

# Metropolitan Coal Mine – Longwalls 317 and 318 Modification

Application Number: **02741**

Commencement Date:

Status: **Locked**

**14/01/2025**

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## 1. About the project

### 1.1 Project details

#### 1.1.1 Project title \*

Metropolitan Coal Mine – Longwalls 317 and 318 Modification

#### 1.1.2 Project industry type \*

Mining

#### 1.1.3 Project industry sub-type

Coal

#### 1.1.4 Estimated start date \*

01/05/2026

#### 1.1.4 Estimated end date \*

22/06/2032

## 1.2 Proposed Action details

**1.2.1 Provide an overview of the proposed action, including all proposed activities. \***

### ***Background of the Existing Operations***

Underground mining and other associated development to produce metallurgical coal (also known as coking coal) are currently carried out at the Metropolitan Colliery (Metropolitan Coal Mine) pursuant to Project Approval (08\_0149) (Metropolitan Coal Project), which was granted under the *Environmental Planning and Assessment Act 1979* (EP&A Act) (New South Wales [NSW]) on 22 June 2009 (and has been subsequently modified on various occasions). The Metropolitan Coal Project was referred under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in October 2008. The Assistant Secretary of the then Department of the Environment, Water, Heritage and the Arts (DEWHA) determined the Metropolitan Coal Project to be 'Not a Controlled Action' on 4 February 2009 (EPBC 2008/4519). The Metropolitan Coal Mine is located approximately 30 kilometres (km) north of Wollongong, NSW (Att 1 – Action Figures, Figure 1), adjacent to the township of Helensburgh, NSW. The Longwall layout for the Metropolitan Coal Project (as presented in the EPBC 2008/4519 Referral) is shown on Att 1 – Action Figures, Figure 2.

The Metropolitan Coal Project proposed the construction and use of Ventilation Shaft 4, as shown on Att 1 – Action Figures, Figure 3. Ventilation Shaft 4, as proposed under EPBC 2008/4519 Referral, has not been constructed, and is no longer planned to be constructed.

### ***Description of the Action***

Metropolitan Collieries Pty Ltd (Metropolitan Coal) has identified an opportunity for the continuation of the Metropolitan Coal Mine by reconfiguring Longwall 317 and adding an additional longwall (i.e. Longwall 318).

The Proposed Action Area (which is approximately 426.1 hectares [ha]) is depicted in Att 1 – Action Figures, Figure 3. The Disturbance Footprint (i.e. direct and indirect disturbance areas) is the same as the Proposed Action Area.

Metropolitan Coal, a wholly owned subsidiary of Peabody Energy Australia Pty Ltd (Peabody), is the applicant for the Action.

### ***Activities Included in the Action***

The Action would include the following additional key activities carried out within the Proposed Action Area (Att 1 – Action Figures, Figure 3):

- extraction of coal within Longwalls 317 and 318 using longwall extraction methods (a type of underground mining); and
- establishment and use of Relocated Ventilation Shaft 4.

The Proposed Action Area comprises the area within the Longwalls 317-318 35 degree angle of draw and/or predicted 20 millimetre subsidence contour, and the disturbance associated with the relocated ventilation shaft (i.e. the direct disturbance area along with a 20 metre [m] indirect disturbance buffer) (Att 1 – Action Figures, Figure 3).

### ***Activities not Included in the Action***

The Action, the subject of this referral, explicitly does not include the following:

- non-subsiding underground roadways and development workings (also known as 'first workings') which would be used to access Longwalls 317 and 318;
- maintenance and use of existing infrastructure including access tracks;
- development and use of new access tracks on previously cleared land;
- use of existing and approved but yet to be constructed ventilation infrastructure;

- continued use of the existing Metropolitan Coal Mine Major Surface Facilities and existing supporting surface infrastructure in the underground mining area;
- continued operation of the existing Coal Handling and Preparation Plant (CHPP);
- train loading and train movements associated with the transport of product coal to Port Kembla Coal Terminal;
- ongoing exploration and mining activities within mining and exploration tenements authorised under the NSW *Mining Act 1992*, including Coal Lease (CL) 379, Consolidated Coal Lease (CCL) 703, Mining Lease (ML) 1610, ML 1702, Mining Purpose Lease (MPL) 320 and Exploration Licence (EL) 9364; and
- the components and operations of the Metropolitan Coal Project (as described in the EPBC 2008/4519 Referral), whether or not those components or operations have been constructed, and irrespective of where those components are located.

### ***Purpose of the Action***

The Action has been proposed as it is a logical continuation of the existing Metropolitan Coal Mine that can use existing infrastructure and services to continue to extract high-quality metallurgical coal (or coking coal) and continue the employment of the existing Metropolitan Coal Mine workforce. The Action would continue to supply high-quality metallurgical coal to the BlueScope Port Kembla Steelworks and to international customers.

### ***Likely Direct and Indirect Impacts***

The Action would include secondary extraction via longwall mining methods of the Bulli Seam within the underground mining area shown on Att 1 – Action Figures, Figure 3. Longwall mining involves the extraction of rectangular panels of coal defined by underground roadways constructed around each longwall. The longwall mining machine travels back and forth across the width of the coal face progressively removing coal in slices from the panel. Once each slice of coal is removed from the longwall face, the hydraulic roof supports are moved forward, allowing the roof and a section of the overlying strata to fall behind the longwall machine (referred to as forming the ‘goaf’). Longwall mining associated with the Action would result in subsidence effects on the surface above and surrounding Longwalls 317 and 318. The Action also proposes direct additional disturbance of approximately 4.3 ha as a result of vegetation clearing associated with a relocated ventilation shaft (Relocated Ventilation Shaft 4).

All direct and indirect impacts of the Proposed Modification would be assessed in the Modification Report prepared in support of the NSW EP&A Act application to modify Project Approval (08\_0149).

### ***Land Tenure***

As depicted in Att 1 – Action Figures, Figure 4, the Proposed Action Area is located on WaterNSW-owned land within ML 1702, CCL 703 and EL 9364. The Proposed Action Area associated with the Action would be located within the Woronora Special Area (Att 1 – Action Figures, Figure 1).

## **1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?**

Yes

## **1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?**

No

#### 1.2.4 Related referral(s)

EPBC Number	Project Title
2008/4519	Metropolitan coal project - continuation, upgrade and extension of underground m

#### 1.2.5 Provide information about the staged development (or relevant larger project).

The Metropolitan Coal Project was referred under the EPBC Act in October 2008 and included a project area of approximately 6,084 ha for its existing and proposed underground mining operations. The Assistant Secretary of the then DEWHA determined the Metropolitan Coal Project to be 'Not a Controlled Action' on 4 February 2009 (EPBC 2008/4519).

The proposed Action involves a continuation of the Metropolitan Coal Project ('Not a Controlled Action' Decision [EPBC 2008/4519]) by reconfiguring Longwall 317 and adding an additional longwall (i.e. Longwall 318). Longwalls 317 and 318 would be accessed from the Metropolitan Coal Project underground first workings.

ROM coal extracted by the Action would be transferred to the existing CHPP via underground workings for processing. The Metropolitan Coal Mine has been operational since the 1880s. This existing CHPP and key supporting infrastructure were constructed prior to commencement of the EPBC Act.

#### 1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? \*

### ***Commonwealth Environment Protection and Biodiversity Conservation Act 1999***

The Action is being referred to the Commonwealth Minister for the Environment and Water for consideration as to whether the Action is a 'controlled action' and requires approval under the EPBC Act (i.e. this Referral).

Relevant guidelines and policies have been considered when preparing this Referral, including:

- *Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999 Matters of National Environmental Significance* (Commonwealth of Australia, 2013).
- *Significant impact guidelines 1.3 Coal seam gas and large coal mining developments – impacts on water resources* (Commonwealth of Australia, 2022).

### ***Environmental Planning and Assessment Act 1979***

The EP&A Act and the NSW *Environmental Planning and Assessment Regulation 2021* set the framework for planning and environmental assessment in NSW.

Metropolitan Coal will apply to modify its Project Approval (08\_0149) under section 4.55(2) of the EP&A Act for the Metropolitan Coal Longwalls 317-318 Modification (referred to as the Modification). A Scoping Letter for the Modification was submitted to the NSW Department of Planning and Environment (DPE) (now Department of Planning, Housing and Infrastructure [DPHI]) in October 2023 (Att 2 – Scoping Letter). Metropolitan Coal plans to submit a Modification Report to DPHI in early 2025.

### ***Biodiversity Conservation Act 2016***

The purpose of the *Biodiversity Conservation Act 2016* is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.

Metropolitan Coal will prepare a Biodiversity Development Assessment Report (BDAR) for the Modification. The BDAR would assess potential ecological impacts and the associated offset liability for unavoidable residual impacts from the Modification in accordance with the Biodiversity Assessment Method (Department of Planning, Industry and Environment, 2020), which sets a standard that would result in no net loss of biodiversity value in NSW.

### ***Mining Act 1992***

A new Mining Lease would be sought over part of EL 9364 to facilitate mining of the Bulli Seam of Longwall 318 and non-subsiding first workings (Att 1 – Action Figures, Figure 2). Under the *Environmental Planning and Assessment Regulation 2021*, a development application must be accompanied by a gateway certificate or site verification certificate.

Metropolitan Coal lodged a site verification certificate application with DPHI on 11 June 2024. The site verification certificate was issued by the Deputy Secretary Development Assessment and Sustainability as delegate for the Planning Secretary on 16 July 2024.

### ***NSW Water Management Act 2000***

Metropolitan Coal holds Water Access Licence (WAL) 36475 under NSW *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2023* and WAL 25410 under *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2023*.

Metropolitan Coal will prepare a Surface Water Assessment and Groundwater Assessment for the Modification as part of the Modification Report.

### ***Other Leases, Licence and Approvals***

Relevant leases, licences or approvals required under other NSW legislation would also be varied and/or obtained for the Action as required.

**1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. \***

Metropolitan Coal conducts regular consultation with government agencies (including the local council), community members and other interested parties regarding the Metropolitan Coal Mine and the proposed Modification (incorporating the Action).

