

Hazelwood Mine Rehabilitation Project

Application Number: **01033**Commencement Date: **08/04/2022**Status: **Locked**

1. About the project

1.1 Project details

Project title *

Hazelwood Mine Rehabilitation Project

Project industry type *

Mining

Project industry sub-type

Coal

Estimated start date *

31/12/2023

Estimated end date *

31/12/2043

1.2 Proposed Action details

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

The Hazelwood Rehabilitation Project involves the rehabilitation of the former Hazelwood Mine to a safe, stable and sustainable landform. The proposed rehabilitated final landform for the former Mine void is a lake to a relative level (RL) of +45 metres Australian Height Datum (+45m AHD). The proposed lake would provide for ongoing safety and stability of the Mine void, obviate a requirement for ongoing groundwater pumping into perpetuity, minimise fire risk in the M1 coal seam, and provide opportunities for future investment and land uses that might be delivered by Government, the local community or the private sector.

A Concept Master Plan has been developed (see Att 3) to articulate these potential opportunities for the rehabilitated site, including a vision to transform the Mine and its surrounds into land that is suitable for a mix of potential tourism, agriculture, industry, passive recreation uses and the conservation of natural ecosystems.

The Project Area covers approximately 4000 hectares (ha), comprising the 1,281ha Mine void between 70 and 130 metres deep, 550ha Hazelwood Cooling Pond (HCP) and various other lands within and adjacent to the Mining Licence boundary. The disturbance footprint includes the Mine void, HCP and areas where further earthworks are proposed, covering approximately 2230ha. The existing conservation areas would be retained on the site (retention area of 37ha).

Groundwater would be extracted at around 17-19 gigalitres (GL) per year under the Mine's existing groundwater licence, which permits extraction of approximately 22GL per year from the M1 and M2 aquifers. Bulk surface water has been commercially secured and is anticipated to be available up to a maximum of around 24.5GL per annum; however, the agreement provides no guarantees in relation to supply. Notably, where other users' needs change, or climatic and weather conditions limit usage, significantly lower amounts are anticipated, and 8GL has been proposed as an estimated minimum (although this amount is not contractually guaranteed). Based on the indicative annual volumes likely to be available from these water sources, and ENGIE Hazelwood's ongoing consultations, the target fill period is between 10 and 20 years.

The HCP has a current capacity of approximately 20GL and will remain a water supply for fire prevention and mitigation purposes for the initial timeframe in which the Mine lake is filling. When the Mine lake reaches a sufficient depth, the Mine Fire Service System (MFSS) would be re-engineered, to be entirely supplied from within the Mine lake, and a Gippsland Water supply connection. The HCP and adjacent Pumphouses would then be decommissioned and the water within the Mine lake would supply water to the MFSS and support dust suppression and fire prevention, until such time where the lake level covers exposed coal batters and rehabilitation works are complete.

The land underlying the HCP would be rehabilitated to reinstate the former alignment of Eel Hole Creek. The existing culvert at Yinnar Road would be upgraded to achieve flood immunity and re-establish fish passage. If feasible, the HCP water may be diverted into the Mine lake to contribute towards fill.

The Mine lake is proposed to have an interconnection with an external watercourse following the completion of filling to maintain the lake level, by re-establishing the currently diverted Morwell River to its original pathway through the site. This would involve interconnecting the Morwell River to the Mine void in the south-west and constructing an outflow in the north-west of the void, providing regional flood mitigation opportunities.

As noted on page 2 of Att 2, significant earthworks have already been undertaken within the Mine pursuant to existing approvals including the 2017 Work Plan Variation, and standalone Earth Resources Regulation (ERR) approvals. Remaining earthworks include reprofiling coal and overburden batters above the final lake level to a geotechnically 'stable' batter profile and ensuring adequate drainage.

Rehabilitation and remediation of ash and asbestos landfills within and external to the void would continue to be progressed in accordance with EPA Operational Licence OL0046436 and ongoing statutory environmental audits and landfill management obligations.

Ongoing management of the areas above the final Mine lake level from a drainage and erosion perspective would be undertaken. This would include monitoring stability of the batters, maintaining the final Mine lake water level and monitoring the broader environment to ensure no detrimental effects.

As per page 3 of Att 2, following demonstration of successful performance of the rehabilitation works, an aftercare plan would be developed to address ongoing monitoring and maintenance requirements in order to facilitate relevant land rezoning and transfers and the relinquishment of MIN5004.

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

Yes

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

No

Related referral(s)

EPBC Number	Project Title
2000/49	Hazelwood Westfield Mine Development

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

The site has been used for mining and power generation since 1949. Operational closure of the Mine and Power Station occurred in March 2017. The Project is part of ENGIE Hazelwood's ongoing series of works to decommission redundant mining and power generation infrastructure, and finally rehabilitate the site of the former Hazelwood Mine and Power Station. A timeline of key works and approvals for the site is provided in Attachment 2 – Key works, events and approvals.

Notably, water from the following sources is presently collecting in the Mine void:

- Rainwater runoff
- Water under existing commercial agreements primarily used for operations (e.g. from the operation of the MFSS)
- Groundwater from the M1 and M2 aquifers underlying the Mine extracted pursuant to ENGIE Hazelwood's Groundwater Licence, at a rate necessary to maintain stable Mine conditions (batters & floor), as a consequence of infrastructure recently decommissioned to prepare the Mine for the receipt of flood flows from Morwell River Flood Diversion (MRFD) infrastructure being constructed to support emergency repairs within the "downstream" Yallourn Mine, in accordance with August 2021 amendments to MIN5004.

The Project comprises all remaining rehabilitation activities to the point where the Project Area is ready for divestment and conversion to productive future uses (following demonstration that relevant closure criteria detailed within the approved DMRP have been satisfied). The specific works are listed on the left-hand side of page 3 of Attachment 2, and build on a range of rehabilitation activities that have been completed within the Project Area to date, or that are underway pursuant to existing approvals (summarised on pages 1 and 2 of

Attachment 2). The specific nature of productive future uses following completion of rehabilitation will be determined in consultation with Victorian Government, business and the community and these proposals would be subject to their own planning and environmental approvals once details are known.

As noted on the right-hand side of page 3 of Attachment 2, certain activities related to Aftercare and Relinquishment will continue in respect of the Project Area after the completion of the physical works comprising the proposed action. These activities are regulated under Part 7C of the MRSD Act, as part of the detailed legislative regime for the aftercare and relinquishment of the declared mines in the Latrobe Valley, which are subject to bespoke regulatory arrangements under the MRSD Act and subject to the oversight of the Mine Land Rehabilitation Authority. ENGIE Hazelwood will continue to work with the Mine Land Rehabilitation Authority across all elements of the Project with specific regard to monitoring and maintenance at the conclusion of the proposed action. In this sense, the works the subject of this referral make up a component of a larger action.

