed on the western side of the existing GDP and the proposed flares. This access road also acts as a fire break for the GDP and the flares (Annex 2)

Vegetation clearing - Vent Shaft 3

Clearing is required for the replacement infrastructure at Vent Shaft 3. A 10 m fire break is proposed for the Ventilation Shaft 3 Plant for asset protection from a bush fire. Significant design modifications have been undertaken to reduce the amount of clearing required.

Clearing is proposed to be achieved with the use of a large tractor with a "trittering" attachment (where required). The "trittering" attachment effectively mulches the vegetation *in situ*, which leaves root balls intact under the ground surface. This would help hold the ground together and prevent erosion. The mulch left on the surface provides excellent protection against erosion, however in this case, excess mulch would be removed to clear excess fuel from the fire break.

Collectively, the Project would directly impact native vegetation in the form vegetation clearing, removing a total of approximately 0.32 ha of native vegetation consisting of 0.04 ha of PCT 3591 and 0.28 ha of PCT 3595 within the vegetation exclusion zone (Figure 3). Ten *E. pilularis* trees were mapped during surveys within the Study Area (Figure 4), of which nine would be removed as a result of the Project.

2.2.3 Enclosed Flare and Vent Shaft 3 upgrade construction

The following Enclosed Flare infrastructure would be installed/constructed:

- 2x 60MW Enclosed Flares
- Civil works
- Piping and valving
- Electrical control system
- Fencing
- Relocation of water storage tanks

The following Ventilation infrastructure would be installed/ constructed:

- 2 x Centrifugal Fans complete with 1800kW Drive Motors
- Ductwork for the 2 x Centrifugal Fans
- Electrical Switch room with 2 x 1.8MW Variable Speed Drives
- 2 x Vertical Discharge bends
- Civil works for 2 x Centrifugal Fans
- 2 x Silencers

This would involve numerous traffic movements to site and installation of concrete foundations for several of the abovementioned items.



The following waste management actions would also be associated with the proposed construction:

- Wash down areas for concrete trucks (located outside the Woronora Special Area)
- Lawful removal of construction waste
- Installation of toilet facilities during construction.

2.3 Project aims

The addendum ecological assessment aims to assess the potential impact of the proposed surface works at the existing Metropolitan No. 3 Shaft. The Project aims to install enclosed flares as part of the existing gas drainage plant and replace existing ventilation infrastructure.

Vegetation removal is required for the purpose of this Project as part of the Project, to provide adequate space for installation, as well as providing a 10 m APZ for the prevention of fire hazards to provide a buffer and protect assets from bushfire. The Project seeks to minimise disturbance as much as practical by utilising previously cleared areas.

2.4 Legislative context

Within the proposed area of works, Metropolitan Coal holds Consolidated Coal Lease (CCL) 703 (under the NSW *Mining Act 1992*). All activities proposed would be developed in accordance with the conditions of CCL 703, where they apply, and an updated forward program will be submitted to the NSW Resources Regulator pertaining to the enclosed flares construction and ventilation system replacement.

2.4.1 NSW Biodiversity Conservation Act 2016

Listed threatened flora and fauna, and TECs in NSW are protected by the BC Act. The BC Act is supported by the NSW Biodiversity Conservation Regulation 2017 (BC Reg), the Biodiversity Assessment Method (BAM), offsetting rules, sensitive biodiversity mapping, credit pricing spreadsheet and other guidance documents.

Under the BC Act, impacts to native vegetation and/or threatened flora and fauna habitat may be required to be offset under Section 6 of the BC Act, the Biodiversity Offsets Scheme (BOS).

Where the BOS is triggered a Biodiversity Development Assessment Report (BDAR) must be prepared. The BAM stipulates the survey and reporting requirements for the BDAR. The BOS can be triggered if a proposed development:

- Has a direct or indirect impact on Biodiversity Values on the NSW Biodiversity Values Map and Threshold Tool, or
- Results in the clearing of native vegetation above the thresholds specified under section 7.2 of the BC Reg, or
- Is likely to significantly affect threatened species or ecological communities, or their habitats, according to the criteria provided in section 7.3 of the BC Act
- Is carried out in a declared area of outstanding biodiversity value.

Considering the above criteria, the Project does not trigger the BOS.



2.4.2 Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

The purpose of the EPBC Act is to ensure that actions likely to cause a significant impact on MNES undergo an assessment and approval process. Under the EPBC Act, an action includes a proposal, undertaking, development or activity. An action that *'has, will have or is likely to have a significant impact on MNES'* is deemed to be a controlled action and may not be undertaken without prior approval from the commonwealth minister for the Department of Climate Change, Energy, the Environment and Water (Cth DCCEEW).

The EPBC Act identifies MNES as:

- World heritage properties
- National heritage places
- Wetlands of international importance (Ramsar wetlands)
- Threatened species and ecological communities
- Migratory species
- Commonwealth marine areas
- Nuclear actions (including uranium mining)
- The Great Barrier Reef Marine Park
- A water resource, in relation to coal seam gas development and large coal mining development.

Listings deemed relevant to the Study Area were assessed in accordance with relevant guidelines available at the time of writing this assessment.



3. Methods

3.1 Database searches and literature review

Database searches for a 10 km radius around the Study Area were conducted in June 2025 to identify threatened biodiversity and migratory species with known or potential occurrences in the locality.

The following databases and literature were used for this purpose:

- NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) BioNet Atlas (NSW DCCEEW 2025a)
- Commonwealth DCCEEW EPBC Act Protected Matters Search Tool (PMST) (Cth DCCEEW 2025)
- Biodiversity Values Map (NSW DCCEEW 2025b)
- NSW State Vegetation Type Map (SVTM) (NSW DCCEEW 2020)
- Metropolitan Coal Gas Drainage Plant - Ecological Assessment (Niche 2018).

3.2 Site assessment

A site assessment was undertaken to ascertain vegetation present within the Study Area, including the extent of Threatened Ecological Communities (TECs), and determine flora and fauna habitat of the Study Area. The level of survey was commensurate with the extent of potential impact. Targeted threatened species surveys were not undertaken. However, direct or indirect signs of threatened fauna or flora species presence was considered, and the presence of suitable habitat.

The site assessment was undertaken on the 16 June 2024 by Niche ecologists Mandy Melvaine and Jesse Paton, accompanied by Niche Archaeologist Isabel Parnell.

The ecological assessment consisted of the following components:

- Rapid Data Points (RDPs) and observations to determine characteristics of the vegetation present, condition and Plant Community Type (PCT) as per the 2022 revised eastern NSW PCTs (NSW Department of Planning and Environment [DPE] 2022).
- Habitat assessment to record presence of habitat constraints and significant habitat features with specific focus on habitat trees within the clearing extent and threatened flora and fauna species.
- Recording the location and details of any habitat trees within or near the proposed clearing extents and hollow-bearing trees within the Study Area.
- Opportunistic survey for flora and fauna.

3.3 Threatened flora and fauna likelihood of occurrence

A list of threatened flora and fauna under the NSW *Biodiversity Conservation Act 2016* (BC Act) and/or Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) within the search area (10 km radius) was determined from database searches. This list was analysed to determine species or their habitat with potential to be impacted by the proposed activity.

The likelihood of species occurring within the Study Area was evaluated on a species-by-species basis to determine likelihood of occurrence. Five categories for 'likelihood of occurrence' were attributed to species after



considering criteria such as known records, presence or absence of important habitat features in the Study Area and applying professional judgement (Table 3-1). The full assessment can be viewed in Annex 3.

Table 3-1: Likelihood of occurrence criteria

Likelihood rating	Threatened flora criteria	Threatened and migratory fauna criteria
Known	The species was observed within the Study Area.	The species was observed within the Study Area.
High	It is likely that a species inhabits or utilises habitat within the Study Area.	It is likely that a species inhabits or utilises habitat within the Study Area.
Moderate	Potential habitat for a species occurs on the site. Adequate field survey would determine if there were a 'high' or 'low' likelihood of occurrence for the species within the Study Area.	Potential habitat for a species occurs on the site and the species may occasionally utilise that habitat. Species unlikely to be wholly dependent on the habitat present within the Study Area.
Low	It is unlikely that the species inhabits the Study Area.	It is unlikely that the species inhabits the Study Area. If present at the site, the species would likely be a transient visitor. The site contains only very common habitat for this species which the species would not rely on for its on-going local existence.
Nil	The habitat within the Study Area is unsuitable for the species.	The habitat within the Study Area is unsuitable for the species.

3.4 Limitations

Limitations involved with this assessment are detailed below.

3.4.1 BAM plots

No BAM plots were completed for the purpose of this assessment. The absence of current BAM plots limits the ability to comprehensively assess the full extent of vegetation condition within the Study Area. A total of 19 RDPs were completed to assist in the determination of PCTs and any associated TECs, however RDPs do not fully capture vegetation condition and composition.

The floristic details captured during the site assessment, are deemed suitable for the addendum assessment.

3.4.2 Targeted threatened species surveys

No targeted threatened species surveys were completed during the addendum assessments. However, random meanders were completed to identify any potential threatened flora or fauna species within the Study Area.

Targeted surveys for threatened flora and fauna were deemed unnecessary due to the minor nature of the proposed disturbance and the absence of suitable habitat to support threatened species within the Disturbance Footprint.



4. Results

The results of the field surveys and desktop assessments have been detailed in this section. Impacts associated with the results of this assessment are detailed in Section 4.

4.1 Background review

4.1.1 Threatened flora and fauna

A total of 140 threatened flora and fauna species, listed under the BC Act and/or EPBC Act, were considered in this assessment (Annex 3). These records were derived from the Atlas of NSW Wildlife (NSW DCCEEW 2025a) and the EPBC Act Protected Matters Search Tool (Cth DCCEEW 2025) (Figure 5 and Figure 6).

A total of 28 threatened fauna species and 1 threatened flora species, as listed under the BC Act and EPBC Act, were considered as having a moderate or higher likelihood of occurring within the Study Area.

Assessments of Significance (AoS) were completed for two threatened entities and have been included in Section 4. Table 4-1 lists the threatened species with a moderate or higher likelihood of occurrence.

Table 4-1: Threatened species with a moderate to high likelihood to occur

Scientific name	Common name	BC Act	EPBC Act
<i>Anthochaera phrygia</i>	Regent Honeyeater	CE	CE
<i>Aphelocephala leucopsis</i>	Southern Whiteface	V	V
<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	V	Not listed
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	E	E
<i>Calyptorhynchus lathami lathami</i>	South-eastern Glossy Black-Cockatoo	V	V
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	V	Not listed
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	E	E
<i>Daphoenositta chrysoptera</i>	Varied Sittella	V	Not listed
<i>Dasyornis brachypterus</i>	Eastern Bristlebird	E	E
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	V	Not listed
<i>Genoplesium baueri</i>	Bauer's Midge Orchid	E	E
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	V	Not listed
<i>Hieraaetus morphnoides</i>	Little Eagle	V	Not listed
<i>Hirundapus caudacutus</i>	White-throated Needletail	V	V, M
<i>Hoplocephalus bungaroides</i>	Broad-headed Snake	E	E
<i>Lathamus discolor</i>	Swift Parrot	E	CE
<i>Lophoictinia isura</i>	Square-tailed Kite	V	Not listed



Scientific name	Common name	BC Act	EPBC Act
<i>Myotis macropus</i>	Southern Myotis	V	Not listed
<i>Neophema pulchella</i>	Turquoise Parrot	V	Not listed
<i>Ninox strenua</i>	Powerful Owl	V	Not listed
<i>Parvipsitta pusilla</i>	Little Lorikeet	V	Not listed
<i>Phascolarctos cinereus</i>	Koala	E	E
<i>Pseudophryne australis</i>	Red-crowned Toadlet	V	Not listed
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V
<i>Pycnoptilus floccosus</i>	Pilotbird	V	V
<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	V	Not listed
<i>Tyto novaehollandiae</i>	Masked Owl	V	Not listed
<i>Tyto tenebricosa</i>	Sooty Owl	V	Not listed
<i>Varanus rosenbergi</i>	Rosenberg's Goanna	V	Not listed

4.1.2 Additional MNES and matters protected under the EPBC Act

The output of the MNES Protected Matters Search Tool is provided below in Table 4-2.

Table 4-2: Matters protected under the EPBC Act

Matter	Occurrence
Matters of National Environmental Significance	
World Heritage Properties	0
National Heritage Places	1
Wetlands of International Importance (Ramsar wetlands)	0
Great Barrier Reef Marine Park	0
Commonwealth Marine Area	1
Listed Threatened Ecological Communities	11
Listed Threatened Species	125
Listed Migratory Species	58
Other matters protected under the EPBC Act	
Commonwealth Land	4
Commonwealth Heritage Places	1
Listed Marine Species	82
Whales and Other Cetaceans	14



Matter	Occurrence
Critical Habitats	0
Commonwealth Reserves Terrestrial	0
Australian Marine Parks	0
Habitat critical to the survival of Marine Turtles	0

4.1.3 Biodiversity Values

Biodiversity Values Map

There are no areas of Biodiversity Value mapped within the Study Area.

Areas of Outstanding Biodiversity Value

There are no areas of Outstanding Biodiversity Value within the Study Area.

4.2 Vegetation categorisation

4.2.1 Existing mapping

Existing mapping (Niche 2018) for the vegetation within the Study Area was devised broadly based on the Peabody Energy Biodiversity Management Plan (2016). Vegetation zones were developed based on differences in species composition and named accordingly:

- Southern Sydney Sheltered Forest EEC
- Apple-Peppermint Gully Forest (APEF)
- Acacia sp. regrowth
- *Kunzea ambigua* - *Allocasuarina littoralis* regrowth.

These zones were further divided based on condition classes, into areas of intact vegetation and areas of disturbed vegetation.

4.2.2 Validated mapping and Plant Community Type descriptions

A review of the SVTM (NSW DCCEE 2020) was undertaken prior to field survey to identify potential PCTs within the Study Area, with a total of 18 RDPs completed to ground-truth vegetation mapping. Species recorded in the RDPs are listed in Annex 4. The PCTs within the Study Area are detailed in Table 4-3.

Table 4-3: Vegetation communities within the Study Area

PCT No.	PCT	Condition	Proposed clearing area (ha)	Associated TEC
3591	<i>Southern Sydney Sheltered Forest</i>	Intact	0.02	<i>Southern Sydney sheltered forest on transitional sandstone soils in the Sydney Basin Bioregion (Endangered)</i>



PCT No.	PCT	Condition	Proposed clearing area (ha)	Associated TEC
3591	<i>Southern Sydney Sheltered Forest</i>	Disturbed	0.02	<i>Southern Sydney sheltered forest on transitional sandstone soils in the Sydney Basin Bioregion</i> (Endangered)
3595	<i>Sydney Coastal Sandstone Gully Forest</i>	Intact	0.14	No associated TECs
3595	<i>Sydney Coastal Sandstone Gully Forest</i>	Disturbed	0.14	No associated TECs
TOTAL			0.32	

4.2.3 Threatened Ecological Communities

PCT 3591 is associated with the TEC, *Southern Sydney Sheltered Forest on Transitional Sandstone soils in the Sydney Basin Bioregion* (EEC, BC Act). The occurrence of this TEC within the Study Area occurs as 0.02 ha of intact and 0.02 ha of disturbed vegetation, for a total of 0.04 ha within the Study Area. Disturbed areas of the TEC lacked its characteristic relatively dense groundcover of ferns, rushes, lilies and forbs. The weed species *Senna pendula var. glabrata* was also present within the disturbed area of this TEC.

Assessment against the TEC Final Determination for *Southern Sydney Sheltered Forest on Transitional Sandstone soils in the Sydney Basin Bioregion* (NSW TSSC 2011) determined that the Extent of PCT 3591 within the Study Area conforms to the listed EEC under the BC Act.

This TEC is not listed as a TEC under the EPBC Act.

4.2.4 Threatened flora

No targeted flora surveys were completed as part of this assessment and no records of threatened flora species occur within the with the Study Area.

4.2.5 Priority weeds and Weeds of National Significance

Two species of exotic flora were recorded within the Study Area:

- *Senna pendula var. glabrata* (Cassia)
- *Ageratina Adenophora* (Crofton Weed)

No Weeds of National Significance (WONS) or Priority Weeds for the Southeast were recorded.

4.3 Fauna

4.3.1 Fauna habitat

The vegetation within the Study Area supports a wide range of food and sheltering resources for vertebrate fauna. Trees from the family *Myrtaceae* (mostly *Eucalyptus spp.*) generally dominate the canopy and supply direct



(foliage, nectar, exudates) and indirect food (arthropods) for a range of vertebrates, particularly birds and arboreal mammals.

All trees identified within and adjacent to the PCT 3591 proposed clearing areas were identified as *Eucalyptus pilularis* (Trees 1-10, Figure 4). Nine *Eucalyptus pilularis* trees (Trees 1-7, 9 and 10) would be removed, none of which contained hollows visible from the ground. Trees 1-5 and 9 are within PCT 3591 in disturbed condition and trees 6, 7 and 10 are on the periphery between disturbed and more intact PCT 3591.. Tree hollows (formed in stags and mature trees) provide nesting and roosting habitat for hollow-dwelling fauna and are important habitat components of native forests. No hollow-bearing trees would be removed for the purpose of the Project.

Some sandstone outcrops were present within the Study Area and sometimes included exfoliation surfaces and crevices. These habitat features may provide refuge for a range of reptile species, including the threatened Broad-headed Snake (*Hoplocephalus bungaroides*) (Endangered BC Act and EPBC Act), and Rosenberg's Goanna (*Varanus rosenbergi*) (Vulnerable, BC Act). These species rely on these habitats for over-wintering, thermoregulation, and shelter, and as a refuge for juveniles and prey species. None of these sandstone outcrops and/or exfoliated surface rock would be impacted by the Project.

4.3.2 Threatened fauna

No targeted fauna surveys were completed as part of this assessment and no records of threatened flora species occur within the with the Study Area.



5. Impact assessment

5.1 Potential impacts

Direct and indirect impacts associated with the proposed activities are summarised below in Table 5-1.

Table 5-1: Assessment of direct and indirect impacts as a result of the Project

Impact	Extent of impact as a result of the project
Direct	
Removal or modification of native vegetation	Up to 0.32 ha of native vegetation would be removed within the proposed clearing extent (Figure 3), including nine <i>Eucalyptus pilularis</i> trees.
Loss of individuals of a threatened species	Impacts to threatened species are unlikely.
Removal or modification of threatened species habitat other than native vegetation (micro-habitat features)	No threatened species habitat features would be impacted or removed.
Death through trampling or vehicle strike	Death through trampling or vehicle strike is possible during construction. See mitigation measures (Section 5.2).
Death through poisoning	Death of fauna through poisoning is unlikely.
Fragmentation	Fragmentation is unlikely to occur.
Indirect	
Predation by domestic and/or feral animals	Predation by exotic fauna is unlikely.
Loss of shade/shelter	Removal of 0.32 ha of vegetation, including nine <i>Eucalyptus pilularis</i> trees, that act as shade and shelter.
Loss of individuals through starvation	Starvation is unlikely to occur.
Loss of breeding opportunities	Removal of fauna habitat may result in loss of breeding opportunities. Refer to mitigation measures (Section 5.2).
Loss of individuals through exposure	Loss of individuals via exposure is unlikely to occur given the extent of existing exposure within the Study Area.
Edge effects (noise, light, traffic)	Edge effects are already present within the Study Area and the proposed activities are unlikely to exacerbate existing impacts. Refer to mitigation measures (Section 5.2).
Deleterious hydrological changes	Hydrological impacts are unlikely to occur.
Weed invasion	Weed invasion is possible during the construction phase. Refer to mitigation measures (Section 5.2).
Increased human activity within or directly adjacent to sensitive habitat areas	Increased human activity would be temporary for the purpose of construction and unlikely to result in significant impacts. Refer to mitigation measures (Section 5.2).



5.2 Affected Biodiversity Values

No areas of Biodiversity Value mapped on the Biodiversity Values Map and Threshold Tool are present within the Study Area. Therefore, the Project would not affect areas of mapped Biodiversity Values.

5.3 Affected Threatened Ecological Communities

Approximately 0.04 ha of the BC Act Listed Endangered Ecological Community *Southern Sydney Sheltered Forest on Transitional Sandstone soils in the Sydney Basin Bioregion* has been recorded within the Study Area.

Assessment of Significance were completed for this TEC in accordance with the EPBC Act and BC Act. The outcome is included in Table 5-2 and the Assessment is included in Annex 5.

Table 5-2: Outcome of Assessment of Significance for Threatened Ecological Communities

TEC Name	BC Act	EPBC Act	EPBC Assessment of Significance Outcome	BC Act Assessment of Significance Outcome
<i>Southern Sydney Sheltered Forest on Transitional Sandstone soils in the Sydney Basin Bioregion</i>	E	Not listed	Not applicable.	No significant impact

5.4 Affected threatened species

No species of threatened flora or fauna are expected to be impacted by the proposed activities.

Species described in Section 3.1.1 and listed in Table 4-1 were identified as having a moderate or higher likelihood of occurring within the Study Area. However, due to the low impact area of the proposed activities, likelihood of impact for these species (located in Appendices) was determined to be low.

Assessments of Significance were completed in accordance with the EPBC Act and BC Act for *Genoplesium baueri* with the results included in Table 5-3. The assessments for this species have been included in Annex 5 and Annex 6.

Table 5-3: Outcome of Assessment of Significance of threatened flora

Scientific name	Common name	BC Act	EPBC Act	EPBC Assessment of Significance Outcome	BC Act Assessment of Significance Outcome
<i>Genoplesium baueri</i>	Bauer's Midge Orchid	E	E	No significant impact	No significant impact



6. Recommendations

6.1 Avoidance

The Project aims to avoid disturbance to the following high biodiversity values, where possible:

- Large trees and stags
- Hollow-bearing trees
- Rock outcrops
- Termite mounds
- Large hollow logs
- The EEC *Southern Sydney Sheltered Forest on Transitional Sandstone Soils in the Sydney Basin Bioregion*.

6.2 Impact mitigation measures

Mitigation measures for the proposed activities are described in Table 6-1 Table 6-1.

Table 6-1: Impact mitigation and recommendations

Potential impact	Proposed mitigation	Procedure
Removal of native vegetation	Native vegetation avoidance	An exclusion zone would be established and marked to indicate the limit of vegetation clearing.
		Project personnel and any contractors are to be informed of the locations of barrier fencing and exclusion zones prior to beginning works.
		A suitably qualified ecologist is to confirm that the clearing limits have been demarcated prior to clearing and undertake a pre-clearance assessment. Hollow-bearing trees to be removed will be flagged, and a two-staged clearing process will be completed: <ul style="list-style-type: none"> – Non-habitat trees and vegetation will be removed initially, at least 48 hours prior to the removal of any habitat trees, to allow for unassisted fauna dispersal. – Habitat trees will be carefully removed using “soft felling” techniques, either by an excavator or qualified arborist, under the supervision of a suitably qualified ecologist. The ecologist will inspect each tree prior to felling to determine the appropriate method and will be present and on standby during removal to manage any displaced or injured fauna.
		Trees to be removed are to be felled into the clearing area and away from adjacent vegetation and exclusion zones.
		A suitably qualified ecologist is to remain on site during clearing of native vegetation to ensure exclusion zones are maintained and areas of retained vegetation and potential threatened species habitat are not impacted.
Fauna death or trampling	Fauna relocation	A suitably qualified ecological is to remain on site during clearing of native vegetation in case fauna wander into or are found within the construction area. Any fauna observed within the construction area during vegetation removal are to be safely relocated or taken to a vet if injured.



Potential impact	Proposed mitigation	Procedure
Weed invasion	Weed management	Vehicles and machinery are to be free of weeds prior to commencing construction and vegetation removal.
		All weed material removed during construction and vegetation removal works should be disposed of in a suitable waste facility and not mulched onsite to avoid reintroduction and further spread of weeds in the area.
Erosion and sedimentation		<ul style="list-style-type: none"> – Temporary erosion and sediment controls be installed prior to commencement of surface disturbance activities – Erosion and sediment controls be designed in accordance with applicable erosion and sediment control principles and guidelines (e.g., Managing urban Stormwater: Soils and Construction, Volume 2E Mines and Quarries).