Key objectives of the engagement undertaken for the Modification (incorporating the Action) are to:

- engage with key government and public stakeholders about the Modification (incorporating the Action);
- seek input from key stakeholders on elements of the Modification (incorporating the Action); and
- continue the ongoing dialogue between Metropolitan Coal and key stakeholders regarding the development of the Metropolitan Coal Mine.

### **Government Agencies**

Metropolitan Coal has consulted with the following NSW Government agencies regarding the Modification (incorporating the Action):

- DPHI (formerly DPE);
- NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW);
- WaterNSW;
- Dams Safety NSW;
- NSW Resource Regulator; and
- Department of Regional NSW – Mining, Exploration and Geoscience.

Metropolitan Coal has also consulted with the Wollongong City Council and Sutherland Shire Council.

### **Community Consultation**

A Community Consultative Committee (CCC) for the Metropolitan Coal Mine is in place and provides a mechanism for ongoing communication between Metropolitan Coal and the local community.

Metropolitan Coal provided a briefing regarding the Modification (incorporating the Action) at CCC meetings in March, July and November 2023, and April and July 2024. More updates regarding the Modification will be provided in future CCC meetings.

In addition, Metropolitan Coal's website provides regular updates on the Metropolitan Coal Mine, and provides access to relevant environment and community information, including compliance reports and approval documents.

Community members will have the opportunity to review the Modification Report for the Modification (incorporating the Action) as part of the public exhibition phase of the NSW Modification application.

### **Indigenous Community**

The Modification Report and its relevant appendices will include further detailed information as to the public consultation that has been carried out in relation to the Modification. For example, the Aboriginal Cultural Heritage Assessment (ACHA) for the Modification (currently in preparation) will set out how Indigenous stakeholders have been consulted in accordance with the NSW *Aboriginal cultural heritage consultation requirements for proponents 2010* (Department of Environment, Climate Change and Water, 2010) and by reference to the guideline *Interim Engaging with First Nations People and Communities on Assessments and Approvals under the Environment Protection and Biodiversity Conservation Act 1999* (Cth DCCEEW, 2023).



## 1.3.1 Identity: Referring party

### **Privacy Notice:**

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

Personal information may be disclosed to other Australian government agencies, persons or organisations where necessary for the above purposes, provided the disclosure is consistent with relevant laws, in particular the Privacy Act 1988 (Privacy Act). Your personal information will be used and stored in accordance with the Australian Privacy Principles.

See our Privacy Policy to learn more about accessing or correcting personal information or making a complaint.

Alternatively, email us at [privacy@awe.gov.au](mailto:privacy@awe.gov.au).

**Confirm that you have read and understand this Privacy Notice \***

### **1.3.1.1 Is Referring party an organisation or business? \***

Yes

Referring party organisation details

**ABN/ACN** 91003135635  
**Organisation name** METROPOLITAN COLLIERIES PTY LTD  
**Organisation address** 31 Duncan Street, Fortitude Valley QLD 2330

Referring party details

**Name** Stephen Love  
**Job title** Environment & Community Superintendent  
**Phone** 02 4294 7384  
**Email** slove@peabodyenergy.com  
**Address** Parkes Street Helensburgh

## 1.3.2 Identity: Person proposing to take the action

### 1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? \*

Yes

Person proposing to take the action organisation details

**ABN/ACN** 91003135635  
**Organisation name** METROPOLITAN COLLIERIES PTY LTD  
**Organisation address** 31 Duncan Street, Fortitude Valley QLD 2330

Person proposing to take the action details

**Name** Stephen Love  
**Job title** Environment & Community Superintendent  
**Phone** 02 4294 7384  
**Email** slove@peabodyenergy.com  
**Address** Parkes Street Helensburgh

**1.3.2.14 Are you proposing the action as part of a Joint Venture? \***

No

**1.3.2.15 Are you proposing the action as part of a Trust? \***

No

**1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. \***

Metropolitan Collieries Pty Ltd (Metropolitan Coal) is dedicated to responsible environmental management and is focused on continually working towards improving its environmental performance.

Metropolitan Coal has not been subject to any environmental related proceedings in any of the following Courts – High Court, Federal Court, Supreme Court, District Court, and Magistrates Court.

Metropolitan Coal has been the subject of environmental related proceedings in the New South Wales Land and Environment Court, for matters related to State legislation for which Metropolitan Coal plead guilty. The Court has deferred its decision with respect to sentencing.

Metropolitan Coal was responsible for the Metropolitan Coal Project referral (EPBC 2008/4519).

Metropolitan Coal focusses on environmental management as an integral part of its ordinary mining activities and has a good record of engagement with stakeholders, including its workforce, the local community and regulators. It is committed to serving and supporting the community in which it operates and has and continues to provide significant contributions to local community projects and environmental initiatives, including:

1. Stuttering Frog (*Mixophyes Australis*) conservation program: Metropolitan Coal partnered with Symbio Wildlife Park in 2023, committing to provide financial assistance in support of their program which seeks to bring back the Stuttering Frog species into the Royal National Park, a species deemed geographically extinct from the area.
2. Platypus conservation: Metropolitan Coal is committed to allocating funds to support platypus conservation initiatives to help ensure the species thrives on a long-term basis.
3. Metropolitan Coal holds and facilitates a Community Consultative Committee at regular intervals throughout the year, inviting engagement with the local community on matters of general business and the environmental performance of the mine's operation, including surface water management during record rainfall events.

The Action will be undertaken in accordance with the proponent's environmental policy and management framework.

**1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework**

Peabody's Health, Safety, Environment & Communities Policy is provided below.

*We commit to safety and health as a way of life. In addition, we take responsibility for minimising impacts on the environment, providing benefits to our communities and restoring the land for future generations.*

*Our vision is to operate safe, healthy and environmentally responsible workplaces that are incident free. Safety and health as well as environmental sustainability are core Peabody values and are integrated into all areas of our business. Our goal is to eliminate all workplace incidents, including injuries and occupational illnesses, and mitigate environmental impacts.*

*The following governing principles apply to our employees, contractors, visitors and vendors at our sites, or any location where Peabody work activities take place and includes all phases of the mining life cycle:*

- Management has the overall accountability for safety, health and environmental management, the promotion of risk management, and the sharing of knowledge across the organization;*
- Everyone is responsible for their own safety and health, preparation for and fitness for work, as well as looking out for their co-workers and protecting the environment;*
- Everyone will be provided training and equipment to perform their jobs in a safe, healthy and environmentally responsible manner;*
- Everyone has the authority to stop and challenge activities that could result in injury or unauthorized environmental impacts;*
- Everyone must comply with established safety, health and environmental requirements (including lifesaving / cardinal rules), laws and regulations;*
- Open, honest and effective incident investigation, followed by corrective actions that address the issues identified is essential;*
- Risks and opportunities are identified and monitored to continuously improve safety, health, environmental stewardship, emissions reduction, and resource management;*
- Safety, health and environmental objectives will be developed, and applicable performance indicators appropriately reported;*
- Areas disturbed by mining will be progressively rehabilitated/reclaimed, monitored and maintained to help ensure desired post-mine land use, landform and environmental outcomes are achieved;*
- Successes will be celebrated, and desirable behaviors recognized and reinforced.*

### 1.3.3 Identity: Proposed designated proponent

#### 1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? \*

Yes

Proposed designated proponent organisation details

**ABN/ACN** 91003135635  
**Organisation name** METROPOLITAN COLLIERIES PTY LTD  
**Organisation address** 31 Duncan Street, Fortitude Valley QLD 2330

Proposed designated proponent details

**Name** Stephen Love  
**Job title** Environment & Community Superintendent  
**Phone** 02 4294 7384  
**Email** slove@peabodyenergy.com  
**Address** Parkes Street Helensburgh

## 1.3.4 Identity: Summary of allocation

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### ✔ Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

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ABN/ACN	91003135635
Organisation name	METROPOLITAN COLLIERIES PTY LTD
Organisation address	31 Duncan Street, Fortitude Valley QLD 2330
Representative's name	Stephen Love
Representative's job title	Environment & Community Superintendent
Phone	02 4294 7384
Email	slove@peabodyenergy.com
Address	Parkes Street Helensburgh

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### ✔ Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

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Same as Referring party information.

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### ✔ Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

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Same as Person proposing to take the action information.