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

Attachment 2 – Key works, events and approvals provides background context and an overview of the milestones, approvals and works at the Hazelwood site.

As is shown on pg 2 of Att 2, extensive progressive and final rehabilitation works have been conducted to date including under existing approvals under the *Mineral Resources (Sustainable Development) Act 1990 (Vic)* (MRSD Act) and other legislation (including the *Building Act 1993 (Vic)* in the context of the demolition works).

In addition, a wide range of operational works occur around the site on a daily basis to keep the site safe and stable, and compliant with regulatory approvals and directions, including:

- MRSD Act: conditions upon MIN5004, approved work plans, letter approvals including approved designs for batter surcharges, the approved Fire Risk Management Plan, Ground Control Management Plan and Risk Management Plan
- *Environment Protection Act 2017 (Vic)* (EP Act): Operational Licence No. OL0046436, Clean up Notices directing that audits be undertaken, approved landfill environmental management plans
- *Occupational Health and Safety Act 2004 (Vic)*: risk management procedures developed by ENGIE Hazelwood for the Mine, as a prescribed mine for the purposes of Part 5.3 of the *Occupational Health and Safety Regulations 2017 (Vic)*.

In December 2021, a referral was submitted to the Victorian Minister for Planning to determine whether an Environment Effects Statement (EES) is required under the *Environment Effects Act 1978 (Vic)* (EE Act). The Minister for Planning determined that an EES is required for the Project on 3 February 2022. The Minister for Planning's assessment of the Project would inform the decisions of other regulatory authorities with statutory approval responsibilities.

The Project will require the following primary planning and environmental approvals:

- Approval of a Declared Mine Rehabilitation Plan pursuant to the MRSD Act
- Development licence for water discharges from the site pursuant to the EP Act
- Licence to construct works to deviate a waterway pursuant to the *Water Act 1989 (Vic)*
- Approval to undertake works pursuant to the *Planning and Environment Act 1987 (Vic)* in accordance with the Latrobe Planning Scheme.
- Approval of a Cultural Heritage Management Plan (CHMP) pursuant to the *Aboriginal Heritage Act 2006 (Vic)*.

The Project may also require the following secondary planning and environmental approvals:

- Licence to take and use groundwater to fill the mine lake pursuant to the *Water Act 1989 (Vic)* should it be necessary to vary the existing groundwater licence
- Permit to take protected flora and fauna pursuant to the *Flora and Fauna Guarantee Act 1988 (Vic)*
- Authorisation for taking of wildlife pursuant to the *Wildlife Act 1975 (Vic)*
- Licence for removal of soil that is likely to contain any part of a noxious weed pursuant to the *Catchment and Land Protection Act 1994 (Vic)*
- Permit or consent for management of impacts to historic heritage under the *Heritage Act 2017 (Vic)*.

The Project Area and surrounds are subject to a range of planning zones and overlays under the Latrobe Planning Scheme. The key planning zones relate to Special Use Zone 1 (SUZ1) for the Hazelwood Mine areas and Public Use (Service and Utility) in the case of the HCP (see Att 1). The Mine site is primarily zoned SUZ1, a zoning which recognises the value of the Latrobe Valley's brown coal resources, and authorises (without a requirement for a planning permit) a very broad range of works associated with mining, industry and utility installation including where authorised under an approved work plan under the MRSD Act or assessed under the EE Act.

Clause 14.03 of the State Planning Policy Framework of the Latrobe Planning Scheme includes the objective of encouraging the exploration and extraction of natural resources. It provides for strategies for the protection of natural resources and extractive industries through the implementation and maintenance of buffer distances.

The Victorian Planning Policy Framework key clauses relevant to the Project include but are not limited to the following:

- Clause 52.02 (Easements, Restrictions and Reserves)
- Clause 52.08 (Earth and Energy Resources Industry)
- Clause 52.17 (Native Vegetation)

- Clause 52.29 (Land Adjacent to a Road Zone, Category 1, or a Public Acquisition Overlay for a Category 1 Road)
- Clause 65 – Decision Guidelines.

Aside from the potential need to obtain a permit for the removal of native vegetation, no other approvals for the Project are required pursuant to the *Planning and Environment Act 1987* (Vic).

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. *

ENGIE Hazelwood has consulted a number of approval agencies on the proposal, including with:

- the Department of Environment, Land, Water and Planning
- Department of Jobs, Precincts and Regions (ERR Branch)
- the Mine Land Rehabilitation Authority
- Southern Rural Water
- Gippsland Water
- West Gippsland Catchment Management Authority
- EPA Victoria
- Latrobe City Council.

ENGIE Hazelwood has consulted with the GunaiKurnai Land and Waters Aboriginal Corporation (GLaWAC) in respect of the proposal to develop a CHMP of the entire Project Area.

Operations at the Hazelwood site extend back many years and processes for consultation with stakeholders are well established.

ENGIE Hazelwood's existing community and stakeholder engagement activities in respect to the final rehabilitation of the Hazelwood Mine have included the following:

- Rehabilitation and Closure Plan (RCP) Working Group: The RCP Working Group comprised regulator and Government representatives and traditional owner representatives. Established in July 2018, the Group met bi-monthly to discuss the RCP, technical studies and inform ENGIE Hazelwood's plans for the site. This forum no longer meets; however, ongoing regular discussions with Government and regulators continues.
- Environmental Review Committee (ERC): The ERC is an advisory body for Hazelwood established under a condition of MIN5004, comprising representatives from the community, key regulators, government agencies and groups who have an interest in ENGIE Hazelwood's environmental performance. The ERC typically meets quarterly to review progress and set priorities for minimising environmental impacts and improving performance. To support these objectives, the ERC tours the site operations annually and reviews the Performance Report and the actions in the Environment Improvement Plan (EIP).
- Community activities: ENGIE Hazelwood has held many community activities, including forums, workshops, pop-ups and focus groups each year from 2016-2019 (pre-COVID 19 interruptions). Feedback, comments and views are captured through a variety of methods.
- Publishing community updates on ENGIE Hazelwood website.

1.3 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 Agriculture, Water and the Environment (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.

