Blackwater Mine – North Extension Project

Application Number: **02106** Commencement Date: **31/10/2023** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Blackwater Mine – North Extension Project

1.1.2 Project industry type *

Mining

1.1.3 Project industry sub-type

Coal

1.1.4 Estimated start date *

01/07/2025

1.1.4 Estimated end date *

30/06/2085

1.2 Proposed Action details

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

Background - Existing Operations

The Blackwater Mine (BWM) is located approximately 20 kilometres (km) south-west of Blackwater in the Bowen Basin, Queensland (**Figure 1 – Attachment (Att) A (Part 1) 'EPBC Act Referral Figures', page 1**). BWM's Mining Leases (MLs) include ML1759, ML1760, ML1761, ML1762, ML1767, ML1771, ML1772, ML1773, ML1792, ML1800, ML1812, ML1829, ML1860, ML1862, ML1907, ML70091, ML70103, ML70104, ML70139, ML70167 and ML70329 (**Figure 1 – Att A (Part 1) 'EPBC Act Referral Figures', page 1**).

The BWM has been in operation since 1967 and operates in accordance with, amongst other authorisations, Environmental Authority (EA) EPML00717813, granted under the *Environmental Protection Act* 1994 (Qld) (EP Act). The BWM produces up to 16 million tonnes per annum (Mtpa) of product coal, predominantly high-quality coking coal (i.e. coal used for making steel), to the export market.

The BWM comprises a series of open-cut mining pits along an approximate 45-kilometre-long strike length (the length of mineralisation). The mine is a typical operation that uses drill and blast methods for breaking rock, and dragline, truck and shovel, dozers, and excavators for waste rock and coal haulage.

Existing infrastructure includes two rail spurs and balloon loops from the Bauhinia Railway Line, a Coal Handling and Preparation Plant (CHPP), Thermal Coal Plant (TCP) (periodically used), product coal stockpiles, Run of Mine (RoM) coal stockpiles, tailings storage facility (TSF), in-pit spoil (i.e., waste rock) dumps, train load-out facilities, water management infrastructure and other supporting infrastructure (e.g., haul roads, access roads, laydown areas, electricity transmission lines, workshops and offices).

Proposed Action - Overview

BM Alliance Coal Operations Pty Ltd (BMA) seek relevant State and Federal approvals to extend the current mining operation through the BWM – North Extension Project (the Project, also referred to as the Proposed Action). The Proposed Action would extend the mining area of the existing BWM to within Surface Area (SA)10 on ML1759 and SA7 on ML1762 and marginally increase BWM production to up to 17.6 Mtpa (product coal). Importantly, the Proposed Action should be viewed in the context that it is an extension of ongoing mining operations on the northern portion of the significantly larger BWM mining operation. The Project area and disturbance footprint are shown on **Figure 2** (**Att A (Part 1) 'EPBC Act Referral Figures', page 2**).

The key elements of the Proposed Action include, but are not limited to, the following:

- Vegetation clearing, the removal and stockpiling of topsoil material, drilling and blasting of overburden and interburden material.
- Removal of overburden and interburden material (dragline and truck and shovel/excavator methods) to uncover coal, which is placed as back fill in the mined-out pits (in-pit spoil dumps) as mining advances.
- Open cut mining (truck and shovel/excavator methods) of RoM coal from the coal measures in SA10 on ML1759 and SA7 on ML1762.
- Continued use of existing BWM infrastructure (e.g. CHPP, TCP, RoM and product stockpiles, train load-out, water management system and other supporting infrastructure).
- Continued disposal of rejects and tailings in accordance with the EA.
- Construction and operation of new or relocated infrastructure within the proposed extension of mining area to facilitate and/or support the open cut mining extension such as back access roads, access tracks, water management infrastructure and powerlines, laydown areas and build pads.
- A new dragline crossing across Deep Creek.
- Ongoing exploration activities within ML1759 and ML1762.
- Progressive rehabilitation of the mine site.

The Project area is approximately 9,048 hectares (ha) with approximately 3,761 ha proposed to be impacted by the Project's disturbance footprint (i.e. mining areas and associated surface infrastructure) (**Figure 2 – Att A (Part 1) 'EPBC Act Referral Figures', page 2**). If approved, and subject to customer demand, the extension is projected to extend mining at the BWM to within SA7 on ML1762 and SA10 on ML1759 from 2025 to 2085.

Prior to the Proposed Action commencing, BWM will continue to carry out authorised activities within SA10 on ML1759 and SA7 on ML1762 in accordance with existing or future State and Commonwealth government approvals.

Activities not included in the Proposed Action

The Proposed Action does not include mining and associated activities in the existing Blackwater Mine adjacent to the Project area. Certain activities within the Project area are unlikely to have a significant impact on Matters of National Environmental Significance, and accordingly are excluded from the Proposed Action for the purposes of this referral. These activities include, but are not limited to, exploration activities, access roads, power supply infrastructure, survey and demarcation activities, works relating to the management and salvage of Aboriginal heritage items, and installation of monitoring equipment. Such activities within the Project area are not part of the Proposed Action and will be addressed in a separate EPBC Act referral, if necessary.

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

No

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* (EPBC Act)

The EPBC Act provides protection for listed Matters of National Environmental Significance (MNES), which are:

- World heritage properties
- National heritage properties
- Wetlands of international importance
- Listed threatened species and ecological communities
- Listed migratory species
- Protection of the environmental from nuclear actions
- Commonwealth marine areas
- The Great Barrier Reef Marine Park
- Nuclear actions
- Water resources (that relate to large coal mining development or coal seam gas development)

The Project may have significant impact on matters of national environmental significance and therefore be considered a controlled action requiring environmental approval. This referral addresses this Act.

Queensland *Mineral Resources Act 1989* (MR Act)

BMA holds mining leases ML1759 and ML1762 and surface area rights, granted under the MR Act, which provide rights to access minerals in the Project area. No further approval or grant of mining tenure is required under the MR Act.

Queensland *Environmental Protection Act 1994* (EP Act)

BWM currently operates under EA EPML00717813 (**Att B 'BWM EA EPML00717813'**). Condition E23 currently prohibits coal mining (other than certain prescribed activities) within SA10 on ML1759 and SA7 on ML1762. As such, BMA's proposal to extend open cut mining at BWM into SA10 on ML1759 and SA7 on ML1762 requires an EA Amendment Application to be submitted to amend Condition E23.

The current EA includes the following Environmentally Relevant Activities (ERAs) that may be undertaken as part of the Proposed Action:

- Schedule 3, ERA 13: Mining Black Coal.
- Ancillary ERA 8 – Chemical Storage.
- Ancillary ERA 31 – Mineral Processing.
- Ancillary ERA 60 – Waste Disposal.
- Ancillary ERA 62 – Resource Recovery and Transfer Facility Operation.
- Ancillary ERA 63 – Sewage Treatment.

Under Part 27 of the EP Act (transitional provisions for the *Mineral and Energy Resources [Financial Provisioning] Act 2018*), holders of EAs are required to submit a Progressive Rehabilitation and Closure Plan (PRC Plan) that complies with Section 126C and Section 126D of the EP Act, pertaining to the activities authorised by the EA. The BWM transitional PRC Plan is scheduled to be submitted to the Department of Environment and Science (DES) in November 2024.

Queensland *Water Act 2000*

No watercourse diversions or modifications to existing or approved watercourse diversions are proposed for the Project. There are existing and/or approved diversions at BWM associated with Deep Creek and Taurus Creek.

The statutory right of a tenure holder to take or interfere with underground water is granted as part of the ML approval under the MR Act, if the taking or interference with that water is necessarily and unavoidably obtained in the process of extracting the mineral resource. This water is termed 'associated water'. In developing the Proposed Action, BMA is proposing to exercise its underground water rights as part of planned mining activities.

Commonwealth *EPBC Act Environmental Offsets Policy 2012*, Queensland *Environmental Offset Act 2014* and *Environmental Offsets Policy 2017*

The Project will be required to provide a suitable offset under the *EPBC Act Environmental Offsets Policy 2012* and Queensland *Environmental Offset Act 2014* and *Environmental Offsets Policy 2017* in the event the Project is assessed as likely to have a significant impact on Matters of National Environmental Significance (MNES) and/or Matters of State Environmental Significance.

Nature Conservation Act 1992 (NC Act)

There is potential for habitat and species specified under the NC Act to occur within the Project area. BMA will apply for relevant licences and permits, where required under the NC Act.

Commonwealth *Native Title Act 1993* (NT Act)

The Project area is located within the traditional lands of the Gaangalu Nation People (QC2012/009) who have received a judgement on their Native Title claim asserting native title rights and interests across parts of the broader region. The recent judgement found that Native Title has been extinguished over the Project area; however, at the time of drafting, there is uncertainty as to the orders that will be issued by the Court in relation to this hearing.

The Project area, and the existing BWM, are located within the extent of the Blackwater and South Blackwater Mines Indigenous Land Use Agreement (ILUA) (QI2001/035) between the Ghungalu and Kangoulu People, the Gurang Land Council, BHP Coal, and South Blackwater Coal Ltd.

Queensland *Aboriginal Cultural Heritage Act 1993* (ACH Act)

The Gaangalu Nation People are the statutory Aboriginal Party for the Project area in accordance with the ACH Act. BMA Blackwater and the Gaangalu Nation People have entered into two cultural heritage management agreements to satisfy the Duty of Care provisions in accordance with the ACH Act. BWM operates in accordance with the provisions set out in the 'BMA Blackwater Mine Aboriginal Cultural Heritage Management Agreement' to identify, protect, manage, and conserve Aboriginal cultural heritage.

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. *

BMA engages with the Blackwater community and other stakeholders in a number of ways including:

- Bi-annual meetings with the Central Highlands Regional Council.
- Central Highlands Resources Roundtable.
- Central Highlands Development Corporation.
- Community Reference Group Meetings.
- Regional Interagency Meetings.
- CSIRO Local Voices Surveys.

Project-specific consultation and engagement has or will be undertaken with key stakeholders including State and Commonwealth Government regulatory authorities, Central Highlands Regional Council, local landowners, Gaangalu Nation People, the existing BWM workforce, neighbouring mine owners and operators, and relevant infrastructure and service providers.

Community consultation and stakeholder engagement forms an integral component of the Queensland assessment process (a Major EA Amendment under the EP Act) for the Project.

The EA Amendment application will most likely be determined by the DES as a 'Major Amendment'. There is a Public Notification stage (30 business days) required for the Proposed Action as part of the Major Amendment of an EA under the EP Act, which provides the public with the opportunity to provide a submission to the DES during the period.

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.

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☑ **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	67096412752
Organisation name	BM ALLIANCE COAL OPERATIONS PTY LIMITED
Organisation address	Level 14, 480 Queen Street, Brisbane, QLD, 4000

Referring party details

Name	Stacey Gromadzki
Job title	Environment Approvals Principal
Phone	0417 726 230
Email	stacey.gromadzki@bhp.com
Address	Level 14, 480 Queen Street, Brisbane, 4000

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? *

No

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

Yes

Person proposing to take the action organisation details

ABN/ACN	67096412752
Organisation name	BM ALLIANCE COAL OPERATIONS PTY LIMITED
Organisation address	4000 QLD

Person proposing to take the action details

Name	Craig Bancroft
Job title	Manager - Environment
Phone	0429041853
Email	craig.bancroft2@bhp.com
Address	Level 14, 480 Queen Street, Brisbane, Qld 4000

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. *

The proponent of the Proposed Action is BMA, as manager and agent on behalf of the Central Queensland Coal Associates Joint Venture (CQCA JV) and South Blackwater Coal Pty Limited.

BMA is owned 50:50 by BHP Group Limited (BHP) and Mitsubishi Development Pty Ltd (operated by BHP) and is Australia's largest supplier of seaborne metallurgical coal. BMA operates seven Bowen Basin mines: Blackwater, Broadmeadow, Goonyella Riverside, Peak Downs, Saraji, Caval Ridge and Daunia, as well as owning and operating the Hay Point Coal Terminal near Mackay.

BM Alliance Coal Operations Pty Limited has an excellent record of responsible environmental management and a strong commitment to the communities and the environments in which it operates. BMA has been the subject of environmental related proceedings in the Queensland Magistrates Court for matters related to State legislation. A fine was imposed and paid by BMA. No conviction was recorded. To the best of our knowledge and enquiries, there have been no further proceedings against BMA under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources.