7. Conclusion

The Project would result in approximately 0.32 ha of native vegetation clearing. PCT 3591 is associated with the *Southern Sydney Sheltered Forest in the Sydney Basin Bioregion* TEC, with approximately 0.04 ha of this TEC to be impacted by the Project. The TEC occurs in both intact (0.02 ha) and disturbed (0.02 ha) condition states, categorised by the presence of exotic weed species and absence of relatively dense groundcover. Nine *Eucalyptus pilularis* trees within the TEC would be cleared, none of which contained hollows visible from the ground. The Project is unlikely to have a significant impact on the TEC within the Study Area. Further, mitigation measures would be adopted to minimise direct or indirect impacts to the TEC, where practical.

No threatened flora or fauna species were recorded within the Study Area, and the Project is unlikely to result in any significant impacts to threatened species.

The relevant management measures as outlined in this report, and in the Metropolitan Coal Construction Management Plan shall be implemented in order to minimise impacts to the environment.



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Annex 1. Figures



- Site extent
- Transport**
- Major road
- Minor road

- Hydrography**
- Non Perennial Stream
- Waterbody

- Administrative and Property Boundaries**
- Lot
- Local Government Area



Figure 1
Location Map
 Surface works assessment - No 3 shaft

Niche PM: Mandy Melvaine
 Niche Proj. #: 9221
 Client: Metropolitan Collieries Pty Ltd

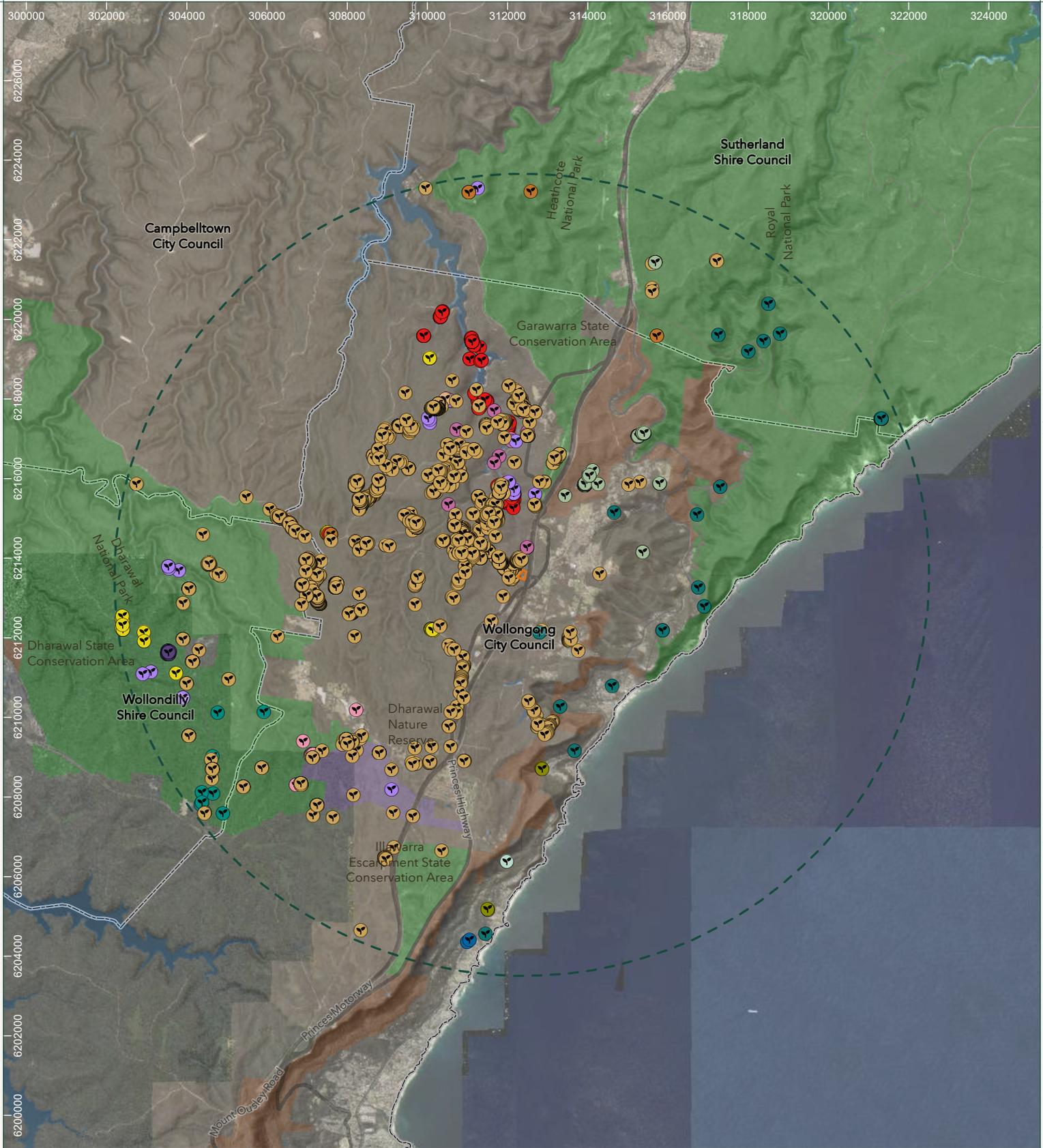
Local Government Area: / Lot: / Hillshade: Esri, Geoscience Australia, NASA, NGA, USGS/ Hillshade: Esri, USGS/ Transparency Mask: / Road: / World_Ocean_Base: NIWA, GeosciencesAustralia, Esri, GEBCO, Garmin, NaturalVue/ Rail: / Watercourse: / NPWS Reserve: / PlacePoint: / Subject area: / State Forest: / Waterbody: / public/NSW_Imagery: © Department of Customer Service 2020/ Site extent: | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 26/06/2025



Figure 2
Site map
 Surface works assessment - No 3 shaft

Niche PM: Mandy Melvaine
 Niche Proj. #: 9221
 Client: Metropolitan Collieries Pty Ltd

Local Government Area: / Contour (10m): / Flare disturbance extent 2025: / Lot: / BAM plot locations: / Transparency Mask: / Road: / Hillshade: Sources: Esri, Maxar, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community/ 2018 Assessment vegetation clearance: / Rail: / Project boundaries: / World_Ocean_Base: NIWA, GeosciencesAustralia, Esri, Garmin, NaturalVue/ Watercourse: / NPWS Reserve: / PlacePoint: / Subject area: / State Forest: / Vegetation Exclusion Zone 2025: / Waterbody: / public/NSW_Imagery: © Department of Customer Service 2020/ Strahler Stream Order: / Site extent: / Hillshade: Esri, CGIAR | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 26/08/2025



Site extent

Bionet 10km buffer

Acacia baueri subsp. *aspera*

Acacia bynoeana

Astrotricha crassifolia

Callitris endlicheri

Daphandra johnsonii

Epacris purpurascens var. *purpurascens*

Eucalyptus camfieldii

Eucalyptus cryptica

Leucopogon exolasius

Macadamia integrifolia

Melaleuca deanei

Persoonia acerosa

Prostanthera densa

Pultenaea aristata

Rhodamnia rubescens

Syzygium paniculatum

Transport

Major road

Rail

Hydrography

Waterbody

Protected Areas of NSW

National Park

Nature Reserve

State Conservation Area

Administrative and Property Boundaries

Local Government Area



GDA2020 MGA Zone 56



Figure 5

Threatened flora records within 10 km

Surface works assessment - No 3 shaft

Niche PM: Mandy Melvaine
Niche Proj. #: 9221
Client: Metropolitan Collieries Pty Ltd

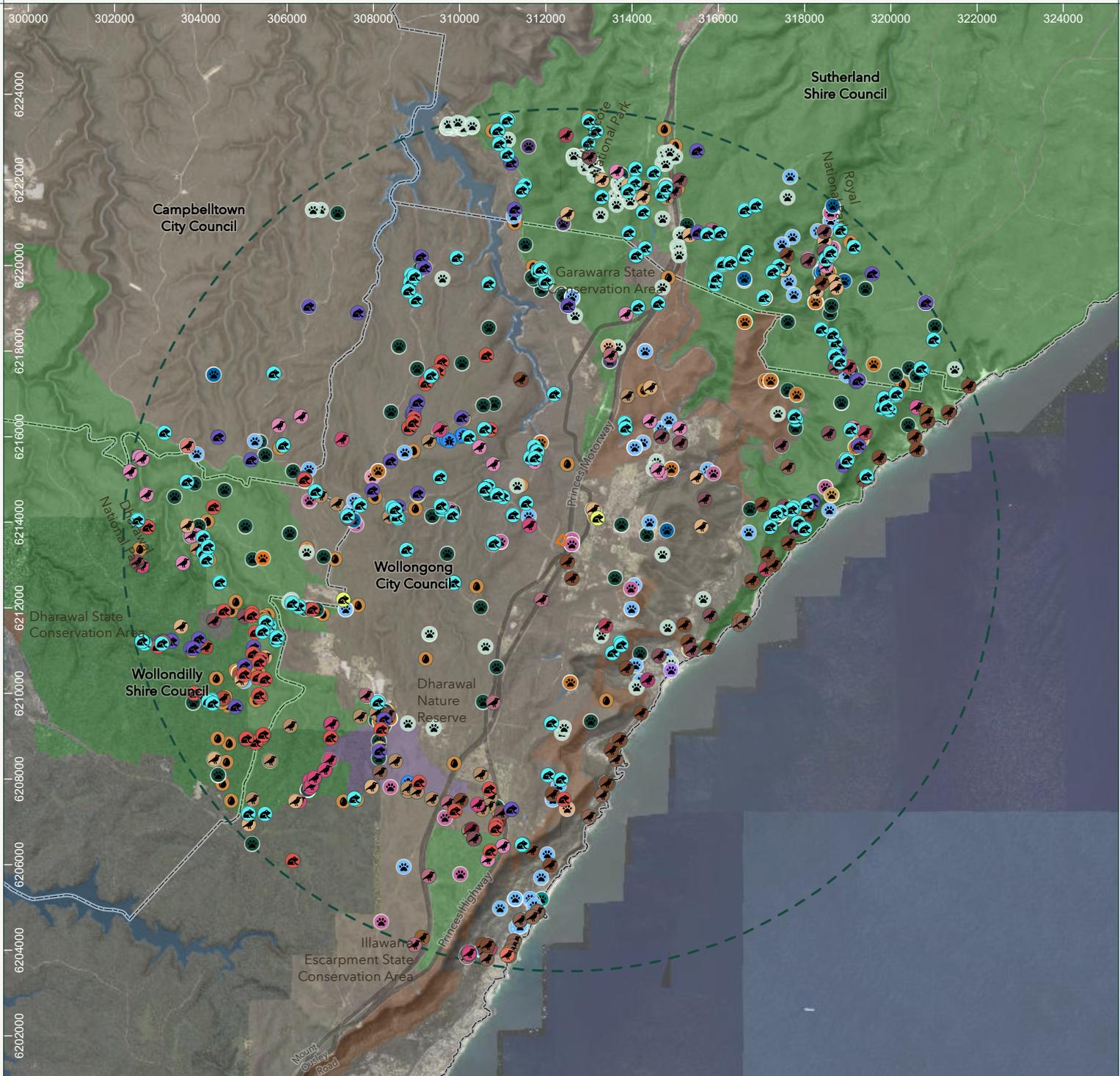


Figure 6
Threatened fauna records within 10 km
 Surface works assessment - No 3 shaft



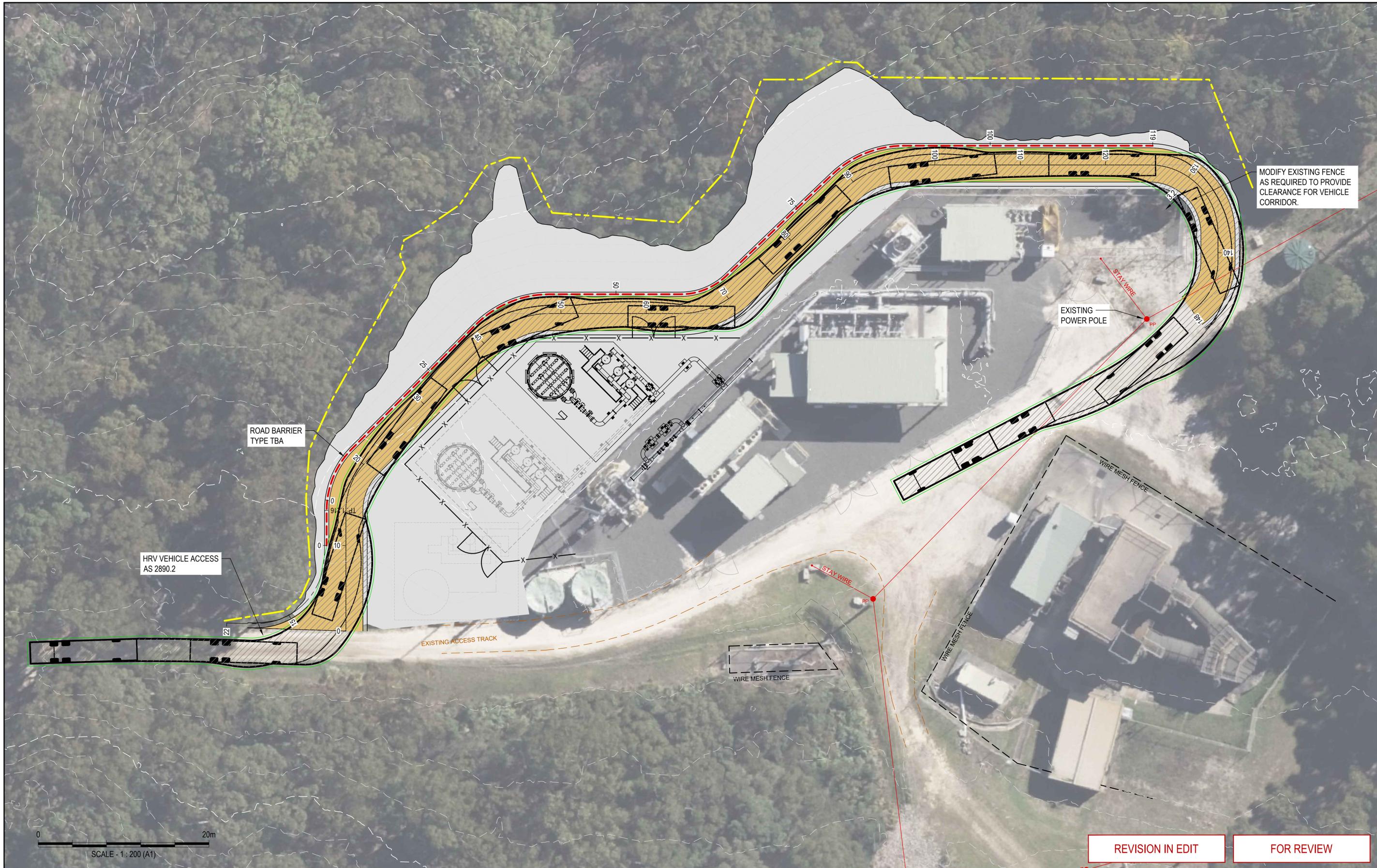
Niche PM: Mandy Melvaine
 Niche Proj. #: 9221
 Client: Metropolitan Collieries Pty Ltd

Local Government Area: / Lot: / Hillshade: Esri, Geoscience Australia, NASA, NGA, USGS/ Hillshade: Esri, USGS/ Transparency Mask: / Road: / World_Ocean_Base: NIWA, GeosciencesAustralia, Esri, GEBCO, Garmin, NaturalVue/ Rail: / Watercourse: / NPWS Reserve: / PlacePoint: / Subject area: / State Forest: / Waterbody: / public/NSW_Imagery: © Department of Customer Service 2020/ Site extent: / Bionet 10km buffer: | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 26/06/2025

Drawn by: IsharaKotiah File: C:\OneDrive\Sync\Folder\Niche\GIS - APRX - APRX - APRX\9221\9221_SurfaceWorksAssessment\No3Shaft_NSW\Proj\9221_SurfaceWorksAssessment\No3Shaft_NSW.aprx Last updated: 26/06/2025 5:43 PM



Annex 2. Engineering concept design



MODIFY EXISTING FENCE AS REQUIRED TO PROVIDE CLEARANCE FOR VEHICLE CORRIDOR.

ROAD BARRIER TYPE TBA

HRV VEHICLE ACCESS AS 2890.2

EXISTING ACCESS TRACK

WIRE MESH FENCE

EXISTING POWER POLE

STAY WIRE

WIRE MESH FENCE

REVISION IN EDIT

FOR REVIEW



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REFERENCE	
25030-101	ENCLOSED FLARE WORKS - ROAD & PAD EARTHWORKS - LAYOUT
25030-100	ENCLOSED FLARE WORKS - EARTHWORKS & CONCRETE - CONCRETE WORKS NOTES
DRG No.	TITLE

HORIZONTAL DATUM:			VERTICAL DATUM:		
REVISIONS					
A	31.07.25	PRELIMINARY ISSUE	JC	-	ZP
REV	DATE	DESCRIPTION	DRN	CHK	ENG APP

		METROPOLITAN GAS DRAINAGE PLANT ENCLOSED FLARE WORKS ROAD & PAD EARTHWORKS VEHICLE ACCESS LAYOUT		
		CLIENT DRG No. -	P 07 3632 0400 admin@singletonsolutions.com.au www.singletonsolutions.com.au	SES DRG No. 25030-105



DATUM MGA94 ZONE 56 AHD

- APZ requirement for Enclosed Flares
- APZ requirement for ventilation infrastructure replacement

CLIENT/PROJECT



METROPOLITAN COAL PTY LTD
METROPOLITAN MINE
PO BOX 402
HELENSBURGH 2508

DRAWING NoM250630-1

N:\Projects\2024\Booster Fans\Drawings\M250702-1 Markup\Twinfan\horizontal\Discharge\NorthEast\Site250124-Ecological Submission version.dwg

SURV'D/DESIG'D

MCF2-281005

CHECKED

AUTHORISED

DATE	DRAWN	SHEET	OF	SCALE
19/06/2025	Survey Dept.	1	1	NTS

METROPOLITAN MINE

Surface Works Assessment - 3 Shaft Layouts



Annex 3. Likelihood of occurrence table



Annex Table 3.1: Likelihood of occurrence table

Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Acacia baueri</i> <i>subsp. aspera</i>	-	E	E	11 records within 10 km, last recorded 2023 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	Restricted to the Sydney region, Kings Tableland in the central Blue Mountains and with sporadic occurrences on the Woronora Plateau in the Royal National Park, Mt. Keira district and at Wedderburn and on the escarpment in the Flat Rock Junction and Stanwell Tops area of the Illawarra. Occurs in low, damp heathlands, often on exposed rocky outcrops over a wide range of climatic and topographical conditions. Peak flowering occurs from December to March.	Low - not recorded during survey.	Low
<i>Acacia bynoeana</i>	Bynoe's Wattle	E	V	43 records within 10 km, last recorded 2009 (NSW DCCEEW 2025a); Species or	Endemic to central eastern NSW, known a limited number of locations, often comprising populations of few plants. Grows mainly in heath/ dry sclerophyll forest on sandy soils, prefers open, sometimes slightly disturbed sites such as trail margins, road edges, and in recently burnt open patches. Flowers September to March, and fruit matures in November.	Low - not recorded during survey.	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)			
<i>Acacia pubescens</i>	Downy Wattle, Hairy Stemmed Wattle	V	V	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Occurs mainly in Bankstown-Fairfield-Rookwood and Pitt Town areas, with outliers at Barden Ridge, Oakdale and Mountain Lagoon. Grows on alluviums, shales and shale/sandstone intergrades. Soils characteristically gravelly, often with ironstone. Occurs in open woodland and forest, in communities including Cooks River/ Castlereagh Ironbark Forest, Shale/ Gravel Transition Forest and Cumberland Plain Woodland. Flowers from August to October.	Low - soil characteristics do not match that of the Study Area.	Low
<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Sunshine Wattle (Sydney region)	E	E	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Occurs in near-coastal areas from northern shores of Sydney Harbour south to the northern and western shores of Botany Bay. Grows in scrub and open eucalypt woodland or forest. The species is known to occur on sandy soil on creek banks, hillslopes of in shallow soil in rock crevices and sandstone platforms on cliffs. Flowers in autumn through to early winter.	Low - no creeks, rocky crevices, or cliffs within Study Area.	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Actitis hypoleucos</i>	Common Sandpiper	Not listed	M	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Does not breed in Australia. When in Australia it is found on all coastlines and in inland areas but is concentrated in the north and west with important areas in WA, the NT and Qld. Utilises a wide range of coastal and inland wetlands with varying salinity levels.	Nil - no wetlands in Study Area.	Nil
<i>Allocauarina glareicola</i>	-	E	E	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Primarily found in Richmond district; although outlier populations exist in Voyager Point, Liverpool. Found in open castlereagh woodland on lateritic soil. The species is associated with the following species: Parramatta Red Gum, Red Ironbark, Narrow-leaved Apple, Hard-leaved Scribbly Gum and Melaleuca decora. Common associated understorey species include Prickly-leaved Paperbark, Finger Hakea, Needlebush, Dillwynia tenuifolia, Micromyrtus minutiflora, Swamp Wattle, Acacia brownei, Themeda australis and Xanthorrhoea minor.	Low - Study Area outside species distribution.	Low
<i>Anthochaera phrygia</i>	Regent Honeyeater	CE	CE	2 records within 10 km, last recorded 2013 (NSW DCCEEW 2025a); Species or	The Regent Honeyeater mainly inhabits temperate woodlands and open forests of the inland slopes of south-east Australia. Birds are also found in drier coastal woodlands and forests in some years. Once recorded between Adelaide and the central coast of Queensland, its range has contracted dramatically in the last 30 years to between north-eastern Victoria and south-eastern Queensland. There are only three known key breeding regions remaining: north-east Victoria (Chiltern-Albury), and in NSW at Capertee Valley and the Bundarra-Barraba region. In NSW the distribution is very patchy and	Moderate	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	mainly confined to the two main breeding areas and surrounding fragmented woodlands. In some years flocks converge on flowering coastal woodlands and forests. The species inhabits dry open forest and woodland, particularly Box-Ironbark woodland, and riparian forests of River Sheoak. Regent Honeyeaters inhabit woodlands that support a significantly high abundance and species richness of bird species. These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes.		
<i>Aphelocephala leucopsis</i>	Southern Whiteface	V	V	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Inhabits a wide range of woodlands and shrublands where there is an understorey of grasses or shrubs, or both. These areas are usually in habitats dominated by acacias or eucalypts on ranges, foothills and lowlands, and plains.	Moderate	Low - no suitable foraging or breeding habitat to be cleared.
<i>Apus pacificus</i>	Fork-tailed Swift	Not listed	M	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	The Fork-tailed Swift is almost exclusively aerial, flying from less than 1 m to at least 300 m above ground and probably much higher. In Australia, they mostly occur over inland plains but sometimes above foothills or in coastal areas. They often occur over cliffs and beaches and also over islands and sometimes well out to sea. They also occur over settled areas, including towns, urban areas and cities. They mostly occur over dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh. They are also found at treeless grassland and sandplains covered with spinifex, open farmland and inland and coastal sand-dunes.	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
					The sometimes occur above rainforests, wet sclerophyll forest or open forest or plantations of pines.		
<i>Ardenna grisea</i>	Sooty Shearwater	Not listed	V	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	In summer months, the Short-tailed Shearwater is the most common shearwater along the south and south-east coasts of Australia. Enormous flocks of birds head south to breeding grounds off these coasts as they return from wintering grounds in the North Pacific. Some counts have recorded numbers as great as 60 000 individuals passing every hour, with over 18 million birds making the trek. At this time a number of birds are washed up on beaches and die as a result of exhaustion, sickness and bad weather. Most are birds hatched during the previous breeding season. Considering the incredible numbers of birds that make this annual migration, the number of fatalities is fairly small.	Nil	Nil
<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	V	Not listed	47 records within 10 km, last recorded 2025 (NSW DCCEEW 2025a)	The Dusky Woodswallow is widespread from the coast to inland, including the western slopes of the Great Dividing Range and farther west. It is often recorded in woodlands and dry open sclerophyll forests, and has also been recorded in shrublands, heathlands regenerating forests and very occasionally in moist forests or rainforests. The understorey is typically open with sparse eucalypt saplings, acacias and other shrubs, often with coarse woody debris. It is also recorded in farmland, usually at the edges of forest or woodland or in roadside remnants or wind breaks with dead timber. The nest is an open shallow untidy cup frequently built in an open hollow, crevice or stump. Although Dusky Woodswallows have large home ranges, individuals may spend most of their time in about a 2 ha range and defend an area about 50 m around the nest. Dusky Woodswallows prefer larger remnants over smaller remnants. Competitive exclusion by Noisy Miners (<i>Manorina melanocephala</i>) is a significant threat to this species.	High	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Astrotricha crassifolia</i>	Thick-leaf Star-hair	V	V	246 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	Occurs near Patonga (Gosford LGA), and in Royal NP and on the Woronora Plateau (Sutherland and Campbelltown LGAs). There is also a record from near Glen Davis (Lithgow LGA). Grows on dry ridgetops to 300 m altitude, associated with very rich heath, or dry sclerophyll woodland on sandstone. Flowers in spring	Low - not recorded during survey	Low
<i>Austrocordulia leonardi</i>	Sydney Hawk Dragonfly	Not listed	E	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	The Sydney hawk dragonfly has a very restricted distribution. The known distribution of the species includes three locations in a small area south of Sydney, from Audley to Picton. The species is known from the Hawkesbury-Nepean, Georges River, Port Hacking and Karuah drainages. The Sydney hawk dragonfly has specific habitat requirements, and has only ever been collected from deep and shady riverine pools with cooler water. Larvae are found under rocks where they co-exist with <i>Austrocordulia refracta</i> .	Low	Low - no suitable foraging or breeding habitat to be cleared