Confirm that you have read and understand this Privacy Notice *

Is Referring party an organisation or business? *

Yes

Referring party organisation details	
ABN	20093846925
Organisation name	AECOM AUSTRALIA PTY LTD
Organisation address	Level 10, Tower Two Collins Square, 727 Collins Street, Docklands 3008
Referring party details	
Name	Melissa Ng
Job title	Senior Environmental Engineer – Impact Assessment and Permitting
Phone	+61466297202
Email	melissa.ng@aecom.com
Address	Collins Square, Level 10 Tower Two 727 Collins Street Melbourne, VIC 3008, Australia

1.3 Identity - Person proposing to take the action

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

No

Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details	
ABN	40924759557
Organisation name	Hazelwood Power
Organisation address	Level 33, Rialto South Tower, 525 Collins Street, Melbourne VIC 3000
Person proposing to take the action details	
Name	Jamie Lowe
Job title	Head of Regulation, Compliance, and Sustainability
Phone	(03) 9617 8415
Email	jamie.lowe@engie.com

Address

Level 33, Rialto South Tower, 525 Collins Street, Melbourne VIC 3000

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

No

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

No

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. *

ENGIE Hazelwood has a satisfactory record of responsible environment management. ENGIE Hazelwood is subject to detailed environmental licence conditions and reporting obligations, and has detailed risk management procedures in place, including under:

- Mining Licence MIN5004 – the ERC condition referenced above
- EPA Licence 46436 – with the site subject to both routine audits, and Annual Performance Statement (APS) requirements
- Safety Management System documentation developed under the OHS Act (with Hazelwood constituting a “prescribed mine” for the purposes of same)
- RMP, GCMP and FRMP documentation developed and approved under MRSD Regulations and MIN5004.

ENGIE Hazelwood has detailed procedures in place to ensure compliance.

One relevant matter to disclose is that in late 2019, ENGIE Hazelwood was convicted of offences under the *Environment Protection Act 1970 (Vic)*, in connection with air pollution from the Hazelwood Mine Fire.

The 2014 Hazelwood Mine Fire incident arose from deliberately lit, external bushfires, and was the subject of the 2014 Hazelwood Mine Fire Inquiry, and a range of regulatory reform for “declared mines” such as Hazelwood.

ENGIE Hazelwood has implemented all recommendations from the 2014 Inquiry, together with a range of voluntary infrastructure and process improvements, as is reflected in independent reports submitted to the Victorian Parliament. It fully co-operates with annual fire preparedness audits undertaken by a range of regulators (ERR, WorkSafe, EPA).

1.3 Identity - Proposed designated proponent

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

Yes

Proposed designated proponent organisation details

ABN	40924759557
Organisation name	Hazelwood Power
Organisation address	Level 33, Rialto South Tower, 525 Collins Street, Melbourne VIC 3000

Proposed designated proponent details

Name	Jamie Lowe
Job title	Head of Regulation, Compliance, and Sustainability
Phone	(03) 9617 8415

Email	jamie.lowe@engie.com
Address	Level 33, Rialto South Tower, 525 Collins Street, Melbourne VIC 3000

1.3 Identity - Summary of allocation

Confirmed Referring party's identity

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

ABN	20093846925
Organisation name	AECOM AUSTRALIA PTY LTD
Organisation address	Level 10, Tower Two Collins Square, 727 Collins Street, Docklands 3008
Representative's name	Melissa Ng
Representative's job title	Senior Environmental Engineer – Impact Assessment and Permitting
Phone	+61466297202
Email	melissa.ng@aecom.com
Address	Collins Square, Level 10 Tower Two 727 Collins Street Melbourne, VIC 3008, Australia

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.

ABN	40924759557
Organisation name	Hazelwood Power
Organisation address	Level 33, Rialto South Tower, 525 Collins Street, Melbourne VIC 3000
Representative's name	Jamie Lowe
Representative's job title	Head of Regulation, Compliance, and Sustainability
Phone	(03) 9617 8415
Email	jamie.lowe@engie.com
Address	Level 33, Rialto South Tower, 525 Collins Street, Melbourne VIC 3000

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.

Same as Person proposing to take the action information.

1.4 Payment details - Payment exemption and fee waiver

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

No

Has the department issued you with a credit note? *

No

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

No

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

No

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

No

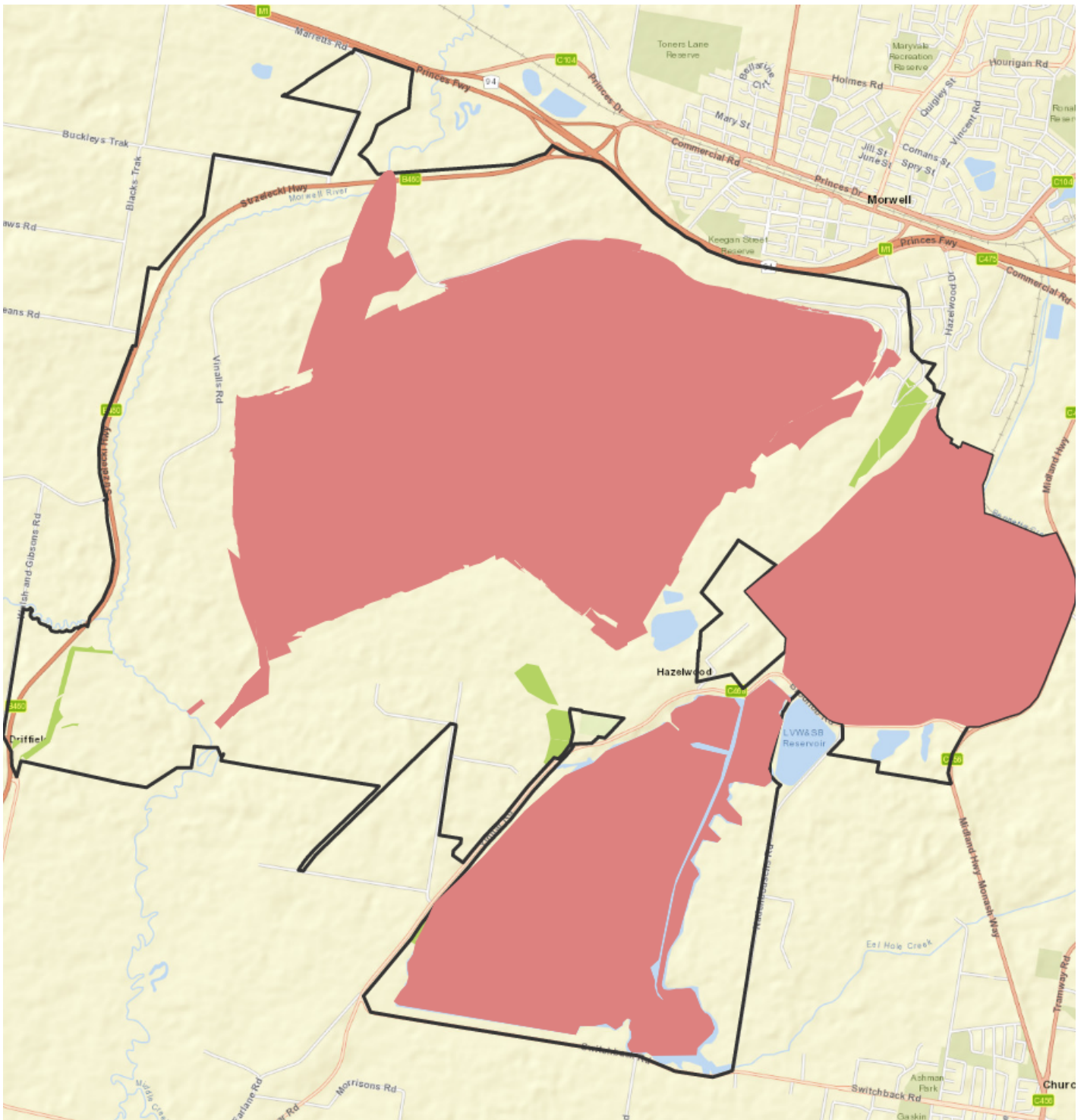
1.4 Payment details - Payment allocation