## 1.4 Payment details: Payment exemption and fee waiver

**1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? \***

No

**1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? \***

No

**1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?**

No

**1.4.7 Has the department issued you with a credit note? \***

No

**1.4.9 Would you like to add a purchase order number to your invoice? \***

No

## 1.4 Payment details: Payment allocation

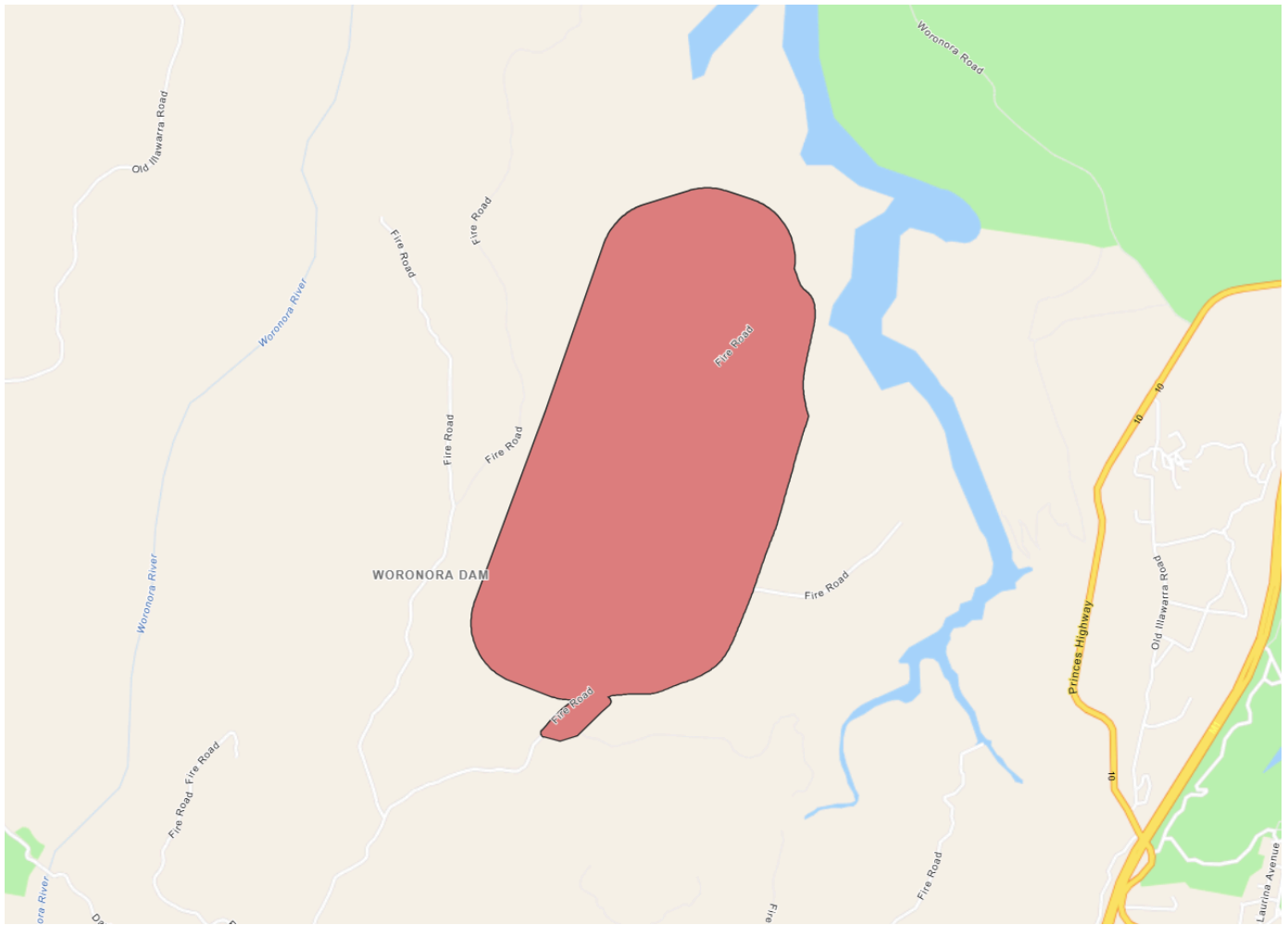
**1.4.11 Who would you like to allocate as the entity responsible for payment? \***

Referring party

## 2. Location



## 2.1 Project footprint



**Project Area: 426.20 Ha Disturbance Footprint: 426.20 Ha**

## 2.2 Footprint details

### 2.2.1 What is the address of the proposed action? \*

Metropolitan Coal Mine, Firetrail No. 9d, Woronora Dam, NSW 2508

### 2.2.2 Where is the primary jurisdiction of the proposed action? \*

New South Wales

### 2.2.3 Is there a secondary jurisdiction for this proposed action? \*

No

### 2.2.5 What is the tenure of the action area relevant to the project area? \*

Land ownership and the mining and exploration tenements across the Proposed Action Area and surrounds are shown on Att 1 – Action Figures, Figure 4. The Proposed Action Area is located within ML 1702, CCL 703 and EL 9364 which were granted under the NSW *Mining Act 1992* (Att 1 – Action Figures, Figure 3).

The Proposed Action Area is entirely within Lot 1 DP 830604 (Att 1 – Action Figures, Figure 4). All land within the Proposed Action Area is owned by WaterNSW (a State-owned Corporation established under the *Water NSW Act 2014* (Att 1 – Action Figures, Figure 4)).

## 3. Existing environment

## 3.1 Physical description

### 3.1.1 Describe the current condition of the project area's environment.

The Action is located approximately 30 km north of Wollongong, NSW, approximately 33 km north of the Port Kembla Steelworks and approximately 3 km north-west of the township of Helensburgh, NSW (Att 1 – Action Figures, Figure 1).

The Proposed Action Area is zoned as C2 (Environmental Conservation) under the Wollongong Local Environmental Plan 2009. The Proposed Action Area is located entirely within the Woronora Special Area (Att 1 – Action Figures, Figure 1). No change in land zoning is proposed for the Action. Public access to the Woronora Special Area is restricted to picnic areas at Woronora Dam, approximately 4 km north of the Proposed Action Area (WaterNSW, 2015).

The Proposed Action Area is dominated by native vegetation, with native vegetation cover in the wider area of the Woronora Plateau (i.e. associated with the water catchments of Nepean, Avon, Cordeaux, Cataract and Woronora Rivers and O'Hares Creek) being nearly 87 percent (NSW National Parks and Wildlife Service, 2003). The native vegetation within the Proposed Action Area and surrounds is generally considered to be high integrity, having experienced minimal disturbance, with minor disturbance evident along tracks/road edges (Bangalay Botanical Services, 2008). A small area of cleared land associated with roads (firetrails) is present within the Proposed Action Area.

The Proposed Action Area contains first and second order streams, coastal upland swamps, rocky outcrops, hollow-bearing trees, myrtaceous and proteaceous shrubs, and trees, fallen woody debris and ground refugia.

Honeysuckle Creek is a named watercourse partially located within the Proposed Action Area. Two other named watercourses occur in proximity of the Proposed Action Area, Bee Creek and Woronora River, both located to the west of the Proposed Action Area (Att 1 – Action Figures, Figure 5). The Proposed Action Area also contains a number of unnamed streams which flow into the Woronora Reservoir (Att 1 – Action Figures, Figure 5).

Access to the Proposed Action Area would primarily be from underground roads associated with the approved Metropolitan Coal Project (EPBC 2008/4519). Relocated Ventilation Shaft 4 and environmental monitoring and management activities associated with the Proposed Action would be accessed via existing access tracks.

Further detail on the existing environment of the Proposed Action Area will be included as part of the BDAR being prepared for the Modification.

### 3.1.2 Describe any existing or proposed uses for the project area.

The Proposed Action Area is located entirely within the Woronora Special Area on land owned by WaterNSW (Att 1 – Action Figures, Figures 1 and 4). The Woronora Special Area covers an area of approximately 75 square kilometres (km<sup>2</sup>) encompassing the catchment of the Woronora River, which drains into Woronora Reservoir. The Woronora Reservoir supplies water to the Sutherland Shire in Sydney's south, and to the northern suburbs of Wollongong (WaterNSW, 2024). Woronora Reservoir is the sole water supply to Helensburgh, Engadine and Lucas Heights. Most of the Woronora catchment features native vegetation, but there are small areas of private land in the upper catchment outside of the Proposed Action Area where stock agistment, horse riding and horticulture occur (WaterNSW, 2015).

Longwall mining associated with the approved Metropolitan Coal Mine commenced in the Woronora Special Area in 1995.

Some of the major reserves in the wider locality, outside of the Proposed Action Area, include those set aside for conservation (e.g. Garawarra and Dharawal State Conservation Areas and the Heathcote and Royal National Parks), the Holsworthy Military Reserve located to the west of the Woronora Reservoir and water catchment areas (e.g. the Metropolitan and Woronora Special Areas).

Underground mining does not result in direct disturbance of vegetation and existing conservation land areas would continue.

Relocated Ventilation Shaft 4 would be decommissioned upon completion of mining and the disturbed area would be rehabilitated with native vegetation.

### **3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.**

There are no Areas of Outstanding Biodiversity Value listed under the NSW *Biodiversity Conservation Regulation 2017* associated with the Proposed Action Area or the wider area.

The Garawarra and Dharawal State Conservation Areas and the Heathcote and Royal National Parks are located in the wider locality but do not occur within the Proposed Action Area.

### **3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.**

The Proposed Action Area is situated on the Woronora Plateau and within the Woronora Special Area. The Proposed Action Area and surrounds primarily consist of low rolling rises to rugged very steep hills on Hawkesbury Sandstone. Elevations range from approximately 190 metres Australian Height Datum (m AHD) on lower sections associated with tributaries of the Woronora Reservoir in the north, to approximately 310 m AHD on higher ridges.

## 3.2 Flora and fauna

**3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.**

The area affected is defined as the direct and indirect disturbance footprint (i.e. Proposed Action Area). The Proposed Action Area is located in the Sydney Basin Interim Biogeographic Regionalisation for Australia bioregion (NSW National Parks and Wildlife Service, 2003).

A BDAR and Aquatic Ecology Assessment are being prepared by Niche Environment and Heritage Pty Ltd (Niche) and Bio-Analysis Pty Ltd, respectively, for the proposed Modification. Surveys of vegetation, threatened flora, threatened fauna and ecological communities are being undertaken by Niche. The survey reports are in preparation.

Based on surveys undertaken for the Metropolitan Coal Project Environmental Assessment and surveys undertaken since approval of the Metropolitan Coal Project, the woodland in the Proposed Action Area predominantly supports native flora and fauna.

Surveys undertaken as part of the Metropolitan Coal Project Environmental Assessment, along with surveys undertaken since approval of the Metropolitan Coal Project, have identified the following threatened species and ecological communities listed under the EPBC Act within the Proposed Action Area and surrounds:

- Prickly Bush-pea (*Pultenaea aristata*);
- Bynoe's Wattle (*Acacia bynoeana*);
- Thick-leaf Star-hair (*Astrotricha crassifolia*);
- *Acacia baueri* subsp. *aspera*;
- Deane's Melaleuca (*Melaleuca deanei*);
- Leafless Tongue-orchid (*Cryptostylis hunteriana*);
- Woronora Beard-heath (*Leucopogon exolasius*);
- Giant Burrowing Frog (*Heleioporus australiacus*);
- Broad-headed Snake (*Hoplocephalus bungaroides*);
- Grey Falcon (*Falco hypoleucos*);
- Grey-headed Flying Fox (*Pteropus poliocephalus*);
- Littlejohn's Tree Frog (*Litoria littlejohni*);
- Pilotbird (*Pycnoptilus floccosus*);
- Swift Parrot (*Lathamus discolor*); and
- Coastal Upland Swamps in the Sydney Basin Bioregion.