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Botaurus poiciloptilus</i>	Australasian Bittern	E	E	Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	Australasian Bitterns are widespread but uncommon over south-eastern Australia. In NSW they may be found over most of the state except for the far north-west. The Species favours permanent freshwater wetlands with tall, dense vegetation, particularly bullrushes (<i>Typha</i> spp.) and spikerushes (<i>Eleocharis</i> spp.), it hides during the day amongst dense reeds or rushes and feed mainly at night on frogs, fish, yabbies, spiders, insects and snails. The species may construct feeding platforms over deeper water from reeds trampled by the bird; platforms are often littered with prey remains.	Nil	Nil
<i>Caladenia tessellata</i>	Thick-lipped Spider-orchid, Daddy Long-legs	V	V	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Occurs from Central Coast NSW to southern Victoria. Mostly coastal but extends inland to Braidwood in southern NSW. In NSW grows in grassy dry sclerophyll woodland on clay loam or sandy soils, and less commonly in heathland on sandy loam soils. Flowers between September and November.	Low - not associated with PCTs present in Study Area.	Low
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Not listed	V	Species or species habitat may occur within area (10 km) (Cth	Spends the non-breeding season in Australia with small numbers occurring regularly in New Zealand. Most of the population migrates to Australia, mostly to the south-east and are widespread in both inland and coastal locations and in both freshwater and saline habitats. Many inland records are of birds on passage. In Australasia, prefers muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation. Breeds in northern Siberia.	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)			
<i>Calidris canutus</i>	Red Knot, Knot	Not listed	V	Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	Breeds in northern hemisphere. Occurs in coastal areas around Australia, with important sites in VIC, SA, WA, NT and Qld. Mainly inhabits intertidal mudflats, sandflats and sandy beaches. Occasionally seen in terrestrial saline wetlands but rarely in freshwater wetlands. Forage in soft substrates in intertidal areas.	Nil	Nil
<i>Calidris falcinellus</i>	Broad-billed Sandpiper	V	M	1 record within 10 km, last recorded 1983 (NSW DCCEEW 2025a)	"In Australia, Broad-billed Sandpipers overwinter on the northern coast, particularly in the north-west, with birds located occasionally on the southern coast. In NSW, the main site for the species is the Hunter River estuary, with birds occasionally reaching the Shoalhaven estuary. There are few records for inland NSW. Broad-billed Sandpipers favour sheltered parts of the coast such as estuarine sandflats and mudflats, harbours, embayments, lagoons, saltmarshes and reefs as feeding and roosting habitat. Occasionally, individuals may be recorded in sewage farms or within shallow freshwater lagoons. Broad-billed Sandpipers roost on banks on sheltered sand, shell or shingle beaches."	Nil	Nil
<i>Calidris ferruginea</i>	Curlew Sandpiper	CE	CE	Species or species habitat may occur within	The Curlew Sandpiper is distributed around most of the Australian coastline (including Tasmania). It occurs along the entire coast of NSW, particularly in the Hunter Estuary, and sometimes in freshwater wetlands in the Murray-Darling Basin. Inland records are probably mainly of birds pausing for a few days during migration. The Curlew Sandpiper breeds in Siberia and migrates to Australia (as well as Africa and Asia)	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				area (10 km) (Cth DCCEEW 2025a)	for the non-breeding period, arriving in Australia between August and November, and departing between March and mid-April. It generally occupies littoral and estuarine habitats, and in New South Wales is mainly found in intertidal mudflats of sheltered coasts. It also occurs in non-tidal swamps, lakes and lagoons on the coast and sometimes inland. It forages in or at the edge of shallow water, occasionally on exposed algal mats or waterweed, or on banks of beach-cast seagrass or seaweed.		
<i>Calidris melanotos</i>	Pectoral Sandpiper	Not listed	M	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Widespread but scattered records across NSW, east of the divide and in the Riverina and Lower Western regions. Breeds in the northern hemisphere. In Australasia, prefers shallow fresh to saline wetlands and is found at coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands. Usually in coastal or near-coastal habitats, and prefers wetlands with open mudflats and low emergent or fringing vegetation such as grass or samphire.	Nil	Nil
<i>Callistemon linearifolius</i>	Netted Bottle Brush	V	Not listed	3 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a)	Recorded from the Georges to Hawkesbury Rivers in Sydney, and north to Nelson Bay. There is also a recent record from the northern Illawarra. Grows in dry sclerophyll forest on the coast and adjacent ranges. Flowers from spring to summer	Low - not recorded during survey.	Low
<i>Callitris endlicheri</i>	Black Cypress Pine, Woronora	E	Not listed	58 records within 10 km, last	Occurs on Woronora Plateau, in the Wollongong LGA, represents the coastal limit of the species' range and is disjunct from other known populations of the species. The Woronora Plateau population is restricted to a single outcrop	Low - not recorded during survey.	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
	Plateau population			recorded 2022 (NSW DCCEEW 2025a)	of sandstone c. 2 ha in area. The soils at this site are skeletal sandy loams and the heathlands on sandstone outcrops in the area are restricted and highly distinctive.		
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	E	E	42 records within 10 km, last recorded 2023 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	In New South Wales, the Gang-gang Cockatoo is distributed from the south-east coast to the Hunter region, and inland to the Central Tablelands and south-west slopes. It occurs regularly in the Australian Capital Territory. It is rare at the extremities of its range, with isolated records known from as far north as Coffs Harbour and as far west as Mudgee. In spring and summer the species is generally found in tall mountain forests and woodlands, particularly in heavily timbered and mature wet sclerophyll forests. In autumn and winter, the species often moves to lower altitudes in drier more open eucalypt forests and woodlands, particularly box-gum and box-ironbark assemblages, or in dry forest in coastal areas and often found in urban areas.	High	Low - no suitable foraging or breeding habitat to be cleared.
<i>Calochilus pulchellus</i>	Pretty Beard Orchid, Pretty Beard-orchid	E	E	Species or species habitat may occur within	Calochilus pulchellus is known from the Sydney Basin Bioregion, where a total of less than 30 adult plants have been recorded in three sites over a range of 40 km on the South Coast of NSW, at altitudes from 20-560 m above sea level. All currently known sites are within the Shoalhaven Local Government Area. The cryptic nature of the species, with a single leaf above ground for only a few months and a	Low - not associated with PCTs present in Study Area	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				area (10 km) (Cth DCCEEW 2025a)	flowering stem lasting a few days or a week, makes detection difficult for most of the year. It is likely that additional scattered individuals and small colonies exist within the area of occurrence.		
<i>Calyptorhynchus lathamii lathamii</i>	South-eastern Glossy Black-Cockatoo	V	V	10 records within 10 km, last recorded 2025 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	The species is uncommon although widespread throughout suitable forest and woodland habitats, from the central Queensland coast to East Gippsland in Victoria, and inland to the southern tablelands and central western plains of NSW, with a small population in the Riverina. It inhabits open forest and woodlands of the coast and the Great Dividing Range where stands of sheoak occur. Black Sheoak (<i>Allocasuarina littoralis</i>) and Forest Sheoak (<i>A. torulosa</i>) are important foods. Inland populations feed on a wide range of sheoaks, including Drooping Sheoak, <i>Allocasuarina diminuta</i> , and <i>A. gymnathera</i> . Belah is also utilised and may be a critical food source for some populations. The species is dependent on large hollow-bearing eucalypts for nest sites.	Moderate	Low - no suitable foraging or breeding habitat to be cleared.
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	V	Not listed	157 records within 10 km, last recorded 2025 (NSW	The Eastern Pygmy-possum is found in south-eastern Australia, from southern Queensland to eastern South Australia and in Tasmania. In NSW it extends from the coast inland as far as the Pilliga, Dubbo, Parkes and Wagga Wagga on the western slopes. The species is found in a broad range of habitats from rainforest through sclerophyll (including Box-Ironbark) forest and woodland to heath, but in most areas woodlands and heath appear to be preferred, except in north-	High	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)	eastern NSW where they are most frequently encountered in rainforest. It feeds largely on nectar and pollen collected from banksias, eucalypts and bottlebrushes and is an important pollinator of heathland plants such as banksias; soft fruits are eaten when flowers are unavailable.		
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	E	E	24 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	The Large-eared Pied Bat is found mainly in areas with extensive cliffs and caves, from Rockhampton in Queensland south to Bungonia in the NSW Southern Highlands. It is generally rare with a very patchy distribution in NSW. There are scattered records from the New England Tablelands and North West Slopes. The species roosts in caves (near their entrances), crevices in cliffs, old mine workings and in the disused, bottle-shaped mud nests of the Fairy Martin (<i>Petrochelidon ariel</i>), frequenting low to mid-elevation dry open forest and woodland close to these features. Females have been recorded raising young in maternity roosts (c. 20-40 females) from November through to January in roof domes in sandstone caves and overhangs. It is found in well-timbered areas containing gullies.	Moderate	Low - no suitable foraging or breeding habitat to be cleared.
<i>Charadrius leschenaultii</i>	Greater Sand Plover, Large Sand Plover	V	V	Species or species habitat may occur within	The Greater Sand-plover breeds in central Asia from Armenia to Mongolia, moving further south for winter. In Australia the species is commonly recorded in parties of 10-20 on the west coast, with the far northwest being the stronghold of the population. The species is apparently rare on the east coast, usually found singly. In NSW, the species has been recorded between the northern rivers and the Illawarra, with most	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				area (10 km) (Cth DCCEEW 2025a)	records coming from the Clarence and Richmond estuaries. The species is almost entirely restricted to coastal areas in NSW, occurring mainly on sheltered sandy, shelly or muddy beaches or estuaries with large intertidal mudflats or sandbanks.		
<i>Chorizema parviflorum</i>	Chorizema parviflorum Benth. in the Wollongong and Shellharbour Local Government Areas	E	Not listed	1 record within 10 km, last recorded 1995 (NSW DCCEEW 2025a)	Recorded from between Austinmer and Albion Park in the local government areas of Wollongong and Shellharbour. All known sites occupy woodland or forest dominated by Forest Red Gum and/or Woollybutt. May occur on coastal heathland. Flowers between August and January.	Low	Low
<i>Circus assimilis</i>	Spotted Harrier	V	Not listed	4 records within 10 km, last recorded 2015 (NSW DCCEEW 2025a)	The Spotted Harrier occurs throughout the Australian mainland, except in densely forested or wooded habitats of the coast, escarpment and ranges, and rarely in Tasmania. Individuals disperse widely in NSW and comprise a single population. The species occurs in grassy open woodland including Acacia and mallee remnants, inland riparian woodland, grassland and shrub steppe. It is found most commonly in native grassland, but also occurs in agricultural land, foraging over open habitats including edges of inland wetlands.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (eastern subspecies)	V	V	1 record within 10 km, last recorded 1996 (NSW DCCEEW 2025a);	The western boundary of the range of the Brown Treecreeper runs approximately through Corowa, Wagga Wagga, Temora, Forbes, Dubbo and Inverell and along this line the subspecies intergrades with the arid zone subspecies of Brown Treecreeper which then occupies the remaining parts of the state. The species is often found in eucalypt woodlands (including Box-Gum Woodland) and dry open forest of the inland slopes and plains inland of the Great	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Dividing Range; mainly inhabits woodlands dominated by stringybarks or other rough-barked eucalypts, usually with an open grassy understorey, sometimes with one or more shrub species; also found in mallee and River Red Gum (<i>Eucalyptus camaldulensis</i>) Forest bordering wetlands with an open understorey of acacias, saltbush, lignum, cumbungi and grasses; usually not found in woodlands with a dense shrub layer; fallen timber is an important habitat component for foraging; also recorded, though less commonly, in similar woodland habitats on the coastal ranges and plains.		
<i>Cryptostylis hunteriana</i>	Leafless Tongue Orchid	V	V	6 records within 10 km, last recorded 2023 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	Occurs in coastal areas from East Gippsland to southern Queensland. Habitat preferences not well defined. Grows mostly in coastal heathlands, margins of coastal swamps and sedgeland, coastal forest, dry woodland, and lowland forest. Prefers open areas in the understorey and is often found in association with Large Tongue Orchid and the Bonnet Orchid. Soils include moist sands, moist to dry clay loam and occasionally in accumulated eucalypt leaves. Flowers November-February.	Low - not associated with PCTS present in Study Area.	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Cuculus optatus</i>	Oriental Cuckoo, Horsfield's Cuckoo	Not listed	M	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	This species migrates to northern and eastern Australia in the warmer months. Occurs south to the Shoalhaven area. Occurs in a range of habitats, including monsoon forest, rainforest edges, leafy trees in paddocks, river flats, roadsides and mangroves.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Cynanchum elegans</i>	White-flowered Wax Plant	E	E	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Occurs from Gerroa (Illawarra) to Brunswick Heads and west to Merriwa in the upper Hunter. Most common near Kempsey. Usually occurs on the edge of dry rainforest or littoral rainforest, but also occurs in Coastal Banksia Scrub, open forest and woodland, and Melaleuca scrub. Soil and geology types are not limiting. Flowering occurs between August and May, with the peak in November.	Low	Low
<i>Daphnandra johnsonii</i>	Illawarra Socketwood	E	E	1 record within 10 km, last recorded 2001 (NSW DCCEEW 2025a); Species or	Rainforest tree to 20 metres tall. Restricted to the Illawarra region where it has been recorded from the local government areas of Shoalhaven, Kiama, Shellharbour and Wollongong. Occupies the rocky hillsides and gullies of the Illawarra lowlands, occasionally extending onto the upper escarpment slopes. Grows in rainforests and moist eucalypt forest on loams and clay soils derived from volcanic and fertile sedimentary rocks. Flowers in September and early October.	Low	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)			
<i>Daphoenositta chrysoptera</i>	Varied Sittella	V	Not listed	43 records within 10 km, last recorded 2023 (NSW DCCEEW 2025a)	The Varied Sittella is sedentary and inhabits most of mainland Australia except the treeless deserts and open grasslands. Distribution in NSW is nearly continuous from the coast to the far west. The species inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland.	High	Low - no suitable foraging or breeding habitat to be cleared.
<i>Dasyornis brachypterus</i>	Eastern Bristlebird	E	E	22 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a); Species or species habitat known to	Occurs in three disjunct areas of south-eastern Australia: southern Queensland/northern NSW, the Illawarra Region and in the vicinity of the NSW/Victorian border. The habitat for central and southern populations is characterised by dense, low vegetation including heath and open woodland with a heathy understorey. In northern NSW the habitat occurs in open forest with dense tussocky grass understorey and sparse mid-storey near rainforest ecotone; all of these vegetation types are fire prone. The age of habitat since fires (fire-age) is of paramount importance to this species. The Illawarra and southern populations reach maximum densities in habitat that has not been burnt for at least 15 years; however, habitat in northern NSW requires frequent fires to maintain habitat condition and suitability. The northern fire regimes is between	Moderate	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				occur within area (10 km) (Cth DCCEEW 2025a)	3-6 years and of variable intensity depending on the habitat condition.		
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V	E	7 records within 10 km, last recorded 2012 (NSW DCCEEW 2025a)	The range of the Spotted-tailed Quoll has contracted considerably since European settlement. It is now found in eastern NSW, eastern Victoria, south-east and north-eastern Queensland, and Tasmania. Only in Tasmania is it still considered relatively common. The species has been recorded across a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. Individual animals use hollow-bearing trees, fallen logs, small caves, rock outcrops and rocky-cliff faces as den sites. Females occupy home ranges of 200-500 ha, while males occupy very large home ranges from 500 to over 4000 ha. Are known to traverse their home ranges along densely vegetated creeklines.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Epacris purpurascens</i> var. <i>purpurascens</i>	-	V	Not listed	21 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a)	Occurs from Gosford in the north, Narrabeen in the east, Silverdale in the west and Avon Dam vicinity in the South. Grows in a range of sclerophyll forest, scrubs and swamps, most of which have a strong shale soil influence.	Low - not recorded during survey	Low
<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	E	Not listed	1 record within 10 km, last recorded	In Australia, Black-necked Storks are widespread in coastal and subcoastal northern and eastern Australia, as far south as central NSW (although vagrants may occur further south or inland, well away from breeding areas). In NSW, the species	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				2007 (NSW DCCEEW 2025a)	becomes increasingly uncommon south of the Clarence Valley, and rarely occurs south of Sydney. Since 1995, breeding has been recorded as far south as Buladelah. Floodplain wetlands (swamps, billabongs, watercourses and dams) of the major coastal rivers are the key habitat in NSW for the Black-necked Stork. Secondary habitat includes minor floodplains, coastal sandplain wetlands and estuaries.		
<i>Erythroriorchis radiatus</i>	Red Goshawk	E	E	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	The species is very rare in NSW, extending south to about 30°S, with most records north of this, in the Clarence River Catchment, and a few around the lower Richmond and Tweed Rivers. Formerly, it was at least occasionally reported as far south as Port Stephens. Red Goshawks inhabit open woodland and forest, preferring a mosaic of vegetation types, a large population of birds as a source of food, and permanent water, and are often found in riparian habitats along or near watercourses or wetlands. In NSW, preferred habitats include mixed subtropical rainforest, Melaleuca swamp forest and riparian Eucalyptus forest of coastal rivers.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Esacus magnirostris</i>	Beach Stone-curlew	CE	Not listed	2 records within 10 km, last recorded 2004 (NSW DCCEEW 2025a)	In NSW, the species occurs regularly to about the Manning River, and the small population of north-eastern NSW is at the limit of the normal range of the species in Australia. Beach Stone-curlews are found exclusively along the coast, on a wide range of beaches, islands, reefs and in estuaries, and may often be seen at the edges of or near mangroves. They forage in the intertidal zone of beaches and estuaries, on islands, flats, banks and spits of sand, mud, gravel or rock, and among mangroves. Beach Stone-curlews breed above the littoral zone, at the backs of beaches, or on sandbanks and islands, among low vegetation of grass, scattered shrubs or low trees; also among open mangroves.	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Eucalyptus camfieldii</i>	Camfield's Stringybark	V	V	10 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	Occurs from Raymond Terrace to Waterfall, with populations known from Norah Head (Tuggerah Lakes), Peats Ridge, Mt Colah, Elvina Bay Trail (West Head), Terrey Hills, Killara, North Head, Menai and the Royal NP. Occurs in exposed situations on sandstone plateaus, ridges and slopes near the coast, often on the boundary of tall coastal heaths or low open woodland. It grows in shallow sandy soils overlying Hawkesbury sandstone.	Low - not recorded during survey.	Low
<i>Eucalyptus cryptica</i>	-	CE	CE	30 records within 10 km, last recorded 2020 (NSW DCCEEW 2025a)	This taxon is endemic to the Kenthurst - Annangrove area in Western Sydney. The species grows as isolated trees or small groups of trees in scrub, heath and low woodland, in sandstone-derived soils.	Low - not recorded during survey.	Low
<i>Falco hypoleucos</i>	Grey Falcon	V	V	Species or species	The Grey Falcon is sparsely distributed in NSW, chiefly throughout the Murray-Darling Basin, with the occasional vagrant east of the Great Dividing Range. The species is	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast. It also occurs near wetlands where surface water attracts prey.		
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	V	Not listed	9 records within 10 km, last recorded 2019 (NSW DCCEEW 2025a)	The Eastern False Pipistrelle is found on the south-east coast and ranges of Australia, from southern Queensland to Victoria and Tasmania. The species prefer moist habitats, with trees taller than 20 m.	Moderate	Low - no suitable foraging or breeding habitat to be cleared.
<i>Gallinago hardwickii</i>	Latham's Snipe	V	V, M	3 records within 10 km, last recorded 2015 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10	Latham's Snipe is a non-breeding migrant to the south east of Australia including Tasmania, passing through the north and New Guinea on passage. Latham's Snipe breed in Japan and on the east Asian mainland. Latham's Snipe are seen in small groups or singly in freshwater wetlands on or near the coast, generally among dense cover. They are found in any vegetation around wetlands, in sedges, grasses, lignum, reeds and rushes and also in saltmarsh and creek edges on migration. They also use crops and pasture.	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				km) (Cth DCCEEW 2025a)			
<i>Genoplesium baueri</i>	Bauer's Midge Orchid	E	E	2 records within 10 km, last recorded 2005 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	Occurs from Ulladulla to Port Stephens, with only 13 known extant populations. Grows in sparse sclerophyll forest and moss gardens over sandstone. Flowers from February to March.	Moderate – Species is associated with PCTs present in Study Area; sandstone is present in Study Area.	Moderate
<i>Grantiella picta</i>	Painted Honeyeater	V	V	Species or species habitat likely to occur within area (10 km) (Cth	The Painted Honeyeater is nomadic and occurs at low densities throughout its range. The greatest concentrations of the bird and almost all breeding occurs on the inland slopes of the Great Dividing Range in NSW, Victoria and southern Queensland. During the winter it is more likely to be found in the north of its distribution. The species inhabits Boree/ Weeping Myall (<i>Acacia pendula</i>), Brigalow (<i>A. harpophylla</i>) and Box-Gum Woodlands and Box-Ironbark Forests. It is a specialist feeder on the fruits of mistletoes growing on	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)	woodland eucalypts and acacias. Prefers mistletoes of the genus Amyema.		
<i>Grevillea parviflora subsp. parviflora</i>	Small-flower Grevillea	V	V	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Occurs between Moss Vale/Bargo and lower Hunter Valley, with most occurrences in Appin, Wedderburn, Picton and Bargo. Broad habitat range including heath, shrubby woodland and open forest on light clay or sandy soils, and often in disturbed areas such as on the fringes of tracks.	Low	Low
<i>Haematopus fuliginosus</i>	Sooty Oystercatcher	V	Not listed	51 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a)	Evenly distributed along NSW coast, including offshore islands. Favours rocky headlands, rocky shelves, exposed reefs with rock pools, beaches and muddy estuaries. Forages on exposed rock or coral at low tide. Breeds almost exclusively on offshore islands, and occasionally on isolated promontories. The species favours rocky headlands, rocky shelves, exposed reefs with rock pools, beaches and muddy estuaries and forages on exposed rock or coral at low tide for foods such as limpets and mussels.	Nil	Nil
<i>Haematopus longirostris</i>	Pied Oystercatcher	E	Not listed	1 record within 10 km, last recorded 2016 (NSW DCCEEW 2025a)	In NSW the Pied Oystercatcher is thinly scattered along the entire coast, with fewer than 200 breeding pairs estimated to occur in the State. 'Pied' Oystercatchers are occasionally recorded on Lord Howe island but it is uncertain which species is involved. The species favours intertidal flats of inlets and bays, open beaches and sandbanks and forages on exposed sand, mud and rock at low tide, for molluscs, worms, crabs and small fish. They nest mostly on coastal or estuarine beaches although occasionally they use saltmarsh or grassy	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
					areas. Nests are shallow scrapes in sand above the high tide mark, often amongst seaweed, shells and small stones.		
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	V	Not listed	45 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a)	The White-bellied Sea-eagle is widespread along the New South Wales coast, and along all major inland rivers and waterways. The species habitats are characterised by the presence of large areas of open water including larger rivers, swamps, lakes, and the sea. It occurs at sites near the sea or sea-shore, such as around bays and inlets, beaches, reefs, lagoons, estuaries and mangroves; and at, or in the vicinity of freshwater swamps, lakes, reservoirs, billabongs and saltmarsh. The terrestrial habitats the species has been recorded in, include coastal dunes, tidal flats, grassland, heathland, woodland, and forest (including rainforest).	Moderate	Low - no suitable foraging or breeding habitat to be cleared.
<i>Haloragis exalata</i> subsp. <i>exalata</i>	Wingless Raspwort, Square Raspwort	V	V	Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	Square Raspwort occurs in 4 widely scattered localities in eastern NSW. It is disjunctly distributed in the Central Coast, South Coast and North Western Slopes botanical subdivisions of NSW. Requires protected and shaded damp situations in riparian habitats.	Low	Low
<i>Heleioporus australiacus</i>	Giant Burrowing Frog	V	V	88 records within 10 km, last recorded 2025 (NSW	The Giant Burrowing Frog is distributed in south eastern NSW and Victoria, and appears to exist as two distinct populations: a northern population largely confined to the sandstone geology of the Sydney Basin and extending as far south as Ulladulla, and a southern population occurring from north of Narooma through to Walhalla, Victoria. It is found in heath, woodland and open dry sclerophyll forest on a variety of soil types except those that are clay based within 300 m of	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)	breeding sites. Breeding habitat of this species is generally soaks or pools within first or second order streams. They are also commonly recorded from 'hanging swamp' seepage lines and where small pools form from the collected water.		
<i>Hibbertia acaulothrix</i>	-	Not listed	E	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	<i>Hibbertia acaulothrix</i> occurs on rocky outcrops within <i>E. sieberi</i> woodland or in association with black she-oak, red bloodwood and flaky-barked tea-tree. It is known from several widely separated localities in NSW, from Wadbilliga National Park in the Southern Tablelands, through the Nattai Wollondilly area in the Southern Central Tablelands, to the Mt Baker and Mt Coricudgy (Wollemi) area in northern part of the Central Coast and Tablelands. The only estimate for subpopulation numbers is for the Nattai-Wollondilly area-south, with 40 plants observed in 2001.	Low	Low
<i>Hieraetus morphnoides</i>	Little Eagle	V	Not listed	18 records within 10 km, last recorded 2019 (NSW DCCEEW 2025a)	The Little Eagle is found throughout the Australian mainland excepting the most densely forested parts of the Dividing Range escarpment. It occurs as a single population throughout NSW. The species occupies open eucalypt forest, woodland or open woodland. Sheoak or Acacia woodlands and riparian woodlands of interior NSW are also used. It nests in tall living trees within a remnant patch, where pairs build a large stick nest in winter.	Moderate	Low - no suitable foraging or breeding habitat to be cleared
<i>Hirundapus caudacutus</i>	White-throated Needletail	V	V, M	32 records within 10 km, last recorded 2022 (NSW DCCEEW	White-throated Needletails often occur in large numbers over eastern and northern Australia. White-throated Needletails are aerial birds and for a time it was commonly believed that they did not land while in Australia. It has now been observed that birds will roost in trees, and radio-tracking has since confirmed that this is a regular activity.	Moderate	Low - no suitable foraging or breeding habitat to be cleared