The Proposed Action will be undertaken in accordance with the proponent's environmental policy and framework. BMA has been responsible for multiple referrals and/or actions under the EPBC Act, including (but not limited to):

- 2022/9350 – BM Alliance Coal Operations Pty Ltd, Peak Downs Continuation Project.
- 2022/9279 – BM Alliance Coal Operations Pty Ltd, Blackwater Mine South Coking Coal Project.
- 2021/9031 – BM Alliance Coal Operations Pty Ltd, Caval Ridge Mine Horse Pit Extension.
- 2019/8576 – BM Alliance Coal Operations Pty Ltd, Saraji Mine Spring Creek to Phillips Creek Diversion.
- 2016/7791 – BM Alliance Coal Operations Pty Ltd, Saraji East Mining Lease Project.
- 2013/6868 – BM Alliance Coal Operations Pty Ltd, Dysart Road Relocation.
- 2013/6865 – BM Alliance Coal Operations Pty Ltd, Red Hill Mining Project.
- 2012/6268 – BM Alliance Coal Operations Pty Ltd, M Block 3D Seismic Survey Program.
- 2009/4759 – BM Alliance Coal Operations Pty Ltd on behalf CQCA Joint Venture, Hay Point Coal Terminal Expansion.
- 2008/4659 – BM Alliance Coal Operations Pty Ltd, Vessel-based Seismic and Hydrographic Sonar Survey.
- 2008/4418 – BM Alliance Coal Operations Pty Ltd, Develop an Open Cut Coal Mine at Daunia.
- 2008/4417 – BM Alliance Coal Operations Pty Ltd, Caval Ridge Open Cut Coal Mine Project.
- 2005/2248 – BM Alliance Coal Operations Pty Ltd, Goonyella Riverside Coal Mine Expansion.
- 2005/2211 – BM Alliance Coal Operations Pty Ltd, Hay Point Services Coal Terminal Offshore Expansion.
- 2004/1447 – BM Alliance Coal Operations Pty Ltd, Norwich Park Coal Mine - Development of East Pit.

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

BM Alliance Coal Operations Pty Limited operates under BHP Group Limited (BHP) and/or Mitsubishi Development Pty Ltd environmental policy and planning framework. BHP and Mitsubishi Development policies and frameworks are described below.

In line with BHP's '*Our Code - Your guide to living our Charter values every day'* (BHP, 2022)(all pages) and our Charter value of Sustainability outlined in Our Code, BHP seeks to avoid or minimise adverse environmental impacts through every stage of its operational activities and acknowledges its role in contributing more broadly to the resilience of the natural environment.

BHP's approach to environmental management is based on and influenced by:

- the identification, assessment and management of risks (both threats and opportunities) across all phases of our operational life cycle, including exploration, development, operation, closure and post closure. BHP applies a Group-wide Risk Framework to identify and manage risks, including environmental risks;
- engagement with internal and external stakeholders to ensure we take their perspectives and knowledge into account in our decision-making;
- the realms of nature (land, oceans, freshwater and atmosphere) that we may impact or depend on;
- the extent and nature of our planned activities and optimising our activities to seek to minimise or prevent adverse impact and maximise contribution to social value; and
- societal risks such as habitat loss and pollution.

BHP's group-wide approach to environmental management is set out in the '*Our Requirements for Environment and Climate Change'* standard (BHP, 2020) (all pages). BHP takes an integrated, risk-based approach to managing any actual or reasonably foreseeable operational impacts (direct, indirect and cumulative) on biodiversity, land, water and air.

BHP's primary approach to preventing or minimising potential adverse environmental impacts is to apply the mitigation hierarchy. Steps one and two of the mitigation hierarchy – avoid and minimise – seek to prevent adverse impacts as far as possible. Steps three and four – rehabilitate and compensate – seek to address those impacts that cannot be avoided.

BHP's *'Climate Transition Action Plan 2021'* (BHP, 2021) (all pages) and *'Water Stewardship Position Statement '* (BHP, 2022) (all pages) also outline BHP's vision, strategies and focus for these areas.

Further information on BHP's approach to the environment and sustainability is provided on BHP's website: https://www.bhp.com/sustainability/environment/.

Mitsubishi Development (a wholly owned subsidiary of Mitsubishi Corporation) operates under three corporate Mitsubishi Corporation principles: corporate responsibility to society; integrity and fairness; and global understanding through business (Mitsubishi Development, 2024 '*Creating Value through Sustainability*', page 1).

These principles are the heart of Mitsubishi Development's sustainability approach, which strives to address the following key sustainability issues:

- transitioning to a low-carbon society;
- procuring, operating and supplying in a sustainable manner;
- tackling evolving regional issues in Australia;
- addressing the needs of society through business innovation and new technology;
- conserving the natural environment;
- growing together with local communities; and
- fostering our employees' maximum potential including health and safety.

Mitsubishi Corporation's 'Environmental Charter' and 'Environmental Policy' under which Mitsubishi Development operates is provided in Mitsubishi Corporation (2023) '*Sustainability Report 2022*' ('Environmental Charter' page 8 and 'Environmental Policy', page 120).

Mitsubishi Corporation is committed to reducing greenhouse gases by implementing new operational efficiencies and sustainable technologies, as well as actively pursuing business partnerships that facilitate the transition to a low-carbon society. Mitsubishi Corporation, Mitsubishi Development's parent company, aims to reduce greenhouse gas emissions by 50 per cent by 2030 per total assets, compared to FY2020 levels and Net Zero by 2050 (Mitsubishi Corporation, 2022 '*Midterm Corporate Strategy 2024',* page 21, 1st paragraph).

Further information on Mitsubishi Development's sustainability approach is available at: https://www.mdp.com.au/sustainability.

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	67096412752
Organisation name	BM ALLIANCE COAL OPERATIONS PTY LIMITED
Organisation address	4000 QLD

Proposed designated proponent details

Name	Craig Bancroft
Job title	Manager - Environment
Phone	0429041853
Email	craig.bancroft2@bhp.com
Address	Level 14, 480 Queen Street, Brisbane, Qld 4000

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

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

ABN/ACN	67096412752
Organisation name	BM ALLIANCE COAL OPERATIONS PTY LIMITED
Organisation address	Level 14, 480 Queen Street, Brisbane, QLD, 4000
Representative's name	Stacey Gromadzki
Representative's job title	Environment Approvals Principal
Phone	0417 726 230
Email	stacey.gromadzki@bhp.com

Address	Level 14, 480 Queen Street, Brisbane, 4000

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/ACN	67096412752
Organisation name	BM ALLIANCE COAL OPERATIONS PTY LIMITED
Organisation address	4000 QLD
Representative's name	Craig Bancroft
Representative's job title	Manager - Environment
Phone	0429041853
Email	craig.bancroft2@bhp.com
Address	Level 14, 480 Queen Street, Brisbane, Qld 4000

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

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

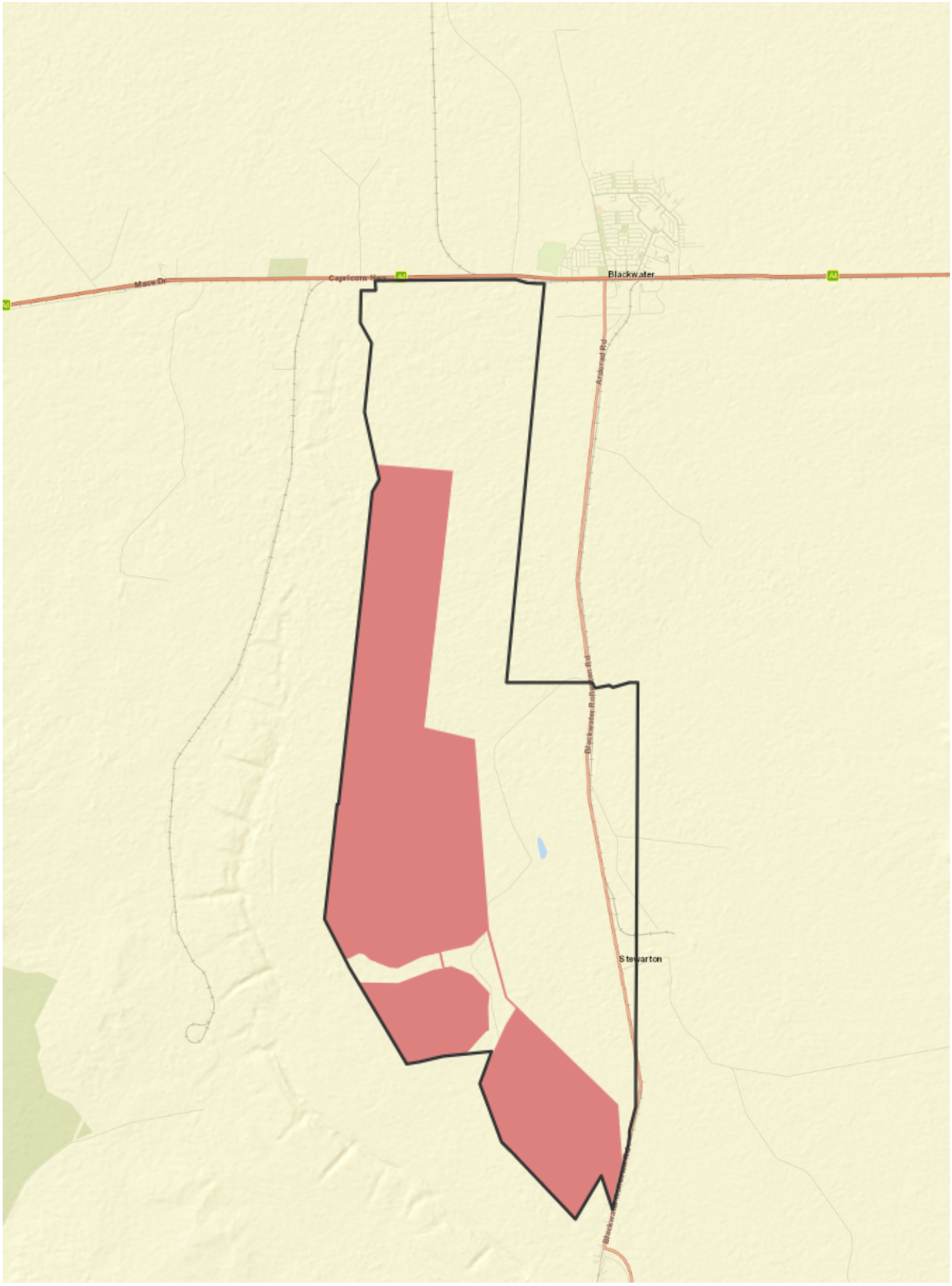
1.4 Payment details: Payment allocation

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

Proposed designated proponent

2. Location

2.1 Project footprint


Mace Dr
Capricorn Hwy
Blackwater
Anderwald Rd
Blackwater Rolleston Rd
Stewarton

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Blackwater Mine, Ardurad Road, Blackwater, QLD 4717

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

Queensland

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? *

The Project area is located within BMA mining tenements ML1759 and ML1762 (**Figure 1 and Figure 2 – Att A (Part 1) 'EPBC Act Referral Figures', pages 1 and 2**).

The land underlying SA10 (ML1759) and SA7 (ML1762) is predominantly Freehold Land and Lands Lease (Grazing Homestead Perpetual Lease) (**Figure 3 – Att A (Part 1) 'EPBC Act Referral Figures'**, **page 3**).

The Project is located primarily within parts of Lot 3 RP843182, Lot 7 HT243, Lot 24 CP855505, Lot 25 HT635, Lot 26 HT419, Lot 30 HT640, Lot 31 CP900801, Lot 35 on HT240, Lot 36 HT243, Lot 50 SP117237, Lot 71 SP259121, Lot U AP17083 and Lot V AP17084.

Easements intersecting the Project area include Lot A HT301, Lot A HT343, Lot A HT456, Lot B HT456, Lot B HT324, Lot C HT456, Lot C HT382, Lot D HT456, Lot F HT381, Lot G HT412, Lot H HT457 and Lot J CP855505.

