Moorvale South Extension Project

Application Number: **02544** Commencement Date: **09/08/2024** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Moorvale South Extension Project

1.1.2 Project industry type *

Mining

1.1.3 Project industry sub-type

Coal

1.1.4 Estimated start date *

01/01/2027

1.1.4 Estimated end date *

01/06/2035

1.2 Proposed Action details

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

Background of existing operations

The Moorvale South Mine (MVS) (formerly known as the Olive Downs Project) is an open cut coal project that is a satellite operation to the Moorvale Mine (MVL). MVS is located approximately 15 kilometres (km) south of the Coppabella township within the Isaac Regional Council local government area (LGA). Peabody

Energy Australia PCI (C&M Management) Pty Limited (Peabody) operate MVS which is owned by several joint venture partners that form the Coppabella and Moorvale Joint Venture (CMJV). The location of MVS is shown in **Figure 1.**

The MVS contributes to economic growth through sustained employment at the local and regional levels, primarily through local employment and business opportunities. To date, the MVS has:

- supported economic activity in the region and Queensland through direct and flow-on activity, and thus contribute local, regional and State economic growth
- provided local businesses with opportunities to secure new contracts and increase sales to service the MVS and workforce needs
- enabled the local sourcing of goods and services as well as labour from the local region
- employed local, regional then state-based employees as an order of preference, and
- directly contributed royalties to the State of Queensland since 2021.

The MVS workforce includes approximately 245 full time equivalent (FTE) employees and contractors. This workforce includes significant local community residents, due to Peabody's employment incentives and subsidies to encourage uptake in local communities, in line with Queensland's *Strong and Sustainable Resource Communities Act 2017* (SSRC Act).

MVS is located on mining leases (ML) 70354 and ML70355 granted by the State Government of Queensland (QLD) under the *Mineral Resources Act 1989* (MR Act). Operations at the MVS are authorised by the Environmental Authority (EA) EPML00380113 issued under the QLD *Environmental Protection Act 1994* (EP Act). The MVS was determined by the Commonwealth Environment Minister not to be a controlled action on 28 November 2005 (EPBC2005/2377) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

MVS operations include open cut mining of coal, a mine industrial area, run of mine (ROM) stockpiles, water infrastructure (raw and mine affected water), out-of-pit spoil dumps (OOPD), in-pit spoil dumps (IPD), explosives reload area and a water release point.

Mining activities at MVS commenced in 2021 and comprise of four pits: Y-pit, Z-pit North, Z-pit South and yet to be developed X-pit. Mining at MVS targets the Leichhardt Lower seam (split into LL2 and LL3), the Vermont Upper seam of the Rangal Coal Measures and the Vermont Lower seam of the Fort Cooper Coal Measures. ROM coal extracted at MVS within ML70354 is periodically transported north via a 10 km haul corridor (ML70355) to MVL for processing and train loading. Product coal is railed via the Moorvale Mine Train Load Out Facility located at MVL to Dalrymple Bay Coal Terminal for export.

Operations at MVL are located on ML70290, ML70291 and ML70319 and are authorised by EA EPML00802813 issued under the QLD EP Act. The MVL operations utilised by MVS include a coal handling and preparation plant (CHPP), co-disposal dams, product coal stockpiles, train loadout facility, Moorvale Branch rail spur, and water infrastructure (raw and mine affected water) and transfer pipeline.

Overview of the Action

The Action comprises mining activities within the extension area of X-pit on mineral development lease (MDL) 3034, located directly north of the already approved operations within ML70354. The Action also includes back-filling of Z-Pit within ML70354. An overview of the Action is illustrated in **Figure 2**.

If approved, the Action is expected to extend the mine's life from 2028 to 2034, continuing to provide jobs and royalties. Significant mine engineering design has been undertaken to support the Action, which will utilize the existing infrastructure at MVS and MVL. The Action presents an opportunity to extract further resources from an area already impacted by previous land uses, offering positive environmental outcomes over establishing a new mine at a greenfield site. Extending the mine life at MVS will also continue to:

- support local, regional and State economic activity
- provide local businesses with opportunities to continue to secure new contracts

- enable local sourcing of goods and services
- employ local, regional then state-based employees (in order of preference), and
- contribute an estimated $360 M in royalties to the State of Queensland by 2034.

The Action will require vegetation clearing, civil works, establishment of temporary laydowns and access tracks, blasting, haulage (of waste rock, coal and materials) and open cut mining. These activities will have direct impacts to terrestrial and aquatic ecology values, water resources (surface and groundwater), and to sensitive receptors (resulting from air, noise and vibration. Indirect impacts may result in the form of edge effects to terrestrial and aquatic ecology values.

The Project Area is comprised of 996.56 hectares (ha), of which the direct disturbance footprint is 714.50 ha and avoidance area is 132.97 ha.

Detailed description of the Action

The Action will comprise of existing open cut mining techniques employed at the MVS and will include the following:

- Construction of temporary access tracks and maintenance of these areas as required
- Vegetation clearing
- Topsoil stripping and stockpiling
- Drill and blast of overburden (including through-seam blasting)
- Development of OOPDs for management of overburden
- Establishment of temporary hardstand areas as required (i.e. go line)
- Establishment of haul roads
- Development of in-pit-dumps as required
- Coal mining, ROM stockpiling near pit top and haulage to the existing CHPP at MVL
- Progressive rehabilitation of disturbed areas with the aim of progressing to a final landform design
- Backfilling of Z-Pit void
- Progressive disposal of overburden to OOPDs and IPDs, and
- Progressive disposal of CHPP rejects to the co-disposal facility at the MVL.

Activities not included in the Action

The Action subject of this Referral is for new disturbance areas for mining activities associated with the extension of X-pit. To clarify, the Action does not include:

- Ongoing authorised exploration activities under MDL3034
- Ongoing authorised mining activities, including within X-Pit, which are contained within ML70354 or ML70355
- The utilisation of infrastructure within ML70354 and ML70355 for the processing and transport of ROM coal, and
- The establishment of minor preliminary works including temporary access tracks and temporary lay down areas that will have no impact on any Matters of National Environmental Significance (MNES).

Interaction with MVS and MVL

The Action is a stand-alone economically viable mining operation that has been planned to utilise existing methodologies and infrastructure at MVS and MVL to take advantage of operational efficiencies. The Action will utilise existing mining methods, mining fleet, mining equipment, operators, technical support team and operational management currently employed at the MVS. Further, the Action also requires the grant of a new ML, over a portion of MDL 3034, under the QLD MR Act. The Action will continue to utilise the following methods and infrastructure associated with MVS and MVL operations:

- Progressive rehabilitation of disturbed areas
- Open cut mining techniques employed at MVS
- Progressive disposal of mining waste and CHPP rejects to co-disposal dams at MVL and MVS

- Use of the existing workforce, workforce strategy and accommodations
- Haul road network between MVS and MVL
- CHPP complex at MVL
- Disposal of dewatered tailings and coarse rejects to the co-disposal area at MVL
- Mine Infrastructure Area at MVS
- MVL rail spur, train load-out facility and product coal stockpiles
- Water management system of MVS and MVL, and
- Supporting infrastructure such as roads, powerlines, laydown, warehouse, workshops, administration buildings, bathhouse, carparks, and communications towers at MVL and MVS.