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)			
<i>Hoplocephalus bungaroides</i>	Broad-headed Snake	E	E	114 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	The Broad-headed Snake is largely confined to Triassic and Permian sandstones, including the Hawkesbury, Narrabeen and Shoalhaven groups, within the coast and ranges in an area within approximately 250 km of Sydney. The species shelters in rock crevices and under flat sandstone rocks on exposed cliff edges during autumn, winter and spring. It is an ambush predator, with lizards, frogs and small mammals forming a large part of it's diet.	High	Low - no suitable foraging or breeding habitat to be cleared



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Isoodon obesulus obesulus</i>	Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern)	E	E	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	The Southern Brown Bandicoot has a patchy distribution. It is found in south-eastern NSW, east of the Great Dividing Range south from the Hawkesbury River, southern coastal Victoria and the Grampian Ranges, south-eastern South Australia, south-west Western Australia and the northern tip of Queensland. Southern Brown Bandicoots are largely crepuscular (active mainly after dusk and/or before dawn). They are generally only found in heath or open forest with a heathy understorey on sandy or friable soils. Males have a home range of approximately 5-20 ha whilst females forage over smaller areas of about 2-3 ha.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Lathamus discolor</i>	Swift Parrot	E	CE	34 records within 10 km, last recorded 2023 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	The Swift Parrot breeds in Tasmania during spring and summer, migrating in the autumn and winter months to south-eastern Australia from Victoria and the eastern parts of South Australia to south-east Queensland. In NSW mostly occurs on the coast and southwest slopes. On the mainland the species occur in areas where eucalypts are flowering profusely or where there are abundant lerp (from sap-sucking bugs) infestations. Their favoured feed trees include winter flowering species such as Swamp Mahogany <i>Eucalyptus robusta</i> , Spotted Gum <i>Corymbia maculata</i> , Red Bloodwood <i>C. gummifera</i> , Forest Red Gum <i>E. tereticornis</i> , Mugga Ironbark <i>E. sideroxylon</i> , and White Box <i>E. albens</i> .	Moderate	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Leucopogon exolasius</i>	Woronora Beard-heath	V	V	42 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	Occurs along the upper Georges River and in Heathcote NP, Royal NP and is also known from the Blue Mountains along the Grose River. Grows in woodland on sandstone and prefers rocky hillsides along creek banks up to 100 m altitude. Associated species include Sydney Peppermint and Silvertop Ash and Graceful Bush-pea, Flaky-barked Tea-tree and Dillwynia retorta.	Low - not recorded during survey.	Low
<i>Limosa lapponica</i>	Bar-tailed Godwit	Not listed	M	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Bar-tailed Godwits arrive in Australia each year in August from breeding grounds in the northern hemisphere. Birds are more numerous in northern Australia. Bar-tailed Godwits inhabit estuarine mudflats, beaches and mangroves. They are common in coastal areas around Australia. They are social birds and are often seen in large flocks and in the company of other waders.	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Limosa lapponica baueri</i>	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit	E	E	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	The bar-tailed godwit (western Alaskan) occurs mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It has also been recorded in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats	Nil	Nil
<i>Litoria aurea</i>	Green and Golden Bell Frog	E	V	2 records within 10 km, last recorded 1987 (NSW DCCEEW 2025a); Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Since 1990 there have been approximately 50 recorded locations of Green and Golden Bell Frog in NSW, most of which are small, coastal, or near coastal populations. These locations occur over the species' former range, however they are widely separated and isolated. Large populations in NSW are located around the metropolitan areas of Sydney, Shoalhaven and mid north coast (one an island population). There is only one known population on the NSW Southern Tablelands. The species inhabits marshes, dams and stream-sides, particularly those containing bullrushes (<i>Typha</i> spp.) or spikerushes (<i>Eleocharis</i> spp.). Optimal habitat includes water-bodies that are unshaded, free of predatory fish such as Plague Minnow (<i>Gambusia holbrooki</i>), have a grassy area nearby and diurnal sheltering sites available. Some sites the species has been recorded in, occur in highly disturbed areas.	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Litoria littlejohni</i>	Littlejohn's Tree Frog	E	E	87 records within 10 km, last recorded 2025 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	Littlejohn's Tree Frog has a distribution that includes the plateaus and eastern slopes of the Great Dividing Range from Watagan State Forest (90 km north of Sydney) and south to Buchan in Victoria. The majority of records are within the Sydney Basin Bioregion with only scattered records south to the Victorian border. The species has not been recorded in southern NSW within the last decade and records are isolated and tend to be at high altitude. The species breeds in the upper reaches of permanent streams and in perched swamps. Non-breeding habitat is heath based forests and woodlands where it shelters under leaf litter and low vegetation, and hunts for invertebrate prey either in shrubs or on the ground.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Litoria watsoni</i>	Southern Heath Frog, Watson's Tree Frog	E	E	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	<i>Litoria watsoni</i> distribution is highly fragmented in NSW. This species is known to breed in the upper reaches of permanent streams and in perched swamps, and non-breeding habitat is heath based forests and woodlands where it shelters under leaf litter and low vegetation, and hunts for invertebrate prey either in shrubs or on the ground.	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Lophoictinia isura</i>	Square-tailed Kite	V	Not listed	19 records within 10 km, last recorded 2017 (NSW DCCEEW 2025a)	The Square-tailed Kite ranges along coastal and subcoastal areas from south-western to northern Australia, Queensland, NSW and Victoria. In NSW, scattered records of the species throughout the state indicate that the species is a regular resident in the north, north-east and along the major west-flowing river systems. It is a summer breeding migrant to the south-east, including the NSW south coast, arriving in September and leaving by March. The species is found in a variety of timbered habitats including dry woodlands and open forests. Shows a particular preference for timbered watercourses. In arid north-western NSW, it has been observed in stony country with a ground cover of chenopods and grasses, open acacia scrub and patches of low open eucalypt woodland.	Moderate	Low - no suitable foraging or breeding habitat to be cleared.
<i>Macadamia integrifolia</i>	Macadamia Nut	Not listed	V	2 records within 10 km, last recorded 2016 (NSW DCCEEW 2025a)	The Macadamia Nut is found in remnant rainforest in northern NSW and south-east Queensland, preferring partially open areas such as rainforest edges. While specimens have been collected from the North Coast of NSW, this species is not known to occur naturally in NSW.	Low	Low
<i>Macquaria australasica</i>	Macquarie Perch	Not listed	E	Species or species habitat may occur within area (10 km) (Cth)	The Macquarie Perch is known only from scattered localities in the cool upper reaches of the Murray-Darling system of New South Wales, including the Hawkesbury-Nepean and Shoalhaven catchments, Victoria and the Australian Capital Territory. Also found in man-made lakes on the NSW coast. The species inhabits cool, clear freshwaters of rivers with deep holes and shallow riffles. They are also found in lakes and reservoirs, where adults aggregate in small shoals during the spawning season.	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)			
<i>Melaleuca biconvexa</i>	Biconvex Paperbark	V	V	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Scattered, disjunct populations in coastal areas from Jervis Bay to Port Macquarie, with most populations in the Gosford-Wyong areas. Grows in damp places, often near streams or low-lying areas on alluvial soils of low slopes or sheltered aspects.	Low	Low
<i>Melaleuca deanei</i>	Deane's Paperbark	V	V	24 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth	Occurs from Nowra to St Albans and west to the Blue Mountains, with most records in Ku-ring-gai/Berowra and Holsworthy/Wedderburn areas. Mostly grows on broad flat ridgetops, dry ridges and slopes and strongly associated with low nutrient sandy loam soils, sometimes with ironstone. Grows in heath- open forest, often in sandstone ridgetop woodland communities.	Low - not recorded during survey	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)			
<i>Melanodryas cucullata cucullata</i>	South-eastern Hooded Robin, Hooded Robin (south-eastern)	E	E	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	The Hooded Robin is widespread, found across Australia, except for the driest deserts and the wetter coastal areas - northern and eastern coastal Queensland and Tasmania. However, it is common in few places, and rarely found on the coast. It is considered a sedentary species, but local seasonal movements are possible. The south-eastern form (subspecies cucullata) is found from Brisbane to Adelaide and throughout much of inland NSW, with the exception of the extreme north-west, where it is replaced by subspecies picata. The species prefers lightly wooded country, usually open eucalypt woodland, acacia scrub and mallee, often in or near clearings or open areas. It also requires structurally diverse habitats featuring mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Meridolum maryae</i>	Maroubra Woodland Snail, Maroubra Land Snail	E	E	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	"This species is confined to a narrow band of habitat along the coast from the north-eastern corner of the Royal National Park to Palm Beach in Sydney. Records of the species are generally within 1 km of the ocean but occur up to 5 km inland. The species is found in the leaf litter of coastal vegetation communities, most commonly in heathland on foredunes also from areas of podsolised dunes/sand plains that support taller heath communities including Eastern Suburbs Banksia Scrub."	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Micronomus norfolkensis</i>	Eastern Coastal Free-tailed Bat	V	Not listed	10 records within 10 km, last recorded	The Eastern Freetail-bat is found along the east coast from south Queensland to southern NSW. The species typically inhabit dry sclerophyll forest, woodland, swamp forests and mangrove forests east of the Great Dividing Range. It roosts	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				2011 (NSW DCCEEW 2025a)	maily in tree hollows but will also roost under bark or in man-made structures.		
<i>Miniopterus australis</i>	Little Bent-winged Bat	V	Not listed	5 records within 10 km, last recorded 2014 (NSW DCCEEW 2025a)	The Little Bentwing-bat occurs along the east coast and ranges of Australia from Cape York in Queensland to Wollongong in NSW. It prefers moist eucalypt forest, rainforest, vine thicket, wet and dry sclerophyll forest, Melaleuca swamps, dense coastal forests and banksia scrub. Generally found in well-timbered areas. The species roost in caves, tunnels, tree hollows, abandoned mines, stormwater drains, culverts, bridges and sometimes buildings during the day, and at night forage for small insects beneath the canopy of densely vegetated habitats.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Miniopterus oriana oceanensis</i>	Large Bent-winged Bat	V	Not listed	45 records within 10 km, last recorded 2021 (NSW DCCEEW 2025a)	Large Bentwing-bats occur along the east and north-west coasts of Australia. The species use caves as the primary roosting habitat, but also use derelict mines, storm-water tunnels, buildings and other man-made structures.	Low	Low
<i>Mixophyes balbus</i>	Stuttering Frog, Southern Barred Frog (in Victoria)	E	V	Species or species habitat likely to occur within area (10 km) (Cth	Stuttering Frogs occur along the east coast of Australia from southern Queensland to north-eastern Victoria. Considered to have disappeared from Victoria and to have undergone considerable range contraction in NSW, particularly in south-east NSW. The Dorrigo region, in north-east NSW, appears to be a stronghold for this species. It is found in rainforest and wet, tall open forest in the foothills and escarpment on the eastern side of the Great Dividing Range. Outside the	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)	breeding season adults live in deep leaf litter and thick understorey vegetation on the forest floor.		
<i>Motacilla flava</i>	Yellow Wagtail	Not listed	M	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	The Yellow Wagtail breeds in temperate Europe and Asia. They occur within Australia in open country habitat with disturbed ground and some water. Recorded in short grass and bare ground, swamp margins, sewage ponds, saltmarshes, playing fields, airfields, ploughed land and town lawns.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Myotis macropus</i>	Southern Myotis	V	Not listed	39 records within 10 km, last recorded 2021 (NSW DCCEEW 2025a)	The Southern Myotis is mainly coastal but may occur inland along large river systems. Usually associated with permanent waterways at low elevations in flat/undulating country, usually in vegetated areas. Forages over streams and watercourses feeding on fish and insects from the water surface. Roosts in a variety of habitats including caves, mine shafts, hollow-bearing trees, stormwater channels, buildings, under bridges and in dense foliage, typically in close proximity to water.	High	Low - no suitable foraging or breeding habitat to be cleared.
<i>Neophema chrysogaster</i>	Orange-bellied Parrot	CE	CE	Species or species habitat may occur within area (10 km) (Cth	The Orange-bellied Parrot breeds in the south-west of Tasmania and migrates in autumn to spend the winter on the mainland coast of south-eastern South Australia and southern Victoria. There are occasional reports from NSW, with the most recent records from Shellharbour and Maroubra in May 2003. Typical winter habitat is saltmarsh and strandline/foredune vegetation communities either on coastlines or coastal lagoons. Spits and islands are favoured but they will turn up anywhere within these coastal regions. The species can be found foraging in weedy areas associated	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)	with these coastal habitats or even in totally modified landscapes such as pastures, seed crops and golf courses.		
<i>Neophema chrysostoma</i>	Blue-winged Parrot	V	V	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	The main populations of Blue-winged Parrots are in Tasmania and Victoria, particularly in southern Victoria and the midlands and eastern areas of Tasmania. The species is occasionally found in New South Wales. The species inhabits a range of habitats from coastal, sub-coastal and inland areas, right through to semi-arid zones. Throughout their range they favour grasslands and grassy woodlands. They are often found near wetlands both near the coast and in semi-arid zones. Blue-winged Parrots can also be seen in altered environments such as airfields, golf-courses and paddocks.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Neophema pulchella</i>	Turquoise Parrot	V	Not listed	7 records within 10 km, last recorded 2007 (NSW DCCEEW 2025a)	The Turquoise Parrot's range extends from southern Queensland through to northern Victoria, from the coastal plains to the western slopes of the Great Dividing Range. The species typically lives on the edges of eucalypt woodland adjoining clearings, timbered ridges and creeks in farmland.	Moderate	Low - no suitable foraging or breeding habitat to be cleared.
<i>Ninox connivens</i>	Barking Owl	V	Not listed	1 record within 10 km, last recorded 1994 (NSW DCCEEW 2025a)	The Barking Owl is found throughout continental Australia except for the central arid regions. The owls sometimes extend their home range into urban areas, hunting birds in garden trees and insects attracted to streetlights. Extensive wildfires in 2019-20 reduced habitat quality further, burnt many old, hollow-bearing trees needed as refuge by prey species and reduced the viability of some regional owl populations. The species inhabit woodland and open forest, including fragmented remnants and partly cleared farmland. It is flexible in its habitat use, and hunting can extend in to closed forest and more open areas. Sometimes able to	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
					successfully breed along timbered watercourses in heavily cleared habitats (e.g. western NSW) due to the higher density of prey found on these fertile riparian soils. The species typically roost in shaded portions of tree canopies, including tall midstorey trees with dense foliage such as Acacia and Casuarina species.		
<i>Ninox strenua</i>	Powerful Owl	V	Not listed	105 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a)	The Powerful Owl is endemic to eastern and south-eastern Australia, mainly on the coastal side of the Great Dividing Range from Mackay to south-western Victoria. In NSW, it is widely distributed throughout the eastern forests from the coast inland to tablelands, with scattered records on the western slopes and plains suggesting occupancy prior to land clearing. Now at low densities throughout most of its eastern range, rare along the Murray River and former inland populations may never recover. The Powerful Owl inhabits a range of vegetation types, from woodland and open sclerophyll forest to tall open wet forest and rainforest. The Powerful Owl requires large tracts of forest or woodland habitat but can occur in fragmented landscapes as well. The species breeds and hunts in open or closed sclerophyll forest or woodlands and occasionally hunts in open habitats. It roosts by day in dense vegetation comprising species such as Turpentine <i>Syncarpia glomulifera</i> , Black She-oak <i>Allocasuarina littoralis</i> , Blackwood <i>Acacia melanoxylon</i> , Rough-barked Apple <i>Angophora floribunda</i> , Cherry Ballart <i>Exocarpus cupressiformis</i> and a number of eucalypt species.	High	Low - no suitable foraging or breeding habitat to be cleared.
<i>Notamacropus parma</i>	Parma Wallaby	V	V	Species or species habitat may occur	The Parma Wallaby range is now confined to the coast and ranges of central and northern NSW from the Gosford district to the Queensland border. The species preferred habitat is moist eucalypt forest with thick, shrubby understorey, often with nearby grassy areas, rainforest margins and occasionally drier eucalypt forest.	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				within area (10 km) (Cth DCCEEW 2025a)			
<i>Numenius madagascariensis</i>	Eastern Curlew	CE	CE, M	2 records within 10 km, last recorded 2016 (NSW DCCEEW 2025a); Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	The Eastern Curlew is widespread in coastal regions in the north-east and south of Australia, including Tasmania, and scattered in other coastal areas. It is rarely seen inland. It breeds in Russia and north-eastern China. On passage, they are commonly seen in Japan, Korea and Borneo. Small numbers visit New Zealand. The Eastern Curlew is found on intertidal mudflats and sandflats, often with beds of seagrass, on sheltered coasts, especially estuaries, mangrove swamps, bays, harbours and lagoons.	Nil	Nil
<i>Onychoprion fuscatus</i>	Sooty Tern	V	Not listed	1 record within 10 km, last recorded 1972 (NSW DCCEEW 2025a)	"The Sooty Tern is found over tropical and sub-tropical seas and on associated islands and cays around Northern Australia. In NSW only known to breed at Lord Howe Island. Occasionally seen along coastal NSW, especially after cyclones. Breeds in large colonies in sand or coral scrapes on offshore islands and cays including Lord Howe and Norfolk Islands."	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Pandion cristatus</i>	Eastern Osprey	V	Not listed	1 record within 10 km, last recorded 2020 (NSW DCCEEW 2025a)	Eastern Ospreys are found right around the Australian coast line, except for Victoria and Tasmania. They are common around the northern coast, especially on rocky shorelines, islands and reefs. The species is uncommon to rare or absent from closely settled parts of south-eastern Australia. There are a handful of records from inland areas. The species favour coastal areas, especially the mouths of large rivers, lagoons and lakes. The species breeds in NSW from July to September.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Pandion haliaetus</i>	Osprey	Not listed	M	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Eastern Ospreys are found right around the Australian coast line, except for Victoria and Tasmania. They are common around the northern coast, especially on rocky shorelines, islands and reefs. The species is uncommon to rare or absent from closely settled parts of south-eastern Australia. There are a handful of records from inland areas. The species favour coastal areas, especially the mouths of large rivers, lagoons and lakes. The species breeds in NSW from July to September.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Parvipsitta pusilla</i>	Little Lorikeet	V	Not listed	10 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a)	"The Little Lorikeet is distributed widely across the coastal and Great Divide regions of eastern Australia from Cape York to South Australia. NSW provides a large portion of the species' core habitat, with lorikeets found westward as far as Dubbo and Albury. Forages primarily in the canopy of open Eucalyptus forest and woodland, yet also finds food in Angophora, Melaleuca and other tree species. Riparian habitats are particularly used, due to higher soil fertility and hence greater productivity. Isolated flowering trees in open country, e.g. paddocks, roadside remnants and urban trees also help sustain viable populations of the species. Nests in proximity to feeding areas if possible, most typically selecting	Moderate	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
					hollows in the limb or trunk of smooth-barked Eucalypts. Entrance is small (3 cm) and usually high above the ground (2-15 m). These nest sites are often used repeatedly for decades, suggesting that preferred sites are limited. Riparian trees often chosen, including species like <i>Allocasuarina</i> ."		
<i>Persicaria elatior</i>	Knotweed, Tall Knotweed	V	V	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Tall Knotweed has been recorded in south-eastern NSW from Ulladulla to the Victorian border. In northern NSW it is known from Raymond Terrace and the Grafton area. This species normally grows in damp places, especially beside streams and lakes. Occasionally in swamp forest or associated with disturbance.	Low	Low
<i>Persoonia acerosa</i>	Needle Geebung	V	E	1 record within 10 km, last recorded 2024 (NSW DCCEEW 2025a)	Recorded on central coast and in Blue Mountains, from Mt Tomah to Hill Top. Mainly in Katoomba, Wentworth Falls and Springwood areas. Inhabits dry sclerophyll forest, scrubby low woodland and heath on sandstone. Occurs in well-drained soils including sands, laterite and gravels between 550- 1000 m asl. May occur in disturbed areas such as roadsides.	Low	Low
<i>Persoonia bargoensis</i>	Bargo Geebung	E	E	Species or species habitat may occur within area (10	Restricted to the western edge of the Woronora Plateau and the northern edge of the Southern Highlands, bounded by Picton, Douglas Park, Yanderra and the Cataract River. Occurs in woodland or dry sclerophyll forest on sandstone and clayey laterite on heavier, well drained, loamy, gravely soils of Hawkesbury Sandstone and Wianamatta Shale. Tends to occur in disturbed areas e.g. roadsides and trail margins.	Low	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				km) (Cth DCCEEW 2025a)			
<i>Persoonia hirsuta</i>	Hairy Geebung	E	E	2 records within 10 km, last recorded 1989 (NSW DCCEEW 2025a); Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Occurs within the Blue Mountains, Southern Highlands and Sydney coastal regions from Hilltop to Glen Davis and Royal NP to Gosford. Population within the Hills Shire particularly important due to high density of plants. Grows on sandy soils in dry sclerophyll open forest, woodland and heath on sandstone up to 600 m above sea level.	Low	Low
<i>Persoonia nutans</i>	Nodding Geebung	E	E	Species or species habitat may occur within area (10 km) (Cth	Occurs from Richmond to Macquarie Fields on the Cumberland Plain. Grows only on aeolian and alluvial sediments in sclerophyll forest and woodland vegetation communities. Largest populations occur in Agnes Banks Woodland or Castlereagh Scribbly Gum Woodland.	Low	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)			
<i>Petalura gigantea</i>	Giant Dragonfly	E	Not listed	10 records within 10 km, last recorded 2025 (NSW DCCEEW 2025a)	The Giant Dragonfly is found along the east coast of NSW from the Victorian border to northern NSW. It is not found west of the Great Dividing Range. There are known occurrences in the Blue Mountains and Southern Highlands, in the Clarence River catchment, and on a few coastal swamps from north of Coffs Harbour to Nadgee in the south. The species live in permanent swamps and bogs with some free water and open vegetation.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Petauroides volans</i>	Southern Greater Glider	E	E	21 records within 10 km, last recorded 2021 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	The greater glider is restricted to eastern Australia, occurring from the Windsor Tableland in north Queensland through to central Victoria (Wombat State Forest), with an elevational range from sea level to 1200 m above sea level. It prefers taller montane, moist eucalypt forest with relatively old trees and abundant hollows.	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Petaurus australis</i>	Yellow-bellied Glider	V	V	2 records within 10 km, last recorded 2022 (NSW DCCEEW 2025a)	The Yellow-bellied Glider is found along the eastern coast to the western slopes of the Great Dividing Range, from southern Queensland to Victoria. The species occur in tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils. Vegetation preferences vary with latitude and elevation; mixed coastal forests to dry escarpment forests in the north; moist coastal gullies and creek flats to tall montane forests in the south.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Petaurus australis australis</i>	Yellow-bellied Glider (south-eastern)	Not listed	V	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	The Yellow-bellied Glider is found along the eastern coast to the western slopes of the Great Dividing Range, from southern Queensland to Victoria. The species occur in tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils. Vegetation preferences vary with latitude and elevation; mixed coastal forests to dry escarpment forests in the north; moist coastal gullies and creek flats to tall montane forests in the south.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Petaurus norfolcensis</i>	Squirrel Glider	V	Not listed	1 record within 10 km, last recorded 2007 (NSW DCCEEW 2025a)	The Squirrel Glider is widely though sparsely distributed in eastern Australia, from northern Queensland to western Victoria. The species inhabits mature or old growth Box, Box-Ironbark woodlands and River Red Gum forest west of the Great Dividing Range and Blackbutt-Bloodwood forest with heath understorey in coastal areas.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	E	V	Species or species habitat	In NSW the Brush-tailed Rock-wallaby occurs from the Queensland border in the north to the Shoalhaven in the south, with the population in the Warrumbungle Ranges being the western limit. The species occupy rocky	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				may occur within area (10 km) (Cth DCCEEW 2025a)	escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges, often facing north. It typically shelters or basks during the day in rock crevices, caves and overhangs and are most active at night when foraging.		
<i>Petroica boodang</i>	Scarlet Robin	V	Not listed	10 records within 10 km, last recorded 2011 (NSW DCCEEW 2025a)	In NSW, the Scarlet Robin from the coast to the inland slopes. After breeding, some Scarlet Robins disperse to the lower valleys and plains of the tablelands and slopes. Some birds may appear as far west as the eastern edges of the inland plains in autumn and winter. The Scarlet Robin lives in dry eucalypt forests and woodlands. The understorey is usually open and grassy with few scattered shrubs. This species lives in both mature and regrowth vegetation. It occasionally occurs in mallee or wet forest communities, or in wetlands and tea-tree swamps. The species habitat usually contains abundant logs and fallen timber: these are important components of its habitat.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Pezoporus wallicus wallicus</i>	Eastern Ground Parrot	V	Not listed	5 records within 10 km, last recorded 2008 (NSW DCCEEW 2025a)	In NSW Eastern Ground Parrot populations have declined and contracted to islands of coastal or subcoastal heathland and sedgeland habitats. The species is found in relatively large numbers on the north coast (Broadwater, Bundjalung, Yuraygir and Limeburners Creek NPs) and in smaller numbers at Myall Lakes on the central coast. There are also large populations on the NSW south coast, particularly Barren Grounds NR, Budderoo NP, the Jervis Bay area and Nadgee NR. The Ground Parrot occurs in high rainfall coastal and near coastal low heathlands and sedgelands, generally below one metre in height and very dense (up to 90% projected foliage cover).	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Phaethon lepturus</i>	White-tailed Tropicbird	Not listed	M	Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	In Australia, the White-tailed Tropicbird breeds in the Cocos-Keeling Islands, Ashmore reef and Rowley Shoals off the northern coast of WA. In Australia, the White-tailed Tropicbird (Indian Ocean) nests in Pisonia trees amongst Pisonia-coconut vegetation, and on sandy ground.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Phascolarctos cinereus</i>	Koala	E	E	171 records within 10 km, last recorded 2025 (NSW DCCEEW 2025a)	The Koala has a fragmented distribution throughout eastern Australia from north-east Queensland to the Eyre Peninsula in South Australia. In New South Wales, koala populations are found on the central and north coasts, southern highlands, southern and northern tablelands, Blue Mountains, southern coastal forests, with some smaller populations on the plains west of the Great Dividing Range. The species inhabit eucalypt woodlands and forests, and feed on the foliage of more than 70 eucalypt species and 30 non-eucalypt species, but in any one area will select preferred browse species.	High	Low - no suitable foraging or breeding habitat to be cleared.
<i>Pimelea curviflora</i> var. <i>curviflora</i>	-	V	V	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Confined to area between north Sydney in the south and Maroota in the north-west. Grows on shaley/lateritic soils over sandstone and shale/sandstone transition soils on ridgetops and upper slopes amongst woodlands. Often grows amongst dense grasses and sedges. Flowers October to May.	Low	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Pomaderris adnata</i>	Sublime Point Pomaderris	E	Not listed	416 records within 10 km, last recorded 2023 (NSW DCCEEW 2025a)	Pomaderris adnata is only known from one site at Sublime Point, north of Wollongong. It occurs near the edge of the plateau behind the Illawarra escarpment. Associated vegetation is Eucalyptus sieberi (Silver-top Ash) - Corymbia gummifera (Red Bloodwood) forest with occasional Hakea salicifolia (Willow-leaved Hakea).	Low - not recorded during survey	Low
<i>Pomaderris brunnea</i>	Rufous Pomaderris, Brown Pomaderris	E	V	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Brown Pomaderris is found in a very limited area around the Colo, Nepean and Hawkesbury Rivers, including the Bargo area and near Camden. Brown Pomaderris grows in moist woodland or forest on clay and alluvial soils of flood plains and creek lines.	Low	Low
<i>Potorous tridactylus tridactylus</i>	Long-nosed Potoroo (southern mainland)	V	V	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	The long-nosed potoroo is found on the south-eastern coast of Australia, from Queensland to eastern Victoria and Tasmania, including some of the Bass Strait islands. In NSW it is generally restricted to coastal heaths and forests east of the Great Dividing Range, with an annual rainfall exceeding 760 mm. It inhabits coastal heaths and dry and wet sclerophyll forests. Dense understorey with occasional open areas is an essential part of habitat, and may consist of grass-trees, sedges, ferns or heath, or of low shrubs of tea-trees or melaleucas. A sandy loam soil is also a common feature.	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Prasophyllum affine</i>	Jervis Bay Leek Orchid, Culburra Leek-orchid, Kinghorn Point Leek-orchid	E	E	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Known from three areas south-east of Nowra on South Coast. These are Kinghorne Point, Wowly Gully near the town of Callala Bay, and near the township of Vincentia. Grows on poorly drained clay soils that support low heathland and sedgeland communities.	Low - not associated with PCTs present in Study Area	Low
<i>Prostanthera densa</i>	Villous Mint-bush	V	V	566 records within 10 km, last recorded 2023 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	This species has been recorded from the Currarong area in Jervis Bay, Royal National Park, Cronulla, Garie Beach, Port Stephens and Bass and Flinders Point in Cronulla. Generally grows in sclerophyll forest and shrubland on coastal headlands and near coastal ranges, chiefly on sandstone, and rocky slopes near the sea.	Low - not recorded during survey	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Prototroctes maraena</i>	Australian Grayling	Not listed	V	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	The Australian Grayling occurs in streams and rivers on the eastern and southern flanks of the Great Dividing Range, from Sydney, southwards to the Otway Ranges of Victoria and in Tasmania. The species is found in fresh and brackish waters of coastal lagoons, from Shoalhaven River in NSW to Ewan Ponds in South Australia	Nil	Nil
<i>Pseudomys novaehollandiae</i>	New Holland Mouse	V	V	5 records within 10 km, last recorded 2015 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	The New Holland Mouse has a fragmented distribution across Tasmania, Victoria, New South Wales and Queensland. The species is known to inhabit open heathlands, woodlands and forests with a heathland understorey and vegetated sand dunes	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Pseudophryne australis</i>	Red-crowned Toadlet	V	Not listed	226 records within 10 km, last recorded 2025 (NSW DCCEEW 2025a)	The Red-crowned Toadlet has a restricted distribution. It is confined to the Sydney Basin, from Pokolbin in the north, the Nowra area to the south, and west to Mt Victoria in the Blue Mountains. It occurs in open forests, mostly on Hawkesbury and Narrabeen Sandstones. The species inhabits periodically wet drainage lines below sandstone ridges that often have shale lenses or cappings.	High	Low - no suitable foraging or breeding habitat to be cleared.
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V	139 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a); Foraging, feeding or related behaviour known to occur within area (10 km) (Cth DCCEEW 2025a)	Grey-headed Flying-foxes are generally found within 200 km of the eastern coast of Australia, from Rockhampton in Queensland to Adelaide in South Australia. In times of natural resource shortages, they may be found in unusual locations. The species occur in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. Roosting camps are generally located within 20 km of a regular food source and are commonly found in gullies, close to water, in vegetation with a dense canopy.	High	Low - no suitable foraging or breeding habitat to be cleared.
<i>Pterostylis gibbosa</i>	Illawarra Greenhood, Rufa	E	E	Species or species	Known from a small number of populations in the Illawarra, Shoalhaven and Hunter regions. Grows in open forest or woodland, on flat or gently sloping land with poor drainage.	Low	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
	Greenhood, Pouched Greenhood			habitat may occur within area (10 km) (Cth DCCEEW 2025a)	In the Illawarra region, the species grows in woodland dominated by Forest Red Gum, Woollybutt and Melaleuca decora. Near Nowra, the species grows in an open forest of Spotted Gum, Forest Red Gum and Grey Ironbark. In the Hunter region, the species grows in open woodland dominated by Narrow-leaved Ironbark, Forest Red Gum and Black Cypress Pine.		
<i>Pterostylis saxicola</i>	Sydney Plains Greenhood	E	E	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Occurs in western Sydney between Picton and Freemans Reach. Grows in small pockets of shallow soil in depressions on sandstone rock shelves above cliff lines. Associated vegetation above these rock shelves is sclerophyll forest or woodland on shale or shale/sandstone transition soils.	Low	Low
<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V	Not listed	2 records within 10 km, last recorded 2001 (NSW DCCEEW 2025a)	Occurs from Newcastle north to Cape York, with vagrants occasionally as far south as Victoria. Occur mainly in sub-tropical and dry rainforest and occasionally in moist eucalypt forest and swamp forest, where fruit is plentiful. Thought to be locally nomadic in response to fruit availability.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Pultenaea aristata</i>	Prickly Bush-pea	V	V	5392 records within 10 km, last recorded	Restricted to the Woronora Plateau, a small area between Helensburgh, south of Sydney, and Mt Kiera above Wollongong. Occurs in either dry sclerophyll woodland or wet heath on sandstone.	Low - not recorded during survey	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				2024 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)			
<i>Pycnoptilus floccosus</i>	Pilotbird	V	V	73 records within 10 km, last recorded 2022 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth	Pilotbirds are strictly terrestrial, living on the ground in dense forests with heavy undergrowth. They are typically seen in pairs or occasionally in family parties, occupying small territories all year round. Birds forage mostly in pairs for insects, and occasionally eat seeds and fruits. Breeding takes places between August and January. Adults build a domed nest on or near the ground in which they usually lay two eggs.	High	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)			
<i>Rhizanthella slateri</i>	Eastern Underground Orchid	V	E	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Currently known only from 10 locations, including near Bulahdelah, the Watagan Mountains, the Blue Mountains, Wiseman's Ferry area, Agnes Banks and near Nowra. The species grows in eucalypt forest but no informative assessment of the likely preferred habitat for the species is available. Flowers September and November.	Low - not associated with PCTs present in Study Area	Low
<i>Rhodamnia rubescens</i>	Scrub Turpentine	CE	CE	26 records within 10 km, last recorded 2021 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth	Occurs in coastal districts north from Batemans Bay in New South Wales, to areas inland of Bundaberg in Queensland. Populations of <i>R. rubescens</i> typically occur in coastal regions and occasionally extend inland onto escarpments up to 600 m a.s.l. in areas with rainfall of 1,000 -1,600 mm. Found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest usually on volcanic and sedimentary soils.	Low - not recorded during survey	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)			
<i>Rhodomyrtus psidioides</i>	Native Guava	CE	CE	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	Pioneer species found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest often near creeks and drainage lines. This species is characterised being extremely susceptible to infection by Myrtle Rust. Myrtle Rust affects all plant parts.	Low	Low
<i>Rostratula australis</i>	Australian Painted Snipe	E	E	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	In NSW many records of the Australian Painted Snipe are from the Murray-Darling Basin including the Paroo wetlands, Lake Cowal, Macquarie Marshes, Fivebough Swamp and more recently, swamps near Balldale and Wanganella. Other important locations with recent records include wetlands on the Hawkesbury River and the Clarence and lower Hunter Valleys. The species prefers fringes of swamps, dams and nearby marshy areas where there is a cover of grasses, lignum, low scrub or open timber.	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheathtail-bat	V	Not listed	2 records within 10 km, last recorded 2011 (NSW	The Yellow-bellied Sheathtail-bat is a wide-ranging species found across northern and eastern Australia. In the most southerly part of its range - most of Victoria, south-western NSW and adjacent South Australia - it is a rare visitor in late summer and autumn. There are scattered records of this species across the New England Tablelands and North West	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				DCCEEW 2025a)	Slopes. It forages in most habitats across its very wide range, with and without trees; appears to defend an aerial territory.		
<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	V	Not listed	10 records within 10 km, last recorded 2019 (NSW DCCEEW 2025a)	The Greater Broad-nosed Bat is found mainly in the gullies and river systems that drain the Great Dividing Range, from north-eastern Victoria to the Atherton Tableland. It extends to the coast over much of its range. In NSW it is widespread on the New England Tablelands, however does not occur at altitudes above 500 m. The species utilises a variety of habitats from woodland through to moist and dry eucalypt forest and rainforest, though it is most commonly found in tall wet forest.	Moderate	Low - no suitable foraging or breeding habitat to be cleared.
<i>Stagonopleura guttata</i>	Diamond Firetail	V	V	1 record within 10 km, last recorded 2011 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)	The Diamond Firetail is endemic to south-eastern Australia, extending from central Queensland to the Eyre Peninsula in South Australia. It is widely distributed in NSW, with a concentration of records from the Northern, Central and Southern Tablelands, the Northern, Central and South Western Slopes and the North West Plains and Riverina. Not commonly found in coastal districts, though there are records from near Sydney, the Hunter Valley and the Bega Valley. This species has a scattered distribution over the rest of NSW, though is very rare west of the Darling River. The species is found in grassy eucalypt woodlands, including Box-Gum Woodlands and Snow Gum Eucalyptus pauciflora Woodlands. It also occurs in open forest, mallee, Natural Temperate Grassland, and in secondary grassland derived from other communities, and often found in riparian areas (rivers and creeks), and sometimes in lightly wooded farmland.	Low	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Sternula albifrons</i>	Little Tern	E	V	Species or species habitat may occur within area (10 km) (Cth DCCEEW 2025a)	The Little Tern is found on the north, east and south-east Australian coasts, from Shark Bay in Western Australia to the Gulf of St Vincent in South Australia. In NSW, it arrives from September to November, occurring mainly north of Sydney, with smaller numbers found south to Victoria. It breeds in spring and summer along the entire east coast from Tasmania to northern Queensland, and is seen until May, with only occasional birds seen in winter months. The species is almost exclusively coastal, preferring sheltered environments; however, may occur several kilometres from the sea in harbours, inlets and rivers	Low	Low - no suitable foraging or breeding habitat to be cleared.
<i>Sternula nereis nereis</i>	Australian Fairy Tern	Not listed	V	Breeding likely to occur within area (10 km) (Cth DCCEEW 2025a)	The Fairy Tern is found on isolated sandy inlets and along the coast from Dampier Archipelago, Western Australia, southward to Tasmania and Victoria, and is only vagrant to the east coast. It is most common in Western Australia and rare in New South Wales, Northern Territory and Queensland. It is also found in New Zealand and New Caledonia. The Fairy Tern is found on coastal beaches, inshore and offshore islands, sheltered inlets, sewage farms, harbours, estuaries and lagoons. It favours both fresh and saline wetlands and near-coastal terrestrial wetlands, including lakes and salt-ponds.	Nil	Nil
<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	V	V	8 records within 10 km, last recorded 2022 (NSW DCCEEW 2025a); Species or	Occurs in narrow coastal strip from Upper Lansdowne to Conjola State Forest. Grows in rainforest on sandy soils or stabilised Quaternary sand dunes at low altitudes in coastal areas, often in remnant littoral or gallery rainforests.	Low	Low