A Petroleum and Gas Tenement (Potential Commercial Area permit number 264) is located in the northern extent of the Project area, however it is outside the Project disturbance footprint.

3. Existing environment

3.1 Physical description

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

The BWM is located approximately 20 km south-west of Blackwater and is accessed via Ardurad Road, Blackwater.

The Project is located within the Central Highlands Regional Local Government Area and is covered by the *Central Highlands Regional Council Planning Scheme 2016* (Central Highlands Regional Council, 2023). The *Central Highlands Regional Council Planning Scheme 2016* indicates the Project area is located within land mapped as Rural, of which an appropriate land use is mining (Central Highlands Regional Council, 2023). The land adjoining the Project area is also land mapped as Rural.

No new roads, or alterations to the existing access road, are required. The existing BWM access roads and haul roads will continue to be used and relocated as required within the Project disturbance footprint. The existing rail infrastructure will continue to be used.

Land within the Project area is predominantly used for cattle grazing, with large areas that have been cleared of native vegetation. Most of the habitat across the Project area is considered low quality due to broad-scale vegetation clearing, cattle grazing, weed encroachment and fragmentation. The areas of non-remnant vegetation are now largely dominated by introduced Buffel Grass, have been raked of woody debris and rocks, and continue to be grazed by livestock. Areas of good quality habitat are limited and usually constrained to small vegetation fragments or as narrow corridors fringing creek and drainage lines.

Remnant sites fringing creek lines are generally narrow linear tracts but hold some biodiversity value, predominantly in the form of connectivity through the mostly cleared landscape. Although some of these sites presented in relatively good condition, all possessed some level of exotic encroachment, most commonly by Buffel Grass dominating the ground layer. All sites also showed evidence of disturbance either by cattle grazing, previous vegetation clearance, or weed encroachment.

Small farm dams occur across the Project area. Some dams in the north of the Project area, provide shallow margins, areas of fringing grasses and reeds and were fenced to cattle. However, the quality of farm dams varied across the Project area. Some dams were unfenced and open to livestock, and the margins were bare due to overgrazing and trampling, with extensive soil erosion and reduced water quality. Other farm dams were fenced, but had steep sides and were generally of low value for waterbirds.

Weed species are widespread across the Project area. A total of seven Category 3 species listed under the *Biosecurity Act 2014* were recorded including Mother of Millions, Rubber Vine, Harrisia Cactus, Parkinsonia Weed, Parthenium, Prickly Pear and Velvety Tree Pear. Parthenium, Rubber Vine and Velvety Tree Pear are classified as Weeds of National Significance. Other non-listed introduced flora species were also recorded with the most numerous and widespread being the pastoral species of Buffel Grass which has formed vast monoculture-like communities through cleared areas and invaded almost all remaining patches of native vegetation, degrading MNES species habitat.

Seven introduced terrestrial vertebrate species were recorded within the Project area, namely, Cane Toad (*Rhinella marina*), Common Myna (*Acridotheres tristis*), Rabbit (*Oryctolagus cuniculus*), Brown Hare (*Lepus capensis*), Wild Dog (*Canis lupus familiaris*), House Mouse (*Mus musculus*) and Feral Pig (*Sus scrofa*).

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

The Project area is located in the Bowen Basin where mining and petroleum exploration activities have been conducted for several decades. The Proposed Action is a continuation of existing operations at the northern extent of the BWM. The current land use within the Project area is predominantly cattle grazing, however, Mining Leases ML1759 and ML1762 were originally granted in 1965 and 1969, indicating that coal mining has been identified as a proposed land use in the Project area for some time. The Cook Colliery (underground coal mine) is located immediately to the east of the Project area (**Figure 1 – Att A (Part 1) 'EPBC Act Referral Figures', page 1**).

A number of easements and associated infrastructure are located within the Project area and include:

- Public road reserves.
- Rail reserves.
- Powerlink 132 kV powerline, BWM 66 kV powerlines (BMA owned and operated) and Ergon 66kV and 22kV powerlines.
- BMA Bedford East water pipeline and Sunwater Blackwater water pipeline.
- Various roads.
- A stock route.

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

The Project area does not have any outstanding natural features or any other important or unique values. Rather, it is characteristic of modified habitats used for cattle grazing activities throughout the broader region.

The Blackdown Tableland National Park is located approximately 10 km to the east of the Project area. The National Park will not be directly or indirectly impacted by the Proposed Action.

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 natural topography in the Project area is generally flat to gently undulating and slopes gently from west to east. The Project area is drained by a number of ephemeral first, second, and third order waterways. The Project area has elevations of approximately 235 metres above Australian Height Datum (mAHD) in the west, descending to approximately 170 mAHD in the east. The gradients of the Project area are typically between 1:100 and 1:240.

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 Project area is located in the Brigalow Belt Bioregion, and the Isaac-Comet Downs subregion (**Figure 4 – Att A (Part 1) 'EPBC Act Referral Figures', page 4**).

Desktop searches and assessments were undertaken to identify Matters of National and/or State Environmental Significance with the potential to occur in the Project area or surrounds and to inform the survey methodology, survey effort and site selection of the ecological field survey programs. The desktop searches undertaken and the results of the desktop searches are described in **Att C 'Terrestrial Ecology Matters of National Environmental Significance (MNES) Assessment - Baseline Report' - section 4.2 (pages 13-14), section 5 (pages 46-60)** and
Att C 'Terrestrial Ecology MNES Assessment - Baseline Report' - Appendix A. The most recent EPBC Act Protected Matters Search (DCCEEW, 2023) is provided in **Att D 'EPBC Act Protected Matters Report' (all pages).**

Extensive baseline terrestrial flora and fauna surveys have been undertaken in the Project area from 2019 to 2023. Details of the survey timing, methodology and survey effort, and the relevant guidelines they have been undertaken in accordance with, is provided in **Att C 'Terrestrial Ecology MNES Assessment - Baseline Report' – section 4.3 (all pages), section 4.4 (all pages) and section 4.5 (all pages).**

Ground-truthing surveys of vegetation communities in the Project area identified the following Regional Ecosystems (REs):

- RE11.3.1 *Acacia harpophylla* and/or *Casuarina cristata* open forest on alluvial plains.
- RE11.3.2 *Eucalyptus populnea* woodland on alluvial plains.
- RE11.3.3 *Eucalyptus coolabah* woodland on alluvial plains.
- RE11.3.6 *Eucalyptus melanophloia* woodland on alluvial plains.
- RE11.3.25 *Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing drainage lines.
- RE11.4.9 *Acacia harpophylla* shrubby woodland with *Terminalia oblongata* on Cainozoic clay plains.

The ground-truthed vegetation communities are shown on **Figures 11a, 11b and 11c – Att A (Part 3) 'EPBC Act Referral Figures' (pages 2 to 4).**

Most of the habitat across the Project area is considered low quality due to broad-scale vegetation clearing, cattle grazing, weed encroachment and fragmentation. The areas of non-remnant vegetation are largely dominated by introduced Buffel Grass, have been raked of woody debris and rocks, and continue to be grazed by livestock. Areas of good quality habitat are limited and usually constrained to small vegetation fragments or as narrow corridors fringing creek and drainage lines.

As described further in Section 3.2.2 of this Referral, one Threatened Ecological Community (TEC) was identified in the Project area, namely, the Brigalow (*Acacia harpophylla* dominant and co-dominant) ecological community. No EPBC Act protected flora species were recorded by the extensive Project surveys.

A total of 211 terrestrial fauna species were recorded by the Project surveys including 14 amphibians, 31 reptiles, 15 non-volant mammals, 15 bats and 136 birds.

Four threatened and three migratory fauna species listed under the EPBC Act were recorded during field surveys (**Figure 5 – Att A (Part 1) 'EPBC Act Referral Figures', page 5**), as described below.

The Australian Painted Snipe was recorded via direct observations in an area of gilgai on ML1762 to the east of Taurus Creek within the Project area but outside of the Project disturbance footprint, and on two dams in the west of the Project area (one within the Project disturbance footprint and one outside) **(Figure 6 – Att A (Part 2) 'EPBC Act Referral Figures', page 1).**

The Ornamental Snake was recorded in an area of gilgai on ML1762 to the east of Taurus Creek (outside the Project disturbance footprint). Ornamental Snakes were found in close proximity to each other in an area of gilgai between Taurus Creek and the Blackwater-Rolleston Road on ML1762 **(Figure 7 – Att A (Part 2) 'EPBC Act Referral Figures', page 2)**.

The Squatter Pigeon was recorded on two occasions in the general vicinity of dams around Taurus Road (one within the Project disturbance footprint) in supplementary ecology surveys commissioned in June-August 2023 - despite not being recorded in over 600 hours in the earlier baseline surveys (**Figure 8 – Att A (Part 2) 'EPBC Act Referral Figures', page 3)**. The individuals were recorded in the vicinity of two dams around Taurus Road and are likely to be scarce in the Project area, reflective of the degraded nature of the habitat and extensive Buffel Grass areas.

Signs of Koala were recorded via indirect observation of old scratches on Queensland Blue Gums along Taurus Creek as well as old scratches and scat on an unnamed creek **(Figure 9 – Att A (Part 2) 'EPBC Act Referral Figures', page 4)**. The scratches on Taurus Creek were present in a small backwater of the main creek line, which was fringed by Queensland Blue Gum which is a preferred foraging resource. Despite extensive transects along creek lines across the remainder of the Project area, no other signs of Koalas were observed.

Three migratory (EPBC Act listed) species were recorded during the Project surveys, namely, Latham's Snipe, Glossy Ibis and Fork-tailed Swift **(Figure 5 – Att A (Part 1) 'EPBC Act Referral Figures', page 5)**.

Latham's Snipe was recorded once during autumn 2019 surveys in an area of gilgai on ML1762 and recorded twice more in gilgai on ML1762 to the east of Taurus Road during the March 2020 surveys. The Glossy Ibis was recorded once during autumn surveys on a farm dam in the north of the Project area (outside of the Project disturbance footprint). The Fork-tailed Swift was observed over ML1762 during April 2019 surveys. A direct count of six was recorded in a feeding flock.

Aquatic ecology surveys (EMM, 2023) have also been conducted for the Project. Survey sites, palustrine waterbodies and lacustrine waterbodies within the Project area and surrounds are shown on **Figure 10 – Att A (Part 3) 'EPBC Act Referral Figures' (page 1)** (noting that several mapped waterbodies shown on Figure 10 are artificially created mine waterbodies [e.g. pit lakes or mine dams] to the west of the Project area). No conservation significant aquatic flora or fauna species listed under the EPBC Act were recorded by the aquatic ecology surveys (EMM, 2023). Due to habitat requirements and distributional range, it is unlikely that any threatened aquatic flora or fauna species occur within the Project area as either resident or transient occurrences (EMM, 2023). Details of the baseline aquatic ecology surveys are reported in **Att E – 'Aquatic Ecology Baseline Assessment' (all pages)**.

There are no potential subterranean groundwater dependent ecosystems (GDEs) mapped within or in the vicinity of the Project area (Bureau of Meteorology [BOM] 2023, Queensland Government 2023). A stygofauna pilot survey was completed for the Project by Freshwater Ecology in December 2020 and May 2021 (Freshwater Ecology, 2021, provided in **Att F – 'Blackwater Mine Stygofauna Pilot Survey' (all pages)**). Bores surveyed for stygofauna are shown on **Figure 10 – Att A (Part 3) 'EPBC Referral Figures' (page 1)**. There are no known records of stygofauna (stygobitic or stygophilic fauna) in the vicinity of the Project, and they were not recorded during the pilot study for the Project (Department of Environment and Science [DES] 2023, Freshwater Ecology 2021 in **Att F – 'Blackwater Mine Stygofauna Pilot Survey' (all pages)**, frc environmental 2020, State of Queensland 2014, State of Queensland 2012). Stygoxenes (i.e. not obligate inhabitants of groundwater systems) were recorded from six of the ten bores sampled during the Project pilot study, including termites (Isoptera), one soil mite (Oribatida), thrips (Thysanoptera) and springtails (Collembola) (Freshwater Ecology 2021). Details of the stygofauna pilot surveys are reported in **Att F – 'Blackwater Mine Stygofauna Pilot Survey' (all pages).**

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

Soils

Within the area of the Proposed Action, four soil map units have been identified based on the dominant soil type. The dominant soil unit in the Project area is a Black-Brown Self-Mulching Vertosol (92%), with smaller areas of Eutrophic Dermosols.