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

Proposed designated proponent

2. Location

2.1 Project footprint



2.2 Footprint details

What is the address of the proposed action? *

Hazelwood Mine, Brodribb Rd, Hazelwood VIC 3840

Where is the primary jurisdiction of the proposed action? *

Victoria

Is there a secondary jurisdiction for this proposed action? *

No

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

The approximately 4,000-hectare Hazelwood site is owned in freehold title by companies within the ENGIE Hazelwood corporate group.

Approximately 178 hectares of the Project Area is Crown land, which has been occupied by ENGIE Hazelwood since at least approximately 2006. Where falling within the boundary of MIN5004, these Crown lands have been "fenced into" the Mine landholding. Crown land comprises the following:

- Crown Allotment 2039 Vol 11740 Folio 212 and Crown Allotment 2049 Vol 11961 Folio 215 - road reserve of former/relocated Strzelecki Highway
- Crown Allotment 2052 Vol 11977 Folio 643 - former alignment of diverted Morwell River
- Crown Allotment 2042 Vol 11960 Folio 947 (likely a former road)
- Crown Allotment 2040 Vol 11980 Folio 560 (likely a former road)
- Crown Allotment 2055 Vol 11968-545 and Crown Allotment F16A Vol 11740 Folio 193 (waterways or banks / beds thereof).

3. Existing environment

3.1 Physical description

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

The Project will be undertaken predominantly within the current mining licence boundary for MIN5004 and the man-made HCP in areas that have previously been heavily disturbed. Some of this land external to the Mine void has already been rehabilitated and supports vegetation.

The existing environmental condition of the Project Area includes existing amenity effects of historic mining operations and rehabilitation activities (i.e., dust/air quality, noise, ground vibration, visual and traffic), an existing cone of depression from Mine dewatering and altered landforms and drainage, including rehabilitated watercourse diversions.

Much of the vegetation within the Project Area has previously been cleared for agricultural use and/or for the historical operation of the Hazelwood Mine, Power Station and associated infrastructure and activities. While a comprehensive recent ecological assessment of the entire Project Area has not been undertaken, it is understood that outside of the established conservation areas, the values are relatively degraded due to past land use.

Describe any existing or proposed uses for the project area.

The Project Area comprises a former open cut coal mine. Existing land uses within the Project Area are industrial and are primarily related to the management of:

1. The Mine void
2. Other materials extraction areas (e.g. borrow pits)
3. Drainage and water diversion infrastructure (drains, levees)
4. Landfills and waste disposal areas (ash, overburden, hard rubbish)
5. Water storage and treatment facilities (ponds, dams, tanks)
6. Equipment and materials storage areas
7. Offices, gatehouses, buildings and warehouses
8. Roads and carparks

9. Supporting infrastructure e.g. fences, roads, electricity lines and substations, pumps pipelines.

The site areas summarised above have been the subject of decommissioning and rehabilitation works in the period since the operational closure of the Hazelwood Mine and Power Station in March 2017 under existing approvals.

Some isolated areas of the approximately 4,000-hectare Hazelwood landholding leased to third parties for:

- Infrastructure purposes (e.g. Gippsland Water, AusNet Services)
- Grazing and agricultural purposes (including as a bushfire fuel reduction measure).

A Concept Master Plan was developed by ENGIE Hazelwood in 2019 (Attachment 3) to articulate the potential opportunities for productive future uses at the rehabilitated Hazelwood site, with a future vision to transform the Mine and surrounds into a site capable of supporting a mix of possible tourism, agriculture, industry, passive recreation and conservation of natural ecosystem land uses. These future productive uses would be determined and implemented following further consultation with Government, business and the community and will be subject to future land use planning and other necessary approvals.

To achieve this future vision, the Project seeks to finally rehabilitate the former Hazelwood Mine to a safe, stable and sustainable landform capable of supporting future productive land uses.

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

Conservation areas

The Hazelwood Mine also manages ecological conservation areas on and off the Project Area to meet its legal obligations for biodiversity offsets and generally promote the enhancement of conservation values beyond those requirements. The net gain conservation areas were developed as a result of removal of Strzelecki Gum during the West Field Project. These areas are located in the Eel Hole Creek Offset Area and Strzelecki Highway Conservation Area. The Eel Hole Creek Offset Area is located both within and outside of the MIN5004 area and protects listed EVCs described as Riparian Forest/Warm Temperate Forest and Plains Grassy Forest. The conservation area adjacent to the Strzelecki Highway is offsite on two parcels of land owned by ENGIE Hazelwood and was established to conserve land colonised by populations of Strzelecki Gum.

Additionally, as part of EPBC Act compliance for the West Field Project, ENGIE Hazelwood was required to provide replacement plantings of Strzelecki Gum on Crown Land beside Morwell River. The requirement was to 'Plant and Maintain not less than 160 *E. strzeleckii* Trees'. To meet this requirement ENGIE Hazelwood planted 371 Strzelecki Gum together with 150 Silver Wattle *Acacia dealbata*, on the west side of Morwell River, north of the MRD entry point in June 2006. In 2008, an additional 43 Strzelecki Gum were planted, bringing the total to 414 trees being planted in the plot. A limited number of these Strzelecki Gums were required to be removed in accordance with Latrobe City Council permit 2021/25 to facilitate the temporary MRFD works, but this loss has been offset by further commercial offset purchased by ENGIE Hazelwood (Native Vegetation Credit Register ID 2021-0656).