Timing

The Action is proposed to begin 1 January 2027 and mining of X-pit will be undertaken for approximately eight years from commencement. Peabody anticipates a two-year rehabilitation period following completion of mining activities associated with X-pit.

Motivation why the Action is considered a Controlled Action

Under the EPBC Act an Action requires approval from the Minister if it has, will have, or is likely to have, a significant impact on MNES. The Action is likely to be a 'Controlled Action' requiring further assessment under the EPBC Act for impacts to threatened species and threatened ecological communities (TECs) and a water resource in relation to coal seam gas development and large coal mining development. Details of these potential impacts are outlined in the appropriate sections of this Referral.

Acronyms & References

The Acronyms & References used in this Referral application are provided in **Attachment I**.

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

Yes

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

No

1.2.4 Related referral(s)

EPBC Number	Project Title
2005/2377	Olive Downs Project

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

The Action involves extending MVS mining operations into a new mining area. A new Mining Lease will be required for the Action.

The MVS mining operations commenced in 2021. The MVS mining operations was determined by the Commonwealth Environment Minister not to be a controlled action on 28 November 2005 (EPBC2005/2377) under the Commonwealth EPBC Act.

The Action will not give rise to any changes to activities undertaken in the existing MVS and MVL mining lease. The Action will make use of the existing infrastructure at MVS Mine and no upgrades of the infrastructure are required for the Action.

This EPBC Act referral therefore relates to Action activities only (that is, activities proposed to be undertaken within the new mining lease site).

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 Environmental Protection and Biodiversity Conservation Act 1999

The Action is subject to assessment and approval under the EPBC Act. Peabody anticipates the Action will be determined to be a 'controlled action' by the Commonwealth Minister of the Environment due to likely significant impacts to listed threatened species and TECs (sections 18 & 18A), and likely significant impacts to a water resource in relation to a large coal mining development (section 24D & 24E).

Commonwealth *Native Title Act 1993*

The *Native Title Act 1993* (NT Act) provides recognition for the rights and interests over land and water possessed by Australian Indigenous people under traditional laws and customs. The NT Act sets out specified processes that must be followed to validate any 'future act' on land or waters with the potential to affect native title rights and interests.

The Barada Barna Native Title determination in 2016 found that Native Title (non-exclusive) exists within the MVS and Project Area (QCD2016/007).

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

Peabody anticipates the Action will require offsets under the *EPBC Act Environmental Offsets Policy 2012, Environmental Offset Act 2014* and *Environmental Offsets Policy 2017* for significant residual impacts to MNES and/or Matters of State Environmental Significance (MSES). Offsets under State and Commonwealth jurisdiction can be addressed together under a consolidated Environmental Offset Strategy. Peabody is reviewing opportunities within its current land portfolio, and will expand that search as required, for appropriate offsets for the Action and will develop an Environmental Offset Strategy and Offset Area Management Plans in due course.

Queensland *Mineral Resources Act 1989*

MVS comprises of ML70354 (granted: 2 April 2009) and ML70355 (granted: 2 April 2009). Peabody intends to submit a Mining Lease Application over a portion of MDL3034 to authorise the Action under the MR Act.

Queensland *Environmental Protection Act 1994*

Peabody is approved to conduct mining operations at MVS on ML70354 in accordance with the conditions set out in the EA EPML00380113 (effective date: 21 August 2023). The EA will be amended to incorporate the new Mining Lease required for the Action.

Queensland *Water Act 2000*

As a result of transitional provisions which applied to the MVS, there is an Associated Water License (622410) given under the *Water Act 2000* (Water Act) on 17 April 2020 for the taking of associated water from the Rangal Coal Measures and Fort Cooper Coal Measures and adjacent formations with the point of take on or under the area of ML70354 for the purposes of dewatering.

Once the ML for the Action is approved, the holder will have a limited entitlement under Chapter 12A of the MR Act to take and use associated water subject to monitoring and other requirements set out in the MR Act and the make good and other obligations set out in Chapter 3 of the Water Act. Queensland *Environmental Protection Regulation 2019*

In 2019, the Queensland EP Act was amended to include Section 41AA of the *Environmental Protection Regulation 2019* (EP Regulation) . 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 Action is required to assess potential impacts on water quality in accordance with the Guideline - Reef discharge standards for industrial activities (Department of Environment, Science and Innovation (DESI), 2024) as per Section 41AA of the EP Regulation.

Queensland *Aboriginal Cultural Heritage Act 1993*

In Queensland, Aboriginal cultural heritage is protected under the *Aboriginal Cultural Heritage Act 2003* ((the ACH Act) the purpose of which is to provide effective recognition, protection and conservation of Aboriginal cultural heritage.

Under the Act, a person carrying out an activity has a cultural heritage duty of care, where they must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage.

The cultural heritage duty of care can be met by acting:

- In compliance with the gazetted cultural heritage Duty of Care Guidelines (DoC Guidelines).
- Under an approved Cultural Heritage Management Plan (CHMP) developed under Part 7 of the ACH Act.
- In compliance with a native title agreement or another agreement with an Aboriginal Party that addresses cultural heritage.

The Barada Barna People are the statutory Aboriginal Party for the Project Area in accordance with the ACH Act. Peabody and the Barada Barna people have entered into a CHMP agreement to satisfy Duty of Care provisions in accordance with the ACH Act (CLH000784, dated 30 September 2010). The Action will be reviewed and carried out in accordance with the CHMP.

Queensland *Heritage Act 1992*

The *Queensland Heritage Act 1992* (Heritage Act) provides for the protection and conservation of Queensland's non-Indigenous cultural heritage for the benefit of the community and future generations.

At a State level, the Heritage Act:

- Establishes the Queensland Heritage Council.
- Establishes the Queensland Heritage Register.
- Provides for the protection of Queensland's historical heritage places and areas.

At a local level, the Heritage Act:

- Requires each local government to identify places of local historical cultural heritage significance and record them in a local heritage register or in its planning scheme.
- Specifies that each place entered in a local heritage register must have enough information to identify the location and boundaries of the place and a statement about its heritage significance (s.114).