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
				species habitat known to occur within area (10 km) (Cth DCCEEW 2025a)			
<i>Thalassarche salvini</i>	Salvin's Albatross	Not listed	V	Foraging, feeding or related behaviour likely to occur within area (10 km) (Cth DCCEEW 2025a)	Salvin's Albatross breeds on islands off New Zealand. It ranges widely through the south Pacific.	Nil	Nil
<i>Thalassarche steadi</i>	White-capped Albatross	Not listed	V	Foraging, feeding or related behaviour known to occur within area (10 km) (Cth DCCEEW 2025a)	The White-capped Albatross is probably common off the coast of south-east Australia throughout the year. This species is similar to the Shy Albatross and can be difficult to identify, especially at sea and as a juvenile. Whilst there has been no specific study, the species has been caught on longline hooks off Tasmania. It has been observed that juveniles are rare in New Zealand waters, being more common off south-east Australia and South Africa. Breeding colonies occur on islands south of New Zealand.	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Thelymitra kangaloonica</i>	Kangaloon Sun Orchid	CE	CE	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	The Kangaloon Sun-orchid is only known to occur on the southern tablelands of NSW in the Moss Vale / Kangaloon / Fitzroy Falls area at 550-700 m above sea level. It is found in swamps in sedgeland soils over grey silty grey loam soils.	Low - not associated with PCTs present in Study Area.	Low
<i>Thesium australe</i>	Austral Toadflax, Toadflax	V	V	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Found in small, scattered populations along the east coast, northern and southern tablelands. Occurs in grassland or grassy woodland, and is often found in association with Kangaroo Grass.	Low	Low
<i>Tyto novaehollandiae</i>	Masked Owl	V	Not listed	27 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a)	The Masked Owl occurs from the coast where it is most abundant to the western plains. Overall records for this species fall within approximately 90% of NSW, excluding the most arid north-western corner. There is no seasonal variation in its distribution. This species lives in dry eucalypt forests and woodlands from sea level to 1100 m and often hunts along the edges of forests, including roadsides. Roosts and breeds in moist eucalypt forested gullies, using large tree hollows or sometimes caves for nesting.	High	Low - no suitable foraging or breeding habitat to be cleared.



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
<i>Tyto tenebricosa</i>	Sooty Owl	V	Not listed	127 records within 10 km, last recorded 2025 (NSW DCCEEW 2025a)	The Sooty Owl occupies the easternmost one-eighth of NSW, occurring on the coast, coastal escarpment and eastern tablelands. This species occurs in rainforest, including dry rainforest, subtropical and warm temperate rainforest, as well as moist eucalypt forests. Sooty Owls roost by day in the hollow of a tall forest tree or in heavy vegetation and nest in very large tree hollows. This species hunts by night for small ground mammals or tree-dwelling mammals such as the Common Ringtail Possum (<i>Pseudocheirus peregrinus</i>) or Sugar Glider (<i>Petaurus breviceps</i>).	High	Low - no suitable foraging or breeding habitat to be cleared.
<i>Varanus rosenbergi</i>	Rosenberg's Goanna	V	Not listed	76 records within 10 km, last recorded 2024 (NSW DCCEEW 2025a)	Rosenberg's Goanna occurs on the Sydney Sandstone in Wollemi National Park to the north-west of Sydney, in the Goulburn and ACT regions and near Cooma in the south. There are records from the South West Slopes near Khancoban and Tooma River and found in heath, open forest and woodland. Rosenberg's Goanna is associated with termites, the mounds of which this species nests in; termite mounds are a critical habitat component. Individuals require large areas of habitat and helters in hollow logs, rock crevices and in burrows, which they may dig for themselves, or they may use other species' burrows, such as rabbit warrens. Runs along the ground when pursued (as opposed to the Lace Monitor, which climbs trees). Feeds on carrion, birds, eggs, reptiles and small mammals.	High	Low - no suitable foraging or breeding habitat to be cleared.
<i>Xenus cinereus</i>	Terek Sandpiper	V	V, M	1 record within 10 km, last recorded 1983 (NSW DCCEEW 2025a)	The two main sites for the Terek Sandpiper in NSW are the Richmond River estuary and the Hunter River estuary. The latter has been identified as nationally and internationally important for the species. The Terek Sandpiper has been recorded on coastal mudflats, lagoons, creeks and estuaries, and favours mudbanks and sandbanks located near mangroves, but may also be observed on rocky pools and	Nil	Nil



Scientific name	Common name	BC Act	EPBC Act	Source	Habitat	Likelihood of occurrence	Likelihood of impact
					reefs, and occasionally up to 10 km inland around brackish pools.		
<i>Xerochrysum palustre</i>	Swamp Everlasting, Swamp Paper Daisy	V	V	Species or species habitat likely to occur within area (10 km) (Cth DCCEEW 2025a)	Found in Kosciuszko National Park and the eastern escarpment south of Badja. Swamp Everlasting grows in wetlands including sedge-swamps and shallow freshwater marshes, often on heavy black clay soils.	Nil	Nil

Text for table ref's



Annex 4. Flora species list



Annex Table 4.1: RDP flora species recorded

Scientific Name	Common Name
<i>Acacia floribunda</i>	White Sally Wattle
<i>Ageratina adenophora</i> *	Crofton Weed*
<i>Angophora costata</i>	Smooth-barked Apple
<i>Allocasuarina littoralis</i>	Black She-oak
<i>Banksia ericifolia</i>	Heath-leaved Banksia
<i>Banksia serrata</i>	Old Man Banksia
<i>Cirsium sp.</i> *	Thistle*
<i>Dodonaea triquetra</i>	Large-leaf Hop-bush
<i>Doryanthes excelsa</i>	Gymea Lily
<i>Elaeocarpus reticulatus</i>	Blueberry Ash
<i>Entolasia stricta</i>	Wiry Panic
<i>Eucalyptus globoidea</i>	White Stringybark
<i>Eucalyptus pilularis</i>	Blackbutt
<i>Eucalyptus piperita</i>	Sydney Peppermint
<i>Eucalyptus sieberi</i>	Silvertop Ash
<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
<i>Hibbertia scandens</i>	Climbing Guinea Flower
<i>Imperata cylindrica</i>	Blady Grass
<i>Kunzea ambigua</i>	Tick Bush
<i>Leucopogon juniperinus</i>	Prickly Beard-heath
<i>Leucopogon lanceolatus</i>	Lance Beard-heath
<i>Lomandra longifolia</i>	Spiky-headed Mat-rush
<i>Microlaena stipoides</i>	Weeping Grass
<i>Persoonia pinifolia</i>	Pine-leaved Geebung
<i>Pteridium esculentum</i>	Bracken Fern
<i>Senna pendula var. glabrata</i> *	Cassia*

*=exotic species



Annex 5. BC Act Assessments of significance



Threatened Ecological Communities

Annex Table 5.1: *Southern Sydney Sheltered Forest on Transitional Sandstone soils in the Sydney Basin Bioregion* BC Act Assessment of significance