Gippsland Lakes Ramsar site

The Gippsland Lakes Ramsar site was listed in 1982 due to its high ecological values and features. It is located east of the Latrobe Valley and south of the Eastern Highlands. The Gippsland Lakes is approximately 70km east of the Project Area. The Morwell River runs along the western border of the Project Area and flows north into the Latrobe River. The Latrobe River then runs east and flows into Lake Wellington which forms part of the Gippsland Lakes Ramsar site.

The Gippsland Lakes is comprised of a group of connected estuarine lagoons or lakes that are separated from the sea by sand dunes. The major lakes that form the Gippsland Lakes include Lake Wellington, Lake Victoria and Lake King. Numerous other wetlands, marshes and smaller lagoons, which form the boundary of the Ramsar site, fringe the primary lakes. There are also disjunct water bodies that also form part of the Ramsar site such as Sale Common which is a freshwater wetland located along the Latrobe River in the town of Sale which is the western most part of the Ramsar site.

Numerous major rivers feed into the Ramsar site including the Latrobe, Macalister, Thomson, Avon (flowing into Lake Wellington), Mitchell, Nicholson and Tambo (flowing into Lake King). The Gippsland Lakes are reliant on these riverine inputs.

Some of the key ecological values of the Gippsland Lakes include, environments supporting a range of threatened species, waterbird breeding, fish nurseries, fish spawning habitat and complex ecological communities such as subtidal seagrass and algal beds. The Gippsland Lakes also support a range of socio-economic values such as recreational activities, tourism, fishing and boating. Furthermore, the Gippsland lakes support and enable several industries and services such as receiving treated sewage from Warragul, Moe and Morwell and wastewater from electricity generation.

Some key threats identified in the Ecological Character Description of the Gippsland Lakes include altered water regimes, salinity, pollution, pest plants and animals, natural resource utilisation, dredging, activation of acid sulphate soils, recreation and tourism usage, fire and erosion.

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

Landforms in the study region consist of dissected slopes, foothills and streams and terraces on the eastern side of the Strzelecki Range. The dominant features within the area are the Morwell River and its tributaries in the east, and the foothills, fans and slopes of the Haunted Hills in the west separated by a broad gently undulating plain. The Morwell River and its floodplain are incised into the plain between higher alluvial terraces. The river is likely to have flowed within this incised area for at least the last 5000 years, with the river changing course several times leaving evidence of numerous prior channels, meanders, oxbows and swampy depressions. In the west the Haunted Hills foothills form fans and slopes immediately above the undulating plain, deeply incised by streams, gullies and channels. Wilderness Creek drains from west of the Project Area through a low valley in the undulating plain at much the same level as the Morwell River. Eel Hole Creek flows from the east through a complex series of valleys and levees to join the Morwell River south of the open cut.

The Mine void itself is a large void within a low-relief landscape; 1,281 hectares in size and between 70 and 130 metres deep. The Project Area contains a number of out-of-void dumps, which range in height from approximately 22 to 59 metres.

3.2 Flora and fauna

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

A detailed ecological assessment for the entirety of the Project Area has not been undertaken. A summary of the desktop assessment for ecological communities, flora and fauna is provided below as discussed in Attachment 4 – Preliminary ecology appraisal report.

Ecological communities

A review of the EPBC Act PMST identified that one threatened ecological community is predicted to occur within 5km of the Project Area, the Gippsland Red Gum (*Eucalyptus tereticornis* subsp. *mediana*) Grassy Woodland (GRGGW) and Associated Native Grassland. Previous ecology studies undertaken at the site have not identified the presence of this community within the Project Area. Refer to Attachment 4, Section 5.2, pp 20-21 for further details.

Flora

The following flora species have been identified as having the potential to occur within 5km of the Project Area:

- River Swamp Wallaby-grass *Amphibromus fluitans* (Vulnerable)
- Matted Flax-lily *Dianella amoena* (Endangered)
- Strzelecki Gum *Eucalyptus strzeleckii* (Vulnerable)

All flora species have been recorded within or near the Project Area except for River Swamp Wallaby-grass. River Swamp Wallaby-grass is an aquatic species that has been recorded growing in natural and man-made water bodies such as swamps and dams. This species also requires fertile soils and fluctuating water levels; these conditions may be present within the Project Area.

A vegetation quality assessment along a small stretch of the Morwell River in the south-west of the site identified nine Strzelecki Gum individuals comprising two large Scattered Trees and one Large Tree in a Patch and four small trees in a patch.

Further targeted surveys will be required to determine full extent and location of threatened flora species within the Project Area. Refer to Attachment 4, Section 5.3, pp 21 for further details.

Fauna

Avifauna

The following fauna species have been identified as having the potential to occur within 5km of the Project Area:

- Common Sandpiper *Actitis hypoleucos* (Marine, Migratory)
- Eastern Great Egret *Ardea alba modesta* (Marine)
- Musk Duck *Biziura lobata* (Marine)
- Australasian Bittern *Botaurus poiciloptilus* (Endangered)
- Cattle Egret *Bubulcus ibis* (Marine)
- Sharp-tailed Sandpiper *Calidris acuminata* (Marine, Migratory)
- Latham's Snipe *Gallinago hardwickii* (Marine, Migratory)
- Caspian Tern *Hydroprogne caspia* (Marine, Migratory)
- Glossy Ibis *Plegadis falcinellus* (Marine, Migratory)
- White-bellied Sea Eagle *Haliaeetus leucogaster* (Marine)

Most of these species were assessed as possible foraging visitors. Some of these species such as the Common Sandpiper, Latham's Snipe and Sharp-tailed Sandpiper are non-breeding visitors to Australia and are unlikely to be reliant on the Project Area for survival. Additionally, species such as the Eastern Great Egret and Glossy Ibis do breed in Australia but in specific locations such as the Murray Darling Basin and Riverina areas of NSW and Victoria. Their presence within the Project Area is likely to be on a temporary and opportunistic basis. Refer to Attachment 4, Section 5.4.1, pp 21-22 for further details.

Mammals

One mammal was identified as potentially occurring within the Project Area, Grey-headed Flying-fox *Pteropus poliocephalus* (Vulnerable). The Grey-headed Flying Fox is likely to use the Project Area opportunistically; however, as the species is highly mobile and has a large foraging range, it is unlikely to be dependent on the site. Refer to Attachment 4, Section 5.4.2, pp 22 for further details.