*Pultenaea aristata* is a small shrub endemic to the Woronora Plateau, between Helensburgh and Mount Keira, which grows in low nutrient sandstone soils in both moist and dry areas (DEWHA, 2008a). This species has been recorded throughout the Proposed Action Area and surrounds during surveys undertaken as part of the Metropolitan Coal Project Environmental Assessment and in subsequent surveys.

*Acacia bynoeana* is semi-prostrate shrub to a meter high which is found in central eastern NSW, from the Hunter District (Morisset) south to the Southern Highlands and west to the Blue Mountains (NSW Office of Environment and Heritage [OEH], 2023). This species has been recorded throughout the area surrounding the Proposed Action Area.

*Astrotricha crassifolia* is an erect shrub growing to approximately 2.4 m high which is considered a local endemic in NSW (DEWHA, 2008b). It occurs near Patonga (Gosford LGA), and in Royal National Park and on the Woronora Plateau (Sutherland and Campbelltown LGAs). It has also been recorded near Glen Davis (Lithgow LGA) (OEH, 2024a). This species has been recorded east of the Proposed Action Area.

*Acacia baueri* subsp. *aspera* is a low growing, well-branched shrub mostly 0.1 to 1 m high with hairy and warty branches. This species is restricted to the Sydney region, occurring on the 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 (OEH, 2024b). This species has been recorded west of the Proposed Action Area.

*Melaleuca deanei* is a single or multi-stemmed colonial shrub growing up to 3 m high which is endemic to the Sydney Basin Bioregion in NSW where it occurs between St. Albans in the north, to Nepean Dam in the south and west to Faulconbridge (Department of Agriculture, Water and the Environment [DAWE], 2021). This species has been recorded to the south of the Proposed Action Area.

*Cryptostylis hunteriana* is an upright perennial leafless terrestrial herb to 75 centimetres (cm) tall which occurs in Victoria, NSW, and Queensland. In NSW, it is recorded mainly on coastal and near coastal ranges north to near Forster, with two isolated occurrences inland north-west of Grafton (DEWHA, 2008c). This species has been recorded south-west of the Proposed Action Area.

The Giant Burrowing Frog is a large, rotund, slow-moving frog that grows to about 10 cm long. It is a powerfully built species with muscular hind limbs and enlarged tubercles on the feet well suited to burrowing. The Giant Burrowing Frog is distributed in south-eastern NSW and Victoria and occurs in heath, woodland and open dry sclerophyll forest on a variety of soil types except those that are clay based (OEH, 2024c). This species has been recorded in the wider area, including within the extent of the approved Metropolitan Coal Project and Proposed Action Area.

The Broad-headed Snake shelters in rock crevices and under flat sandstone rocks on exposed cliff edges during autumn, winter and spring and shelters in crevices or hollows in large trees within 500 m of escarpments in summer. This species 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 (OEH, 2024d). The Broad-headed Snake has been recorded within the extent of the approved Metropolitan Coal Project and Proposed Action Area.

The Grey Falcon is 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 is sparsely distributed in NSW, chiefly throughout the Murray-Darling Basin, with the occasional vagrant east of the Great Dividing Range (OEH, 2022a). This species has been recorded to the north-east of the Proposed Action Area.

The Grey-headed Flying Fox habitat comprises subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps. Gardens and cultivated fruit crops also provide habitat for this species (NSW National Parks and Wildlife Service, 2001). This species has been recorded to the north-east of the Proposed Action Area.

Littlejohn's Tree Frog occurs on the plateaus and eastern slopes of the Great Dividing Range from Watagan State Forest (90 km north of Sydney) south to the end of the Woronora Plateau. Breeding habitat for this species includes the upper reaches of permanent streams and in perched swamps with non-breeding habitat comprising heath-based forests and woodland (OEH, 2024e). This species has been recorded within the extent of the approved Metropolitan Coal Project and Proposed Action Area.

The Pilotbird is endemic to south-east Australia. Upland Pilotbirds occur above 600 m in the Brindabella Ranges in the Australian Capital Territory, and in the Snowy Mountains in New South Wales and north-east Victoria. Lowland Pilotbirds occur in forests from the Blue Mountains west of Newcastle, around the wetter forests of eastern Australia, to Dandenong near Melbourne (DAWE, 2022). The Pilotbird has been recorded within the extent of the approved Metropolitan Coal Project and south-east of the Proposed Action Area.

The Swift Parrot is a migratory species which 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. It occurs in areas where eucalypts are flowering profusely or where

there are abundant lerp (from sap-sucking bugs) infestations (OEH, 2022b). This species has been recorded within the extent of the approved Metropolitan Coal Project and Proposed Action Area.

Coastal Upland Swamps in the Sydney Basin Bioregion is an Endangered Ecological Community (EEC) which includes open graminoid heath, sedgeland and tall scrub associated with periodically waterlogged soils on the Hawkesbury sandstone plateaux. This EEC is confined to the Sydney Basin Bioregion (OEH, 2024f). Areas of vegetation associated with this EEC occur widely throughout the Proposed Action Area and surrounds.

Additional EPBC Act listed threatened species and ecological communities, and migratory species identified as potentially occurring within the Proposed Action Area based on the Protected Matters Search Tool (PMST) report (Att 3 – EPBC Act Protected Matters Report) are listed in Att 4 – Potential Impacts on EPBC Act Listed Threatened Species, Ecological Communities and Migratory Species, pages 1-15. Att 4 – Potential Impacts on EPBC Act Listed Threatened Species, Ecological Communities and Migratory Species, pages 1-15, includes details of BioNet records of the potentially occurring threatened species and ecological communities, and migratory species, including those listed above (i.e. identified during previous surveys).

### **3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.**

The Proposed Action Area is located within the Illawarra climate subregion (OEH, 2014), characterised by long sandy beaches, rivers, large, protected estuaries and small coastal embayments protected by large sandstone headlands – much of which is Hawkesbury sandstone.

The Action is located on the Woronora Plateau in the Southern Coalfield. The Proposed Action Area and surroundings range in elevation from approximately 190 m AHD on lower sections associated with tributaries of the Woronora Reservoir in the north, to approximately 310 m AHD on higher ridges.

The Proposed Action Area is located within the Soil Landscapes of the Wollongong-Port Hacking 1:100,000 sheets and is dominated by the Bundeena soil landscape with the Hawkesbury soil landscape present in smaller areas.

The Bundeena Soil Landscape is located on exposed plateau surfaces, convex ridges and coastal headlands of the Woronora Plateau. Typical examples include areas surrounding Bundeena and many coastal headlands within The Royal National Park. Fertility is very low. Nutrient status is very low as is nutrient storage potential. Soils are generally strongly acid and shallow with limited volumes available for root exploitation.

The Hawkesbury Soil landscape is located on steep, rugged, Hawkesbury Sandstone slopes and ridges of the Woronora Plateau, including much of the catchments of the Woronora, Cordeaux, Cataract, Avon and Hacking Rivers. Other examples include O'Hares Creek, the Nepean River gorge upstream from Menangle and areas to the west of Buxton and Orangeville. Fertility is very low. Soils are extremely to strongly acidic with a low to very low nutrient status and storage potential. They are also shallow and stony with low available water-holding capacities and high potential aluminium toxicity.

In the north of the region, within which the Proposed Action Area lies, natural ecosystems tend to be concentrated along the escarpment and sandstone plateau. Rainforests and tall eucalypt forests occur along the Illawarra Escarpment and in sheltered gorges. The sandstone plateau is largely covered in dry sclerophyll forest, interspersed with smaller patches of heath and upland swamps (OEH, 2014).



## 3.3 Heritage

### 3.3.1 Describe any Commonwealth Heritage Places Overseas or other places recognised as having heritage values that apply to the project area.

The Proposed Action Area does not contain any Commonwealth Heritage Places or other recognised places.

### 3.3.2 Describe any Indigenous heritage values that apply to the project area.

The Proposed Action Area is located within the traditional lands of the Tharawal people and the Illawarra Local Aboriginal Land Council.

The Sydney region has been inhabited by Aboriginal people for at least 30,000 years, and possibly longer. Archaeological sites from the Blue Mountains and Hawkesbury/Nepean River System have provided the earliest evidence of occupation within the region. Excavation of the Greaves Creek rock shelter site of Walls Cave near Medlow Bath has produced a date of c.12,000 years before present (BP) (ibid). At Shaws Creek Kill, a rock shelter on the west bank of the Nepean north of Penrith, a date of c13,000 BP is recorded. Sites on the south coast of NSW, such as Burrill Lake (c.20,000) and Bass Point (c.17,000), provide complimentary dates (Kayandel Archaeological Services, 2008).

An ACHA is being prepared for the Modification, and will be included with the Modification Report. The assessment would outline Indigenous heritage values and describe management measures developed in consultation with Aboriginal stakeholders. The ACHA and Modification Report will be available to the Department upon request once the assessment is completed.

## 3.4 Hydrology

**3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. \***

## Surface Water

The Metropolitan Coal Mine is situated within the Woronora Reservoir catchment. The Woronora Reservoir supplies water to the Sutherland Shire and to the northern suburbs of Wollongong (WaterNSW, 2024). The Woronora Reservoir is the sole water supply to Helensburgh, Engadine and Lucas Heights (WaterNSW, 2015). Honeysuckle Creek is located west of proposed Longwall 318 and flows north into the Woronora Reservoir. Other named watercourses within proximity of the Proposed Action Area include Bee Creek, the Woronora River, the Waratah Rivulet and the Eastern Tributary.

Watercourses and drainage lines within and surrounding the Proposed Action Area generally flow north into the Woronora Reservoir.

Surface water quantity, surface water quality and meteorological data is monitored at the existing Metropolitan Coal Mine including within and surrounding the Proposed Action Area. Surface water monitoring results are reported in the Metropolitan Coal Mine Annual Reviews. The latest surface water monitoring results are summarised in the Metropolitan Coal 2023 Annual Review (Metropolitan Coal, 2024).