Southern Sydney sheltered forest on transitional sandstone soils in the Sydney Basin Bioregion (Endangered)		
<p>Distribution: Southern Sydney sheltered forest on transitional sandstone soils is found within an estimated total extent of less than 45 000 ha, bounded approximately by Hurstville, Carrs Park, Bundeena, Otford, Stanwell Tops, Darkes Forest, Punchbowl Creek and Menai. Within this range, the community is currently estimated to occupy an area of approximately 400 - 4 000 ha. The community has been recorded from the local government areas of Campbelltown, Hurstville, Kogarah, Sutherland, Wollondilly and Wollongong within the Sydney Basin Bioregion and may occur elsewhere in the Bioregion. In Hurstville, Kogarah and Sutherland, the community persists as small fragments surrounded by urban development. The community is also present in the upper Hacking River catchment around Helensburgh and in Royal National Park.</p> <p>Extent: As detailed in the Final Determination for this TEC, the estimated total extent of occurrence is less than 45,000 ha with an estimated area of occupancy of 400 to 4,000 ha (NSW TSSC, 2011).</p> <p>Impact summary: A maximum of 0.04 ha of Southern Sydney Sheltered Forest would be impacted by the proposed works via vegetation clearing.</p>		
<p>An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:</p>		
Criteria	Address of Criteria	Likelihood
<p>In the case of a threatened species:</p> <ul style="list-style-type: none"> Whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction. 	N/A	N/A
<p>In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:</p>	<p>Extent and composition As detailed in the Final Determination for this TEC, the estimated total extent of occurrence is less than 45,000 ha with an estimated area of occupancy of 400 to 4,000 ha (NSW TSSC, 2011).</p> <p>Assessment</p>	Unlikely



Southern Sydney sheltered forest on transitional sandstone soils in the Sydney Basin Bioregion (Endangered)

<ul style="list-style-type: none"> – Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or 	<p>Approximately 0.04 ha of Southern Sydney Sheltered Forest, comprising 0.02 ha intact and 0.02 ha disturbed condition vegetation, would be removed or modified for the purpose of this Project. The removal of 0.04 ha of TEC, accounts for 0.00009% of the total extent of occurrence and 0.01-0.001% of the TEC's area of occupancy. As such, the area to be removed/modified is relatively small, and on the edge of a remnant. The area to be impacted is largely disturbed, with areas of absent canopy species and presence of exotic weed species. As such, the removal of 0.04 ha of Southern Sydney Sheltered Forest TEC is unlikely have an adverse effect of the extent of this TEC such that its local occurrence is placed at risk of extinction.</p>	
<p>In the case of an endangered ecological community or critically endangered ecological community:</p> <ul style="list-style-type: none"> – Whether the proposed development or activity is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction. 	<p>Extent and composition</p> <p>As detailed in the Final Determination for this TEC, the estimated total extent of occurrence is less than 45,000 ha with an estimated area of occupancy of 400 to 4,000 ha (NSW TSSC, 2011).</p> <p>Of this local occurrence, 0.04 ha would be removed or modified by the Project. The removal of 0.04 ha of TEC, accounts for 0.00009% of the total extent of the TEC and 0.01-0.001% of the TEC's area of occupancy.</p> <p>Assessment</p> <p>Approximately 0.04 ha of Southern Sydney Sheltered Forest would be removed or modified for the purpose of this Project. The area to be impacted is largely disturbed, with areas of absent canopy species or exotic weed species. The removal of these small areas of vegetation are unlikely to substantially modify the composition of the local occurrence of this TEC such that its local occurrence is placed at risk of extinction.</p>	Unlikely
<p>In relation to the habitat of a threatened species or ecological community:</p> <ul style="list-style-type: none"> – The extent to which habitat is likely to be removed or modified as a result of the proposed development or activity. 	<p>Minimal clearing is proposed to be undertaken within areas of Southern Sydney Sheltered Forest, with impacts limited to 0.04 ha of already disturbed vegetation. Therefore, the extent to which habitat is likely to be removed or modified as a result of the action proposed is considered to be minimal.</p>	Unlikely
<p>In relation to the habitat of a threatened species or ecological community:</p> <ul style="list-style-type: none"> – Whether an area of habitat is likely to become fragmented or isolated from 	<p>The proposed activities would result in the removal of 0.04 ha of this TEC. As the areas of clearing would be restricted to outer edges of existing habitat, the proposed vegetation clearing would not result in a hostile barrier to the movement of pollinators or the dispersal of seed.</p> <p>The Project is unlikely to result in fragmentation or isolation of this TEC.</p>	Unlikely



Southern Sydney sheltered forest on transitional sandstone soils in the Sydney Basin Bioregion (Endangered)

<p>other areas of habitat as a result of the proposed development or activity.</p>		
<p>In relation to the habitat of a threatened species or ecological community:</p> <ul style="list-style-type: none"> – The importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality. 	<p>As detailed in the Final Determination for Southern Sydney Sheltered Forest, the TEC has an estimated extent of occurrence of approximately 45,000 ha and is estimated to occupy an area of approximately 400-4,000 ha. Approximately 0.04 ha of this TEC would be cleared or modified for the purpose of this Project, representing a maximum of 0.00009% of the TEC's extent of occurrence and 0.01-0.001% of this TEC's remaining area of occupancy. As the vegetation clearing would take part predominantly in already disturbed habitat, the area to be cleared or modified is of low importance to the long-term survival of this TEC.</p> <p>The Project is unlikely to have a significant impact on Southern Sydney Sheltered Forest TEC.</p>	<p>Unlikely</p>
<p>Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).</p>	<p>Areas of Outstanding Biodiversity Value (AOBV) in NSW include:</p> <ul style="list-style-type: none"> – Gould's Petrel- critical habitat declaration; – Little penguin population in Sydney's North Harbour; – Mitchell's Rainforest Snail in Stotts Island Nature Reserve; and – Wollemi Pine. <p>None of these areas of AOBV would be affected by the Project.</p>	<p>Unlikely</p>
<p>Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.</p>	<p>The only KTP that would be affected as a result of the Project is the clearing of native vegetation. In this case, the proposed activities would remove approximately 0.04 ha of Southern Sydney Sheltered Forest TEC. The Project is not likely to significantly increase the impact of this key threatening process.</p>	<p>Unlikely</p>
<p>Conclusion: Based on the above information, the local occurrence of Southern Sydney Sheltered Forest TEC is unlikely to be significantly affected by the Project.</p>		

Threatened flora



Annex Table 5.2: *Genoplesium baueri* BC Act Assessment of significance

***Genoplesium baueri* Bauer's Midge Orchid (Endangered)**

Distribution:

The species has been recorded from locations between Ulladulla and Port Stephens. About half the records were made before 1960 with most of the older records being from Sydney suburbs including Asquith, Cowan, Gladesville, Longueville and Wahroonga. No collections have been made from those sites in recent years. Currently the species is known from just over 200 plants across 13 sites. The species has been recorded at locations now likely to be within the following conservation reserves: Berowra Valley Regional Park, Royal National Park and Lane Cove National Park. May occur in the Woronora, O'Hares, Metropolitan and Warragamba Catchments.

Two records within 10 km, last recorded 2005 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a).

Habitat and Ecology

Grows in dry sclerophyll forest and moss gardens over sandstone.

Impact summary:

While no individuals were recorded in the Study Area, records have previously been recorded within the locality. As the species has a moderate likelihood of occurring within the Study Area and surveys were not conducted for this species, presence has been assumed. This species is known to occur in *PCT 3595 Sydney Coastal Sandstone Gully Forest*. Approximately 0.28 ha of associated habitat would be cleared by the Project. Mitigation measures and barrier fencing would be implemented to protect potential habitat for this species and ensure impact would be minimal. There is the potential that the Project would impact on a few individuals during construction through trampling or damage or soil compaction, as this species is only above ground for approximately 2 months (February to March).

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

Criteria	Address of Criteria	Likelihood
<p>In the case of a threatened species:</p> <ul style="list-style-type: none"> – whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction. 	<p>Viable local population</p> <p><i>Genoplesium baueri</i> is not known to occur in the vicinity of the Study Area, however the Study Area does occur within this species' known range of distribution.</p> <p>Life cycle factors</p> <p>As detailed in the Commonwealth Conservation Advice (Cth TSSC, 2013), <i>Genoplesium baueri</i> persists each year from a tuber-like perennial root, with some plants not appearing regularly each year. When flowering, plants are visible above ground for approximately 2 months before returning to dormancy.</p> <p>Assessment</p> <p>There is the potential that some individuals of this species to be affected by the Project, as this species remains dormant under the soil for majority of the year. To minimise the impacts of the Project on this</p>	Unlikely



***Genoplesium baueri* Bauer's Midge Orchid (Endangered)**

	species, an ecologist would be on site during pre-clearance demarcation of clearing limits and during clearing operations to ensure there is no exceedance of agreed/approved clearing limits. Therefore, the action proposed is unlikely to have an adverse effect on the life cycle of <i>Genoplesium baueri</i> , such that a viable local population of the species is likely to be placed at risk of extinction.	
In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: <ul style="list-style-type: none"> – Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or 	N/A	N/A
In the case of an endangered ecological community or critically endangered ecological community: <ul style="list-style-type: none"> – Whether the proposed development or activity is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction. 	N/A	N/A
In relation to the habitat of a threatened species or ecological community: <ul style="list-style-type: none"> – The extent to which habitat is likely to be removed or modified as a result of the proposed development or activity. 	Extent of impact on habitat The extent of <i>Genoplesium baueri</i> habitat to be modified is up to 0.28 ha as a result of the Project.	Unlikely
In relation to the habitat of a threatened species or ecological community:	Habitat fragmentation	Unlikely



***Genoplesium baueri* Bauer's Midge Orchid (Endangered)**

<ul style="list-style-type: none"> – Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity. 	<p>The Project would result in the primary clearing of up to 0.28 ha of potential habitat, none of which presents a hostile barrier to the movement of pollinators or the dispersal of seed. This species would not be fragmented as a result of the Project.</p>	
<p>In relation to the habitat of a threatened species or ecological community:</p> <ul style="list-style-type: none"> – The importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality. 	<p>Importance of habitat to be impacted</p> <p>The Project would have no impact on the extent of habitat for this species within the locality and none would be fragmented.</p>	Unlikely
<p>Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).</p>	<p>Critical habitat declarations in NSW include:</p> <ul style="list-style-type: none"> – Gould's Petrel - critical habitat declaration; – Little penguin population in Sydney's North Harbour; – Mitchell's Rainforest Snail in Stotts Island Nature Reserve; and – Wollemi Pine. <p>None of these areas of critical habitat would be affected by the Project.</p>	Unlikely
<p>Whether the proposed development or activity is or is part of a key threatening process (KTP) or is likely to increase the impact of a key threatening process.</p>	<p>The only KTP that would be affected as a result of the Project is the clearing of native vegetation. However, the area of vegetation to be cleared is predominantly disturbed in the form of exotic weed species and absent canopy or midstorey vegetation.</p>	Unlikely
<p>Conclusion: A viable local population of <i>Genoplesium baueri</i> is unlikely to be significantly affected by the Project as:</p> <ul style="list-style-type: none"> – An ecologist would be on site during proposed clearing works to ensure clearing is limited to impact areas. – The action proposed is unlikely to have an adverse effect on the life cycle of the species; – The habitat potentially affected by the Project is likely to be of little or no importance to the long-term survival of the species in the locality; – The Project would not have an effect on declared Areas of Critical Habitat. – The Project would not exacerbate KTPs in the long term. 		



Annex 6. EPBC Act significant impact criteria assessment



Annex Table 6.1: *Genoplesium baueri* EPBC Act Assessment of significance

***Genoplesium baueri* Bauer's Midge Orchid (Endangered)**

Distribution:

The species has been recorded from locations between Ulladulla and Port Stephens. About half the records were made before 1960 with most of the older records being from Sydney suburbs including Asquith, Cowan, Gladesville, Longueville and Wahroonga. No collections have been made from those sites in recent years. Currently the species is known from just over 200 plants across 13 sites. The species has been recorded at locations now likely to be within the following conservation reserves: Berowra Valley Regional Park, Royal National Park and Lane Cove National Park. May occur in the Woronora, O'Hare's, Metropolitan and Warragamba Catchments.

Two records within 10 km, last recorded 2005 (NSW DCCEEW 2025a); Species or species habitat known to occur within area (10 km) (Cth DCCEEW 2025a).

Habitat and Ecology

Grows in dry sclerophyll forest and moss gardens over sandstone.

Impact summary:

While no individuals were recorded in the Study Area, records have previously been recorded within the locality. As the species has a moderate likelihood of occurring within the Study Area and surveys were not conducted for this species, presence has been assumed. This species is known to occur in *PCT 3595 Sydney Coastal Sandstone Gully Forest*. Approximately 0.28 ha of associated habitat would be cleared by the Project. Mitigation measures and barrier fencing would be implemented to protect potential habitat for this species and ensure impact would be minimal. There is the potential that the Project would impact on a few individuals during construction through trampling or damage or soil compaction, as this species is only above ground for approximately two months (February to March).

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

Criteria	Address of Criteria	Likelihood
Lead to a long-term decrease in the size of an important population of a species.	It is considered unlikely that the Project would lead to a long-term decrease in the size of the <i>Genoplesium baueri</i> populations. While the Study Area does occur within this species' known range of distribution, the Project would only remove a small section of already disturbed potential habitat. Furthermore, no records for this species exist within a 5 km radius of the Study Area, indicating it is unlikely that an important population would be affected by the Project.	Unlikely
Reduce the area of occupancy of an important population.	The extent of occurrence is approximately 11,500 km ² (1,150,000 ha) and area of occupancy is 168 km ² (16,800 ha). The Project would result in the removal of 0.28 ha of potential habitat, representing 0.00002% of the species' area of occupancy and 0.002% of its area of occurrence.	Unlikely



***Genoplesium baueri* Bauer's Midge Orchid (Endangered)**

Fragment an existing important population into two or more populations.	The Project would not cause fragmentation for the species as there would be no barrier to the transfer of pollen and other genetical material.	Unlikely
Adversely affect habitat critical to the survival of a species.	The following species are listed on the EPBC Act Register of Critical Habitat: <ul style="list-style-type: none"> – Wandering Albatross (<i>Diomedea exulans</i>) - Macquarie Island – <i>Lepidium ginninderrense</i> (Ginninderra peppergrass) - Northwest corner Belconnen Naval Transmission Station, ACT – Black-eared Miner (<i>Manorina melanotis</i>) - Gluepot Reserve, Taylorville Station and Calperum Station. – Shy Albatross (<i>Thalassarche cauta</i>) - Albatross Island, The Mewstone, Pedra Branca – Grey-headed Albatross (<i>Thalassarche chrysostoma</i>) - Macquarie Island No critical habitat has been declared for <i>Genoplesium baueri</i> .	Unlikely
Disrupt the breeding cycle of an important population.	Although the Study Area falls within the known distribution range of the species, the Project would impact only a small portion of already disturbed potential habitat. Additionally, no recorded occurrences of the species have been documented within a 5 km radius of the Study Area, suggesting that the Project is unlikely to dispersal and functionality of an important populations.	Unlikely
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.	The Project would remove and modify a small area of potential habitat for this species (0.28 ha of PCT 3595). However, the potential habitat to be impacted is already disturbed, with areas of absent canopy and understorey species, as well as exotic weed species present in the ground layer. Therefore, the removal of 0.28 ha of potential habitat is unlikely to result in the further decline of this species.	Unlikely
Result in invasive species that are harmful to an endangered species becoming established in the vulnerable species' habitat.	The Project would introduce personnel (by foot), equipment, and machinery into an area of already disturbed potential habitat. Exotic weed species that could outcompete <i>Genoplesium baueri</i> are already present within the Study Area. Weed mitigation measures recommended in this assessment would reduce the potential for further introduction of invasive species (Section 6.2).	Unlikely
Introduce disease that may cause the species to decline.	Whilst there is some potential for personnel and equipment to transport and disperse soil pathogens/disease throughout the subject site, this risk would be managed through the use of mitigation	Unlikely



Genoplesium baueri Bauer's Midge Orchid (Endangered)

	measures. It is considered unlikely that the proposed action would introduce disease that may cause the <i>Genoplesium baueri</i> to decline.	
Interfere substantially with the recovery of the species.	There is no recovery plan for this species.	Unlikely

Conclusion: The Project is unlikely to have a significant impact on the *Genoplesium baueri*. The Referral of the Project to the Federal Minister for the Environment is not required.



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Our expertise



Natural capital
and offsetting



Ecology



Heritage
management



Spatial Services



Metropolitan Surface Works Assessment – No 3 Shaft

Aboriginal Objects Due Diligence Assessment

Prepared for Metropolitan Coal Pty Ltd | 29/08/2025



Metropolitan Surface Works Assessment – No 3. Shaft

Document control

Project number	Client	Project manager	LGA
9221	Metropolitan Coal Pty Ltd	Mandy Melvaine	Wollongong City Council

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1 Introduction

1.1 Background

The Metropolitan Coal Mine is operated by Metropolitan Collieries Pty Ltd (Metropolitan Colliery). Metropolitan Colliery is wholly owned by Peabody Energy Australia Pty Ltd (Peabody Energy; the Proponent).

Niche Environment and Heritage Pty Ltd (Niche) was commissioned by Peabody Energy to conduct an Aboriginal Objects Due Diligence (DD) assessment to determine whether any Aboriginal objects will be harmed by the proposed activity, whether further investigation is needed, and whether that harm requires an Aboriginal Heritage Impact Permit (AHIP).

This DD forms part of an addendum ecological report and heritage assessment to identify threatened biodiversity and Aboriginal cultural heritage with the potential to be impacted by the project and provide recommendations about how to avoid and minimise potential impacts.

The Activity Area is located off the Princes Highway at Helensburgh, New South Wales (NSW), within the Peabody Energy Metropolitan Colliery Mine lease area (Figure 1 and Figure 2). The following assessment has been undertaken in accordance with the *NSW Minerals Industry Due Diligence Code of Practice for the Protection of Aboriginal Objects* (New South Wales Minerals Council Ltd, 2010; the Code), as is outlined in Plate 1.

1.2 Proposed activity

The proposed activity involves construction activities at No 3 Vent Shaft (Figure 2).

The proposed activity consists of the following:

- Installation of enclosed flares attached to the gas drainage plant
- Replacement of existing ventilation infrastructure.

The Project involves the clearing of native vegetation to facilitate enclosed flare installation and ventilation infrastructure replacement.

Within the proposed area of works, Metropolitan Coal holds Consolidated Coal Lease (CCL) 703 (under the Mining Act, 1992). All activities proposed will be developed in accordance with the conditions of CCL 703 where they apply, and an updated forward program will be submitted to the NSW Resources Regulator pertaining to the enclosed flares construction and ventilation system replacement.



Figure 1: Process for the Protection of Aboriginal Heritage for NSW Minerals Industry

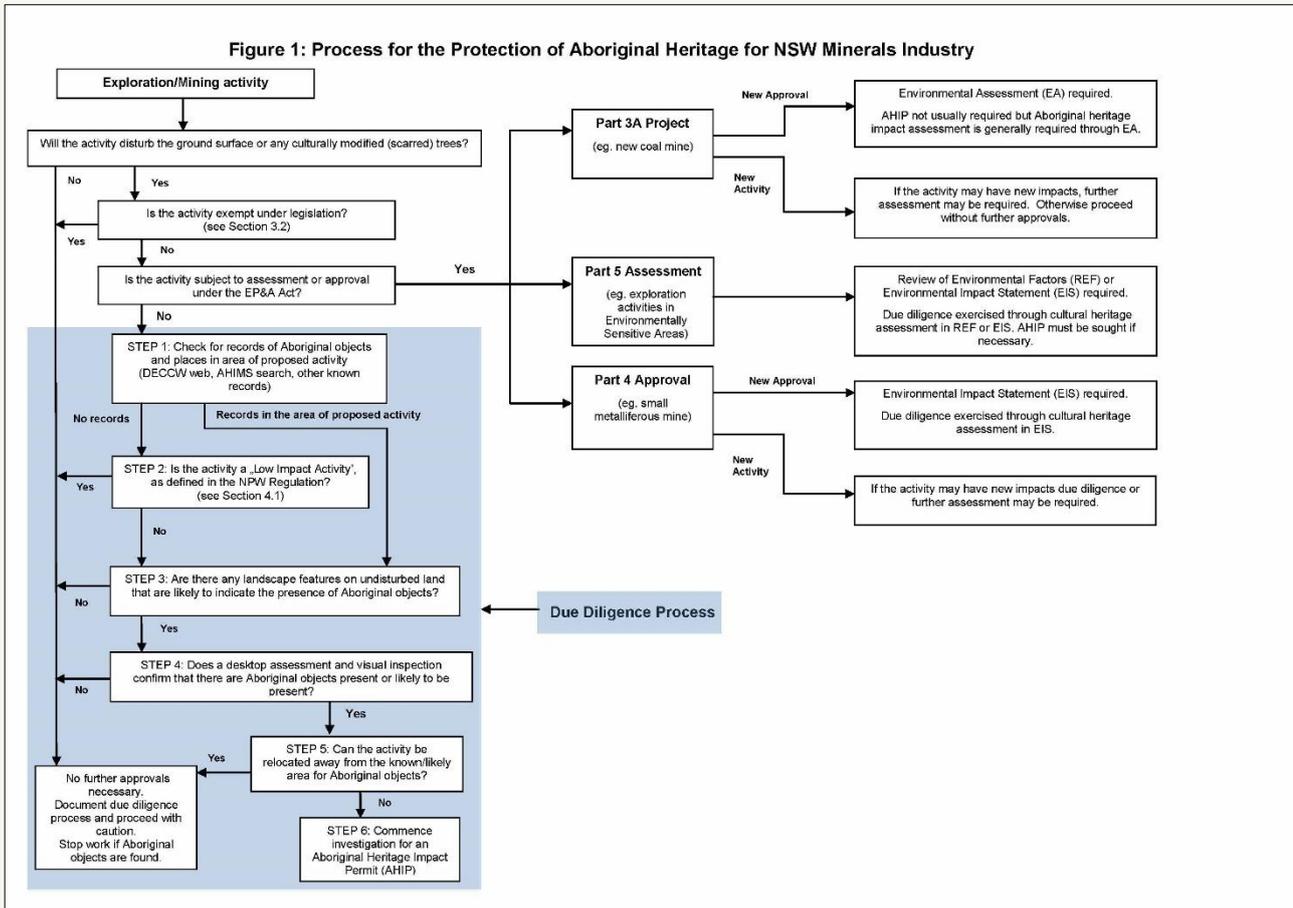
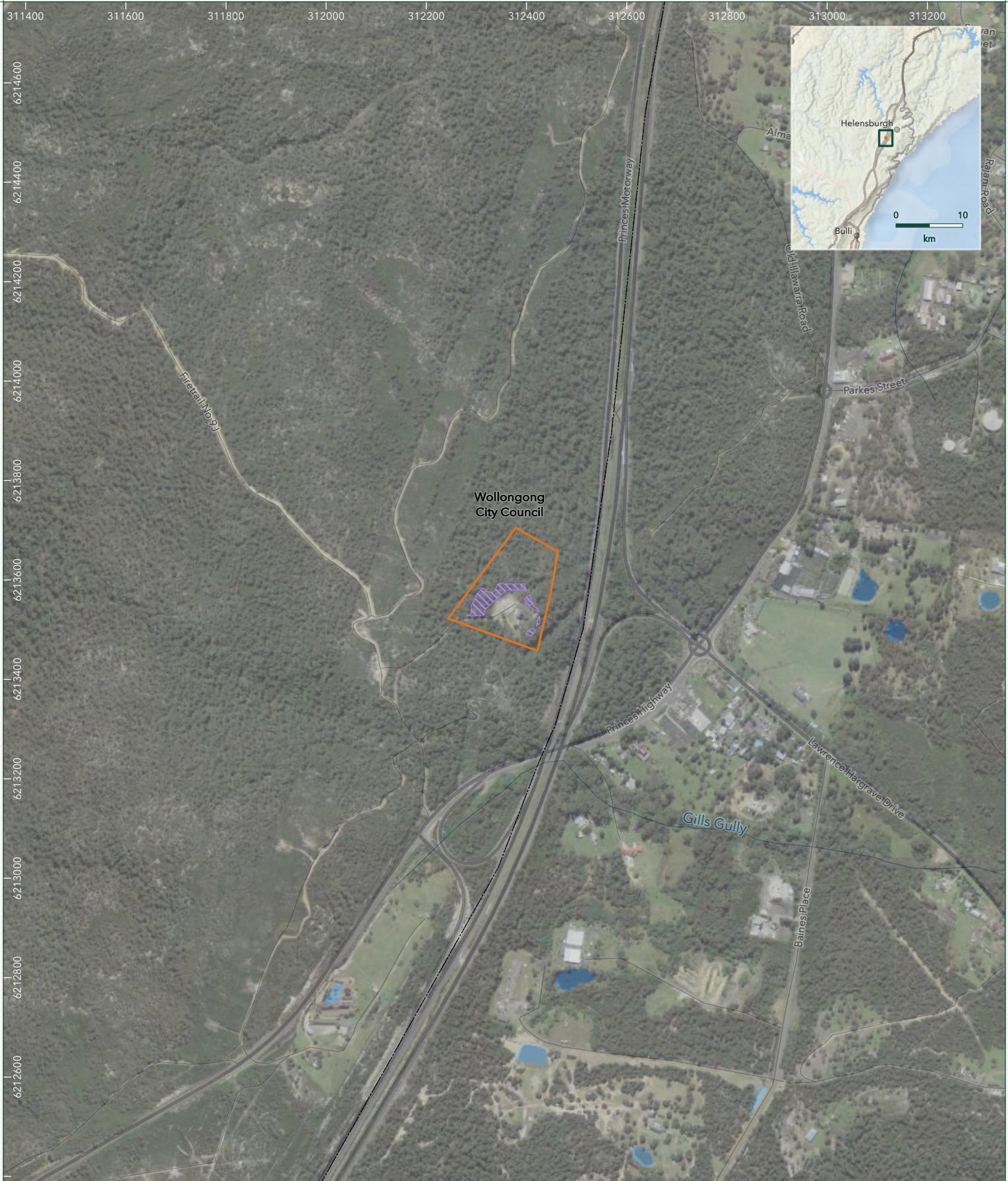


Plate 1: NSW minerals industry due diligence process for the protection of Aboriginal objects.