Fish

Two fish species were identified as potentially occurring within the Project Area, including:

- Australian Grayling *Prototroctes maraena* (Vulnerable)
- Dwarf Galaxias *Galaxiella pusilla* (Vulnerable)

The Australian Grayling prefers freshwater streams and rivers, typically with a gravel substrate, with a moderate flow rate that are cool and clear. The study area may support this species, in particular habitat associated with the Morwell River.

The Dwarf Galaxias prefers shallow slow moving to still water bodies such as drainage lines, swamps with some aquatic vegetation. This species may use suitable habitat within the Project Area that matches this description.

Further targeted surveys may be required to confirm presence/absence and distribution of these species within the Project Area. Refer to Attachment 4, Section 5.4.4, pp 23-24 for further details.

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

Soils

Soils are mainly fine-grained and clay-rich with minor sand increasing to the west. Soil structure decline is evident under intensive grazing and cultivation. The soils can be characterised as:

- Sandy silts and clayey silts generally make up the surface soils to 1.2 m
- Silty clay and clayey silts are widespread from 0.2 m to 10 m below the surface, with bed thicknesses ranging from 2 m to in excess of 8 m
- Between 2.8 m and 5.8 m below the surface, sand content gradually increases with depth
- Below 4 m, coarse sands and sand-dominated beds are generally encountered
- Alkalinity increases slightly with depth
- Depth to coal ranged from 7.4 m to 19.1 m, and coal was encountered in all boreholes.

Vegetation

The Project Area is located within the Gippsland Plain Bioregion of Victoria, which extends east from Melbourne to Lakes Entrance and includes the Mornington Peninsula and South Gippsland. The study area also sits just outside of the Strzelecki Ranges Bioregion. The Project Area covers about 4,000ha, much of which has been disturbed over its life as a coal mine and power station and for agricultural use. Only scattered and isolated patches of native vegetation remain. These areas of remnant vegetation vary in condition from relatively intact indigenous vegetation with low weed levels to stands of trees with a completely exotic understory. Areas of pasture generally support mature, hollow-bearing eucalypts.

A desktop review and preliminary assessment for the entire MIN5004 Project Area identified 46 references to native vegetation (either remnant patches or scattered trees), where the ecological value was "known" to occur within the Project Area. Native vegetation modelling (DELWP, 2018; DELWP, 2019) suggests that there is up to 79.9 hectares of native vegetation within the Project Area, and a further 578.22 hectares occupied by wetland. The DELWP modelled native vegetation and wetland datasets classify the HCP and other areas within the Mine void as native vegetation and wetlands and are therefore considered to overstate the presence of these ecological values within the Project Area.

The following Ecological Vegetation Classes (EVCs) are modelled within 5km of the Project Area:

- Lowland Forest (EVC 16)
- Herb-rich Foothill Forest (EVC 23)
- Damp Forest (EVC 29)
- Swamp Scrub (EVC 53)
- Plains Grassy Woodland (EVC 55)
- Swampy Riparian Woodland (EVC 83)
- Swampy Riparian Complex (EVC 126)
- Plains Grassy Forest (EVC 151)
- Water Body – man-made (EVC 998)

Of these, four EVCs are modelled within the Project Area, Swamp Scrub (Bioregional Conservation Status (BCS- Endangered), Plains Grassy Woodland (BCS – Endangered), Swampy Riparian Woodland (BCS – Endangered) and Plains Grassy Forest (BCS – Vulnerable).

Limited on-ground assessments of vegetation quality have identified a small number of scattered trees and large trees in patches and remnant patches considered to be of low species and structural diversity. Four patches of Swampy Riparian Woodland were mapped in the small stretch of the Morwell River in the south-west of the Project Area.

3.3 Heritage

Describe any Commonwealth heritage places overseas or other places recognised as having heritage values that apply to the project area.

No Commonwealth Heritage Places have been identified relevant to the Project Area.

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

A database search conducted for the site identified no sites of Aboriginal heritage on the Australian Heritage Database and 90 sites on the Victorian Aboriginal Heritage Register (VAHR). Refer to Att. 5, Section 4.1, pp 5-6 for further details.

Aboriginal heritage investigations undertaken for the impact zones for the previously approved West Field Project identified seven new Aboriginal places in the proposed impact area. The location of the identified artefact scatters supported the initial predictive model for the distribution of Aboriginal places within the study area, suggesting such sites were likely to occur in alluvial landscapes associated with locally significant watercourses. Refer to Attachment 5, Section 4.3.11, pp 7-8.

Areas of potential archaeological deposits were identified throughout the study area, with areas designated as high to very high potential reserved for the Strzelecki Highway Deviation area, the Morwell River corridor and associated terraces, and the Eel Hole Creek-Morwell River confluence. Areas adjacent to other local watercourses were likewise designated a range from moderate to high archaeological potential, predicated on the likelihood that such landforms would have been favourable for Aboriginal occupants.

The Phase 2 development of the West Field project beyond the existing MIN5004 boundary required the preparation of an EES, of which further Aboriginal heritage investigations were then necessary. A subsurface testing program and subsequent salvage were undertaken in all areas determined to represent the greater archaeological potential, comprising river and stream terraces. A number of the identified Aboriginal Places (comprising largely scattered stone artefacts) were subject of salvage works and disturbance permits prior to excavation, noting that the VAHR in certain cases requires updating to reflect this status.

More recently, Aboriginal cultural objects (artefacts) have also been identified adjacent to and within the HCP. Following the lowering of the HCP water level due to risks associated with dam wall integrity in earthquake conditions (ensure ANCOLD compliance), an area of the lakebed around its margins, as well as the original Eel Hole Creek alignment, was exposed for the first time in several decades.

The artefacts in the southern portion of the Project Area adjacent to the HCP, which have been entered onto the VAHR, appear to be relatively undisturbed and require ongoing management, and are proposed to be addressed in the CHMP to be developed between ENGIE Hazelwood and GLaWAC.

3.4 Hydrology

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

The Hazelwood Mine is located within the Morwell River catchment of 65,000ha. The Morwell River is part of the Latrobe River basin and West Gippsland catchment and flows all year round. It flows from the Strzelecki Ranges in the south in a northerly direction, joined by two minor tributaries (Eel Hole Creek and Wilderness Creek) before reaching its confluence with the Latrobe River.