- **Self-Mulching Black-Brown Vertosol** - Vertosols are clay soils with shrink-swell properties that exhibit strong cracking when dry and at depth have slickensides and/or lenticular structural aggregates.
- **2A and 2B Eutrophic Red and Black-Brown Dermosols** - Dermosols are soils with structured B horizons and lack strong texture contrast between the A and B horizons.

Vegetation Communities

Vegetation assessments across the Project area identified a dominance of heavily degraded, non-remnant vegetation with few to no native plant species. Most non-remnant sites are active grazing land and have been altered by both recent and long preceding vegetation clearance and raking of woody debris and rocks. These areas are now largely dominated by introduced Buffel Grass and continue to be grazed by livestock.

Ground-truthing surveys of vegetation communities in the Project area identified the following Regional Ecosystems (REs):

- RE11.3.1 *Acacia harpophylla* and/or *Casuarina cristata* open forest on alluvial plains.
- RE11.3.2 *Eucalyptus populnea* woodland on alluvial plains.
- RE11.3.3 *Eucalyptus coolabah* woodland on alluvial plains.
- RE11.3.6 *Eucalyptus melanophloia* woodland on alluvial plains.
- RE11.3.25 *Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing drainage lines.
- RE11.4.9 *Acacia harpophylla* shrubby woodland with *Terminalia oblongata* on Cainozoic clay plains.

The ground-truthed vegetation communities are shown on **Figures 11a, 11b and 11c – Att A (Part 3) 'EPBC Act Referral Figures' (pages 2 to 4).**

Riparian vegetation comprises the entirety of the remnant vegetation within the Project area. Vegetation along watercourses such as Taurus Creek and Two Mile Gully consist of narrow linear patches that fringe the creeks. Vegetation types in riparian zones consisted primarily of Brigalow dominated communities such as RE 11.3.1 and 11.4.9, with some patches supporting large eucalypt species such as Coolibah (*Eucalyptus coolabah*), Queensland Blue Gum and Silver-leaved Ironbark (*E. melanophloia*). Other riparian vegetation includes RE11.3.2 dominated by *Eucalyptus populnea*. Vegetation is most extensive and with most complex structure around the downstream limit of Taurus Creek and Two Mile Gully.

Within the Project disturbance footprint, riparian vegetation includes narrow bands of RE11.3.1 and mixed polygons supporting REs 11.3.2, 11.3.6 and 11.4.9 including some that are regrowth vegetation with sparse to no woody vegetation.

Vegetation polygons confirmed as REs that were potentially associated with a Threatened Ecological Community (TEC) under the EPBC Act were assessed against applicable TEC diagnostic condition thresholds. The assessments indicated one vegetation patch of RE11.3.1 *Acacia harpophylla* and/or *Casuarina cristata* open forest on alluvial plains met thresholds for Brigalow TEC. This TEC patch was previously mapped as non-remnant vegetation in Queensland Government certified mapping prior to ground-truthing.

This area of Brigalow TEC (**Figure 12 – Att A (Part 4) 'EPBC Act Referral Figures', page 1**) exists as riparian vegetation along Taurus Creek on ML1762 covering an area of approximately 6.3 ha. Although the site meets TEC criteria, it exhibits elements of disturbance such as weed encroachment (within TEC thresholds of <50% exotic cover), predominantly from Buffel Grass and/or Rubber Vine.

Areas of ground-truthed RE11.3.2 were recorded in the Project area, where *Eucalyptus populnea* was dominant in the canopy (refer to **Figure 11a, 11b and 11c – Att A (Part 3) 'EPBC Act Referral Figures', pages 2 to 4**). All areas failed to meet Poplar Box TEC thresholds through excessive weed cover. These areas often had a ground cover dominated by Buffel Grass or other non-native species.

The TEC assessment results are provided in **Att C 'Terrestrial Ecology MNES Assessment – Baseline Report', Appendix G).** No other TECs occur within the Project area.

Remnant RE11.3.1 mapped along Sagittarius Creek, Taurus Creek and Two Mile Gully represent the largest tract of vegetation within the Project area. Further information on the vegetation communities identified in the Project area is provided in **Att C 'Terrestrial Ecology MNES Assessment – Baseline Report' - section 6.2.1, pages 79 to 83.**

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.

There are no Commonwealth Heritage places (as listed on the Commonwealth Heritage list) in the Project area.

The Queensland Heritage Register (November 2023) includes no culturally significant sites in the general vicinity of the Project area. The closest site was located in Emerald, 70 km to the west of the Project area.

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

Initial Indigenous cultural heritage surveys in the Project disturbance footprint have been undertaken. Indigenous cultural heritage surveys have been undertaken in accordance with processes outlined in the Cultural Heritage Management Agreement between BMA and the Ghungalu and Kangoulu People. Artefacts and areas of significance identified in the Project disturbance footprint have been recorded and for the most part left *in-situ.* Management and relocation of sites identified within the Project disturbance footprint will be managed in accordance with the processes outlined in the Cultural Heritage Management Agreement as mining progresses. All indigenous cultural heritage clearance activities will be undertaken in accordance with the Queensland *Aboriginal Cultural Heritage Act 2003*.

An ILUA has been signed between the Proponent and the Ghungalu and the Kangoulu Peoples. This agreement has also been confirmed by the Queensland Government and covers the land on which the existing BWM and the Proposed Action is located.

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 Project area is located within the catchment of Blackwater Creek, which is a tributary of the Mackenzie River. The Mackenzie River catchment drains to the Fitzroy River, which ultimately terminates at the Coral Sea south-east of Rockhampton, near Port Alma.

The Project area covers an area of approximately 90 km2, which equates to approximately 0.7% of the approximate 13,000 km2 Mackenzie River catchment, and 0.07% of the approximate 140,000 km2 Fitzroy River basin.

The waterways of the Project area are predominantly first and second order tributaries. There are sections of waterways ranging up to the fourth order including Two Mile Gully and Taurus Creek. Taurus Creek then flows north into Blackwater Creek as a fifth order stream.

The waterways of the Project area are ephemeral streams, which are dry for most of the year and flow for a short time following sustained or intense rainfall events that are more common in the wet season. Stream flows are expected to be highly variable, with most channels dry during winter to early spring when rainfall and runoff is historically low.

The waterways within the Project area and downstream are shown on **Figure 13 - Att A (Part 4) 'EPBC Act Referral Figures', page 2**. These include:

- Two Mile Gully and its associated tributaries, the headwaters of which are located to the south east and within the southern part of the Project area. These waterways flow in a north easterly direction, joining Taurus Creek approximately 6 km downstream of the Project disturbance footprint.
- Deep Creek, the tributaries of which originate to the west of BWM and flow in a north easterly direction between active mining areas of BWM (parallel with Taurus Creek) and joins Taurus Creek immediately downstream of Taurus Road. The Deep Creek watercourse traverses between active mining areas via the Deep Creek Diversion, which conveys flows to the New Deep Creek Dam. The New Deep Creek Dam is an on-line structure and flows discharging from the Dam continue in an easterly direction for approximately 3.5 km before joining at the confluence with Taurus Creek.
- Taurus Creek, the tributaries of which originate to the west of BWM and flow in a north easterly direction between active mining areas of BWM as well as immediately west of the Project disturbance footprint in a north easterly direction, where it joins with Blackwater Creek. Taurus Creek flows into Blackwater Creek approximately 15 km downstream of the New Taurus Creek Dam and approximately 4 km downstream of the Project disturbance footprint.
- Sagittarius Creek, the upstream tributaries of which originate in the Project area, flows off-site passing to the west of Blackwater, then joining Blackwater Creek, approximately 12 km downstream of the Project area.
- Blackwater Creek, which is located to the east of the Project area and flows in a northerly direction to the east of Blackwater, joining the Mackenzie River approximately 40 km downstream of the Project area, and ultimately joining the Fitzroy River and flowing to the Coral Sea at Rockhampton.

Water quality sampling has been regularly undertaken at 11 locations upstream and downstream of the Project area as part of the BWM Receiving Environment Monitoring Program. The monitoring has been undertaken in accordance with the BWM EA and includes water quality, sediment and macroinvertebrate sampling. The sampling locations are shown on **Figure 14 – Att A (Part 4) 'EPBC Act Referral Figures', page 3**.

BWM has joined the Fitzroy Partnership for River Health, which undertakes monitoring of surface water in accordance with the Fitzroy Regional Receiving Environment Monitoring Program.

A Surface Water Resources Assessment Report to address EPBC Act Significant Impact Guidelines and IESC guidelines is currently being prepared. The Surface Water Resources Assessment report will be made available upon request by the Department.

Groundwater

The hydrostratigraphic units relevant to the Project are described below, from the shallowest (Alluvium) to the deepest (Burngrove Formation):

- Alluvium - Alluvial deposits are associated with local creeks. In recent years, the alluvium within the Project area has been found dry.
- Regolith - Unconsolidated surface layer of weathered rock which may provide a preferential flow pathway for groundwater if levels exceed the base of weathering.
- Clematis Group - outcrops to the east of the Project area, where it forms an elevated plateau. The unit is comprised of weathering resistant medium to coarse grained quartzose to sublabile and micaceous sandstone, siltstone, mudstone and conglomerate.
- Rewan Group - A regional scale aquitard comprising mudstones interbedded with siltstone and fine to medium grained labile sandstone. However, permeability testing indicates hydraulic conductivity values may be higher in the upper weathered zone of the unit.
- Rangal Coal Measures - Groundwater flow is primarily within the coal seams (via interconnected cleats and fractures), which are confined by low permeability overburden and interburden that essentially form aquitards. The coal measures are highly faulted resulting in "compartmentalisation" with coal seams juxtaposed against lower permeability interburden. Recharge to this unit occurs via direct infiltration where the unit outcrops or sub-crops.
- Burngrove Formation - Outcrops to the west of BWM and dips east below the Rangal Coal Measures. It is largely regarded an aquitard comprising interbedded siltstone, carbonaceous and tuffaceous shales, mudstone, and thin coal seams. However, several landholder bores are apparently screened within this formation locally, suggesting it includes permeable horizons that can support low yields.

The existing BWM groundwater monitoring network consists of 17 monitoring bores for EA compliance, and 26 additional Project specific groundwater monitoring bores and/or vibrating wire piezometers. **Figure 15 - Att A (Part 4) 'EPBC Referral Figures', page 4,** shows the location of monitoring bores. Groundwater level data for select bores are available from 2009.

The two major aquifers in the Project area are:

- The Rangal Coal Measures, which contains brackish water, and is not accessed by landholder bores within a 10 km buffer area.
- The Burngrove Formation which contains brackish water and is accessed by landholder bores within a 10 km buffer area.

Locally, the alluvium was found either absent or dry and hence it is not considered a major aquifer in the Project area.

There are no private bores within the Project area, and approximately nine private bores within a 10 km buffer of the Project area.

A desktop assessment was completed to assess the potential presence of groundwater dependent ecosystems (GDEs) within the Project area and surrounds mapped by the Groundwater Dependent Ecosystem Atlas (National GDE Atlas) (Bureau of Meteorology, 2023) and the WetlandMaps, DES, Queensland Government (2023). Areas to the north-east of the Project area (associated with Blackwater Creek) are mapped as having 'moderate potential' to support terrestrial GDEs and an area within the Project area along Taurus Creek is mapped as having 'low potential' to support terrestrial GDEs (**Figure 16 - Att A (Part 5) 'EPBC Act Referral Figures', page 1)**. An assessment of whether the terrestrial vegetation within the Project predicted extent of drawdown represents terrestrial GDE's is being undertaken.