1.3 Assessment objective and methodology

This DD assessment follows the process of the Code (Plate 1).

The aim of this due diligence process was to assess whether Aboriginal objects and/or Aboriginal Places were present or were likely to occur within, or near the proposed activity. Further, if any Aboriginal objects and/or Aboriginal Places identified through the assessment may be harmed by the proposed activity, whether harm could be avoided or if further investigation was required. The principal approach to avoiding harm considered by the assessment process is to move components of the proposed activity to locations where they will not cause or risk harm to Aboriginal objects.



-  Subject area
-  Vegetation exclusion zone 2025
- Transport**
-  Major road
-  Minor road
- Hydrography**
-  Non Perennial Stream
-  Waterbody
- Administrative and Property Boundaries**
-  Local Government Area



Figure 1
Location Map
 Surface Works Assessment - No 3 Shaft

Niche PM: Mandy Melvaine
 Niche Proj. #: 9221
 Client: Metropolitan Collieries

Local Government Area: / Suburb: / Disturbance footprint: / Transparency Mask: / Road: / Hillshade: Sources: Esri, Maxar, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodastatys, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community/ Rail: / World_Ocean_Base: NIWA, GeosciencesAustralia, Esri, Garmin, NaturalVue/ Watercourse: / NPWS Reserve: / PlacePoint: / Proposed works area: / Subject area: / State Forest: / Waterbody: / public/ NSW_Imagery: © Department of Customer Service 2020/ Hillshade: Esri, CGIAR | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56.



- Subject area
- Minor road
- Vegetation exclusion zone 2025
- Administrative and Property Boundaries**
- Transport**
- Lot
- Local Government Area
- Major road



Figure 2
Location of the Subject Area
 Surface Works Assessment - No 3 Shaft

Niche PM: Mandy Melvaine
 Niche Proj. #: 9221
 Client: Metropolitan Collieries

Local Government Area: / Property: / Suburb: / Disturbance footprint: / Lot: / Transparency Mask: / Road: / Hillshade: Sources: Esri, Maxar, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community/ Rail: / Watercourse: / NPWS Reserve: / Subject area: / State Forest: / Waterbody: / public/NSW_Imagery: © Department of Customer Service 2020 | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56.



2 Aboriginal Objects Due Diligence Assessment

Will the activity disturb the ground surface or any Aboriginal culturally modified (scarred) trees?

The proposed activity involves earthworks consisting of the clearing of native vegetation to facilitate enclosed flare installation and ventilation infrastructure replacement up to a maximum impact footprint of 0.32 ha.

No Aboriginal culturally modified (scarred) trees are located inside the Activity Area.

Is the activity exempt under the legislation?

No, the proposed activity is not exempt under the legislation. Examples of exempt activities include Aboriginal people conducting traditional cultural activities, emergency fire-fighting activities, or activities carried out by authorised officers of the regulator for conservation purposes.

Is the activity subject to assessments or approval under the EP&A Act?

Yes, approval for this project has been granted under section 75J of the NSW *Environmental Planning and Assessment Act 1979* (Department of Planning and Environment, 1979) on 22 June 2009.

Step 1. Are there any relevant confirmed site records or other associated landscape feature information on AHIMS?

Yes.

Due to the environmental and cultural significance and ongoing mining activity within the Activity Area and immediate surroundings, several heritage assessments have previously been undertaken. This has resulted in a collection of reports on the cultural heritage values of the Activity Area (Biosis, 2009, 2007, 2004; Illawarra Prehistory Group, 2010; Kayandel Archaeological Services, 2008; Niche Environment and Heritage, 2022a, 2022b, 2021a, 2021b, 2021c, 2021d, 2019, 2025) that are detailed in Table 1 below.

The studies below have been reviewed because they are near to and/or within the Activity Area and located within the same and/or similar landforms and/or environments to the Activity Area. The main issues dealt with by these studies have been questions of the presence or absence of sites, the broad characterisation of where sites occur in the landscape, and the monitoring of sites for subsidence.



Table 1: Previous heritage assessments within the Activity Area

Author and year	Title and description
<p>Biosis (2004)</p>	<p>Dendrobium Area 3 and Lake Cordeaux Foreshore Seismic Testing Review of Environmental Factors (REF): Archaeological Survey</p> <p>An assessment of the Lake Cordeaux Foreshore, nine seismic survey lines and five borehole sites within Dendrobium Area 3 were undertaken for a REF. The entire lengths of the seismic lines, a 100 m radius around proposed borehole locations and all areas of archaeological potential within the proximity of the seismic lines were surveyed. The foreshore was surveyed in sample transects and nearby sandstone overhangs and shelters were also inspected.</p> <p>The survey identified 10 new sites, two of which fall within the Dendrobium Area 3 area. The two new sites within the Dendrobium Area 3 comprised a sandstone rock shelter with art and a sandstone rock shelter with artefacts. One new isolated find site was identified at a borehole location and the remaining eight sites were identified along the Lake Cordeaux Foreshore and include isolated finds and artefact scatters.</p> <p>This assessment is useful in informing the predictive model for the current project, particularly by highlighting the prevalence of sandstone rock shelters with archaeological potential within similar landforms and proximity to water sources</p>
<p>Biosis (2007a)</p>	<p>Dendrobium Area 3 Archaeological and Cultural Heritage Assessment</p> <p>An assessment of Dendrobium Areas 3A, 3B and 3C mining areas was undertaken and located 65 sites. Eighteen of which were located within Area 3C. The sites located within the 3C domain include shelters with art (n= 12), shelters with artefacts/deposits (n= 2), grinding grooves (n = 2), artefact sites (n = 1) and a stone arrangement (n = 1).</p> <p>The survey indicated that the most suitable sandstone overhangs occur within the steep scarps and gorges of the Hawkesbury land system, usually associated with Wongawilli Creek and its immediate tributaries. Sites were plotted against their slope class to assess the relationship between slope, and archaeological site distribution. Moderate to steep slopes (20 - 35 degrees slope gradients) where suitable overhangs for occupation occur, were most heavily utilised while very steep slopes and lower gradients were utilised less.</p> <p>The results of this survey provide valuable insight for the current assessment by demonstrating that sandstone shelters with cultural material are most frequently located on moderate to steep slopes within the Hawkesbury land system, particularly near watercourses such as Wongawilli Creek—highlighting the importance of targeting similar landforms when assessing archaeological potential.</p>
<p>Kayandel (2008)</p>	<p>Aboriginal Cultural Heritage Assessment Metropolitan Coal Project, Metropolitan Colliery, Helensburgh, NSW</p> <p>Kayandel completed an Aboriginal Cultural Heritage Assessment (ACHA) for the Metropolitan Cola Project including the continuation and expansion of the Metropolitan Colliery. Kayandel was commissioned by HCPL, a wholly owned subsidiary of Peabody Pacific Pty Ltd, for this assessment as part of an Environmental</p>



	<p>Assessment of the project under Part 3A of the EP&A Act. This assessment focused on Longwalls 14 - 17 and Longwalls 18 - 19A. The ACHA identified 188 Aboriginal heritage sites within its Activity Area, including 142 sandstone overhangs and 46 open sites. Based on the identification of these 188 Aboriginal heritage sites it was recommended by Kayandel that an Aboriginal Cultural Heritage Management Plan be developed in consultation with representatives of the Aboriginal community.</p> <p>The high density of identified sites—particularly sandstone overhangs—within a comparable landscape underscores the archaeological sensitivity of the region.</p>
<p>Biosis (2009a)</p>	<p>Cultural Heritage Assessment: Proposed Exploration Program Dendrobium Area 3A and 3C - Survey 6</p> <p>Another assessment was completed as part of a REF for a proposed exploration program in Dendrobium Areas 3A and 3C. The entire lengths of the seismic lines and a 30 m radius around proposed borehole locations were surveyed. No new sites were identified; however, areas of Aboriginal archaeological sensitivity at sandstone overhangs and rocky outcrops were reported. Poor ground surface visibility due to thick vegetation cover was noted as inhibiting the identification of open stone artefact sites.</p> <p>Although no new sites were recorded, the identification of areas of archaeological sensitivity—particularly around sandstone features—combined with limited surface visibility due to vegetation, suggests that subsurface or obscured cultural material may still be present and warrants further consideration in the current assessment.</p>
<p>Illawarra Prehistory Group (2010)</p>	<p>Archaeological survey of the western catchment of Waratah Rivulet from Fire Road 10B to the junction with the Woronora River</p> <p>The Illawarra Prehistory Group undertook a survey of the Woronora Catchment between September 2006 and December 2007. This report presents the results of this survey and compares the results with a survey undertaken in the 1970's by the Illawarra Prehistory Group. The report also includes areas surveyed by Caryl Sefton for professional reasons. This report focuses on the western drainage of Waratah Rivulet bounded by the northern drainage into Waratah Rivulet from Fire Road 9H to the junction with the Woronora River. The survey identified 100 sites in an area of approximately 18 km², resulting in a density average of 6 sites per square km.</p> <p>The high site density recorded in this relatively constrained catchment area highlights the archaeological sensitivity of the broader Woronora landscape and supports the application of a similarly high level of scrutiny in the current assessment.</p>
<p>Niche (2019a)</p>	<p>ACHA: Dendrobium Area 3C Longwalls 20-21</p> <p>This assessment was undertaken for the proposed extension of the existing underground mine to extract Longwalls 20-21 within Dendrobium Area 3C. Longwalls 20 - 21 are a continuation of mining that extends into the Dendrobium Mine 3C Area. The longwall panels are located between Donald Castle Creek to the west and Cordeaux Reservoir to the east. No additional survey was completed as part of the ACHA as the area was concluded to already have been systematically surveyed in the past during the Biosis assessment (Biosis 2007a). While the assessment itself did not include a survey program, previously recorded sites were revisited and assessed. Of the nine Aboriginal sites previously registered within the</p>



	<p>assessment area, eight were revisited and confirmed during the site inspection. One registered site Browns Road Site 33 (AHIMS ID# 52-2-0458) could not be confirmed at its registered location. Subsequent desktop assessment and field inspection concluded that the coordinates for this site were incorrect. Baseline recording was completed for the following sites:</p> <ul style="list-style-type: none"> – Browns Road Site 17 (AHIMS ID# 52-2-1632) – Browns Road Site 18 (AHIMS ID#52-2-1633) – Browns Road Site 20 (AHIMS ID#52-2-1647) – DM18 (AHIMS ID#52-2-3642) – DM 19 (AHIMS ID#52-2-363). <p>During the baseline recording, two new sites were identified including Dendrobium 3C Shelter 1 (AHIMS ID# 52-2-4500) and Dendrobium 3C Isolated Find 1 (AHIMS ID# 52-2-4499). The results of the assessment were concluded to be consistent with the predictive modelling developed for the area by Biosis in 2007 whereby most sites were associated with contexts with moderate to steep slope gradients.</p> <p>The results of the assessment align with the predictive model developed by Biosis (2007a), confirming that most sites are associated with moderate to steep slope gradients—an observation that reinforces the relevance of this model to the current assessment area and supports its continued application in identifying areas of archaeological potential.</p>
<p>Niche (2021a)</p>	<p>Aboriginal Cultural Heritage Assessment Dendrobium Colliery Area 3C Longwalls 22 and 23</p> <p>This assessment was undertaken for the Subsidence Management Plan (SMP) application for Longwalls 22 and 23 within Dendrobium Colliery Area 3C. The assessment included an additional survey within the assessment area, covering an area of 101.2 ha and targeted sandstone slopes, ridgelines and drainage lines of the Hawkesbury soil landscape. Visibility and exposure were relatively low (10% and 20% respectively). The targeted survey resulted in the successful reidentification of nine (9) previously recorded shelter sites including:</p> <ul style="list-style-type: none"> – Browns Road Site 17 (AHIMS ID#52-2-1632). – Browns Road Site 18 (AHIMS ID#52-2-1633). – Browns Road Site 19 (AHIMS ID#52-2-1634). – Cordeaux Reservoir; Sandy Creek Road (AHIMS ID# 52-2-0019). – Dendrobium 3 (AHIMS ID#52-2-2219). – DM 1 (AHIMS ID#52-2-4656). – DM 10 (AHIMS ID#52-2-4657). – Sandy Creek Road 1 Stone Arrangement (AHIMS ID#52-2-0535). – Sandy Creek Road 23 (AHIMS ID #52-5-0275). <p>One site (Dendrobium 3C Isolated Find 1; AHIMS ID#52-2-4499) was unable to be ground-truthed. No new sites were identified.</p> <p>Although no new sites were identified, the reidentification of multiple previously recorded Aboriginal sites in targeted landforms reinforces the archaeological sensitivity of the Hawkesbury soil landscape and underscores the relevance of similar survey strategies and predictive modelling in the context of the current assessment.</p>
<p>Niche (2021b,2021c, 2021d)</p>	<p>Dendrobium Exploration REF: Aboriginal Cultural Heritage Due Diligence Assessments</p>



	<p>On behalf of Illawarra Coal, Niche has completed numerous exploration REFs. These exploration works comprise seismic lines and exploration borehole works. Aboriginal Objects Due Diligence Assessments (DDs) were completed to inform the REFs. The following DD assessments have been undertaken within Dendrobium Area 3C:</p> <ul style="list-style-type: none"> – Niche (2021b) Dendrobium Longwall 19 and 21 Groundwater Monitoring Boreholes - Aboriginal Objects Due Diligence Assessment. – Niche (2021c) Dendrobium Area 3C Environmental Monitoring Review of Environmental Factors - Aboriginal Objects Due Diligence Assessment. – Niche (2021d) Dendrobium Area 3 Environmental Monitoring Review of Environmental Factors Addendum - Additional Flow Monitoring and Shallow Swamp Piezometer Sites - Aboriginal Objects Due Diligence Assessment. <p>The survey assessment for these works included surveying all ridgelines and creek beds within close proximity to the proposed works and relocating works within 100 m of AHIMS-registered Aboriginal sites. The survey completed for the Environmental Monitoring DD (Niche 2021c) revisited one previously recorded Aboriginal heritage site consisting of a shelter with artefacts and a deposit named DM10 (AHIMS ID# 52-2-4657). Visibility was noted to be variable across the assessment areas. No new Aboriginal heritage sites, however, were identified during any of the assessments.</p> <p>While no new sites were identified, the combination of targeted survey coverage and variable visibility conditions suggests that subsurface archaeological potential remains, particularly in landforms known to contain cultural material—reinforcing the relevance of the existing predictive model to the current assessment.</p> <p>While no new sites were identified, the combination of targeted survey coverage and variable visibility conditions suggests that subsurface archaeological potential remains, particularly in landforms known to contain cultural material—reinforcing the relevance of the existing predictive model to the current assessment.</p>
<p>Niche (2022b)</p>	<p>Aboriginal Objects Due Diligence Assessment: Longwall 21 Exploration Boreholes</p> <p>This draft Aboriginal Objects Due Diligence Assessment is part of a REF relating to two proposed exploration borehole sites, D-S4-01 and D-S4-02, located within Longwall 21 in Area 3C. A survey was completed of the area of the proposed borehole sites. No new Aboriginal heritage sites were identified; however, the results are consistent with previous assessments in the area and support the existing predictive model, which suggests that while surface-visible sites may be absent, there remains a potential for subsurface archaeological material in suitable landforms.</p>
<p>Niche (2024)</p>	<p>Baseline Recording Longwalls 311 to 316 Metropolitan Colliery - Aboriginal Heritage Baseline Recording</p> <p>This report presents the baseline recording of 36 Aboriginal heritage sites undertaken by Niche Environment and Heritage Pty Ltd (Niche) for sites located within 600 m of Longwalls 311 to 316. These sites were previously reported on in the Aboriginal Cultural Heritage Assessment (ACHA) prepared by Kayandel Archaeological Services (2008) to support the Metropolitan Coal Project Environmental Assessment. The re-recording of these sites provides updated condition data and confirms the persistence of cultural material in proximity to</p>



	longwall infrastructure, reinforcing the archaeological sensitivity of the broader landscape and supporting the application of similar predictive criteria in the current assessment.
Peabody (2024)	<p>Metropolitan Coal Longwalls 311-316 Heritage Management Plan</p> <p>This Heritage Management Plan was prepared to manage the potential environmental consequences of the Extraction Plan on Aboriginal heritage sites or values. A total of 65 Aboriginal heritage sites located within 600 m of Longwalls 311-316 secondary extraction, the majority of which are Shelter and Grinding Groove sites. The high concentration of culturally significant sites in proximity to extraction areas highlights the archaeological sensitivity of the landscape and underscores the importance of ongoing monitoring and mitigation strategies, which remain relevant to the current assessment.</p>
Niche (2025)	<p>Metropolitan Longwall 311-317 Monitoring Locations</p> <p>This Aboriginal Objects Due Diligence Assessment assessed survey line areas, groundwater hole sites, road maintenance areas, water sampler sites, and drill pads for a clearance area of up to 18, 375m². No sites were located within the assessed Activity Area, nor were any new sites identified during the course of investigations. The report identified that Shelters with Art and Grinding Grooves are the most common site types within the Metropolitan Colliery area, and other site types are fairly rare. This assessment noted that shelters with art and grinding grooves are the most common site types within the broader Metropolitan Colliery area, while other site types are relatively uncommon. These findings support the existing predictive model for the region and suggest that, although no sites were identified during this investigation, targeted landforms associated with rock shelters and water sources should continue to be prioritised in the current assessment.</p>

AHIMS

An AHIMS search was undertaken on 13 June 2025 (AHIMS Client# 91013796) for the area encompassing Eastings: 311283.0 - 313416.0, Northings: 6212493.0 - 6214592.0.

A total of 46 registered Aboriginal cultural heritage sites were identified in the searches (Table 2). There were no Aboriginal Places identified. The AHIMS results are provided in full in Appendix 1.

Table 2: Overview of Aboriginal heritage site features within proximity of Activity Area.

Site features	Total	Percentage of total (%)
Grinding Groove	16	34.78
Shelter with Art	7	15.21
Shelter with Deposit	4	8.70



Open Camp Site	3	6.52
Shelter with Art, Shelter with Deposit	2	4.35
Artefact	2	4.35
Shelter with Art, Deposit and Grinding Groove	2	4.35
Shelter with Art, Shelter with Midden	2	4.35
Grinding Groove, Rock Engraving	1	2.17
Grinding Groove, Shelter with Art	1	2.17
Grinding Groove, Open Camp Site	1	2.17
Grinding Groove, Rock Engraving, Shelter with Art	1	2.17
Grinding Groove, Water Hole/Well	1	2.17
Midden	1	2.17
Potential Archaeological Deposit (PAD)	1	2.17
Rock Engraving	1	2.17
Total	46	100%

The most common feature of Aboriginal archaeological site encountered in the area encompassed by the AHIMS search are grinding grooves (n=16) and shelters with art (n=7). Other site types are present within the region but are generally rare to a far lesser extent.

Nineteen of the registered AHIMS sites identified within the search results comprise sandstone shelter sites that have either one or a combination of PAD, artefacts, grinding grooves and/or art. The Hawkesbury sandstone of the Activity Area lends itself to this site type to be used by past Aboriginal peoples for artistic expression, occupation, and transient use. These site types are significant to the local Aboriginal community as they are evidence of past occupation of the area and can be used as an educational tool for younger generations. A total of seven shelters with art sites were identified within the AHIMS search results. As identified in previous assessments, the most common type of expression is charcoal outline/infill (Biosis, 2007, 2009). Such sites have previously been identified within the areas surrounding Dendrobium Area 3B (Biosis, 2007) and Helensburgh (Kayandel Archaeological Services, 2008).



Sixteen of the registered AHIMS sites identified within the search results comprise grinding groove sites. These are a common site type within the broader region of the Woronora Plateau. This can be attributed to the landforms within the Hawkesbury Sandstone landscape that commonly feature large areas of sandstone plateau and large rivers and creeks with sandstone beds suitable for use for the making and sharpening of stone tools through the process of grinding. These sites are typically associated with water beds and rock platforms on creeks, but not always. These sites hold significance to the local Aboriginal community as evidence of past occupation and use of the Activity Area as well as an educational tool for younger generations.

At least 3 AHIMS sites lie within 20 m of the proposed Activity Area (Figure 3 and Table 3).

Table 3: AHIMS sites within 20 m proximity of Activity Area.

AHIMS ID	Site name	Site type	Proximity to Activity Area
52-2-0732	Flat Rock Creek 166	Grinding Groove	20 m west of Activity Area boundary
52-2-3492	Flat Rock Creek 299	Art (Pigment or Engraved)	20 m west of Activity Area boundary
52-2-0320	Flat Rock Creek 118 duplicate of 52-2-0205	Artefact, Art (Pigment or Engraved)	Adjacent to existing access track to Shaft site
52-2-0205	Flat Rock Creek 118 duplicate of 52-2-0320	Artefact, Art (Pigment or Engraved), Grinding Groove	

AHIMS limitations

There are several limitations to the AHIMS dataset. These limitations include the following:

- The status of the registered sites, whereby the status of the current site does not match the AHIMS database.
- Some datum and locational errors within the AHIMS dataset – particularly of sites with *loci*.
- Sites are presented as point data, not polygons, so site extents of PADs and large scatters are not conveyed.
- Sites that have not been registered in AHIMS.



Subject area

Vegetation exclusion zone 2025

AHIMS

Shelter with Art, Artefact(s), Grinding Groove(s) and Rock Engraving

Grinding Groove(s)

Transport

Major road
 Minor road

Administrative and Property Boundaries

Lot
 Local Government Area



0 40

m

GDA2020 MGA Zone 56



Figure 3

Location of AHIMS Sites and Heritage Items

Surface Works Assessment - No 3 Shaft

Niche PM: Mandy Melvaine
 Niche Proj. #: 9221
 Client: Metropolitan Collieries



Step 2: Is the Activity a 'Low Impact Activity', as defined in the NPW Regulation?

No.

The activity is not a low impact activity because the proposed activity involves disturbance to the ground surface from the installation of enclosed flares to the gas drainage plant, which will involve ground clearing to set up a pad on which the enclosed flare unit will sit.

Further vegetation clearance to the extent of the proposed disturbance area will also be required.

The above proposed activities are not low impact as defined under Clause 80B (1)-(3) of the Code within the *National Parks and Wildlife Regulation 2019* (NSW Government, 2019).

Step 3. Are there landscape features on undisturbed land that are likely to indicate the presence of Aboriginal objects?

Yes.

The following landscape features listed in the Code signify a high potential for the presence of Aboriginal objects:

- Within 200 m of waters; or
- located within a sand dune system; or
- located on a ridge top, ridge line or headland; or
- located within 200 m below or above a cliff face; or
- within 20 m of or in a cave, rock shelter, or a cave mouth.

In accordance with the Code, the Activity Area is located within 200 m of waters. Two ninth order tributaries of the Waratah Rivulet cross into the Activity Area.

The water sources present within proximity to the Activity Area have the potential to have been used as navigational and transitory routes, particularly in moving between the coast and the inland areas associated with the Cumberland Plain and surrounds. The many significant waterways and smaller tributaries within the landscape would have provided fresh water sources for Aboriginal people, as well as a range of flora and faunal species for subsistence.