## Groundwater

The groundwater resource within and surrounding the Proposed Action Area comprises three distinct groundwater systems:

- Perched groundwater system – generally above and independent of the regional groundwater table (typically less than 20 m below the ground surface). Excess rainfall produces a permanent perched water table within swamp sediments and outcropping sandstone that is independent of the regional water table in the Hawkesbury Sandstone. As the swamps are essentially rain-fed, water levels within upland swamps fluctuate seasonally with climatic conditions.
- Shallow groundwater system – the shallow groundwater system (extending typically to less than 100 m below the ground surface) defines a regional water table and is separate from the overlying perched groundwater system.
- Deep groundwater system – although the shallow and deep groundwater systems are connected, low permeability of the Bald Hill Claystone provides a degree of isolation between the Hawkesbury Sandstone that hosts shallow groundwater and the underlying Bulgo Sandstone and deeper formations that host deep groundwater. The deep groundwater system is typically greater than 100 m below the ground surface.

Recharge to the groundwater system is from rainfall and from lateral groundwater flow. Although groundwater levels are sustained by rainfall infiltration, they are controlled by ground surface topography and surface water levels. A local groundwater mound develops beneath elevated sandstone that ultimately discharges to creeks and waterbodies. Loss by evapotranspiration through vegetation where the water table is within a few metres of the ground surface occurs within upland swamps and outcropping sandstone.

The only recognised economic aquifer in the area is the Hawkesbury Sandstone. The Hawkesbury Sandstone is a low yield aquifer of generally good quality beneath the Woronora Plateau and the Illawarra Plateau. Review of the WaterNSW 'Real-time Data' database (October 2024) indicates no privately owned registered bores, other than those registered by Metropolitan Coal, are located in the vicinity of the Proposed Action Area. The nearest private water supply bores (GW100275 and GW110916) are located approximately 5.5 km from the Action longwalls.

Groundwater level/pressure and groundwater quality is monitored at the existing Metropolitan Coal Mine including within and surrounding the Proposed Action Area. Groundwater monitoring results are reported in the Metropolitan Coal Mine Annual Reviews. The latest groundwater monitoring results are summarised in the Metropolitan Coal 2023 Annual Review (Metropolitan Coal 2024).

The Action is subject directly (and indirectly) to the water sharing rules of the following Water Sharing Plans under the NSW *Water Management Act 2000*:

- *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2023*; and
- *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2023*.

#### **Modification Assessments**

A Surface Water Assessment and a Groundwater Assessment will be prepared as part of the Modification Report. The Surface Water Assessment and Groundwater Assessment reports would be available to the Department upon request once these assessments are completed.

## 4. Impacts and mitigation

## 4.1 Impact details

**Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.**

<b>EPBC Act section</b>	<b>Controlling provision</b>	<b>Impacted</b>	<b>Reviewed</b>
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	No	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	Yes	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

## 4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

### 4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \*

No

### 4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

\*

There are no world heritage places within the vicinity of the Proposed Action Area that would be directly or indirectly impacted by the Action.

## 4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

### 4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \*

No

### 4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

\*

There are no national heritage sites within the vicinity of the Proposed Action Area that would be directly or indirectly impacted by the Action.

## 4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

**4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

No

**4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

There are no Ramsar wetlands within the vicinity of the Proposed Action Area that would be directly or indirectly impacted by the Action.

**4.1.4 Threatened Species and Ecological Communities**

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

### Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	<i>Acacia baueri</i> subsp. <i>aspera</i>	
Yes	Yes	<i>Acacia bynoeana</i>	Bynoe's Wattle, Tiny Wattle
No	No	<i>Allocasuarina glareicola</i>	
No	No	<i>Anthochaera phrygia</i>	Regent Honeyeater
No	No	<i>Astrotricha crassifolia</i>	Thick-leaf Star-hair
No	No	<i>Botaurus poiciloptilus</i>	Australasian Bittern
No	No	<i>Caladenia tessellata</i>	Thick-lipped Spider-orchid, Daddy Long-legs
No	No	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
No	No	<i>Calidris canutus</i>	Red Knot, Knot
No	No	<i>Calidris ferruginea</i>	Curlew Sandpiper
No	No	<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo
No	No	<i>Calochilus pulchellus</i>	Pretty Beard Orchid, Pretty Beard-orchid
No	No	<i>Calyptorhynchus lathami lathami</i>	South-eastern Glossy Black-Cockatoo
No	No	<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat, Large Pied Bat
No	No	<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (south-eastern)
No	No	<i>Cryptostylis hunteriana</i>	Leafless Tongue-orchid
No	No	<i>Cynanchum elegans</i>	White-flowered Wax Plant
No	No	<i>Dasyornis brachypterus</i>	Eastern Bristlebird
No	No	<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
No	No	<i>Erythrorchis radiatus</i>	Red Goshawk
No	No	<i>Eucalyptus camfieldii</i>	Camfield's Stringybark



<b>Direct impact</b>	<b>Indirect impact</b>	<b>Species</b>	<b>Common name</b>
No	No	<i>Falco hypoleucos</i>	Grey Falcon
No	No	<i>Gallinago hardwickii</i>	Latham's Snipe, Japanese Snipe
No	No	<i>Genoplesium baueri</i>	Yellow Gnat-orchid, Bauer's Midge Orchid, Brittle Midge Orchid
No	No	<i>Grantiella picta</i>	Painted Honeyeater
No	No	<i>Haloragis exalata</i> subsp. <i>exalata</i>	Wingless Raspwort, Square Raspwort
Yes	Yes	<i>Heleioporus australiacus</i>	Giant Burrowing Frog
No	No	<i>Hirundapus caudacutus</i>	White-throated Needletail
Yes	Yes	<i>Hoplocephalus bungaroides</i>	Broad-headed Snake
No	No	<i>Isoodon obesulus obesulus</i>	Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern)
Yes	Yes	<i>Lathamus discolor</i>	Swift Parrot
Yes	Yes	<i>Leucopogon exolasius</i>	Woronora Beard-heath
No	No	<i>Litoria aurea</i>	Green and Golden Bell Frog
Yes	Yes	<i>Litoria littlejohni</i>	Northern Heath Frog, Littlejohn's Tree Frog
No	No	<i>Litoria watsoni</i>	Southern Heath Frog, Watson's Tree Frog
No	No	<i>Macquaria australasica</i>	Macquarie Perch
No	No	<i>Melaleuca deanei</i>	Deane's Melaleuca
No	No	<i>Melanodryas cucullata cucullata</i>	South-eastern Hooded Robin, Hooded Robin (south-eastern)
No	No	<i>Mixophyes balbus</i>	Stuttering Frog, Southern Barred Frog (in Victoria)
No	No	<i>Neophema chrysostoma</i>	Blue-winged Parrot
No	No	<i>Notamacropus parma</i>	Parma Wallaby
No	No	<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew
No	No	<i>Persicaria elatior</i>	Knotweed, Tall Knotweed
No	No	<i>Persoonia hirsuta</i>	Hairy Geebung, Hairy Persoonia
No	No	<i>Persoonia nutans</i>	Nodding Geebung

<b>Direct impact</b>	<b>Indirect impact</b>	<b>Species</b>	<b>Common name</b>
No	No	<i>Petauroides volans</i>	Greater Glider (southern and central)
No	No	<i>Petaurus australis australis</i>	Yellow-bellied Glider (south-eastern)
No	No	<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby
No	No	<i>Phascolarctos cinereus</i> (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)
No	No	<i>Potorous tridactylus trisulcatus</i>	Long-nosed Potoroo (southern mainland)
No	No	<i>Prasophyllum affine</i>	Jervis Bay Leek Orchid, Culburra Leek-orchid, Kinghorn Point Leek-orchid
No	No	<i>Prostanthera densa</i>	Villous Mintbush
No	No	<i>Pseudomys novaehollandiae</i>	New Holland Mouse, Pookila
No	No	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox
No	No	<i>Pterostylis saxicola</i>	Sydney Plains Greenhood
Yes	Yes	<i>Pultenaea aristata</i>	
No	No	<i>Pycnoptilus floccosus</i>	Pilotbird
No	No	<i>Rhizanthella slateri</i>	Eastern Underground Orchid
No	No	<i>Rhodamnia rubescens</i>	Scrub Turpentine, Brown Malletwood
No	No	<i>Rhodomyrtus psidioides</i>	Native Guava
No	No	<i>Rostratula australis</i>	Australian Painted Snipe
No	No	<i>Stagonopleura guttata</i>	Diamond Firetail
No	No	<i>Sternula nereis nereis</i>	Australian Fairy Tern
No	No	<i>Syzygium paniculatum</i>	Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry
No	No	<i>Thelymitra kangaloonica</i>	Kangaloon Sun Orchid
No	No	<i>Thesium australe</i>	Austral Toadflax, Toadflax
No	No	<i>Tringa nebularia</i>	Common Greenshank, Greenshank
No	No	<i>Xerochrysum palustre</i>	Swamp Everlasting, Swamp Paper Daisy

## Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland
No	Yes	Coastal Upland Swamps in the Sydney Basin Bioregion
No	No	Eastern Suburbs Banksia Scrub of the Sydney Region
No	No	River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria
No	No	Upland Basalt Eucalypt Forests of the Sydney Basin Bioregion

**4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

Yes

**4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. \***

The Action may cause direct disturbance to a listed threatened species, ecological community or their habitat as a result of vegetation clearing associated with Relocated Ventilation Shaft 4.

The Action may have an indirect impact on a listed threatened species, ecological community or their habitat due to subsidence resulting from longwall mining associated with the Action.

Threatened species and ecological communities that have been recorded within the Proposed Action Area in previous surveys, and may be directly and/or indirectly impacted by the Action, include:

- Prickly Bush-pea (*Pultenaea aristata*);
- Bynoe's Wattle (*Acacia bynoeana*);
- Woronora Beard-heath (*Leucopogon exolasius*);
- Giant Burrowing Frog (*Heleioporus australiacus*);
- Broad-headed Snake (*Hoplocephalus bungaroides*);
- Littlejohn's Tree Frog (*Litoria littlejohni*);
- Swift Parrot (*Lathamus discolor*); and
- Coastal Upland Swamps in the Sydney Basin Bioregion.