Desktop mapping of potential aquatic GDEs in Queensland shows no known or derived surface-expression GDEs within the Project area (Bureau of Meteorology 2023, Queensland Government 2023, EMM 2023a). Baseline field surveys of waterways within the Project area concluded that no obvious signs of groundwater influence were evident, based on the concentration and relative proportion of major ions in surface water samples (**Att E – 'Aquatic Ecology Baseline Assessment', section 5.8.1, pages 53 and 54**). In addition, surveys in December 2019 were undertaken following a prolonged dry period providing ideal conditions for identifying aquatic GDEs, however, no flows, salt seeps, hydrophytes or other obvious indicators of aquatic GDEs were encountered (**Att E – 'Aquatic Ecology Baseline Assessment', section 6, page 57)**. One aquatic system to the north-east and downstream of the Project area is mapped as having moderate potential for groundwater interaction (**Att E – 'Aquatic Ecology Baseline Assessment', section 5.8.1, page 53**). This system includes a section of Blackwater Creek approximately 10 km downstream of the Project area (**Figure 17 - Att A (Part 5) 'EPBC Act Referral Figures', page 2**):

There are no potential subterranean GDEs mapped within or in the vicinity of the Project area by the National GDE Atlas or the Queensland Government.

A Groundwater Impact Assessment report to address the Independent Expert Scientific Committee (IESC) on Coal Seam Gas and Large Coal Mining Development Information Guideline requirements is under preparation (SLR, in prep). The Groundwater Impact Assessment report will be made available upon request by the Department.

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	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	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.

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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. *

A search of the EPBC Act database using the Protected Matters Search Tool (DCCEEW, 2023) (**Att D - EPBC Act Protected Matters Report**) indicates that no World Heritage Properties occur within the Project area or surrounds.

The nearest World Heritage property is the Great Barrier Reef, which is located approximately 200 km east of the Project area. The Proposed Action is located within the catchment of Blackwater Creek, which is a tributary of the Mackenzie River. The Mackenzie River catchment drains to the Fitzroy River, which ultimately terminates at the Coral Sea/Great Barrier Reef, south-east of Rockhampton, near Port Alma.

There is potential for an indirect impact in the event mining activities impact water in the downstream environment that is within a Great Barrier Reef catchment.

As part of the Proposed Action the existing BWM Water Management Plan will be reviewed and updated to incorporate the Project and to manage water in accordance with the existing BWM EA (**Att B 'BWM EA EPML00717813'**). The BWM water management strategy will be applied to the Project, which includes (but is not limited to) the following management actions:

- Where possible, runoff from undisturbed areas both on and surrounding the mine is diverted away from disturbed areas into adjacent waterways.
- Disturbed area runoff is captured and treated in sediment/environmental dams and used preferentially for dust suppression and coal processing.
- Mine affected water is captured and treated in the BWM water management system where it is then transferred to be preferentially used for process water or dust suppression. If required, it is released off-site in compliance with the BWM EA release conditions.

The Project will utilise the same infrastructure and processes currently implemented at the existing BWM operations.

Water quality sampling has been regularly undertaken at 11 locations upstream and downstream of the Project area as part of the BWM Receiving Environment Monitoring Program. The monitoring has been undertaken in accordance with the BWM EA and includes water quality, sediment and macroinvertebrate sampling. The sampling locations are shown on **Figure 14 – Att A (Part 4) 'EPBC Act Referral Figures',**
page 3.

BWM has joined the Fitzroy Partnership for River Health, which undertakes monitoring of surface water in accordance with the Fitzroy Regional Receiving Environment Monitoring Program.

The Proposed Action will not have a direct or indirect impact on any World Heritage properties.

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.

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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. *

A search of the EPBC Act database using the Protected Matters Search Tool (DCCEEW, 2023) (**Att D - EPBC Act Protected Matters Report**) indicates that no National Heritage places occur within the Project area or surrounds.

The nearest National Heritage place is the Great Barrier Reef, which is located approximately 200 km east of the Project area. The Proposed Action is located within the catchment of Blackwater Creek, which is a tributary of the Mackenzie River. The Mackenzie River catchment drains to the Fitzroy River, which ultimately terminates at the Coral Sea/Great Barrier Reef, south-east of Rockhampton, near Port Alma.

There is potential for an indirect impact in the event mining activities impact water in the downstream environment that is within a Great Barrier Reef catchment.

The BWM Water Management Plan will be reviewed and updated to incorporate the Project and to manage water in accordance with the existing BWM EA (**Att B 'BWM EA EPML00717813'**).

The BWM water management strategy will be applied to the Project, which includes (but is not limited to) the following management actions:

- Where possible, runoff from undisturbed areas both on and surrounding the mine site is diverted away from disturbed areas into adjacent waterways.
- Disturbed area runoff is captured and treated in sediment/environmental dams and used preferentially for dust suppression and coal processing.
- Mine affected water is captured and treated in the BWM water management system where it is then transferred to be preferentially used for process water or dust suppression. If required, it is released off-site in compliance with the BWM EA release conditions.

The Project will utilise the same infrastructure and processes currently implemented at the existing BWM operations.

Water quality sampling has been regularly undertaken at 11 locations upstream and downstream of the Project area as part of the BWM Receiving Environment Monitoring Program. The monitoring has been undertaken in accordance with the BWM EA and includes water quality, sediment and macroinvertebrate sampling. The sampling locations are shown on **Figure 14 – Att A (Part 4) 'EPBC Referral Figures',**
page 3. BWM has joined the Fitzroy Partnership for River Health, which undertakes monitoring of surface water in accordance with the Fitzroy Regional Receiving Environment Monitoring Program.

The Proposed Action will not have a direct or indirect impact on any National Heritage places.

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.

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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. *

A search of the EPBC Act database using the Protected Matters Search Tool (DCCEEW, 2023) (**Att D - EPBC Act Protected Matters Report**) indicates that no Ramsar Wetlands occur within the Project area or surrounds.

The nearest Ramsar Wetland is the Shoalwater and Corio Bays Area, located approximately 200 km north-east of the Project area. The Proposed Action is located within the catchment of Blackwater Creek, which is a tributary of the Mackenzie River. The Mackenzie River catchment drains to the Fitzroy River, which ultimately terminates at the Coral Sea, south-east of Rockhampton, near Port Alma. The mouth of the Fitzroy River is more than 50 km south of the Shoalwater and Corio Bays Area Ramsar wetland.

The BWM Water Management Plan will be reviewed and updated to incorporate the Project and to manage water in accordance with the existing BWM EA (**Att B 'BWM EA EPML00717813'**).

The BWM water management strategy will be applied to the Project, which includes (but is not limited to) the following management actions:

- Where possible, runoff from undisturbed areas both on and surrounding the mine site is diverted away from disturbed areas into adjacent waterways.
- Disturbed area runoff is captured and treated in sediment/environmental dams and used preferentially for dust suppression and coal processing.
- Mine affected water is captured and treated in the BWM water management system where it is then transferred to be preferentially used for process water or dust suppression. If required, it is released off-site in compliance with the BWM EA release conditions.

The Project will utilise the same infrastructure and processes currently implemented at the existing BWM operations.

Water quality sampling has been regularly undertaken at 11 locations upstream and downstream of the Project as part of the BWM Receiving Environment Monitoring Program. The monitoring has been undertaken in accordance with the BWM EA and includes water quality, sediment and macroinvertebrate sampling. The sampling locations are shown on **Figure 14 – Att A (Part 4) 'EPBC Referral Figures', page 3**. BWM has joined the Fitzroy Partnership for River Health, which undertakes monitoring of surface water in accordance with the Fitzroy Regional Receiving Environment Monitoring Program.

The Proposed Action will not have a direct or indirect impact on any Ramsar Wetlands.

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
No	No	Cadellia pentastylis
No	No	Calidris ferruginea
No	No	Dasyurus hallucatus
No	No	Delma torquata
Yes	Yes	Denisonia maculata
No	No	Dichanthium queenslandicum
No	No	Egernia rugosa
No	No	Elseya albagula
No	No	Erythrotriorchis radiatus
No	No	Falco hypoleucos
Yes	Yes	Geophaps scripta scripta
No	No	Grantiella picta
No	No	Hemiaspis damelii
Yes	Yes	Hirundapus caudacutus
No	No	Macroderma gigas
No	No	Neochmia ruficauda ruficauda
No	No	Nyctophilus corbeni
No	No	Petauroides volans
Yes	Yes	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)
No	No	Poephila cincta cincta
No	No	Rheodytes leukops
Yes	Yes	Rostratula australis
No	No	Stagonopleura guttata

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Brigalow (Acacia harpophylla dominant and co-dominant)
No	No	Natural Grasslands of the Queensland Central Highlands and northern Fitzroy Basin
No	No	Poplar Box Grassy Woodland on Alluvial Plains
No	No	Weeping Myall Woodlands

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 Proposed Action will have a direct impact on some threatened species listed under the EPBC Act as the clearance of native vegetation and habitat within the Project disturbance footprint is required for the Project. The matters that would be directly impacted are threatened species with known or likely habitat in the Project disturbance footprint. These matters are the Australian Painted Snipe, Ornamental Snake, Squatter Pigeon, Koala and White-throated Needletail.

Known and potential habitat for the Australian Painted Snipe, Ornamental Snake, Squatter Pigeon and Koala have been mapped across the Project area. The habitat mapping for these species is shown on **Figures 6 to 9, in Att 1 (Part 2) 'EPBC Act Referral Figures', pages 1 to 4, respectively.** The habitat mapping for each species is described in detail in **Att C 'Terrestrial Ecology MNES Assessment – Baseline Report' (section 7.1.2 [Australian Painted Snipe, pages 90-92], section 7.1.3 [Ornamental Snake, pages 93-99], section 7.1.4 [Koala, pages 99-104], section 7.1.6 [Squatter Pigeon, pages 106-111]**.

The direct impact on threatened species habitat would reduce the availability of habitat for these species, as described below.

Australian Painted Snipe, *Rostratula australis*

Approximately 689 ha of Suitable habitat is mapped in the Project area for the Australian Painted Snipe. The Project will directly impact approximately 94.3 ha of Suitable habitat for the Australian Painted Snipe located within the Project disturbance footprint (**Figure 6, in Att 1 (Part 2) 'EPBC Act Referral Figures', page 1)**.

Ornamental Snake, *Denisonia maculata*

Approximately 577 ha of Preferred habitat and 95 ha of Marginal habitat is mapped within the Project area for the Ornamental Snake (a total of approximately 672 ha).

The Project will directly impact approximately 19.8 ha of Preferred habitat and 65.9 ha of Marginal habitat for the Ornamental Snake located within the Project disturbance footprint (a total of approximately 85.7 ha of habitat for the Ornamental Snake) (**Figure 7, in Att 1 (Part 2) 'EPBC Act Referral Figures', page 2)**.

Squatter Pigeon, *Geophaps scripta scripta*

Approximately 43 ha of Preferred habitat, 313 ha of Suitable habitat and 91 ha of Marginal habitat is mapped within the Project area for the Squatter Pigeon (a total of approximately 447 ha). The Project will directly impact approximately 0.6 ha of Suitable habitat and 35.6 ha of Marginal habitat located within the Project disturbance footprint (a total of approximately 36.2 ha of habitat for the Squatter Pigeon) (**Figure 8, in Att 1 (Part 2) 'EPBC Act Referral Figures', page 3)**.

Koala, *Phascolarctos cinereus*

Approximately 11 ha of Preferred habitat, 317 ha Suitable habitat and 45 ha Marginal habitat is mapped within the Project area for the Koala (a total of approximately 373 ha). The Project will directly impact approximately 20.3 ha of Suitable habitat and 6.6 ha of Marginal habitat for the Koala (a total of approximately 26.9 ha) (**Figure 9, in Att 1 (Part 2) 'EPBC Act Referral Figures', page 4)**.

White-throated Needletail, *Hirundopus caudacutus*

White-throated Needletail are predominantly aerial, and although they occur over most types of habitat, they are recorded most often above wooded areas (DCCEEW 2023q). However, the White-throated Needletail forages over a wide range of habitats including cleared areas. Habitat mapping is not provided for the White-throated Needletail as this species may occur in any of the airspace over the site, and its potential presence above the site is assumed across the Project area (refer **Att C 'Terrestrial Ecology MNES Assessment – Baseline Report' (section 7.1.5 [pages 104-106])**.