The Latrobe River provides an essential source of freshwater to the Gippsland Lakes Ramsar site, of which Lake Wellington and the Lower Latrobe Wetlands (Dowd Morass, Heart Morass and Sale Common) are important components. The catchment area of the Latrobe River is approximately 490,000ha representing approximately 23% of the total catchment of the Gippsland Lakes.

The long-term annual average yield for the Latrobe River downstream of the Latrobe Valley is reported to be around 844GL. The upper Latrobe catchment and the inflow into Blue Rock Reservoir contributes around 489GL/year. The major tributaries (Morwell River, Tyers River, Narracan Creek and Traralgon Creek) contribute around 355GL into the Latrobe River/year. Further downstream, the Thomson River and Macalister River contribute an estimated 390GL/year. Additional (smaller) tributaries contribute around 34GL into the Latrobe River, giving a total annual average yield for the Latrobe River at Lake Wellington of 1,268GL.

There are three major storages present in the Latrobe catchment: Lake Narracan located on the Latrobe River upstream of the Yallourn Power Station (8,600ML), Blue Rock Reservoir on the Tanjil River (198,280ML) and Moondarra Reservoir on the Tyers River (30,300ML). Surface water extraction and storage in Latrobe River basin have impacted the hydrology of the system. Flow regulation has decreased the volume and variability of downstream flow, affecting sediment transport and disconnecting floodplains throughout the entire river. Development on the adjoining floodplains for Hazelwood Power Station, Loy Yang Power Station and Yallourn Power Station have compromised the stream condition through ongoing water extractions and diversions from the Latrobe River and its tributaries.

The water quality of the Latrobe River catchment is described as having lowland reaches of poor water quality (elevated nutrients and turbidity), attributed to various historical activities, including irrigation drainage, sewage treatment plant discharges, runoff from intensively farmed areas, industrial discharges, urbanisation and erosion.

To the west of the Mine is an engineered diversion of the Morwell River (the Hazelwood Morwell River Diversion (MRD)). The Morwell River catchment upstream of the Mine void (a sub-catchment area of approximately 43,400ha) has been diverted at the point where it intersects the Mine void. The Morwell River and its tributary Eel Hole Creek have been reshaped a number of times to allow access to brown coal and for flood protection.

An assessment of the Morwell River flow rates between 6/12/2017 and 17/06/2021 showed average flow rates of between 63ML/day and 300ML/day for 90% of the time. These data were acquired from monitoring stations located on the Morwell River, just before its entrance into the diversion structure, close to the western boundary of the Hazelwood Mine.

The Project Area has a local catchment area of approximately 1,000ha, which drains to the Mine void itself. This local catchment consists of overburden and rehabilitated areas, compacted areas and undisturbed areas.

Pre-establishment of the Hazelwood site, Eel Hole Creek ran in a north westerly direction from the area west of Churchill before intersecting with the Morwell River. The creek has been diverted to stay clear of the mining area and now feeds into the input end of the MRD channel. The HCP site sits across the original Eel Hole Creek pathway, hence the creek now flows into the HCP (with such flows being ephemeral in nature). On the downstream side of the HCP, water discharged from the pond traverses the remaining creek pathway then along the creek diversion channel into the MRD.

The HCP is a manmade lake with constructed earthen embankments on two sides created to store water for the former Power Station cooling system, and as a former repository for groundwater from the M1 and M2 aquifer dewatering operations. Whilst the HCP has a nominal capacity of 30GL, the water level has been lowered to ensure compliance with Australian National Committee On Large Dams (ANCOLD) Guidelines applicable to dams of the size of the HCP (i.e. demonstrate embankment stability tolerances in earthquake conditions), such that it presently holds approximately 20GL.

Flows in Eel Hole Creek enter the HCP at the south-east corner. An HCP discharge system is set up on the north-west of the HCP and discharges to the original Eel Hole Creek pathway, which then traverses to the diversion channel and into the MRD.

4. Impacts and mitigation

4.1 Impact details

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

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	Yes	Yes
S18	Threatened Species and Ecological Communities	No	Yes
S20	Migratory Species	No	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes

EPBC Act section	Controlling provision	Impacted	Reviewed
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth heritage places overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

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.

—

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

No

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

No World Heritage Places have been identified relevant to the Project Area.

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.

—

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

No

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

No National Heritage Places have been identified relevant to the Project Area.

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.

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

Yes

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

A number of waterways intersect the Hazelwood site, including the Morwell River, which flows into the Latrobe River, approximately 8km to the north of the Hazelwood Mine. The contribution of the Morwell River to the total flow volume in this section of the Latrobe River is estimated to be in the order of 30%. The Latrobe River provides an essential source of freshwater to the Gippsland Lakes Ramsar site.

The Gippsland Lakes Ramsar site is approximately 60,015ha in area, located approximately 70km east of the Project Area. Lake Wellington and its fringing wetlands are the largest single component in the Ramsar site and are listed as nationally important in the Directory of Important Wetlands in Australia. The wetlands include Lake Coleman, Heart and Dowd Morass (at the mouth of the Latrobe River), Clydebank Morass and Sale Common.

The Project requires the continued use of surface water resources during filling of the Mine void and, separate to filling, may result in the modification of waterways and flow regimes within vicinity of the site during the filling period. While historically groundwater and surface water used at the site have been discharged via the HCP into the Latrobe system, during lake filling, this water is being retained within the Mine void, and water flow leaving the site has reduced. This may have indirect implications for the long-term health of river systems and aquatic environments downstream of the site, such as the Gippsland Lakes Ramsar site.

Reduced flows have the potential to exacerbate the already reduced frequency and duration of flows that flush salinity from the Gippsland Lakes estuary and wetlands from agricultural, industrial and urban consumption of water from the Thomson, Macalister and Latrobe rivers, this could have some effect on the existing character of the wetlands.

Whilst the Gippsland Lakes Ramsar site is a considerable distance from the Project Area and the contribution of flows from the Morwell River to the wetland is potentially small, the potential effects of changes in flow and water quality in the Morwell River on the Ramsar site have not been comprehensively assessed. Altered flow regimes in the Morwell River arising from the reduction of discharges from the HCP downstream into Eel Hole Creek and the MRD, may impose risks to the Gippsland Lakes Ramsar site including altering the riverine input of the Latrobe River into Lake Wellington. Additionally, there may be risks to Sale Common which is a freshwater wetland located along the Latrobe River which forms part of the Ramsar site. Whilst expected to be manageable, potential risks to the Ramsar site requiring further investigation include:

- Changes to salinity due to decreased riverine inputs
- Increases in sedimentation and turbidity due to earthworks
- Any migration of contamination from the Mine site following the future interconnection of the Morwell River (Att. 4, Section 5.6, pp 24-25).