As discussed in Section 3.2, a PMST report for the Proposed Action Area which includes EPBC Act listed threatened species and ecological communities is provided in Att 3 – EPBC Act Protected Matters Report. Att 4 – Potential Impacts on EPBC Act Listed Threatened Species, Ecological Communities and Migratory Species, pages 1-13, provides details of potential direct and indirect impacts to the PMST report (Att 3 – EPBC Act Protected Matters Report) EPBC Act listed threatened species and ecological communities (including those listed above).

### **Greenhouse Gas Considerations**

In relation to the greenhouse gas emissions (GHG emissions) associated with the Action and the physical effects of climate change on threatened species and ecological communities, the Action is unlikely to have an indirect "impact" (as defined under the EPBC Act) on threatened species and ecological communities, including for the following two reasons:

1. the Action is not expected to cause any net increase in global GHG emissions and the global average temperature including because:
  - a. the GHG emissions generated by the ultimate combustion of the coal produced by the Action may be offset, mitigated or abated by the jurisdictions that are the prospective consumers of the coal. For example, these jurisdictions may implement new policies or regulations in relation to GHG emissions to align with goals set out in the Paris Agreement; and
  - b. if the Action does not proceed, prospective buyers would likely purchase an equivalent amount of coal from a supplier other than Metropolitan Coal, which would likely result in an equivalent amount of GHG emissions when combusted, when compared with the estimated amount associated with the coal produced by the Action.
2. even if the Action was to cause a net increase in global GHG emissions, any contribution from the Action to global GHG emissions would be negligible, such that the proposed Action would not be a substantial cause of the physical effects of climate change on threatened species and ecological communities.

#### **4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact?**

Yes

**4.1.4.5 Describe why you consider this to be a Significant Impact. \***

The vegetation in the Action Area is primarily native vegetation, and the area of direct disturbance associated with the construction of Relocated Ventilation Shaft 4 would be approximately 4.3 ha. Indirect subsidence impacts would likely occur over an area of approximately 420.6 ha.

Based on the substantial monitoring undertaken to date, underground mining of the Bulli Seam at the Metropolitan Coal Project using conservative longwall geometry (i.e. narrower longwall voids and wider pillars) has not resulted in an exceedance of the Project Approval (08\_0149) Biodiversity Subsidence Impact Performance Measure, *Negligible impact on threatened species, populations, or ecological communities*. The Proposed Action would also target the Bulli coal seam using the same longwall geometry as the existing Metropolitan Coal Mine.

Notwithstanding Metropolitan Coal's compliance with the abovementioned Biodiversity Subsidence Impact Performance Measure, as the BDAR is in preparation and further surveys, analysis of data and impact assessment are yet to be completed, uncertainty remains over the potential impacts on threatened species and ecological communities. In accordance with the *Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999 Matters of National Environmental Significance* (Commonwealth of Australia, 2013), the precautionary principle is applicable in this case. Under the precautionary principle, it is considered possible that without mitigation or offsets, the Action could have a significant impact on the following species or ecological communities:

- Coastal Upland Swamps in the Sydney Basin Bioregion;
- Giant Burrowing Frog;
- Littlejohn's Tree Frog; and
- Broad-headed Snake.

Notwithstanding, the significance of any impact will be confirmed in the Modification BDAR.

Further consideration of how the Action could have a significant impact on threatened species and ecological communities is provided in Att 4 – Potential Impacts on EPBC Act Listed Threatened Species, Ecological Communities and Migratory Species, pages 1-13.

**4.1.4.7 Do you think your proposed action is a controlled action? \***

Yes

**4.1.4.8 Please elaborate why you think your proposed action is a controlled action. \***

The proposed Action is likely to be a controlled Action due to potential significant impacts on threatened ecological communities and threatened species.

**4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. \***

The Action has been designed to avoid and mitigate impacts to threatened species and ecological communities via the following strategies:

- maximising the use of existing and approved infrastructure to reduce the Proposed Action disturbance area;
- designing the longwall layout with a geometry that reduces subsidence effects (i.e. narrower longwall voids and wider pillars compared to typical longwall operations);
- progressive rehabilitation of Relocated Ventilation Shaft 4 following construction (i.e. as soon as any areas are available for rehabilitation); and
- offsetting any potential residual impacts identified in the BDAR in accordance with the offset rules under the NSW Biodiversity Offsets Scheme (as required by the NSW *Biodiversity Conservation Act 2016*).

These strategies are generally consistent with those that have been implemented successfully for the approved Metropolitan Coal Project.

Consistent with the existing operations, Metropolitan Coal would prepare an Extraction Plan for the Action to reduce and manage potential impacts of subsidence, which would be subject to approval by the NSW DPHI in accordance with Conditions 6 and 7, Schedule 3 of the Project Approval (08\_0149). The Extraction Plan would include a Biodiversity Management Plan.

The Action is still in the planning stage. As such, the full extent of environmental impacts associated with the Action are yet to be determined. Targeted biodiversity surveys will be completed during the preparation of the BDAR to determine the extent and magnitude of the impacts. As such, further avoidance and mitigation measures will be provided in the BDAR and the Modification Report.

#### **4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. \***

The proposed Action will be assessed in accordance with the bilateral agreement and the NSW Biodiversity Offsets Scheme (BOS). The BOS rules require that impacts on vegetation communities and threatened species are offset by retiring biodiversity credits. Credits to be traded as offsets must be 'like-for-like', that is, they must represent vegetation of the same Offset Trading Group (OTG) as that impacted. OTGs are determined by vegetation class and the extent of that vegetation class which has been cleared after 1750 or by TEC where the vegetation forms part of a listed TEC. Any ecosystem credits and species credits associated with the Action will be calculated and provided in the BDAR.

#### **4.1.5 Migratory Species**

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name
No	No	<i>Actitis hypoleucos</i>	Common Sandpiper
No	No	<i>Apus pacificus</i>	Fork-tailed Swift
No	No	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
No	No	<i>Calidris canutus</i>	Red Knot, Knot
No	No	<i>Calidris ferruginea</i>	Curlew Sandpiper
No	No	<i>Calidris melanotos</i>	Pectoral Sandpiper
No	No	<i>Cuculus optatus</i>	Oriental Cuckoo, Horsfield's Cuckoo
No	No	<i>Gallinago hardwickii</i>	Latham's Snipe, Japanese Snipe
No	No	<i>Hirundapus caudacutus</i>	White-throated Needletail
No	No	<i>Motacilla flava</i>	Yellow Wagtail
No	No	<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew
No	No	<i>Pandion haliaetus</i>	Osprey
No	No	<i>Tringa nebularia</i>	Common Greenshank, Greenshank

**4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

No

**4.1.5.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

The Action is not expected to have direct and/or indirect impacts on listed migratory species. None of the migratory species listed in the PMST report (Att 3 – EPBC Act Protected Matters Report) have been recorded in the Action Area. Further detail on the migratory species listed in the PMST report (Att 3 – EPBC Act Protected Matters Report) can be found in Att 4 – Potential Impacts on EPBC Act Listed Threatened Species, Ecological Communities and Migratory Species, pages 14-15.

**4.1.6 Nuclear**

**4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? \***

No

**4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

The Action does not involve nuclear activities.

**4.1.7 Commonwealth Marine Area**

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

**4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

No

**4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

There are no Commonwealth Marine Areas within the vicinity of the Proposed Action Area that will be directly or indirectly impacted by the Action.

**4.1.8 Great Barrier Reef**



**4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? \***

No

**4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

The Action is unlikely to have a direct or indirect "impact" (as defined under the EPBC Act) on the Great Barrier Reef Marine Park (GBRMP).

The Action will not have a direct impact on the GBRMP because the Great Barrier Reef is located more than 1,000 km from the Action.

In relation to the GHG emissions associated with the Action and the physical effects of climate change on the GBRMP, the Action is unlikely to have an indirect "impact" (as defined under the EPBC Act) on the GBRMP, including for the following two reasons:

1. the Action is not expected to cause any net increase in global GHG emissions and the global average temperature including because:
  - a. the GHG emissions generated by the ultimate combustion of the coal produced by the Action may be offset, mitigated or abated by the jurisdictions that are the prospective consumers of the coal. For example, these jurisdictions may implement new policies or regulations in relation to GHG emissions to align with goals set out in the Paris Agreement; and
  - b. if the Action does not proceed, prospective buyers would likely purchase an equivalent amount of coal from a supplier other than Metropolitan Coal, which would likely result in an equivalent amount of GHG emissions when combusted, when compared with the estimated amount associated with the coal produced by the Action.
2. even if the Action was to cause a net increase in global GHG emissions, any contribution from the Action to global GHG emissions would be negligible, such that the proposed Action would not be a substantial cause of the physical effects of climate change on the GBRMP.

**4.1.9 Water resource in relation to large coal mining development or coal seam gas**

**4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? \***

Yes

**4.1.9.2 Briefly describe why your action has a direct and/or indirect impact on this protected matter. \***

The Proposed Action involves underground longwall mining and land clearing associated with Relocated Ventilation Shaft 4 within the Woronora Special Area.

Potential direct and/or indirect impacts on surface water resources may arise as a result of:

- subsidence of the surface due to underground mining activities, which may alter flow patterns on a local scale (indirect impact);
- changes in baseflow as a result of underground mining activities (indirect impact); and
- loss of catchment associated with the construction of Relocated Ventilation Shaft 4 (direct impact).

Relocated Ventilation Shaft 4 to be designed to have neutral or beneficial effect on water quality as required by *State Environmental Planning Policy (Biodiversity and Conservation) 2021*.

The main potential indirect impacts on the groundwater regime due to the Action are as a result of potential depressurisation of aquifers, drawdown on the groundwater table and changes in groundwater flow patterns, aquifer storage and baseflow.