The Isaac Region Planning Scheme 2021 is the current planning scheme for Isaac Region Local Government Area and includes policies for local heritage places in Part 5 - Tables of assessment and Part 7 - 7.2.8 Heritage overlay code and identifies heritage places within a heritage overlay (Heritage Overlay Map 9.2 - Rural Areas (north-east)).

There are no local heritage places listed within the Isaac Region Planning Scheme 2021 located within the Project Area.

Queensland *Human Rights Act 2019*

The *Human Rights Act 2019* (HR Act) commenced on 1 January 2020. Since then, in Queensland, all public entities are required to act and make decisions in a way that is compatible with human rights.

The main objects of the HR Act are:

- To protect and promote human rights
- To help build a culture in the Queensland public sector that respects and promotes human rights, and
- To help promote a dialogue about the nature, meaning and scope of human rights.

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. *

MVS has a range of communication methods in place that enable it to share information with the local community, which include:

- Site open days
- Phone calls and meetings with landholders
- Meetings with the Traditional Owners
- Meetings with the Isaac Regional Council
- The Peabody Energy website - https://www.peabodyenergy.com, and
- Ad hoc community newsletters.

MVL and MVS have implemented a Complaint Response Protocol to respond to all community concerns, which will be expanded to incorporate the Action. Complaints and meetings with stakeholders are logged in the consultation management system. A Public Notification and Consultation period (ten days) is required as part of the EPBC Referral process, which provides the public with the opportunity to make a submission to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) during this period.

Indigenous Engagement

Peabody currently undertakes engagement with the Barada Barna Aboriginal Corporation (BBAC) via twice yearly Cultural Heritage Committee meetings. The most recent of these meetings was held on Barada Barna Country at their Bidgerley Cultural Centre outside Mackay on the 15 March 2024. These meetings were established to build and maintain Peabody's relationship with the BBAC, and to provide an opportunity for Peabody to provide regular operational updates on the MVS (amongst other projects of interest), site cultural heritage updates, discuss vocational work opportunities/training and any other business or issues as relevant.

Additionally, Peabody regularly engages with the BBAC outside of the CH Committee meetings regarding employment and procurement opportunities at the MVS and other projects. Current collaborative opportunities and projects include the roll out of BBAC Cultural Awareness Training to site staff, direct contract opportunities at MVS for earthworks, rehabilitation works, topsoil stripping, and indirect opportunities for people employment via Peabody's larger direct contractors e.g. Compass Group who operate the Terowrie Camp.

Towards Sustainable Mining - Communities of Interest – Enhanced Stakeholder Engagement

Peabody is currently in the process of implementing the Towards Sustainable Mining (TSM) ESG framework across its Australian assets. As part of this, a new program is being developed to support and enhance community and stakeholder engagement at Peabody's Bowen Basin assets. Peabody has

partnered with the Fitzroy Basin Association (FBA) to co-design a collaborative model for broad, sustainable and equitable community engagement including measurement and reporting. The new engagement framework and program will be developed with direct input from any communities adjacent to and with interest in MVS and will be regularly reviewed. Development of the program is underway and engagement sessions are anticipated to commence in Q3/Q4 2024 and remain on-going.

1.3.1 Identity: Referring party

Privacy Notice:

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

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

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

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

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

Alternatively, email us at privacy@awe.gov.au.

☑ **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	65077890932
Organisation name	PEABODY ENERGY AUSTRALIA PCI (C&M MANAGEMENT) PTY LTD

Organisation address	4006 QLD

Referring party details

Name	Marianne Gibbons
Job title	Senior Manager - Environment & Approvals
Phone	+61427321361
Email	mgibbons@peabodyenergy.com
Address	Level 14, 31 Duncan Street, Fortitude Valley, QLD 4006

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	65077890932
Organisation name	PEABODY ENERGY AUSTRALIA PCI (C&M MANAGEMENT) PTY LTD
Organisation address	4006 QLD

Person proposing to take the action details

Name	Marianne Gibbons
Job title	Senior Manager - Environment & Approvals

Phone	+61427321361
Email	mgibbons@peabodyenergy.com
Address	Level 14, 31 Duncan Street, Fortitude Valley, QLD 4006

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

Yes

Joint Venture Name	Business Address	ABN/ACN	Responsible Person	Email
Coppabella and Moorvale Joint Venture	Level 14, 31 Duncan Street, Fortitude Valley, QLD 4006	65077890932	Marianne Gibbons	mgibbons@peabodyenergy.com

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 Action is Peabody Energy Australia PCI (C&M Management) Pty Limited, as manager and operator on behalf of the Coppabella and Moorvale Joint Venture (CMJV). The CMJV comprises Peabody Coppabella Pty Ltd, Citic Australia Coppabella Pty Ltd, NS Coal Pty Ltd, KC Resources Pty Ltd and Winchester Coal Operations Pty Ltd.

The CMJV has an excellent record of responsible environmental management and a strong commitment to the communities and the environments in which it operates. The CMJV has no convictions for breaches of environmental management requirements and regularly reviews environmental performance and publicly reports on progress. CMJV is not, to its knowledge as of 9 August 2024, subject to any other proceedings or actions relating to its management of the environment.

The CMJV was responsible for the Codrilla Open Cut Coal Mining and Processing Operation with Associated Infrastructure referral (EPBC number: 2009/4892). In addition to this, Peabody has various other entities and interests in Queensland and New South Wales that have, at various times, submitted Referral applications.

The CMJV focusses on environmental management as an integral part of its ordinary mining activities and has a good record of sustainable practices and engagement with stakeholders including its workforce, the local community and regulators. The CMJV complies with its environmental approvals and monitors its

compliance with its own policies and implementation of procedures to give effect to CMJV's obligations. The Action will be undertaken in accordance with the proponent's environmental policy and management framework. Peabody's policy *Commitment to Health, Safety, Environment & Communities* (Peabody, 2020), is provided under **Attachment A**. In addition, the CMJV maintains several environmental management and monitoring plans for MVS, which will form the basis of environmental management for the Action. These environmental management and monitoring plans in place at MVS are outlined in **Attachment B** and include the following:

Water Management Plan (Peabody, 2023) (**Attachment B1**)

Erosion and Sediment Control Plan (Peabody, 2020) (**Attachment B2**)

Receiving Environment Monitoring Program (REMP) Design Document (Guage, 2022) (**Attachment B3**)

Groundwater Monitoring and Mitigation Plan (SLR, August 2019) (**Attachment B4**)

Cultural Heritage Management Plan (**Attachment B5**)

Air Quality Management Plan (ERM, 2023) (**Attachment B6**), and

Rehabilitation Manual (Highlands Env, 2024) (**Attachment B7**).

Management plans specific to the Action, will be developed and implemented prior to works commencing.