Threatened Ecological Community - Brigalow (*Acacia harpophylla* – dominant or co-dominant)

As described in Section 3.2.2 of this Referral, one patch of Brigalow TEC (**Figure 12 in Att A (Part 4) 'EPBC Act Referral Figures', page 1**) occurs within the Project area, as riparian vegetation along Taurus Creek on ML1762 (approximately 6.3 ha). The Brigalow TEC is situated approximately 2.5 km from the nearest Project infrastructure and there is no Brigalow TEC located within the Project disturbance footprint (**Figure 12, in Att 1 (Part 4) 'EPBC Act Referral Figures', page 1)**.

The Proposed Action also has the potential to indirectly impact on the listed threatened species and Brigalow TEC. Without mitigation measures, the Proposed Action may indirectly impact the matters through recognised threats such as increased fragmentation, possible modified fire regime, potential incursion of weeds, increase in feral animals, and changes in hydrology.

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. *

A Terrestrial Ecology Matters of National Environmental Significance Assessment Report (EMM, in prep) is currently being prepared for the Project. Preliminary assessment results have been incorporated into this referral. The significant impact assessments will be confirmed once the Terrestrial Ecology Matters of National Environmental Significance Assessment Report has been completed. The Terrestrial Ecology Matters of National Environmental Significance Assessment Report will be made available upon request by the Department.

Ornamental Snake

The occurrence of the Ornamental Snake in the Project area is considered to constitute an important population. Although the Ornamental Snake has not been recorded in gilgai areas to be impacted by the Project disturbance footprint (**Figure 7, in Att 1 (Part 2) 'EPBC Act Referral Figures', page 2)**, the species' occurrence in the area of preferred gilgai habitat is assumed. The Project is considered likely to have a significant impact on the Ornamental Snake.

The Project is not considered likely to have a significant impact on the Australian Painted Snipe, Squatter Pigeon, Koala or White-throated Needletail, as described below.

Australian Painted Snipe

The Australian Painted Snipe has been recorded on three occasions in the Project area across spring and autumn seasonal surveys in a year where there had been high rainfall (**Figure 6, in Att 1 (Part 2) 'EPBC Act Referral Figures', page 1)**. The species is not likely to be present in the Project area on a continuous basis, but habitat mapping criteria applies for when this nomadic species is present in the region.

The species may occur on any natural or artificial wetland habitat within the Project area when conditions are suitable. This includes areas of gilgai and farm dams. Field surveys indicated that potential breeding habitat is not present within the Project area – wetlands within the Project area are minor in extent and lack the complex microhabitat features required for this species' breeding. There are no suitable islands for breeding present and in general the canopy cover is not present for breeding attempts. When the species occurs, it is likely to be sporadic and utilising the gilgai areas as a temporary foraging resource.

The majority of suitable habitat within the Project area is located outside the Project footprint. Due to the likely infrequent occurrence of this highly nomadic species in the Project area and large areas of suitable habitat remain within the Project area and surrounding region, the Project is unlikely to lead to a long term decrease in the size of a population, fragment an existing population into two or more populations, adversely impact on habitat critical to the survival of the species, or disrupt the breeding cycle of the species.

While the Project will result in the loss of suitable Australian Painted Snipe habitat it is not expected to an extent that will cause the species to decline, due to the large areas of available and higher quality habitat that would not be disturbed within the Project area.

The Project is considered unlikely to have a significant impact on the Australian Painted Snipe.

Squatter pigeon

North of the Carnarvon Ranges the species is relatively common and is considered to be a single, continuous sub-population. As such, the population in the Project area is not considered to be an important population. Squatter Pigeons were observed on two different occasions while traversing the Project area in June 2023 and August 2023 (**Figure 8, in Att 1 (Part 2) 'EPBC Act Referral Figures', page 3)**, despite not being seen in approximately 500 hours of survey effort at various times of day and season previously.

Although the species was recorded adjacent to dams near Taurus Road on two occasions, in June and August 2023, the species is considered to be scarce in the Project area due to habitat degradation rendering the Project area largely unsuitable. A significant factor is likely the extensive areas of dense Buffel Grass dominating the Project area. Additionally, the Project area is dominated by clay soils, and sandy substrates are not extensive.

The species has potential to occur in the Project area (especially near water sources) although the likelihood is significantly reduced by the dominance of Buffel Grass and clay soils (as the species favours sandy soils and a mosaic of open woodland and native grasses). Extensive areas of grassy woodland and open grassland occurs to the east of the Project disturbance footprint along Taurus Creek which is likely to form the core of habitat for the species in the Project area.

The Project area is already heavily fragmented as a result of historical and contemporary clearing for agriculture, predominantly in form of cattle grazing. The Project layout maintains linkages to surrounding habitat, particularly the maintenance of connectivity along Taurus Creek.

The Project is considered unlikely to have a significant impact on the Squatter Pigeon.

Koala

The Project footprint will result in the direct loss of 20.28 ha of suitable habitat and 6.62 ha of marginal habitat (a total of approximately 26.9 ha). This comprises predominantly Brigalow dominated woodland along the riparian corridors, with sparse emergent eucalypts, or areas of patchy regrowth. This suitable habitat also includes small areas of non-remnant habitat dominated by degraded and previously cleared scrub containing Eucalypt species (consistent with the criteria utilised by DCCEEW) and is in reality over-mapped as much of this area is degraded with very few suitable food tree species present. The majority of Koala habitat in the Project area occurs outside the Project disturbance footprint with 346 ha of potential habitat in areas that would not be disturbed by the Project.

This species has not been recorded within the Project area, although old scratches and a scat were present on a tributary of Taurus Creek confirming previous utilisation by the species (**Figure 9, in Att 1 (Part 2) 'EPBC Act Referral Figures', page 4)**. Despite nearly 600 hours field survey in the Project area, no individuals have been recorded.

The Project area does not contain extensive areas of contiguous eucalypt woodland or retain connectivity to such areas. As such, the habitat mapped has been assessed as marginal for the species as it is highly fragmented and limited in extent, and the likelihood of the species occurring on a regular basis is low. The Project layout maintains linkages to surrounding habitat (including riparian corridors associated with Taurus Creek and Two Mile Gully).

Due to the low likelihood of the species being present regularly (given no individuals have been observed despite extensive survey) and avoidance of areas of preferred habitat which offer a higher potential of Koala being present, the Project is considered unlikely to have a significant impact on the Koala.

White-Throated Needletail

The White-throated Needletail is a non-breeding visitor to Australia arriving in October and departing by April. They are highly mobile, migrating along the Great Dividing Range and are known to respond to weather and foraging conditions. The Project area represents only a small portion of their vast range.

White-throated Needletails are aerial insectivores, spending most of their time aloft. As a result, they have the potential to occur anywhere over the Project area. While the White-throated Needletail has not been recorded in the Project area, it has been recorded in surveys further to the south and is considered likely to occur in the Project area.

As the species is almost exclusively aerial, direct impacts to their habitat are not expected to occur as a result of vegetation clearance for the Project. There is limited potential the species could roost in an area of woodland across the Project area, although this use will be sporadic, temporary and across a broad area (i.e. not involving regular or repeated roost sites). The majority of suitable roost trees (larger more mature trees) are located within riparian corridors, which are largely avoided by the Project.

Although vegetation clearing will occur for the Project, there are extensive areas of vegetation within the Project area that would remain, and cleared habitats are still utilised by the species. The majority of the Project area will remain as suitable foraging and roosting habitat for the species.

Since White-throated Needletails do not breed in Australia, the Project will not disrupt their breeding cycle.

The Project will not have a significant impact on the White-throated Needletail.

Brigalow TEC

The Proposed Action will not directly impact Brigalow TEC (**Figure 12 in Att A (Part 4) 'EPBC Act Referral Figures', page 1**). The potential for indirect impacts to the nearest patch of TEC will be managed through the implementation of BWM management systems, plans and procedures, so that indirect impacts are not anticipated to occur.

The Project will not have a significant impact on the Brigalow TEC.

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 Project is considered likely to have a significant impact on the Ornamental Snake.

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. *

Ecological surveys of the Project area commenced at an early stage during Project design, and as such the results of the surveys have been able to inform the Project layout. This has resulted in areas of higher ecological significance being avoided to the greatest practical extent, such as avoidance of riparian corridors along Taurus Creek (recognising the limitations around the coal resource requirements). The location of the mine and pits are informed by geological surveys and testing, and limited by the extent of the resource, however where possible riparian areas have been avoided.

The Project layout has been designed to minimise vegetation clearing and impacts on MNES habitats. This has included:

- making use of existing BWM infrastructure to avoid additional disturbance;
- avoiding the patch of Brigalow TEC and minimising clearing of riparian vegetation;
- avoiding vegetation clearance along the higher order watercourses of Two Mile Gully and Taurus Creek; and
- minimising creek crossings (number and width) and selecting locations to minimise disturbance.

Measures that would be implemented to avoid and mitigate impacts on the natural environment and MNES and their habitats include, but would not be limited to:

- soil management practices, including the stripping and stockpiling of soils for use in rehabilitation;
- progressive rehabilitation;
- management of the site water management system in accordance with BWM Environmental Authority conditions;
- erosion and sediment control measures;
- appropriate storage and handling of hazardous materials;
- bushfire prevention and control measures;
- pre-clearance survey procedures; and
- implementation of weed and feral animal controls.

The above list of management and mitigation measures is being refined and expanded upon to address the potential impacts of the Project as part of the environmental assessments currently being prepared for the Project. This includes the development of specific mitigation measures relevant to threatened species and the Brigalow TEC.

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

Biodiversity offsets will be provided for significant impacts to Matters of National Environmental Significance (and Matters of State Environmental Significance) in accordance with Commonwealth and State policies and legislation.

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
No	No	Actitis hypoleucos
Yes	Yes	Apus pacificus
No	No	Calidris acuminata
No	No	Calidris ferruginea

Direct impact	Indirect impact	Species
No	No	Calidris melanotos
No	No	Cuculus optatus
Yes	Yes	Gallinago hardwickii
No	No	Motacilla flava
No	No	Myiagra cyanoleuca
Yes	Yes	Plegadis falcinellus

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

Yes

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

Clearance of native vegetation and habitat for the Project is likely to impact on the following migratory species listed under the EPBC Act that have been recorded within the Project area**:** Latham's Snipe (*Gallinago hardwickii*), Fork-tailed Swift (*Apus pacificus*) and Glossy Ibis (*Plegadis falcinellus*)(**Att C 'Terrestrial Ecology MNES Assessment - Baseline Report', section 6.1.2, pages 71-77; Figure 5 – Att A (Part 1) 'EPBC Referral Figures', page 5).**

Information on these species is provided in **Att C 'Terrestrial Ecology MNES Assessment – Baseline Report' (section 7.1.7 [Latham's Snipe, pages 112-113], section 7.1.8 [Fork-tailed Swift, pages 113-114] and section 7.1.9 [Glossy Ibis, pages 114-115]).**

For the Latham's Snipe and Fork-tailed Swift, potential foraging and dispersal habitat is present within the Project disturbance footprint, however breeding habitat does not occur. The Project also has the potential to indirectly impact on habitats located outside the direct clearance area.

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

No

4.1.5.6 Describe why you do not consider this to be a Significant Impact. *

The Project will not have a significant impact on the Latham's Snipe, Fork-tailed Swift or Glossy Ibis, as described below.

Latham's Snipe

The species occurs widely across eastern Australia, although does not breed in the country. Important habitat for the species is defined in the *EPBC Act Policy Statement 3.21 - Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species* (DCCEEW, 2023) as being areas that have been identified as internationally important for the species, or areas that support at least 18 individuals of the species. Surveys by EMM encountered occasional individuals in gilgai areas (three observations over the surveys). The Project area is unlikely to constitute important habitat for the species (**Att C 'Terrestrial Ecology MNES Assessment – Baseline Report' (section 7.1.7 [pages 112-113])**).

Although habitat will be cleared for the Proposed Action, the loss of this habitat will not have a significant impact on Latham's Snipe and the risk of an impact on an ecologically significant proportion of the population is considered to be low (EMM, in prep).

Fork-tailed Swift

The Fork-tailed Swift is a non-breeding visitor to all states and territories of Australia. In Australia, the Fork-tailed Swift is almost exclusively aerial, occurring from heights of less than 1 m up to more than 1,000 m above the ground. The Project area is unlikely to constitute important habitat for the species **Att C 'Terrestrial Ecology MNES Assessment – Baseline Report' (section 7.1.8 [pages 113-114])**.