**4.1.9.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact?**

\*

Yes

**4.1.9.5 Describe why you consider this to be a Significant Impact. \***

## **Surface Water**

The Proposed Action Area is located within the Woronora Special Area (Att 1 – Action Figures, Figure 1). The Woronora Special Area covers an area of 75 km<sup>2</sup>, encompassing the catchment of the Woronora River. The Woronora River drains into the Woronora Reservoir, which supplies water to the Sutherland Shire in Sydney's south, and to the northern suburbs of Wollongong (WaterNSW, 2024). Woronora Reservoir is the sole water supply to Helensburgh, Engadine and Lucas Heights. The Woronora Special Area features mostly native vegetation, with small area of private land in the upper catchment used for stock agistment, horse riding and horticulture (WaterNSW, 2015).

Honeysuckle Creek is a named watercourse which occurs partly within the Proposed Action Area but would not be directly undermined by the Action longwalls. Honeysuckle Creek flows north through the Proposed Action Area towards the Woronora Reservoir. A number of unnamed watercourses also occur within the Proposed Action Area.

Section 4.2 of the *Significant Impact Guidelines 1.3 – Coal seam gas and large coal mining developments – impacts on water resources* has been considered in determining whether a significant impact is likely:

*An action is likely to have a significant impact on a water resource if there is a real or not remote chance or possibility that it will directly or indirectly result in a change to:*

- *the hydrology of a water resource*
- *the water quality of a water resource*

*that is of sufficient scale or intensity as to reduce the current or future utility of the water resource for third party users, including environmental and other public benefit outcomes, or to create a material risk of such reduction in utility occurring.*

Given the small area of disturbance, it is expected that any potential loss in catchment would have a negligible impact on watercourses and the Woronora Reservoir, and a neutral effect on water quality.

Progressive rehabilitation would be undertaken on the disturbed area associated with Relocated Ventilation Shaft 4 upon completion of construction (i.e. as areas become available for rehabilitation). Relocated Ventilation Shaft 4 would be decommissioned upon completion of mining and the disturbed area would be rehabilitated.

Notwithstanding the above, as the Modification Surface Water Assessment is in preparation and further analysis of data and impact assessment are yet to be completed, uncertainty remains over the potential impacts on water resources. In accordance with the *Significant impact guidelines 1.3 Coal seam gas and large coal mining developments — impacts on water resources* (Commonwealth of Australia, 2022), the precautionary principle is applicable in this case. Under the precautionary principle, it is considered possible that without mitigation or offsets, the Action could have a significant impact on a water resource.

A detailed Surface Water Assessment will be prepared for the Action and will include an assessment of potential impacts on surface water resources.

## **Groundwater**

The Metropolitan Coal Mine is located in the Southern Coalfield of NSW, with longwall mining occurring in the Bulli Seam.

The only recognised economic aquifer in the Proposed Action Area is the Hawkesbury Sandstone. The Hawkesbury Sandstone is a low yield aquifer of generally good quality beneath the Woronora Plateau and Illawarra Plateau.

As described in Section 3.4.1, the groundwater resource within the Proposed Action Area comprises three distinct groundwater systems (i.e. perched groundwater system, shallow groundwater system and deep groundwater system).

The Woronora Reservoir Impact Strategy summary letter (prepared by independent experts for proposed mining near the Woronora Reservoir) (dated 9 December 2019) (Hebblewhite, B., McMahon, T. & Kalf, F., 2019) concluded:

1. *Connective fracturing/depressurisation and depressurisation alone extends up to approximately 195 m above the current 163 m wide longwall extraction zone (Figure 1).*
2. *There is virtually no pressure head propagation (i.e. depressurisation), that is pressure head loss, extending upwards beyond about 80 m from the surface and very little above 150 m from the surface (Figure 1). The depressurisation zone below 150m is recovering due to lateral groundwater flow.*
3. *There is no evidence of surface to longwall panel connectivity at the Metropolitan Mine, with inflows averaging 0.01 ML/day between January 2009 and April 2019.*
4. *There is a clear benefit in using narrower panels and wider chain pillars near and beneath the Woronora Reservoir as it substantially reduces subsidence predictions.*

Subsequent monitoring has confirmed these conclusions with the 20-day average daily mine water make (i.e. groundwater that has seeped into the mine from the strata) being 0.18 megalitres per day (ML/day) during the 2023 Annual Review reporting period, well below the relevant trigger level of 0.5 ML/day (Metropolitan Coal, 2024).

Notwithstanding the above, as the Modification Groundwater Assessment is in preparation and further analysis of data and impact assessment are yet to be completed, uncertainty remains over the potential impacts on water resources. In accordance with the *Significant impact guidelines 1.3 Coal seam gas and large coal mining developments — impacts on water resources* (Commonwealth of Australia, 2022), the precautionary principle is applicable in this case. Under the precautionary principle, it is considered possible that without mitigation or offsets, the Action could have a significant impact on a water resource.

A detailed Groundwater Assessment will be prepared as part of the Modification Report and will include an assessment of potential impacts on groundwater resources.

### **Water Licensing**

Section 4.3.1 of the *Significant Impact Guidelines 1.3 – Coal seam gas and large coal mining developments – impacts on water resources* states:

*If a proponent can demonstrate that all of the water used by a proposed action is authorised through such entitlements, the action is less likely to require a referral due to significant impacts on the hydrological characteristics of a water resource.*

Under the NSW *Water Management Act 2000*, all water taken by aquifer interference activities (such as mining) is required to be accounted for within the extraction limits set by any relevant Water Sharing Plans (i.e. state water resource plans).

The Action is subject directly (and indirectly) to the water sharing rules of the following Water Sharing Plans under the NSW *Water Management Act 2000*:

- *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2023*; and
- *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2023*.

Metropolitan Coal would obtain and hold sufficient WAL entitlements to account for the predicted water takes associated with the proposed Action.

#### **4.1.9.7 Do you think your proposed action is a controlled action? \***

Yes

#### **4.1.9.8 Please elaborate why you think your proposed action is a controlled action. \***

On the basis of the reasons outlined in this Referral, and in consideration of the precautionary principle, the Action is considered a controlled action as it may be likely to have a significant impact on a water resource.

#### **4.1.9.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. \***

The Action has been designed to avoid and mitigate impacts to water resources via the following strategies:

- maximising the use of existing and approved infrastructure to reduce the Proposed Action disturbance area;
- designing the longwall layout with a geometry that reduces subsidence effects (i.e. narrower longwall voids and wider pillars compared to typical longwall operations);
- partial rehabilitation of Relocated Ventilation Shaft 4 following construction (i.e. as soon as the area is available for rehabilitation); and
- Metropolitan Coal holding WALs with sufficient entitlements for predicted groundwater and surface water take due to the Proposed Action (in accordance with the NSW *Water Management Act 2000*).

These strategies are generally consistent with those that have been implemented successfully for the approved Metropolitan Coal Project.

Consistent with the existing operations, Metropolitan Coal would prepare an Extraction Plan for the Action to reduce and manage potential impacts of subsidence, which would be subject to approval by the NSW DPPI in accordance with Conditions 6 and 7, Schedule 3 of the Project Approval (08\_0149). The Extraction Plan would include a Water Management Plan.

#### **4.1.9.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. \***

Metropolitan Coal would obtain and hold sufficient WAL entitlements to account for the predicted water takes associated with the proposed Action and would manage the Action in accordance with a Water Management Plan which would be developed as part of a future Extraction Plan.

#### **4.1.10 Commonwealth Land**

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

**4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

No

**4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

There is no Commonwealth land within the vicinity of the Action Area that would be directly or indirectly impacted by the Action.

**4.1.11 Commonwealth Heritage Places Overseas**

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

**4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

No

**4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

The Action is situated on the Australian mainland, with no direct or indirect impacts on Commonwealth heritage places overseas.

**4.1.12 Commonwealth or Commonwealth Agency**

#### 4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? \*

No

## 4.2 Impact summary

### Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

- Threatened Species and Ecological Communities (S18)
- Water resource in relation to large coal mining development or coal seam gas (S24D)

### Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

## 4.3 Alternatives

### 4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? \*

No

### 4.3.8 Describe why alternatives for your proposed action were not possible. \*

Alternatives to the Proposed Action including the location and design elements were considered by Metropolitan Coal; along with the option of not proceeding with the Proposed Action. An overview of alternatives is provided below:

- **Alternative Location** – The location of the Proposed Action area cannot be readily changed. The location has been determined by the location of the target coal resource, Metropolitan Coal's tenements and the proximity to the existing Metropolitan Coal Mine longwalls, enabling ROM coal to be transferred to the pit top and CHPP.
- **Alternative Mining Method (Bord and Pillar)** – Longwall mining was selected over other underground mining methods (e.g. bord and pillar) due to its superior productivity and its suitability to extract the resource. Board and pillar mining is unlikely to be economically viable. Longwall mining is currently used at Metropolitan Coal Mine and therefore Metropolitan Coal can utilise its existing equipment located in the underground workings and expertise to mine the Action area.
- **Alternative Mining Method (Open Cut)** – The depth of the coal seam associated with the Action prevents it from being mined by open cut mining methods. Open cut mining methods would not be economically feasible and would results in significantly greater environmental impacts.
- **No Action** – Metropolitan Coal has considered not undertaking the Proposed Action. However, in the event that the Proposed Action is not developed, the following benefits would be forgone:
  - an additional approximately 2 years of employment of the approximately 400-strong Metropolitan Coal workforce;
  - tax payments to the Commonwealth government associated with the extraction and sale of the resource (e.g. company and income tax payments); and
  - royalty payments to the State.

Metropolitan Coal has elected to proceed with the Action as it is a logical and efficient progression of the existing Metropolitan Coal Mine.