The CMJV management team has an ongoing focus on improving its ESG program and metrics to attain our own targets to meet or exceed industry expectations for greenhouse gas emission reduction, energy use efficiency and progress of sustainability measures including beneficial waste practices and minimising impacts on biodiversity. The CMJV also undertakes progressive rehabilitation of mining related disturbances across its sites.

Furthermore, Peabody participates in the Australian and Queensland Governments' 'Paddock to Reef Integrated Monitoring, Modelling and Reporting Program' (P2R Program). This program aims to monitor the progress and implementation of the Reef 2050 Water Quality Improvement Plan, the goal of which is to improve the quality of runoff that enters the Great Barrier Reef (GBR) from relevant catchments. Peabody participates in the P2R Program, in which their agricultural land within the GBR catchments is subject to water quality run off monitoring and trials. As a significant rural landholder in the Fitzroy basin (a GBR catchment), Peabody is proactive towards assessing its land management practices (which are outside operational parts of mining leases) against the objectives of the P2R Program. Peabody has engaged the services of a rural property management consultant to undertaken land audits in consultation with the relevant property agistees and provide Peabody with recommendations for changes to current practices, introduction of suitable monitoring programs or improvements to property infrastructure. Peabody will then work with each agistee in the context of the relevant agistment agreement to deliver industry standard and beyond land management practices in the interests of mitigating impacts to the GBR as per the P2R Program objectives.

In summary the CMJV and Peabody (as manager and operator on behalf the CMJV) is a responsible environmental manager of all of its interests.

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

Peabody's policy *Commitment to Health, Safety, Environment & Communities* (Peabody, 2020), is summarised below and provided under **Attachment A**.

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

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

In addition, Peabody's approach to sustainability is grounded in environmental, social, and governance practices that deliver further value across our business. As part of our approach, we utilise a risk management framework to assess risks and opportunities across our company and build actionable performance goals. We believe that coal will continue to be essential in the production of affordable, reliable, and secure energy and steel. We will continue to strengthen our position by aligning our strategy and practices with the goals of our stakeholders and expectations of our shareholders.

Peabody believe that good ESG practices are good business practices that support sustainability and resilience. We are embracing a future in which issues that are material to our ESG strategy are both risks as well as opportunities to differentiate ourselves as the Coal Producer of Choice. This focus, coupled with our commitment to sustainability, will drive the future success of our business. As a part of this commitment, we continue to review our current programs and improve our environmental, social, and governance efforts in ways that mitigate risk and create value.

Peabody publishes annual sustainability reports which provide an overview of the company's sustainability practices across all operations. The Peabody 2024 Sustainability Report is provided under **Attachment C**.

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	65077890932
Organisation name	PEABODY ENERGY AUSTRALIA PCI (C&M MANAGEMENT) PTY LTD
Organisation address	4006 QLD

Proposed designated proponent details

Name	Marianne Gibbons
Job title	Senior Manager - Environment & Approvals
Phone	+61427321361

Email	mgibbons@peabodyenergy.com
Address	Level 14, 31 Duncan Street, Fortitude Valley, QLD 4006

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	65077890932
Organisation name	PEABODY ENERGY AUSTRALIA PCI (C&M MANAGEMENT) PTY LTD
Organisation address	4006 QLD
Representative's name	Marianne Gibbons
Representative's job title	Senior Manager - Environment & Approvals
Phone	+61427321361
Email	mgibbons@peabodyenergy.com
Address	Level 14, 31 Duncan Street, Fortitude Valley, QLD 4006

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	65077890932
Organisation name	PEABODY ENERGY AUSTRALIA PCI (C&M MANAGEMENT) PTY LTD
Organisation address	4006 QLD
Representative's name	Marianne Gibbons
Representative's job title	Senior Manager - Environment & Approvals
Phone	+61427321361
Email	mgibbons@peabodyenergy.com