The Proposed action will not have a significant impact on the Fork-tailed Swift and the risk of an impact on an ecologically significant proportion of the population is considered to be low. It is an aerial species not likely to be impacted from the Proposed Action (EMM, in prep).

Glossy Ibis

The Glossy Ibis occurs widely across Australia and the Project area is unlikely to constitute important habitat for the species (**Att C 'Terrestrial Ecology MNES Assessment – Baseline Report' (section 7.1.9 [pages 114-115])**. Individuals of the species are expected to only to be sporadic visitors to the Project area. A number of suitable farm dams at which the species may forage will remain in the Project area and the risk of an impact on an ecologically significant proportion of the population is considered to be low (EMM, in prep).

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

No

4.1.5.9 Please elaborate why you do not think your proposed action is a controlled action. *

The direct and indirect impacts on the Project on migratory species are not considered significant impacts and therefore migratory species are not considered to be a controlled action.

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

Ecological surveys of the Project area commenced at an early stage during Project design, and as such the results of the surveys have been able to inform the Project layout. This has resulted in areas of higher ecological significance being avoided to the greatest practical extent, such as avoidance of riparian corridors along Taurus Creek (recognising the limitations around the coal resource requirements). The location of the mine and pits are informed by geological surveys and testing, and limited by the extent of the resource, however where possible riparian areas have been avoided.

The Project layout has been designed to minimise vegetation clearing and impacts on MNES migratory species' habitats. This has included:

- making use of existing BWM infrastructure to avoid additional disturbance;
- avoiding the patch of Brigalow TEC and minimising clearing of riparian vegetation;
- avoiding vegetation clearance along the higher order watercourses of Two Mile Gully and Taurus Creek; and
- minimising creek crossings (number and width) and selecting locations to minimise disturbance.

Measures that would be implemented to avoid and mitigate impacts on the natural environment and migratory species' habitats include, but would not be limited to:

- soil management practices, including the stripping and stockpiling of soils for use in rehabilitation;
- progressive rehabilitation;
- management of the site water management system in accordance with BWM Environmental Authority conditions;
- erosion and sediment control measures;
- appropriate storage and handling of hazardous materials;
- bushfire prevention and control measures;
- pre-clearance survey procedures; and
- implementation of weed and feral animal controls.

The above list of management and mitigation measures is being refined and expanded upon to address the potential impacts of the Project as part of the environmental assessments currently being prepared for the Project. This includes specific mitigation measures relevant to migratory species.

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

No proposed offsets are necessary for migratory species as the Proposed Action will not have a significant impact on any migratory species.

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 Proposed Action does not represent a nuclear action.

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.

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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. *

No areas of Commonwealth Marine Area occur within the Project area or surrounds (**Att D - EPBC Act Protected Matters Report**). The nearest Commonwealth marine area is situated over 250 km east of the Project area.

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 Project area is located approximately 200 km west of the Great Barrier Reef.

The Proposed Action is located within the catchment of Blackwater Creek, which is a tributary of the Mackenzie River. The Mackenzie River catchment drains to the Fitzroy River, which ultimately terminates at the Coral Sea/Great Barrier Reef, south-east of Rockhampton, near Port Alma.

There is potential for an indirect impact in the event mining activities impact water in the downstream environment that is within a Great Barrier Reef catchment.

The BWM Water Management Plan will be reviewed and updated to incorporate the Project and to manage water in accordance with the existing BWM EA (**Att B 'BWM EA EPML00717813'**).

The BWM water management strategy will be applied to the Project, which includes (but is not limited to) the following management actions:

- Where possible, runoff from undisturbed areas both on and surrounding the mine site is diverted away from disturbed areas into adjacent waterways.
- Disturbed area runoff is captured and treated in sediment/environmental dams and used preferentially for dust suppression and coal processing.
- Mine affected water is captured and treated in the BWM water management system where it is then transferred to be preferentially used for process water or dust suppression. If required, it is released off-site in compliance with the BWM EA release conditions.

Water quality sampling has been regularly undertaken at 11 locations upstream and downstream of the Project as part of the BWM Receiving Environment Monitoring Program. The monitoring has been undertaken in accordance with the BWM EA and includes water quality, sediment and macroinvertebrate sampling. The sampling locations are shown on **Figure 14 in Att A (Part 4) 'EPBC Act Referral Figures', page 3**. BWM has joined the Fitzroy Partnership for River Health, which undertakes monitoring of surface water in accordance with the Fitzroy Regional Receiving Environment Monitoring Program.

In 2019, the Queensland EP Act was amended to include Section 41AA of the Environmental Protection Regulation 2019. The aim of Section 41AA is to achieve no net decline in water quality in the surface water basins that feed into the Great Barrier Reef. Since June 2021, all new or expanding projects that potentially impact the waters for the Great Barrier Reef are required to provide information about their Dissolved Inorganic Nitrogen (DIN) and Total Suspended Solids (TSS) load. The Project is required to assess potential impacts on water quality in accordance with the *Guideline - Reef discharge standards for industrial activities* (DES, 2023) as per section 41AA of the *Environmental Protection Regulation 2019*.

The current release limits for the approved operations do not require consideration of total suspended solids and nitrogen for planned water releases. Therefore, neither suspended solids nor total nitrogen is currently measured as part of regular water quality monitoring data for water releases. Water quality monitoring data from site storages taken from March 2021 – January 2023 indicate an average total nitrogen concentration (N) of 2.44 mg/L with a maximum of 8.1 mg/L (SLR, in prep). This is below the environmental guidelines for total nitrogen in rivers and streams (100-750 mg/L) as per the ANZECC guidelines. Water balance modelling results for the Proposed Action suggest that planned releases would be minimal, less than 100 ML/year across all site storages. This is less than current release volumes as the Proposed Action is predicted to utilise more of the site stored water inventory to satisfy mine demands as production increases and the climate dries under the changed climate projections (SLR, in prep). The results of the water balance modelling indicate downstream water quality is consistent with the requirements of the EA and generally below downstream water quality objectives for salinity.

The Proposed Action will utilise the same infrastructure and processes currently implemented at the existing BWM operations. The potential for increased dissolved inorganic nitrogen and fine sediment resulting in impacts to the Great Barrier Reef as a result of the Proposed Action are considered to be minimal.

The Proposed Action will not have a direct or indirect impact on the Great Barrier Reef.

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. *

Surface Water

The Proposed Action has the potential to impact surface water resources through direct disturbance associated with open cut mining, creation of new temporary and permanent landforms that affect flood waters and (if required) through the release of water to the surrounding environment from the on-site water management system (in accordance with the existing EA).

Potential impacts to surface water resources may include: changes to catchment areas and flow characteristics due to the construction of (for example) water storage dams, mine infrastructure, in-pit spoil dumps, flood levees, open cut pits, and final voids; impacts to other water users in the region; and potential release of water as part of the on-site water management system.

A Surface Water Resources Assessment is currently being prepared for the Proposed Action. The Surface Water Resources Assessment report will be made available upon request by the Department.

Groundwater

The Proposed Action has the potential to impact groundwater resources through direct interaction with aquifers by open cut mining and indirect take from adjacent aquifers due to changes in hydraulic gradients.

Potential impacts to groundwater resources may include: potential drawdown of groundwater levels, alteration of groundwater flow directions and decrease in baseflow to surface water systems; localised effects on groundwater quality; and long term changes to groundwater levels and flow direction in the vicinity of final voids.

A Groundwater Impact Assessment is currently being prepared for the Proposed Action. The Groundwater Impact Assessment report will be made available upon request by the Department.

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

No

4.1.9.6 Describe why you do not consider this to be a Significant Impact. *

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.

A Surface Water Assessment Report (SRL, in prep) and Groundwater Impact Assessment Report (SLR, in prep) are currently being prepared for the Project. Preliminary assessment results have been incorporated into this referral. The significant impact assessments will be confirmed once the reports have been completed. The Surface Water Resources Assessment report and Groundwater Impact Assessment report will be made available upon request by the Department.

Surface water

The Proposed Action will have a minimal impact on the hydrological characteristics of the surface water resources in the area. The flow regime is unlikely to change significantly, and the quantity of flow is unlikely to reduce the current or future utility of the resource for other users. As such the Proposed Action is expected to have negligible impacts as per the criteria outlined in the *Significant Impact Guidelines 1.3: Coal seam gas and large coal mining developments—Impacts on water resources* (Department of Climate Change, Energy, the Environment and Water, 2022).

Groundwater

There were two major aquifers identified of relevance to the Proposed Action:

- Rangal Coal Measures (target coal seam), brackish water.
- Burngrove Formation (underlies the Rangal Coal measures), brackish water.

There are no landholder bores withing the Rangal Coal Measures, all users in the area target the Burngrove Formation.

BWM has installed a groundwater monitoring bore network, targeting potentially impacted aquifers. Groundwater can be found in the shallow Tertiary Sediments or Alluvium, however, locally the alluvium was found either absent or dry and hence it is not considered a major aquifer in the Project area.

Preliminary groundwater impact assessments showed substantial drawdown in the Rangal Coal Measures where the mining will occur, both incrementally and cumulatively. However, as this formation is not used by any anthropogenic or environmental users, this would not be considered a significant impact.

The preliminary assessment has also assessed the anthropogenic users of the Burngrove Formation, which showed a potential cumulative impact on four bores, only one more than 5 m and no impact from the Proposed Action itself. The preliminary assessments were based on a numerical groundwater model, which inherently has uncertainties attached to it. An uncertainty analysis will be prepared to describe the uncertainty.

The Proposed Action will result in water take from the geological formations intersected by mining, resulting in groundwater drawdown effects that are diminished with distance from the pits.

A Groundwater Impact Assessment report (including groundwater baseline and 3D numerical modelling and uncertainty analysis) is being prepared to quantify the potential impacts on groundwater resources. The assessment will be prepared with specific reference to the requirements of *Significant impact guidelines 1.3: Coal seam gas and large coal mining developments— impacts on water resources* (Department of Climate Change, Energy, the Environment and Water, 2022*)* and IESC guidelines.

Studies to assess Groundwater Dependent Ecosystems are also under preparation. The Groundwater Dependent Ecosystem Assessment reports will be made available upon request by the Department.

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

No

4.1.9.9 Please elaborate why you do not think your proposed action is a controlled action. *

The detailed studies currently under preparation are anticipated to show that significant impacts are unlikely to occur, and these will be provided to support the assessment of the Proposed Action.

The Proposed Action is not considered to be a controlled action as it is not likely to have a significant impact on water resources for the following reasons:

- Surface water and groundwater use in the locality is limited. The Proposed Action will have minimal impact on the hydrological characteristics of the surface water resources in the area. The flow regime is unlikely to change significantly, and the quantity of flow is unlikely to reduce the current or future utility of the resource for other users. Surface water quality monitoring indicates surface water quality results are within the acceptable ranges at BWM.
- Preliminary groundwater impact assessments showed substantial drawdown in the Rangal Coal Measures where the mining will occur, both incrementally and cumulatively. However, as this formation is not used by any anthropogenic or environmental users, this would not be considered a significant impact.
- No significant impacts to aquatic GDEs.

The presence and potential impacts of the Project on terrestrial GDEs are currently being assessed.

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 initial mine footprint for the Project was designed to maximise resource recovery within SA10 on ML1759 and SA7 on ML1762. The initial Project disturbance footprint would have resulted in greater impacts to water resources. Both the mine plan and footprint were reduced to avoid and/or minimise impacts on the environment including air quality emissions, ecology and water resources. A buffer zone to Deep Creek and Taurus Creek from open cut mining activities has been incorporated into the Project.

The Project layout has been designed to avoid and minimise impacts on water resources. This has included:

- making use of existing BWM infrastructure to avoid additional disturbance;
- minimising or avoiding disturbance to the higher order watercourses of Taurus Creek and Two Mile Gully; and
- minimising creek crossings (number and width) and selecting locations to minimise disturbance.

Measures that would be implemented to avoid and/or mitigate impacts on water resources include, but would not be limited to:

- soil management practices, including the stripping and stockpiling of soils for use in rehabilitation;
- progressive rehabilitation;
- management of the site water management system in accordance with BWM Environmental Authority conditions;
- erosion and sediment control measures;
- appropriate storage and handling of hazardous materials;
- flood protection measures; and
- the establishment of a post-mining landform that is safe, stable and non-polluting.