## 5. Lodgement



## 5.1 Attachments

### 1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 - Action Figures.pdf Action Figures	15/01/2025	No	High

### 1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2 - Scoping Letter.pdf Scoping Letter	15/01/2025	No	High
#2.	Link	Biodiversity Assessment Method <a href="https://www.environment.nsw.gov.au/-/media/OEH/C..">https://www.environment.nsw.gov.au/-/media/OEH/C..</a>			High
#3.	Link	Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999 Matt <a href="https://www.dcceew.gov.au/environment/epbc/publi..">https://www.dcceew.gov.au/environment/epbc/publi..</a>			High
#4.	Link	Significant impact guidelines 1.3 Coal seam gas and large coal mining developments – impacts on water <a href="https://www.dcceew.gov.au/environment/epbc/publi..">https://www.dcceew.gov.au/environment/epbc/publi..</a>			High

### 1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Aboriginal cultural heritage consultation requirements for proponents 2010 <a href="https://www.environment.nsw.gov.au/research-and-..">https://www.environment.nsw.gov.au/research-and-..</a>			High
#2.	Link	Interim Engaging with First Nations People and Communities on Assessments and Approvals <a href="https://www.dcceew.gov.au/sites/default/files/do..">https://www.dcceew.gov.au/sites/default/files/do..</a>			High

### 3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence

#1.	Link	DAMS OF GREATER SYDNEY AND SURROUNDS Woronora. <a href="https://www.waternsw.com.au/__data/assets/pdf_fi..">https://www.waternsw.com.au/__data/assets/pdf_fi..</a>	High
#2.	Link	Metropolitan Coal Project Baseline Flora Survey - Proposed Longwall Mining Area <a href="https://majorprojects.planningportal.nsw.gov.au/..">https://majorprojects.planningportal.nsw.gov.au/..</a>	High
#3.	Link	The Native Vegetation of the Woronora, O'Hares and Metropolitan Catchments <a href="https://www.environment.nsw.gov.au/resources/nat..">https://www.environment.nsw.gov.au/resources/nat..</a>	High

### 3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	DAMS OF GREATER SYDNEY AND SURROUNDS Woronora <a href="https://www.waternsw.com.au/__data/assets/pdf_fi..">https://www.waternsw.com.au/__data/assets/pdf_fi..</a>			High
#2.	Link	Woronora Dam <a href="https://www.waternsw.com.au/nsw-dams/greater-syd..">https://www.waternsw.com.au/nsw-dams/greater-syd..</a>			High

### 3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 3 - EPBC Act Protected Matters Report.pdf EPBC Act Protected Matters Report	15/01/2025	No	High
#2.	Document	Att 4 - Potential Impacts on TS, EC & MS.pdf Potential Impacts on Threatened Species, Ecological Communities and Migratory Species	15/01/2025	No	High
#3.	Link	Acacia baueri subsp. aspera - profile. <a href="https://threatenedspecies.bionet.nsw.gov.au/prof..">https://threatenedspecies.bionet.nsw.gov.au/prof..</a>			High
#4.	Link	Approved Conservation Advice for Astrotricha crassifolia (Thick-leaf			High

Star-hair)

<https://www.environment.gov.au/biodiversity/thre..>

#5.	Link	Approved Conservation Advice for Cryptostylis hunteriana (Leafless Tongue-orchid) <a href="https://www.environment.gov.au/biodiversity/thre..">https://www.environment.gov.au/biodiversity/thre..</a>	High
#6.	Link	Approved Conservation Advice for Pultenaea aristate <a href="https://www.environment.gov.au/biodiversity/thre..">https://www.environment.gov.au/biodiversity/thre..</a>	High
#7.	Link	Broad-headed Snake - profile <a href="https://threatenedspecies.bionet.nsw.gov.au/prof..">https://threatenedspecies.bionet.nsw.gov.au/prof..</a>	High
#8.	Link	Coastal Upland Swamp in the Sydney Basin Bioregion - profile <a href="https://threatenedspecies.bionet.nsw.gov.au/prof..">https://threatenedspecies.bionet.nsw.gov.au/prof..</a>	High
#9.	Link	Conservation Advice for Melaleuca deanei (Deane's Melaleuca) <a href="https://www.environment.gov.au/biodiversity/thre..">https://www.environment.gov.au/biodiversity/thre..</a>	High
#10.	Link	Conservation Advice for Pycnoptilus floccosus (Pilotbird) <a href="https://www.environment.gov.au/biodiversity/thre..">https://www.environment.gov.au/biodiversity/thre..</a>	High
#11.	Link	Giant Burrowing Frog - profile. <a href="https://threatenedspecies.bionet.nsw.gov.au/prof..">https://threatenedspecies.bionet.nsw.gov.au/prof..</a>	High
#12.	Link	Grey Falcon - profile. <a href="https://threatenedspecies.bionet.nsw.gov.au/prof..">https://threatenedspecies.bionet.nsw.gov.au/prof..</a>	High
#13.	Link	Grey-headed Flying-fox <a href="https://www.environment.nsw.gov.au/resources/nat..">https://www.environment.nsw.gov.au/resources/nat..</a>	High
#14.	Link	<a href="https://threatenedspecies.bionet.nsw.gov.au/profile?id=10006">https://threatenedspecies.bionet.nsw.gov.au/profile? id=10006</a> <a href="https://threatenedspecies.bionet.nsw.gov.au/prof..">https://threatenedspecies.bionet.nsw.gov.au/prof..</a>	High
#15.	Link	Littlejohns Tree Frog - profile <a href="https://threatenedspecies.bionet.nsw.gov.au/prof..">https://threatenedspecies.bionet.nsw.gov.au/prof..</a>	High
#16.	Link	Swift Parrot - profile <a href="https://threatenedspecies.bionet.nsw.gov.au/prof..">https://threatenedspecies.bionet.nsw.gov.au/prof..</a>	High

#17.	Link	The Bioregions of New South Wales: their biodiversity, conservation and history. <a href="https://www.environment.nsw.gov.au/research-and-..">https://www.environment.nsw.gov.au/research-and-..</a>	High
#18.	Link	Thick-leaf Star-hair - profile <a href="https://threatenedspecies.bionet.nsw.gov.au/prof..">https://threatenedspecies.bionet.nsw.gov.au/prof..</a>	High

### 3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Illawarra Climate Change Snapshot <a href="https://www.climatechange.environment.nsw.gov.au..">https://www.climatechange.environment.nsw.gov.au..</a>			High

### 3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Aboriginal Cultural Heritage Assessment Metropolitan Coal Project Metropolitan Colliery, Helensburgh <a href="https://majorprojects.planningportal.nsw.gov.au/..">https://majorprojects.planningportal.nsw.gov.au/..</a>			High

### 3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	DAMS OF GREATER SYDNEY AND SURROUNDS Woronora <a href="https://www.waternsw.com.au/_data/assets/pdf_fi..">https://www.waternsw.com.au/_data/assets/pdf_fi..</a>			High
#2.	Link	Metropolitan Coal 2023 Annual Review <a href="https://majorprojects.planningportal.nsw.gov.au/..">https://majorprojects.planningportal.nsw.gov.au/..</a>			High
#3.	Link	Woronora Dam <a href="https://www.waternsw.com.au/nsw-dams/greater-syd..">https://www.waternsw.com.au/nsw-dams/greater-syd..</a>			High

### 4.1.4.5 (Threatened Species and Ecological Communities) Why you consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999 <a href="https://www.dcceew.gov.au/environment/epbc/publi..">https://www.dcceew.gov.au/environment/epbc/publi..</a>			High

4.1.9.5 (Water resource in relation to large coal mining development or coal seam gas) Why you consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	About BioNet Atlas <a href="https://www.environment.nsw.gov.au/topics/animal..">https://www.environment.nsw.gov.au/topics/animal..</a>			High
#2.	Link	DAMS OF GREATER SYDNEY AND SURROUNDS Woronora <a href="https://www.waternsw.com.au/__data/assets/pdf_fi..">https://www.waternsw.com.au/__data/assets/pdf_fi..</a>			High
#3.	Link	Metropolitan Coal 2023 Annual Review <a href="https://majorprojects.planningportal.nsw.gov.au/..">https://majorprojects.planningportal.nsw.gov.au/..</a>			High
#4.	Link	RE: METROPOLITAN COAL - SUMMARY OF WORONORA RESERVOIR IMPACT STRATEGY STAGE 1 AND STAGE 2 REPORTS <a href="https://majorprojects.planningportal.nsw.gov.au/..">https://majorprojects.planningportal.nsw.gov.au/..</a>			High
#5.	Link	Significant impact guidelines 1.3 Coal seam gas and large coal mining developments – impacts on <a href="https://www.dcceew.gov.au/environment/epbc/publi..">https://www.dcceew.gov.au/environment/epbc/publi..</a>			High
#6.	Link	Woronora Dam <a href="https://www.waternsw.com.au/nsw-dams/greater-syd..">https://www.waternsw.com.au/nsw-dams/greater-syd..</a>			High

## 5.2 Declarations

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## Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

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ABN/ACN	91003135635
Organisation name	METROPOLITAN COLLIERIES PTY LTD
Organisation address	31 Duncan Street, Fortitude Valley QLD 2330
Representative's name	Stephen Love
Representative's job title	Environment & Community Superintendent
Phone	02 4294 7384
Email	slove@peabodyenergy.com
Address	Parkes Street Helensburgh

Check this box to indicate you have read the referral form. \*

I would like to receive notifications and track the referral progress through the EPBC portal. \*

By checking this box, I, **Stephen Love of METROPOLITAN COLLIERIES PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. \*

I would like to receive notifications and track the referral progress through the EPBC portal. \*

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## Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

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Same as Referring party information.

Check this box to indicate you have read the referral form. \*

I would like to receive notifications and track the referral progress through the EPBC portal. \*



I, **Stephen Love of METROPOLITAN COLLIERIES PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. \*

I, **Stephen Love of METROPOLITAN COLLIERIES PTY LTD**, the Person proposing the action, consent to the designation of **Stephen Love of METROPOLITAN COLLIERIES PTY LTD** as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. \*

I would like to receive notifications and track the referral progress through the EPBC portal. \*

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### **Completed Proposed designated proponent's declaration**

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

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Same as Person proposing to take the action information.

Check this box to indicate you have read the referral form. \*

I would like to receive notifications and track the referral progress through the EPBC portal. \*

I, **Stephen Love of METROPOLITAN COLLIERIES PTY LTD**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. \*

I would like to receive notifications and track the referral progress through the EPBC portal. \*