Address	Level 14, 31 Duncan Street, Fortitude Valley, QLD 4006

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

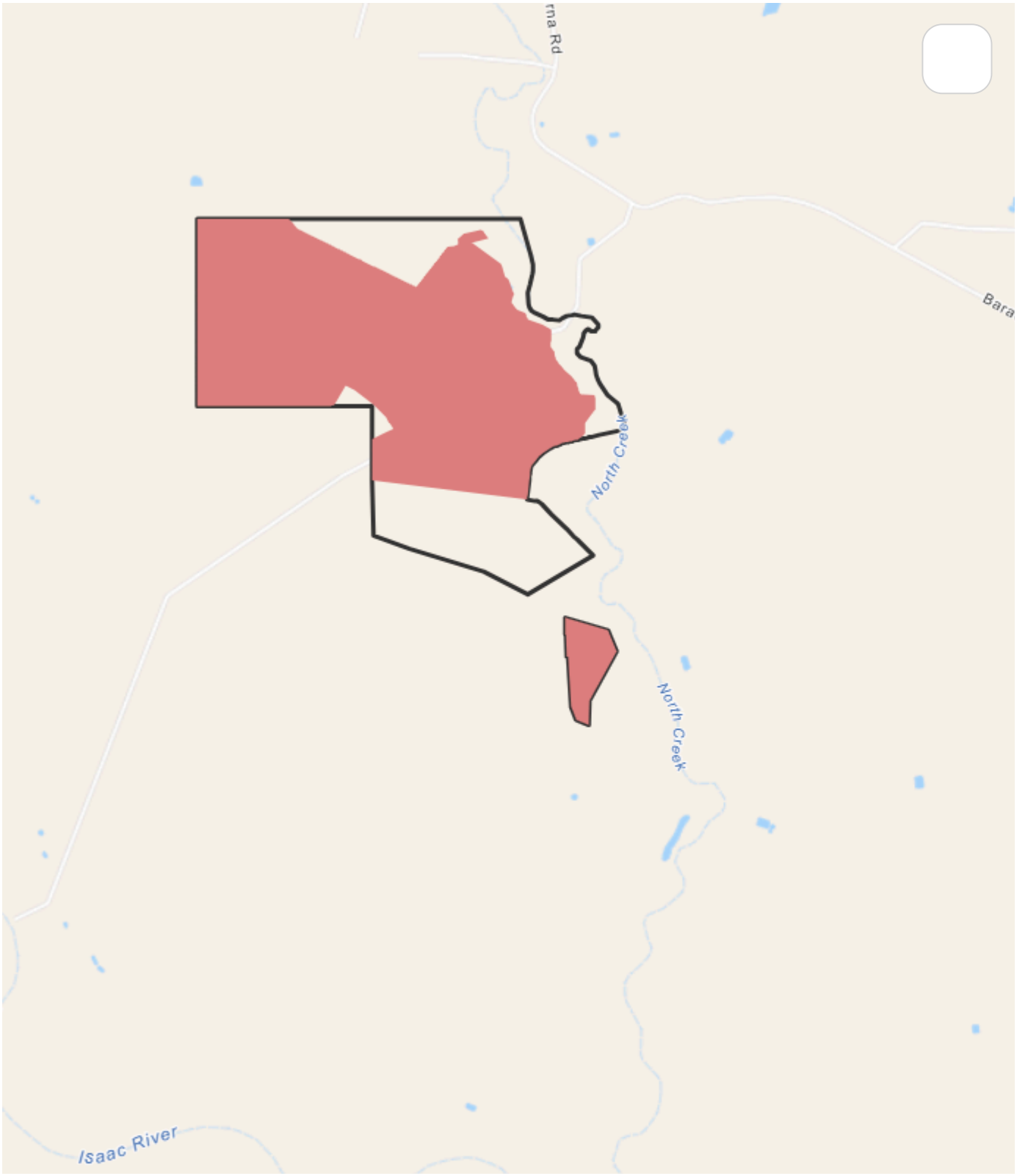
1.4 Payment details: Payment allocation

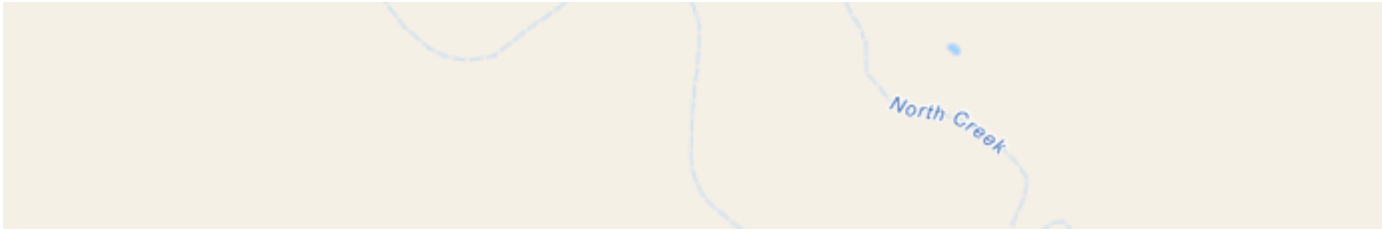
1.4.11 Who would you like to allocate as the entity responsible for payment? *

Proposed designated proponent

2. Location

2.1 Project footprint





Project area: 999.47 Ha Disturbance footprint: 716.58 Ha

Maptaskr © 2024 -22.060411, 148.475168

Powered By Esri - Sources: Esri, TomTom, Garmin, F…

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Moorvale Mine, Lot 2 Peak Downs Hwy, Coppabella QLD 4741

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 Action is within MDL3034, directly north of the existing approved operations at ML70354. The Action also includes the back-filling of Z-Pit within ML70354 (refer to **Figure 2**). These tenements are under the ownership of CMJV. ML70354 is located on freehold tenure 3 GV90, and MDL3034 is located on freehold tenure Lot 1 SP320981, Lot 2 SP320981 and an unnamed road parcel owned by the Isaac Regional Council.

3. Existing environment

3.1 Physical description

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

MVS is located approximately 15 km south of the Coppabella township and approximately 30 km east of the Moranbah township and is accessed via a turn off from the Peak Downs Highway. Secondary access is available via a private access road arrangement with the landholder from Barada Barna Road. As the Action is an extension of existing mining operations at MVS, there will be no need for new roads, or modification to current road access to MVS. Run-of-mine coal extracted from X-pit will continue to be hauled to MVL using the existing interconnecting haul road between MVS and MVL.

The Project Area (**Figure 1**) is located in the northern Bowen Basin, adjacent to other large coal mining operations and areas subject of historical clearing for agriculture. As such, the local area and region is generally disturbed, exhibiting exotic species, extensive non-remnant areas and eroded landforms.

Land within the Project Area has been subject to historical disturbance, primarily associated with cattle grazing. The dominant pre-mining land use was cattle grazing on native grasses, and the site experienced some collective clearing. Currently, the Project Area is located within a modified landscape, largely impacted by agricultural and mining land uses. The Project Area is located on land zoned as rural by the *Isaac Regional Planning Scheme 2021*. No re-zoning will be required for the Action.

Vegetation with the Project Area primarily consists of predominantly non-remnant vegetation with mature regrowth and remnant vegetation associated with riparian vegetation along North Creek and on granite to the north. The non-remnant vegetation is dominated by *Cenchrus ciliaris* (buffel grass) and *Bothriochloa pertusa* (Indian bluegrass), indicative of heavy grazing and agricultural activities.

The primary watercourse in vicinity to the Project Area is North Creek, which extends along the entire eastern boundary of the Project Area. Other water features in the area are ephemeral drainage lines and farm dams that are highly degraded through historical agricultural management practices.

State mapping identified one lacustrine wetland within the Project Area and riverine wetlands fringing North Creek. A preliminary Aquatic Ecology Assessment has been undertaken by ESP for the Project Area and observations during the late-wet field survey indicated that there is no significant aquatic habitat present in the vicinity of the Project Area. The mapped lacustrine wetland and unmapped farm dams within the Project Area were ground truthed to be typically in poor to fair aquatic ecology condition. The preliminary Aquatic Ecology Assessment (ESP, 2023) is provided under **Attachment D**.

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 current land use within the Project Area and surrounding area is predominantly cattle grazing and resource extraction. Several existing coal mines surround the Project Area including the existing MVS immediately south of the Project Area, Daunia Mine immediately west of the Project Area, Mavis Downs, Millenium Mine and Poitrel Mine further to the west, and Moorvale Mine to the north. Immediately north of the Project Area is the Daunia Quarry.

Several unsealed access roads and cattle fencing are located within the Project Area, but there are no easements or associated infrastructure. Stock yards, troughs and cleared grazing paddocks are present both within the area and in adjacent regions.

Proposed uses for the Project Area will comprise of various PMLU to be confirmed following approval of the Progressive Rehabilitation and Closure Plan by DESI. The PMLU proposed will include cattle grazing from natural environments.

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 and is characteristic of modified habitat typically used for cattle grazing activities.

The Dipperu National Park (scientific) is located approximately 35 km northeast of the Project Area and will not be impacted by the 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 Project Area is located within a largely flat valley running southeast to northwest at elevations ranging from 200 m Australian Height Datum (AHD) to 220 m AHD.

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.