The existing BWM surface water and groundwater management systems and management measures will be extended to the Proposed Action.

Additional, Proposed Action-specific mitigation measures may be developed as part of the assessment studies currently under preparation. If required, these measures will be developed to supplement the existing surface water and groundwater monitoring and management systems.

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

Offsets for surface water and groundwater are not anticipated to be required. This will be confirmed following completion of the relevant assessments assessing impacts on water resources.

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. *

A search of the EPBC Act database using the Protected Matters Search Tool (DCCEEW, 2023) (**Att D - EPBC Act Protected Matters Report**) indicates that no areas of Commonwealth Land occur within the Project area or surrounds.

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. *

A search of the EPBC Act database using the Protected Matters Search Tool (DCCEEW, 2023) (**Att D - EPBC Act Protected Matters Report**) indicates that no areas of Commonwealth heritage places overseas occur within the Project area or surrounds.

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)

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)
- 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

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. *

The BWM has been in operation since 1967 and has been subject to regular review of its feasibility in consideration of market demand. The long-term future of BWM and associated approvals for long-term access to BWM's resources (including in SA7 on ML1762 and SA10 on ML1759) assist to secure the future of BWM, its customers, workforce and the surrounding community. The Project facilitates an opportunity to further contribute to Australia's position as a primary global producer of high-quality coking coal products.

The existing operations at BWM play a fundamental role in creating employment opportunities within the local and regional communities, which in turn, increases regional prosperity and domestic productivity. The local and regional community has established itself to service the existing mining complex, and is therefore accustomed to the benefits, costs and demands associated with the mining operations

undertaken at BWM.

The Project location is defined by the nature and scale of the deposit. The Project is located in the Bowen Basin and the geological strata in the vicinity of the BWM is heavily influenced by the series of easterly dipping thrust faults. The coal deposits mined at BWM are found within the Rangal Coal Measures. The coal seams to be mined by the Project are within coal tenements held by BMA.

The initial mine footprint for the Project was designed to maximise resource recovery within SA10 on ML1759 and SA7 on ML1762. While the majority of the Project area has been disturbed by agricultural activities (i.e., grazing), some Eucalypt woodland and Brigalow vegetation remains. The initial Project disturbance footprint would have resulted in substantially greater impacts to remnant vegetation and flora/fauna habitats. The Project mine plan and footprint were revised to retain riparian vegetation associated with Deep Creek, Taurus Creek and Two Mile Gully. A buffer zone to the riparian vegetation from open cut mining activities has also been incorporated into the Project. Adjustments were also made in relation to the out of pit disturbance areas required for Project infrastructure (such as powerlines and back access roads), particularly where the alignments are required to traverse waterways to minimise the clearing of vegetation.

If the Proposed Action did not proceed, it would not contribute to the significant economic growth provided by Queensland's growing export industry, the value that the coal resource would provide through State royalties and Commonwealth tax revenue would be foregone and the employment opportunities and social and community benefits for the region would not be realised.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 1) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 1 to 5	29/11/2023	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 B BWM EA EPML00717813.pdf Blackwater Mine Environmental Authority (EA) EPML00717813	29/06/2023	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	BHP (2020) Our Requirements for Environment and Climate Change https://www.bhp.com/-/media/documents/ourapproac..			High
#2.	Link	BHP (2021) Climate Transition Action Plan 2021 https://www.bhp.com/-/media/documents/investors/..			High
#3.	Link	BHP (2022) Our Code - Your guide to living Our Charter values every day https://www.bhp.com/-/media/project/bhp1ip/bhp-c..			High
#4.	Link	BHP (2022) Water Stewardship Position Statement https://www.bhp.com/-/media/documents/environmen..			High
#5.	Link	Environment https://www.bhp.com/sustainability/environment/			High
#6.	Link	Mitsubishi Corporation (2022) Midterm Corporate Strategy 2024 https://www.mitsubishicorp.com/jp/en/about/plan/..			High
#7.	Link				

		Mitsubishi Corporation (2023) Sustainability Report 2022 https://www.mitsubishicorp.com/jp/en/about/plan/..	High
#8.	Link	Mitsubishi Development (2024) Creating Value Through Sustainability https://www.mdp.com.au/wp-content/uploads/2021/0..	High
#9.	Link	Sustainability https://www.mdp.com.au/sustainability	High

2.2.5 Tenure of the action area relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 1) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 1 to 5	28/11/2023	No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Central Highlands Regional Council Planning Scheme 2016 https://eplan.chrc.qld.gov.au/planningscheme/			High

3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 1) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 1 to 5	28/11/2023	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 1) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 1 to 5	28/11/2023	No	High
#2.	Document	Att A (Part 2) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 6 to 9	29/11/2023	No	High
#3.	Document	Att A (Part 3) EPBC Act Referral Figures.pdf EPBC Act Referral Figure 10 and Figures 11a to 11c	29/11/2023	No	High
#4.	Document	Att C Terrestrial Ecology MNES Assessment - Baseline Report (V4-Jan 24).pdf BWM North Extension Project Terrestrial Ecology MNES Assessment - Baseline	07/12/2023	No	High
#5.	Document	Att D EPBC Act Protected Matters Report.pdf EPBC Act Protected Matters Report	31/10/2023	No	High
#6.	Document	Att E Aquatic Ecology Baseline Assessment.pdf Aquatic Ecology Baseline Assessment	19/07/2023	No	High
#7.	Document	Att F Blackwater Mine Stygofauna Pilot Survey.pdf Blackwater Mine Stygofauna Pilot Survey	30/06/2021	No	High
#8.	Link	Ensham Life of Mine Extension Project Stygofauna Assessment https://www.idemitsu.com.au/mining/wp-content/up..			High
#9.	Link	Environmental Impact Statement (EIS) Assessment Report for the Washpool Coal Mine Project https://www.qld.gov.au/__data/assets/pdf_file/00..			High
#10.	Link				

		Environmental Impact Statement Report under the Environmental Protection Act 1994 Minyango Project https://www.qld.gov.au/__data/assets/pdf_file/00..	High
#11.	Link	Groundwater Dependent Ecosystems Atlas http://www.bom.gov.au/water/groundwater/gde	Medium
#12.	Link	Queensland Globe https://qldglobe.information.qld.gov.au	Medium
#13.	Link	Queensland Subterranean Aquatic Fauna Database https://data.qld.gov.au/dataset/queensland-subte..	Medium

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 3) EPBC Act Referral Figures.pdf EPBC Act Referral Figure 10 and Figures 11a to 11c	28/11/2023	No	High
#2.	Document	Att A (Part 4) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 12 to 15	29/11/2023	No	High
#3.	Document	Att C Terrestrial Ecology MNES Assessment - Baseline Report (V4-Jan 24).pdf BWM North Extension Project Terrestrial Ecology MNES Assessment - Baseline	06/12/2023	No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 4) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 12 to 15	28/11/2023	No	High
#2.	Document	Att A (Part 5) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 16 and 17	29/11/2023	No	High
#3.	Document	Att E Aquatic Ecology Baseline Assessment.pdf Aquatic Ecology Baseline Assessment	18/07/2023	No	High
#4.	Link	Groundwater Dependent Ecosystem Atlas http://www.bom.gov.au/water/groundwater/gde/			Medium
#5.	Link	WetlandMaps https://wetlandinfo.des.qld.gov.au/wetlands/fact..			Medium

4.1.1.3 (World Heritage) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 4) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 12 to 15	28/11/2023	No	High
#2.	Document	Att B BWM EA EPML00717813.pdf Blackwater Mine Environmental Authority (EA) EPML00717813	28/06/2023	No	High
#3.	Document	Att D EPBC Act Protected Matters Report.pdf EPBC Act Protected Matters Report	30/10/2023	No	High

4.1.2.3 (National Heritage) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 4) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 12 to 15	28/11/2023	No	High
#2.	Document				

		Att B BWM EA EPML00717813.pdf Blackwater Mine Environmental Authority (EA) EPML00717813	28/06/2023	No	High
#3.	Document	Att D EPBC Act Protected Matters Report.pdf EPBC Act Protected Matters Report	30/10/2023	No	High

4.1.3.3 (Ramsar Wetland) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 4) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 12 to 15	28/11/2023	No	High
#2.	Document	Att B BWM EA EPML00717813.pdf Blackwater Mine Environmental Authority (EA) EPML00717813	28/06/2023	No	High
#3.	Document	Att D EPBC Act Protected Matters Report.pdf EPBC Act Protected Matters Report	30/10/2023	No	High

4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 2) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 6 to 9	28/11/2023	No	High
#2.	Document	Att A (Part 4) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 12 to 15	28/11/2023	No	High
#3.	Document	Att C Terrestrial Ecology MNES Assessment - Baseline Report (V4-Jan 24).pdf BWM North Extension Project Terrestrial Ecology MNES Assessment - Baseline	06/12/2023	No	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.	Document	Att A (Part 2) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 6 to 9	28/11/2023	No	High
#2.	Document	Att A (Part 4) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 12 to 15	28/11/2023	No	High

4.1.5.2 (Migratory Species) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 1) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 1 to 5	28/11/2023	No	High
#2.	Document	Att C Terrestrial Ecology MNES Assessment - Baseline Report (V4-Jan 24).pdf BWM North Extension Project Terrestrial Ecology MNES Assessment - Baseline	06/12/2023	No	High

4.1.5.6 (Migratory Species) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att C Terrestrial Ecology MNES Assessment - Baseline Report (V4-Jan 24).pdf BWM North Extension Project Terrestrial Ecology MNES Assessment - Baseline	06/12/2023	No	High
#2.	Link	EPBC Act Policy Statement 3.21 - Industry guidelines for avoiding, assessing and mitigating impacts https://www.dcceew.gov.au/environment/epbc/publi..			High

4.1.7.3 (Commonwealth Marine Area) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att D EPBC Act Protected Matters Report.pdf EPBC Act Protected Matters Report	30/10/2023	No	High

4.1.8.3 (Great Barrier Reef) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A (Part 4) EPBC Act Referral Figures.pdf EPBC Act Referral Figures 12 to 15	28/11/2023	No	High
#2.	Document	Att B BWM EA EPML00717813.pdf Blackwater Mine Environmental Authority (EA) EPML00717813	28/06/2023	No	High
#3.	Link	Guideline - Reef discharge standards for industrial activities https://www.des.qld.gov.au/policies?a=272936:pol..			High

4.1.9.6 (Water resource in relation to large coal mining development or coal seam gas) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Significant Impact Guidelines 1.3: Coal seam gas and large coal mining developments - impacts on wat https://www.dcceew.gov.au/environment/epbc/publi..			High

4.1.10.3 (Commonwealth Land) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att D EPBC Act Protected Matters Report.pdf EPBC Act Protected Matters Report	30/10/2023	No	High

4.1.11.3 (Commonwealth heritage places overseas) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att D EPBC Act Protected Matters Report.pdf EPBC Act Protected Matters Report	30/10/2023	No	High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	67096412752
Organisation name	BM ALLIANCE COAL OPERATIONS PTY LIMITED
Organisation address	Level 14, 480 Queen Street, Brisbane, QLD, 4000
Representative's name	Stacey Gromadzki
Representative's job title	Environment Approvals Principal
Phone	0417 726 230
Email	stacey.gromadzki@bhp.com
Address	Level 14, 480 Queen Street, Brisbane, 4000

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, **Stacey Gromadzki of BM ALLIANCE COAL OPERATIONS PTY LIMITED**, 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/ACN	67096412752
Organisation name	BM ALLIANCE COAL OPERATIONS PTY LIMITED
Organisation address	4000 QLD
Representative's name	Craig Bancroft
Representative's job title	Manager - Environment
Phone	0429041853
Email	craig.bancroft2@bhp.com
Address	Level 14, 480 Queen Street, Brisbane, Qld 4000

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, **Craig Bancroft of BM ALLIANCE COAL OPERATIONS PTY LIMITED**, 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, **Craig Bancroft of BM ALLIANCE COAL OPERATIONS PTY LIMITED**, 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. *

- [x] I would like to receive notifications and track the referral progress through the EPBC portal. *