Specific linkages between the use of the surface water resources and downstream impacts would be further investigated to understand potential effects such as:

- The effect of continued water resource use under future climate scenarios on the Latrobe River ecosystem
- Implications for Traditional Owners and socio-economic activities that rely on healthy wetlands and rivers, that may be affected by use of the water.

Following filling of the Mine void, a river flow into and out of the Mine would reintroduce a large area for flood retention. It is anticipated that an interconnection of the Mine Lake and the Morwell River would provide improved Mine lake water quality, improved river water quality, and improved regional connectivity of aquatic and riparian habitat. However, this interconnection would be subject to further investigations to ensure the Mine lake water would be of appropriate quality to sustain downstream environmental values, including to the Ramsar wetlands.

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

Yes

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

There is the potential that the Project would result in changes to the flow regime of the Latrobe River catchment which could have a significant impact on the Gippsland Lakes Ramsar site. Potential effects on the Gippsland Lakes Ramsar site would be further investigated to assess potential impacts in more detail and further develop suitable mitigation measures.

Notwithstanding this, whilst further investigations are required to fully characterise ecological values, the environmental impacts are expected to be manageable as the Gippsland Lakes Ramsar site is a considerable distance from the Project Area and the contribution of flows from the Morwell River to the wetland is potentially small, limiting the potential effects of changes in flow and water quality in the Morwell River on the Ramsar site.

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

Yes

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

There is the potential that the Project would result in changes to the flow regime of the Latrobe River catchment which could have a significant impact on the Gippsland Lakes Ramsar site. Taking a precautionary approach, is considered that the proposed action is a controlled action. Potential effects on the Gippsland Lakes Ramsar site would be further investigated.

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

The use of water resources and design of waterway interconnections would be subject to further investigation to ensure ecological effects in waterways and aquatic ecosystems are avoided or minimised in the case where waterways are modified in the vicinity of the site. An adaptive water filling approach may be adopted following further consultation with regulators, other mine operators, water modelling and ongoing monitoring. In addition, consultation with Traditional Owners through the CHMP process would be undertaken to further investigate the future management of water resources in the Latrobe River catchment.

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

Any offsets would be dependent on the findings of the detailed assessments and would be commensurate to the impacts identified. Offsets would be determined in consultation with DAWE and in accordance with the EPBC Act environmental offsets policy.

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
No	No	Abantiades hyalinatus
No	No	Abantiades hyalinatus
No	No	Abantiades magnificus
Yes		Amphibromus fluitans
No	Yes	Botaurus poiciloptilus
Yes		Dianella amoena
Yes		Eucalyptus strzeleckii
Yes		Galaxiella pusilla (eastern population)
Yes		Prototroctes maraena
No	Yes	Pteropus poliocephalus

Ecological communities

—

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

No

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

Please provide a response to the question above.

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.

—

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

No

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

Please provide a response to the question above.

Nuclear

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

No

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

The Project does not involve a nuclear action.

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.

—

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

No

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

No Commonwealth marine areas have been identified relevant to the Project Area.

Great Barrier Reef

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

No

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

The Project does not impact the Great Barrier Reef.

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

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

No

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

The Project does not involve coal seam gas or coal mining development.

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.

—

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

No

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

No Commonwealth land has been identified relevant to the Project Area.

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.

—

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

No

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

No Commonwealth heritage places overseas have been identified relevant to the Project Area.

Commonwealth or Commonwealth Agency

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:

- Ramsar Wetland (S16)
- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)

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)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth heritage places overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

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

No

Describe why alternatives for your proposed action was not possible. *

Other possible rehabilitation models have been previously assessed in the context of:

- The 2015-2016 Hazelwood Mine Fire Inquiry
- Rehabilitation planning undertaken by ENGIE Hazelwood post-closure (including many supporting technical studies)
- In the development by Government and industry of the Latrobe Valley Rehabilitation Strategy (LVRRS) and its supporting studies.

However, a lake landform is the only feasible outcome for the Hazelwood Mine void:

- Having regard to international experience, particularly in the rehabilitation of former lignite (brown coal) mines in the East Germany
- Where the M1 and M2 aquifers beneath the Mine void have lowered through aquifer depressurisation (dewatering) for a period of several decades. Their eventual recovery (absent ongoing pumping into perpetuity, which would not be sustainable) makes a lake landform inevitable
- Where a lake landform will stabilise the Mine floor and batters, and provide a safe, stable and sustainable final landform.

5. Lodgement

5.1 Attachments

1.2 Overview of the proposed action

#1.	Attachment 1 - Figures	Document	Figures of the Project Area, Planning Zones and Overlays, and rehabilitation concept
#2.	Attachment 2 - Key works, events and approvals	Document	Previous and future key works, events and approvals relevant to the Hazelwood site
#3.	Attachment 3 - Concept master plan	Document	Concept master plan for the Hazelwood site post-rehabilitation

3.2 Flora and fauna within the affected area

#1.	Attachment 4 - Preliminary Ecology Appraisal Report	Document	Preliminary ecology appraisal desktop study for the Project
-----	---	----------	---

3.3 Indigenous heritage values that apply to the project area

#1.	Attachment 5 - Preliminary Heritage Appraisal Report	Document	Preliminary heritage appraisal desktop study for the Project
-----	--	----------	--

5.2 Declarations

Completed Referring party's declaration

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

ABN	20093846925
Organisation name	AECOM AUSTRALIA PTY LTD
Organisation address	Level 10, Tower Two Collins Square, 727 Collins Street, Docklands 3008
Representative's name	Melissa Ng
Representative's job title	Senior Environmental Engineer – Impact Assessment and Permitting
Phone	+61466297202
Email	melissa.ng@aecom.com
Address	Collins Square, Level 10 Tower Two 727 Collins Street Melbourne, VIC 3008, Australia

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, **Melissa Ng of AECOM AUSTRALIA 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. *

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.

ABN	40924759557
Organisation name	Hazelwood Power
Organisation address	Level 33, Rialto South Tower, 525 Collins Street, Melbourne VIC 3000
Representative's name	Jamie Lowe
Representative's job title	Head of Regulation, Compliance, and Sustainability
Phone	(03) 9617 8415
Email	jamie.lowe@engie.com
Address	Level 33, Rialto South Tower, 525 Collins Street, Melbourne VIC 3000

- 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, **Jamie Lowe of Hazelwood Power**, 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 would like to receive notifications and track the referral progress through the EPBC portal. *

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.

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, **Jamie Lowe of Hazelwood Power**, 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. *