Desktop and field survey assessments were undertaken for one 'dry season' survey in July 2023, and one 'wet season' in March 2024 to identify, describe and assess terrestrial ecological MNES values and determine the likelihood of significant impact to MNES. . The results are detailed in the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report**). Surveys were completed in line with the following methodologies (further detailed in **Attachment E – Terrestrial Ecology Assessment Report,** section 2.4, pages 27-33):

- Survey Guidelines for Australia's Threatened Birds (DEWHA, 2010)
- Survey Guidelines for Australia's Threatened Mammals (DSEWPC, 2011b)
- Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Queensland Herbarium, 2018)
- A review of koala habitat assessment criteria and methods (Youngentob et al., 2021)
- Draft referral guidelines for the nationally listed Brigalow Belt reptiles (DSEWPC, 2011a)
- Supporting information for each of the 14 migratory listed birds (DotE 2015)
- Flora Survey Guidelines - Protected Plants (DESI, 2020)
- Draft Survey Guidelines for Australia's Threatened Orchids (DESI, 2020)
- Guide to determining terrestrial habitat quality Version 1.3 (DESI, 2020), and
- Species specific guidelines published by the Commonwealth Government (DCCEEW, 2023d).

The 'dry season' survey was conducted over nine days between July and August 2023, and the 'wet season' survey was conducted over 14 days in March 2024 for the MNES flora and fauna species assessed as known or likely to occur within the Ecological Study Area. Surveys were undertaken at representative locations across the Ecological Study Area within vegetation community/habitat types present. The Ecological Study Area consisted of small portion of MDL3034, totaling approximately 1,181 hectares (ha). Of the Ecological Study Area, 700.26 ha was assessed as the 'disturbance footprint'. Details of the methodology are outlined in Section 2 of the E2M Terrestrial Ecology Assessment (2024). Details of the methodology are outlined in Section 2 of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report,** section 2, pages 15-34).

The Likelihood of Occurrence Assessment for MNES is detailed under Appendix E of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report,** Appendix E, pages 231-245).

Flora

The Ecological Study Area consists mostly of non-remnant vegetation dominated by introduced pasture grasses buffel grass (*Cenchrus ciliaris*) and Indian bluegrass (*Bothriochloa pertusa*). Patches of regional ecosystems (REs) considered analogous to Brigalow (*Acacia harpophylla*) dominant and co-dominant TEC (REs 11.4.8, 11.9.1 and 11.9.5) and Poplar Box Grassy Woodland on Alluvial Plains TEC (RE 11.3.2) were ground truthed within the Ecological Study Area. Ground truthed REs are presented on **Figure 3** and discussed in detail under Section 4.12 of the E2M Terrestrial Ecology Assessment (2024)(**Attachment E – Terrestrial Ecology Assessment Report,** section 4.1.2, pages 39-42).

Seven weed species listed as Weeds of National Significance and/or restricted matter under the QLD *Biosecurity Act 2014* were recorded within the Ecological Study Area during surveys. This included Captain Cook tree (*Cascabela thevetia*), harrisia cactus (*Harrisia martinii*), lantana (*Lantana camara*), cardona pear (*Opuntia streptacantha*), common prickly-pear (*Opuntia tomentosa*), parthenium (*Parthenium hysterophorus*), and Prickly acacia (*Vachellia nilotica*).

Fauna

Greater glider (*Petauroides volans / Petauroides armillatus*) (Endangered under the EPBC Act)

Greater glider was observed 52 times. The majority of observations were recorded within riparian eucalypt woodland (RE 11.3.25) where one record was within E*. populnea* woodland on alluvial (RE 11.3.2).

Preferred habitat mapped within the Ecological Study Area includes remnant REs 11.3.25 and 11.3.4a providing abundant food (*C. tessellaris*) and den trees (*E. tereticornis* and *E. camaldulensis*) and abundant species records. Suitable habitat for the species within the Ecological Study Area includes areas of remnant REs 11.3.2 and 11.5.3 providing abundant food trees (*E. populnea*) with connectivity to preferred habitat and few species records. The Ecological Study Area contains 61.65 ha of habitat for the species, comprising 29.71 ha of preferred habitat, with 0 ha located within the disturbance footprint. There was 31.94 ha of suitable habitat within the Ecological Study Area of which 0.53 ha was within the disturbance footprint.

The locations of Greater Glider observations and habitat is outlined on **Figure 4** and discussed in detail under Section 4.2.2.1 of the of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report,** section 4.2.2.1, pages 47-48).

Koala (*Phascolarctos cinereus*) (Endangered under the EPBC Act)

One koala was observed within the Ecological Study Area in riparian vegetation along North Creek during the dry season survey. No observations of koala were made during the wet season survey. Scratches and scats attributable to koala were also recorded in riparian REs along North Creek.

The Ecological Study Area contains 155.56 ha of habitat for the species, comprising 28.65 ha of preferred habitat with 0 ha located within the disturbance footprint and 76.08 ha of suitable habitat including 1.81 ha within the disturbance footprint. A total of 50.86 ha of marginal habitat within the Ecological Study Area, with no portion (0 ha) located within the disturbance footprint.

The locations of koala observations and habitat are presented in **Figure 5** and discussed in detail under Section 4.2.2.2 of the of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report,** section 4.2.2.2, pages 48-50).

Ornamental snake (Denisonia maculata) (Vulnerable under the EPBC Act)

One ornamental snake was identified within the disturbance footprint. The individual was caught in a funnel trap within young woody regrowth brigalow surrounding disturbed gilgai during the wet season survey. The individual was feeding on a green tree frog that had also been caught within the trap. Despite little rainfall being recorded preceding the survey, many green tree frogs were recorded while spotlighting within the patch of regrowth where the trap line was situated.

The Ecological Study Area contains 165.77 ha of habitat for the species. This includes 165.77 ha of preferred habitat within the Ecological Study Area, including 105.34 ha within the disturbance footprint.

The location of the ornamental snake observation and habitat is presented in **Figure 6** and discussed in detail under Section 4.2.2.3 of the of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report,** section 4.2.2.3, pages 51-52).

Squatter pigeon (southern) (*Geophaps scripta scripta*) (Vulnerable under the EPBC Act)

Squatter pigeon (southern) was observed 14 times during the field survey, across three locations within the Ecological Study Area. Two individuals were recorded within mature regrowth of RE 11.9.1. The other twelve individuals were recorded in non-remnant areas.

Squatter pigeon (southern) records within the Ecological Study Area were in proximity to dams and had trees nearby to disperse into when startled. The ground cover during the wet season was dense and mostly unsuitable for squatter pigeon (southern). However, during the dry season grass levels were sparse evidencing a variation of ground cover throughout the Ecological Study Area across the seasons likely due to grazing and rain events. Areas with trees had lower levels of grass productivity with mid-dense to sparse ground cover. These areas are likely to be more suitable for squatter pigeon (southern) foraging habitat.

The Ecological Study Area contains 156.68 ha of habitat for the species. This includes 103.92 ha of preferred habitat within the Ecological Study Area, including 26.13 ha within the disturbance footprint; and 52.76 ha of suitable habitat within the Ecological Study Area, including 7.93 ha within the disturbance footprint.