Based on the known geology and soils within the Activity Area, archaeological potential is moderate, dependent on the impact of past historic disturbances. Soils that have not been subjected to high levels of disturbance, particularly in colluvial soils have the potential for preserving archaeological deposits, while surface finds may also be present across the landscape. Identification of tool manufacture is likely as chert is located within this landscape and is commonly utilised for manufacture of stone tools. It can be surmised that there is potential for grinding groove sites where sandstone is exposed, particularly near a reliable water source. Given the prevalence of sandstone outcrops and overhangs within the broader Metropolitan Special Area, there is also a high potential for overhangs and shelter sites which may contain art surfaces and other evidence of Aboriginal occupation such as artefacts and hearths.

The landscape has been subject to limited impacts over time, owing to the area being part of the WaterNSW Metropolitan Catchment Area and being located between Heathcote National Park and the Dharawal Nature Reserve.

Access within the Metropolitan Catchment Area is limited to the public and is restricted by WaterNSW. Land use impacts include:

- Creation of the Woronora Dam.
- Installation of services (power lines, pipes, roads).
- Exploration drilling and seismic activities.



Each of the above land uses and activities impact the preservation and visibility of the archaeological record within the Activity Area. Additionally, the presence of existing shaft infrastructure and associated proximity works within the Activity Area suggests a moderate degree of prior disturbance.

As such, a desktop assessment and a visual inspection were conducted for the proposed activities.

Step 4: Does the desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?

Yes.

The desktop assessment confirmed there are previously recorded AHIMS adjacent to the proposed work locations of the Activity Area. They are positioned within 200 m of a waterway which constitute a landscape with elevated archaeological potential. Therefore, a field assessment was required to further determine the likelihood for Aboriginal cultural heritage to occur within the Activity Area.

2.1.1 Site inspection details

A site inspection was conducted over one day on 16 June 2025, by Isabel Parnell (Niche, Heritage Consultant). The survey involved inspecting the work locations of the Activity Area and nearby areas for potential Aboriginal cultural heritage sites (Plate 2 to Plate 9).

The Ground Surface Visibility (GSV) was generally low (<20%), due to vegetation cover, comprising of sheltered forest on transitional sandstone soils, and gully forests, with some areas of exposure along drainage depressions and previously cleared areas (Plate 2 to Plate 5). No landforms that are conducive to occupation were identified, due to the assessed sloping undulating landform of the Activity Area. Tributaries of the Waratah Rivulet were surveyed and exposed stone was inspected for grinding grooves. Cleared or previously disturbed areas are present in proximity to the Activity Area, likely in relation to the existing shaft infrastructure (Plate 7 and Plate 8). Soils were a sandy loam, and due to the sloping landforms and proximity to both the highway and existing shaft infrastructure, it is likely that soils are not intact (Plate 6).

There were no new Aboriginal objects or sites identified during the inspection.



Plate 2: Dense vegetation growth, minor area of exposure at forefront, photo facing east.



Plate 3: Dense ground coverage (low GSV) and damp, sheltered forest photo facing northeast.



Plate 4: Open woodland area, photo facing northeast.



Plate 5: Small tributary, photo facing northwest.



Plate 6: Sandy loam topsoil.



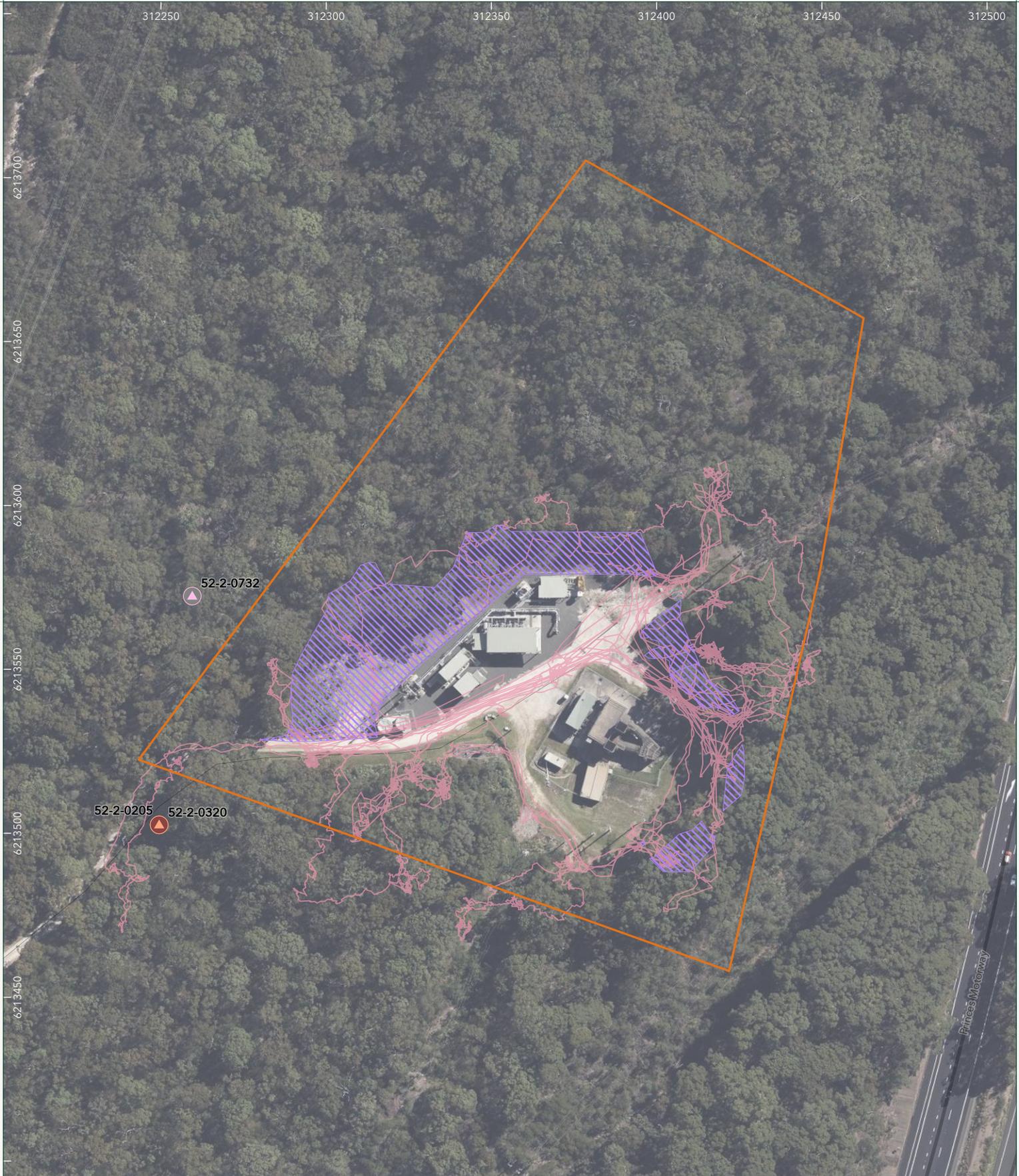
Plate 7: Rock outcropping at northeastern side of Activity Area, photo facing south.



Plate 8: Area of existing disturbance from infrastructure and clearing associated with the existing shaft, photo facing north.



Plate 9: Low GSV due to thick ground coverage, photo facing northeast.



- | | | |
|--------------------------------|--|------------------|
| Subject area | AHIMS | Transport |
| Vegetation exclusion zone 2025 | Shelter with Art, Artefact(s), Grinding Groove(s) and Rock Engraving | Major road |
| Survey tracks | Grinding Groove(s) | Minor road |



Figure 4

Site Inspection Results and Aboriginal Heritage Constraints
Surface Works Assessment - No 3 Shaft

Niche PM: Mandy Melvaine
Niche Proj. #: 9221
Client: Metropolitan Collieries



Survey tracks: / Landform areas: / Disturbance footprint: / Distinct land surface area: / Transparency Mask: / Road: / Indistinct landform extent area: / Indistinct landform extent point: / Hillshade: Sources: Esri, Maxar, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community/ AHIMS: / Rail: / Local Heritage Place (Albury City Council): / Distinct land surface point: / State Heritage Register Curtilage: / Watercourse: / Subject area: / Waterbody: / public/NSW_Imagery: © Department of Customer Service 2020/ Distinct land surface line: / Indistinct landform extent line: | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56.



Step 5: Can the activity be relocated away from the known/likely area of Aboriginal objects?

The desktop assessment and visual inspection found that no known Aboriginal cultural heritage is located within the Activity Area. Given the presence of sandy loam soils, the sloping nature of the landforms, and the proximity to both the highway and existing shaft infrastructure, it is likely that the natural soil profiles have been disturbed. As such, the potential for intact subsurface archaeological deposits within this area is considered low. No further archaeological assessment is required, and works may proceed with caution in accordance with the recommendations:



3 Conclusions and recommendations

Niche was commissioned by Peabody Energy to conduct a DD assessment to determine whether any Aboriginal objects will be harmed by the proposed activity, whether further investigation is needed, and whether that harm requires an AHIP.

Based on the desktop and fieldwork assessment, there are no Aboriginal cultural heritage sites within the Activity Area. Three Aboriginal cultural heritage sites (Flat Rock Creek 166 [AHIMS ID# 52-2-0732]; Flat Rock Creek 299 [AHIMS ID# 52-2-3492]; and Flat Rock Creek 188 [AHIMS ID# 52-2-0329] (Same as AHIMS ID# 52-2-0205) have been identified within 20 m of the Activity Area.

In response to the results of this Due Diligence assessment, the following recommendations have been developed.

Recommendations Actions		
1.	With respect to ACH, works can proceed with caution	With the measures outlined below implemented, the proposed activities present no risk of harming Aboriginal objects, and works may proceed with caution with regards to Aboriginal Cultural Heritage.
2.	Vehicle caution	Work vehicles must be confined to designated access tracks and work areas.
Unexpected Finds Procedure		
3.	Unexpected Aboriginal object(s) and/or sites	<p>The proposed works can proceed with caution with an Unexpected Finds Procedure in place, as outlined below:</p> <ul style="list-style-type: none"> – All site workers and contractors should be inducted into the area and informed of the obligations under the NPW act. – In the unlikely event that any Aboriginal objects are found, all activities with the potential to impact the objects must and a temporary fence is to be erected around the Aboriginal cultural heritage site, with a buffer zone of at least 10 m around the known edge. – Temporary fencing will comprise (at minimum) star pickets and high visibility construction fencing/similar suitable materials. – Immediately cease all activity at the location. – Ensure no further harm occurs and secure the area. – Contact a suitably qualified heritage specialist to inspect the find and confirm if it is an Aboriginal object, and to determine the need for further investigation or management. – If the find is confirmed to be an Aboriginal object, contact Heritage NSW to confirm the next steps for management. – No further action to be undertaken until Heritage NSW provides written advice.
4.	Human remains	<p>In the unlikely event that suspected human remains are encountered during works, all work in the area that may cause further impact must cease immediately and:</p> <ul style="list-style-type: none"> – The location, including a 20 m curtilage, should be secured using barrier fencing to avoid further harm. – The NSW Police must be contacted immediately. – No further action is to be undertaken until the NSW Police provide written advice.



Recommendations Actions

		<p>If the skeletal remains are identified as Aboriginal, Peabody Energy or their agent must:</p> <ul style="list-style-type: none">– Contact a suitably qualified heritage specialist; and Heritage NSW to confirm the next steps for management.– No further action to be undertaken until Heritage NSW provides written advice.
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Appendix 1 - AHIMS Extensive Search

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status **</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
52-2-0823	Flat Rock Creek 160; duplicate of 52-2-0309	GDA	56	311590	6213560	Closed site	Valid	Artefact : -	Shelter with Deposit	102160,104928,105044
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group,Illawarra Prehistory Group					<u>Permits</u>		
52-2-0721	Flat Rock Creek 113;	GDA	56	312030	6214390	Closed site	Valid	Art (Pigment or Engraved) : 20, Artefact : 1, Grinding Groove : 4	Axe Grinding Groove,Shelter with Art,Shelter with Deposit	102160,104919,104982,105044
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group,Illawarra Prehistory Group					<u>Permits</u>		
52-2-0412	Flat Rock Creek 156; duplicate of 52-2-0878	GDA	56	311346	6212824	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Midden	102160
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group					<u>Permits</u>		
52-2-3486	Flat Rock Creek 301	AGD	56	312000	6214365	Open site	Valid	Grinding Groove : 1		102160,104919,104982,105044
	<u>Contact</u> Searle	<u>Recorders</u>	Illawarra Prehistory Group					<u>Permits</u>		
52-2-0825	Flat Rock Creek 175;	AGD	56	311210	6214030	Closed site	Valid	Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Deposit	102160,104925,105044
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group					<u>Permits</u>		
52-2-0361	Flat Rock Creek 138 duplicate of 52-2-0184	GDA	56	311463	6213080	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102160,104928
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group,Illawarra Prehistory Group,Illawarra LALC					<u>Permits</u>		
52-2-0876	Flat Rock Creek 120 duplicate of 52-2-0319	GDA	56	312355	6213375	Open site	Valid	Grinding Groove : 12, Art (Pigment or Engraved) : 1	Axe Grinding Groove,Rock Engraving	102160,104928
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group,Illawarra Prehistory Group,Mr.F Wright					<u>Permits</u>		
52-2-3488	Flat Rock Creek 295	AGD	56	311272	6212585	Open site	Valid	Grinding Groove : 9		102160
	<u>Contact</u> Searle	<u>Recorders</u>	Illawarra Prehistory Group					<u>Permits</u>		
52-2-3491	Flat Rock Creek 298	AGD	56	311580	6212930	Open site	Valid	Grinding Groove : 1		102160
	<u>Contact</u> Searle	<u>Recorders</u>	Illawarra Prehistory Group					<u>Permits</u>		
52-2-0202	Flat Rock Creek 110 duplicate of 52-2-0319	GDA	56	312071	6213239	Closed site	Valid	Grinding Groove : 1, Art (Pigment or Engraved) : -	Axe Grinding Groove,Shelter with Art	102160,104928
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group,Illawarra Prehistory Group					<u>Permits</u>		
52-2-0725	Flat Rock Creek 114;	GDA	56	312370	6214200	Open site	Valid	Grinding Groove : 1	Axe Grinding Groove	102160,104919,104928,105044
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group,Illawarra Prehistory Group					<u>Permits</u>		
52-2-1267	Helensburg Site 7;	AGD	56	312050	6213730	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	897,105044
	<u>Contact</u>	<u>Recorders</u>	Mrs.Caryll Sefton					<u>Permits</u>		

Report generated by AHIMS Web Service on 13/06/2025 for Olivier Rochecouste for the following area at Datum :GDA, Zone : 56, Eastings : 311283.0 - 313416.0, Northings : 6212493.0 - 6214592.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 46

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
52-2-0363	Flat Rock Creek 112 duplicate of 52-2-0806	GDA	56	312704	6214412	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102160,105044
	Contact	Recorders	Illawarra Prehistory Group,Illawarra Prehistory Group,Illawarra Prehistory Group					Permits	2545	
52-2-0310	Flat Rock Creek 125; duplicate of 52-2-0727	AGD	56	311625	6212750	Open site	Valid	Grinding Groove : -, Water Hole : -	Axe Grinding Groove,Water Hole/Well	102160,104919,104925,104928
	Contact	Recorders	Unknown Author,Illawarra Prehistory Group					Permits		
52-2-0320	Flat Rock Creek 118 duplicate of 52-2-0205	GDA	56	312248	6213500	Closed site	Valid	Artefact : 3, Art (Pigment or Engraved) : 7	Shelter with Art	102160,104928,105044
	Contact	Recorders	Illawarra Prehistory Group,Illawarra Prehistory Group,Illawarra Prehistory Group					Permits		
52-2-3449	Flat Rock Creek 318	AGD	56	311206	6213200	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		102160
	Contact Searle	Recorders	Illawarra Prehistory Group					Permits		
52-2-0364	Flat Rock Creek 109 Blue Gum Forest duplicate of 52-2-0190	AGD	56	311630	6212725	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102160
	Contact	Recorders	Illawarra Prehistory Group,Illawarra Prehistory Group					Permits	2545	
52-2-0190	Blue Gum Forest;Flat Rock Creek 109; same as 52-2-0364	AGD	56	311630	6212725	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102160
	Contact	Recorders	Illawarra Prehistory Group,Illawarra Prehistory Group					Permits	3558	
52-2-3489	Flat Rock Creek 296	AGD	56	311226	6212713	Open site	Valid	Grinding Groove : 7		102160
	Contact Searle	Recorders	Illawarra Prehistory Group					Permits		
52-2-3490	Flat Rock Creek 297	AGD	56	311266	6213012	Open site	Valid	Artefact : 5		102160
	Contact Searle	Recorders	Illawarra Prehistory Group					Permits		
52-2-3494	Flat Rock Creek 302	AGD	56	311864	6213223	Closed site	Valid	Artefact : 11		102160,105044
	Contact Searle	Recorders	Illawarra Prehistory Group					Permits		
52-2-0197	Flat Rock Creek 121	GDA	56	311980	6213220	Closed site	Valid	Art (Pigment or Engraved) : 12	Shelter with Art	102160,104928
	Contact	Recorders	Illawarra Prehistory Group,Illawarra Prehistory Group					Permits		
52-2-1268	Helensburg Site 8;	AGD	56	312250	6213200	Open site	Valid	Artefact : -	Open Camp Site	897
	Contact	Recorders	Mrs.Caryll Sefton					Permits		
52-2-0343	Flat Rock Creek 150 Blue Gum Forest	AGD	56	311925	6213080	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	102160
	Contact	Recorders	Illawarra Prehistory Group					Permits		
52-2-0319	Flat Rock Creek 110 duplicate of 52-2-0202 and 52-2-0876	GDA	56	312355	6213375	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102160,104915,104928
	Contact	Recorders	Illawarra Prehistory Group,Illawarra Prehistory Group,Mr.F Wright					Permits		
52-2-0540	Flat Rock Creek 252	AGD	56	311500	6213920	Open site	Destroyed	Artefact : -	Open Camp Site	102160,105044

Report generated by AHIMS Web Service on 13/06/2025 for Olivier Rochecouste for the following area at Datum :GDA, Zone : 56, Eastings : 311283.0 - 313416.0, Northings : 6212493.0 - 6214592.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 46

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Illawarra Prehistory Group					Permits		
52-2-0882	Flat Rock Creek 258	AGD	56	311430	6212770	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102160
	Contact	Recorders	Illawarra Prehistory Group					Permits		
52-2-0205	Flat Rock Creek 118 duplicate of 52-2-0320	GDA	56	312248	6213500	Closed site	Valid	Artefact : 3, Art (Pigment or Engraved) : 7, Grinding Groove : -	Axe Grinding Groove,Rock Engraving,Shelter with Art	102160,104928,105044
	Contact	Recorders	Illawarra Prehistory Group,Illawarra Prehistory Group,Illawarra Prehistory Group					Permits		
52-2-0201	Flat Rock Creek 111 duplicate of 52-2-0384	AGD	56	312077	6213282	Open site	Not a Site	Grinding Groove : -	Axe Grinding Groove	102160
	Contact	Recorders	Unknown Author,Illawarra Prehistory Group					Permits		
52-2-3472	Flat Rock Creek 341	AGD	56	312884	6214063	Open site	Valid	Grinding Groove : 1		102160
	Contact Searle	Recorders	Illawarra Prehistory Group					Permits		
52-2-0196	Flat Rock Creek 119	GDA	56	311860	6213815	Closed site	Valid	Artefact : 8	Shelter with Deposit	102160,104919,104928,105044
	Contact	Recorders	Illawarra Prehistory Group,Illawarra Prehistory Group					Permits		
52-2-0824	Flat Rock Creek 167;	AGD	56	311230	6213530	Closed site	Not a Site	Artefact : -	Shelter with Deposit	102160
	Contact	Recorders	Illawarra Prehistory Group					Permits		
52-2-0878	Flat Rock Creek 156; duplicate of 52-2-0412	GDA	56	311346	6212824	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Midden	102160,104928
	Contact	Recorders	Illawarra Prehistory Group,Mrs.Caryll Sefton					Permits	608	
52-2-3492	Flat Rock Creek 299	AGD	56	312122	6213345	Closed site	Valid	Art (Pigment or Engraved) : 1		102160,105044
	Contact Searle	Recorders	Illawarra Prehistory Group					Permits		
52-2-0184	Flat Rock Creek 108 duplicate of 52-2-0361	GDA	56	311463	6213080	Closed site	Valid	Artefact : 2	Shelter with Deposit	102160,104928
	Contact	Recorders	Illawarra Prehistory Group,Illawarra Prehistory Group,Illawarra LALC					Permits		
52-2-3493	Flat Rock Creek 300	AGD	56	312059	6213351	Closed site	Valid	Artefact : 1		102160,105044
	Contact Searle	Recorders	Illawarra Prehistory Group					Permits		
52-2-0726	Flat Rock Creek 115;	GDA	56	312260	6214240	Closed site	Valid	Artefact : -, Art (Pigment or Engraved) : 1	Shelter with Art,Shelter with Deposit	102160,104919,104928,104982,105044
	Contact	Recorders	Illawarra Prehistory Group,Illawarra Prehistory Group					Permits		
52-2-0731	Flat Rock Creek 162;	GDA	56	311678	6212885	Closed site	Valid	Artefact : 19, Art (Pigment or Engraved) : 72, Grinding Groove : 4	Axe Grinding Groove,Shelter with Art,Shelter with Deposit	102160,104928

Report generated by AHIMS Web Service on 13/06/2025 for Olivier Rochecouste for the following area at Datum :GDA, Zone : 56, Eastings : 311283.0 - 313416.0, Northings : 6212493.0 - 6214592.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 46

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group,Illawarra Prehistory Group					<u>Permits</u>		
52-2-0732	Flat Rock Creek 166;	GDA	56	312259	6213571	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102160,104928,105044
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group,Illawarra Prehistory Group					<u>Permits</u>		
52-2-0206	Flat Rock Creek 165	AGD	56	312433	6213747	Open site	Not a Site	Artefact : -	Open Camp Site	102160
	<u>Contact</u>	<u>Recorders</u>	Miss.Marjorie Sullivan					<u>Permits</u>		
52-2-0806	Flat Rock Creek 112; duplicate of 52-2-0363	GDA	56	312704	6214412	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	102160,105044
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group,Illawarra Prehistory Group,Illawarra Prehistory Group					<u>Permits</u>		
52-2-0822	Flat Rock Creek 159;	AGD	56	311200	6212950	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	102160
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group					<u>Permits</u>		
52-2-0740	Flat Rock Creek 123;	AGD	56	312000	6213920	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102160,105044
	<u>Contact</u>	<u>Recorders</u>	ASRSYS					<u>Permits</u>		
52-2-0309	Flat Rock Creek 160 duplicate of 52-2-0823	GDA	56	311590	6213560	Open site	Valid	Shell : -, Artefact : -	Midden	102160,105044
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group					<u>Permits</u>		
52-2-0384	Flat Rock Creek 111; duplicate of 52-2-0201	AGD	56	312077	6213282	Closed site	Not a Site	Art (Pigment or Engraved) : -	Shelter with Art	102160
	<u>Contact</u>	<u>Recorders</u>	Unknown Author,Illawarra Prehistory Group					<u>Permits</u>		
52-2-0747	Flat Rock Creek 169;	GDA	56	312200	6214540	Open site	Valid	Artefact : 15, Grinding Groove : 1	Axe Grinding Groove,Open Camp Site	102160,104919,104982,105044
	<u>Contact</u>	<u>Recorders</u>	Illawarra Prehistory Group,Illawarra Prehistory Group					<u>Permits</u>		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified



Contact us

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Melbourne VIC 3000

Our Expertise



Natural capital
and offsetting



Ecology



Heritage
management



Environmental
planning, approvals
and management



Spatial Services

Attachment 2

No. 3 Shaft Site Construction Layout



DATUM MGA94 ZONE 56 AHD

- 1st Aid
- DRAINS
- FIRE EXTINGUISHER
- Phone
- EMERGENCY ASSEMBLY POINT
- SPILL KITS

CLIENT/PROJECT



METROPOLITAN COAL PTY LTD
METROPOLITAN MINE
PO BOX 402
HELENSBURGH 2508

DRAWING No M250630-1

SURV'D/DESG'D

CHECKED

AUTHORISED

DATE	DRAWN	SHEET	OF	SCALE
19/06/2025	Survey Dept.	1	1	NTS

METROPOLITAN MINE