The locations of the Squatter pigeon (southern) observations and habitat are presented in **Figure 7** and discussed in detail under Section 4.2.2.5 of the of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report,** section 4.2.2.5, pages 53-60).

Fork-tailed swift (*Apus pacificus*) (Migratory under the EPBC Act)

Possible occurrence of this species due to suitable habitat being present within the Ecological Study Area, although the species has not previously been recorded within 25 km of the Ecological Study Area. The species is predominantly aerial and occurs over inland areas and occasionally above the foothills in coastal areas with dry and open habitat. The species can also occur over low scrub, heathland, saltmarsh and riparian woodlands and are associated with low pressure systems that favour the occurrence of insect prey (DCCEEW, 2024c).

Pest Species

Six pest fauna species listed under the Biosecurity Act were recorded during the field survey, including cane toad (*Rhinella marina*), European rabbit (*Oryctolagus cuniculus*), wild dog (*Canis lupus*), feral pig (*Sus scrofa*), feral chital deer (*Axis axis*); and feral cat (*Felis catus*).3

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

The Project Area is composed predominantly of non-remnant vegetation comprising of cleared paddocks and disturbed areas dominated by introduced pasture grasses such as *Bothriochloa pertusa* and *Cenchrus ciliaris*. Patches of remnant eucalypt woodlands dominated by *E. populnea* and *E. tereticornis* are present along North Creek and eucalypt woodlands dominated by *E. crebra* are present on granite hills to the north.

Soil within the Project Area is typically sediment-rich soils to heavy clay soils. These include Cainozoic clay plains, Cainozoic sand plains, alluvial plains, and fine-grained sedimentary rocks.

Seven REs were identified within the Ecological Study Area including REs 11.3.2, 11.3.25, 11.3.4a, 11.5.3, 11.9.5, 11.12.1, and 11.12.7 (**Figure 3**) and are discussed in detail in Section 4.1 of the E2M Terrestrial Ecology Assessment (**Attachment E – Terrestrial Ecology Assessment Report,** section 4.1, pages 39-46).

Field surveys of the Ecological Study Area identified REs analogous with the following two TECs:

- Brigalow (*A. harpophylla*) dominant and co-dominant (REs 11.4.8, 11.9.1 and 11.9.5), and
- Poplar Box Grassy Woodland on Alluvial Plains (RE 11.3.2).

Assessment of key diagnostic criteria and condition thresholds of these REs determined that no TECs are present within the Ecological Study Area as conditional criteria was not met by the vegetation (refer to Section 4.1.3 of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report,** section 4.1.3, pages 43-44).

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, state or local places recognised as having heritage values within the Project Area. The Queensland Heritage Register (2024) includes no culturally significant sites in the general vicinity of the Project Area. The closest significant site is Nebo Hotel, located in Nebo, 56 km north-east of the Project Area.

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

MVS and the Project Area are located on land subject to a Native Title claim (QCD2016/007). The Barada Barna people represented by the Barada Barna Aboriginal Corporation are the determined Native Title Holders (non-exclusive).

Indigenous heritage values within the Project Area are currently managed under a Cultural Heritage Management Plan, executed on 20 May 2010 with the Barada Barna People.

As clearing progresses, assessment, management and relocation of any cultural heritage sites identified within the disturbance footprint (**Figure 2 – Project Overview**) will be undertaken in accordance with the agreed processes provided in the CHMP. All Indigenous cultural heritage clearance activities will be undertaken in accordance with the Queensland ACH Act. The CHMP is provided under **Attachment B5**.

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

MVS is within the Isaac River sub-basin of the wider Fitzroy Basin (WQ1301). The Isaac River sub-basin covers an area of approximately 22,364 km2. Natural waterways in the region are typically temporary or ephemeral streams. The waterways are typically dry for most of the year and only flow for a short time following rainfall events, which is more common in the wet season. They may also contain intermittent pools or permanent waterholes (dependent on the season and substrate type).

The Project Area lies directly west of North Creek and north of the Isaac River. North Creek flows from the north to the south and converges with the Isaac River approximately 3 km south of the Project Area. This confluence feeds into the Mackenzie River, then the Fitzroy River, which outflows to the Coral Sea southeast of Rockhampton.

The environmental values associated with North Creek at and downstream of the Project Area include:

- Aquatic ecosystems (moderately disturbed)
- Farm supply/use
- Irrigation
- Stock water
- Human consumer
- Primary, secondary and visual recreation
- Drinking water
- Industrial use, and
- Cultural and spiritual values.

Located within the Project Area are three unnamed and unmapped tributaries that traverse the north and south areas of MDL3034. These tributaries are likely part of the North Creek catchment.

The preliminary Aquatic Ecology Assessment undertaken by ESP during the late-wet season in June 2023 (**Attachment D**) indicated that there are several mapped lacustrine wetlands predominantly associated with the MVS mine water storages located in the vicinity of the Project Area (**Figure 8**). Only one of these lacustrine wetlands is located within the Project Area, alongside several unmapped farm dams that were all observed to be in poor to fair aquatic ecological condition. The lacustrine wetland and farm dams were observed to consist of relatively uniform instream aquatic habitat (dominated by shallow and deep pools) and low diversity of instream structural complexity providing limited habitat for aquatic fauna communities.

There are no mapped palustrine wetlands within the Project Area. The closest palustrine wetland is located along North Creek, approximately 1 km downstream of the Project Area. There are no wetlands of international importance (i.e. Ramsar wetlands) in the Isaac River sub-basin (DES, 2013).

Groundwater

The Action is located within the Isaac Connors Groundwater Management Area as defined under Section 6, Schedule 3 and Schedule 4 of the *Water Resource (Fitzroy Basin) Plan 2011.* It is located within the northern part of the Bowen Basin, which is comprised of the Permian aged coal measures that have been folded into a syncline structure that strikes in a northwest to southeast direction. The geology of MVS is comprised of the stratified sequences of the Moranbah Coal Measures, Fort Cooper Coal Measures and Rangal Coal Measures that dip locally towards the east. The Triassic Rewan Group unconformably overlies the coal measures, and surficial cover includes the alluvium along the Isaac River and North Creek, as well as regolith material comprising Quaternary to Tertiary sediments and weathered strata.

The following discussion of groundwaters is drawn from the Moorvale South PRCP Groundwater Assessment Report (SLR, 2024a) (**Attachment G**) produced for the QLD EP Act. Baseline information addresses groundwaters identified within the MVS mining leases only (immediately south of the Project Area).

The main hydrogeological units identified within MVS and assumed within the Project Area are the alluvium associated with the Isaac River and North Creek (unconfined aquifer), regolith (mainly confined/fractured aquifer), rewan group aquitard, and the Permian strata aquifer that host the coal measures (semi-confined

to unconfined/fractured aquifer to the west and confined/fractured aquifer to the east).

The alluvial sediments were found to be localised to the Isaac River and North Creek adjacent to the MVS mining leases and did not form a consistent interconnected aquifer. The alluvium comprises a heterogeneous distribution of clays, sandy clay, sands and gravels. Groundwater occurs within the alluvium at depths of around 10 m below ground level (bgl) to 20 m bgl, and more than 4 m below the base of the Isaac River.

Regionally, groundwater flow within the alluvium is a subdued reflection of topography with groundwater flowing in a south easterly direction, consistent with the alignment of the Isaac River. However, local groundwater levels within the alluvium are highest close to the river, indicating a potential local flow direction away from the river to the east and west. The alluvium is variably saturated, with recharge mostly from stream flow or flooding (losing streams). Direct infiltration of rainfall also occurs rapidly where there are no substantial clay barriers in the shallow sub-surface. Water quality data for the alluvium indicates it can be fresh to moderately saline and highly spatially and temporally variable. The alluvium is mostly suitable for stock water supply and irrigation only.

Tertiary-Quaternary aged sediments and weathered strata (collectively regolith) form the base of the unconfined shallow groundwater system. The groundwater flow processes are similar to those of the alluvium, however the fluxes are expected to be significantly lower due to the dominance of clay within the Tertiary sediments. Near the Isaac River and North Creek, water has been detected within the regolith material at depths of around 8 m bgl to 19 m bgl. Outside of these areas the regolith material is largely unsaturated. Water quality data for the regolith indicates it is generally highly saline but can be brackish to moderately saline. Water within the regolith is generally of poor quality and not considered suitable for stock, irrigation, aquatic ecosystems or drinking water.

In the Permian strata, groundwater is encountered in the coal seams and in the sandstone/siltstone lower hydraulic conductivity units. As with the rest of the Bowen Basin, the coal seams are the main groundwater bearing units within the Permian sequences, with low hydraulic conductivity interburden generally confining the individual seams. The coal seams are dual porosity in nature with a primary matrix porosity and a secondary (dominant) porosity provided by fractures (joints and cleats). Hydraulic conductivity of the coal decreases with depth due to increasing overburden pressure reducing the aperture of fractures. Vertical movement of groundwater (including recharge) is limited by the confining interburden layers, meaning that groundwater flow is primarily horizontal through the seams with recharge occurring mainly at subcrop. Refer to **Figure 9** and **Figure 10** outlining the groundwater levels and conceptual flow directions at MVS and in the localised area.

Peabody has engaged SLR Consulting Australia to complete groundwater modelling and impact assessment to meet the requirements of the EPBC Act and the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC). It is anticipated the Groundwater Modelling and Impact Assessment for the Action will be available in Q1 2025.

Groundwater Dependent Ecosystems

Desktop mapping of potential aquatic groundwater dependent ecosystems (GDEs) has been undertaken by ESP (2023) (**Attachment D – Aquatic Ecology Assessment Report,** section 3.10, pages 29-30) that has indicated potential surface-expression GDEs located along North Creek and the Isaac River. The National Groundwater Dependent Atlas (2016) delineated high, moderate, and low potential terrestrial GDEs within the Ecological Study Area, particularly associated with specific riparian vegetation (RE) zones and alluvial soils. Riparian vegetation along tributaries of the Isaac River is speculated to be groundwater-dependent due to factors such as intermittent surface flows, reachable water table depths, and supportive clay soils. Projects in nearby areas have identified riparian vegetation associated with the Isaac River (RE 11.3.25) as having moderate to high potential as terrestrial GDEs (Whitehaven Coal Pty Ltd, 2021). Based on this assessment, riparian communities within and surrounding the Ecological Study Area likely contain terrestrial GDEs, particularly those associated with RE 11.3.25.

Field assessment undertaken within the region for other projects however have observed no surface expression aquatic GDEs along the reaches of the Isaac River or North Creek due to (FRC Environmental, 2019):

- These waterways do not flow all year and most floodplain palustrine wetlands do not hold water all year, excluding the artificial farm dams
- Flow volumes in the Isaac River and North Creek not increasing in the absence of tributary inflows
- The level and extent of water of wetlands and farms dams varied between the two seasons surveyed, and
- There were no springs or seeps.

Overall, aquifers within the Aquatic Study area are considered to have a low likelihood of supporting stygofauna communities. Although stygofauna have been recorded from fractured rock aquifers (e.g. basalt and coal), they are less likely to occur where there is insufficient hydrological connection to limestone or alluvial aquifers (Doody, 2019). However, stygofauna may occur in close vicinity to the Ecological Study Area, particularly in the nearby North Creek and Isaac River alluvium.

A detailed discussion of potential for terrestrial GDEs is outlined in Section 3.1.2 in the E2M Terrestrial Ecology Assessment (E2M, 2024) provided in **Attachment E – Terrestrial Ecology Assessment Report,** section 3.1.2, pages 35-36.

Figure 11 illustrates the potential GDEs in relation to the Action.

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	No	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes

EPBC Act section	Controlling provision	Impacted	Reviewed
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. *

Direct and indirect impacts on the Great Barrier Reef World Heritage Area (GBRWHA) are unlikely due to the Action’s planning and mitigation measures.

The nearest World Heritage property is the GBRWHA which was inscribed on the United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage List in 1981, having met all four of the UNESCO natural criteria for World Heritage (GBRMPA, 2021a) at the time of its listing. The GBRWHA covers approximately 348,000 km2 and extends from the top of Cape York in north-east Australia, to just north of Bundaberg, and from the low water mark on the Queensland coast to the outer boundary of the Great Barrier Reef Marine Park (GBRMP), which is beyond the edge of the continental shelf, up to 250 km offshore (GBRMPA, 2021). Nearly 99% of the GBRWHA is within the GBRMP, with the remainder under Queensland Government jurisdiction, including most islands, ports and other internal state waters (GBRMPA, 2021a).

The key values of the GBRWHA include biodiversity (habitats, terrestrial habitats that support the Great Barrier Reef, and species), geomorphological features, Aboriginal and Torres Strait Islander heritage, historical heritage, community benefits of the environment, and key environmental processes (GBRMPA, 2021). Current pressures on GBRWHA and its key values include climate change and extreme weather, catchment run-off, coastal development, and direct uses.

The Project Area is situated within the Isaac River catchment, a tributary of the Fitzroy River which eventually discharges into the Coral Sea near Port Alma, over 426 km downstream of MVS. The eventual discharge is directly into the GBR National Heritage Place (GBRNHP). The location of the Project in relation

to the GBRWHA is provided on **Figure 12**.

Direct or indirect impacts to the GBRWHA may arise from:

- Erosion of the proposed overburden, or mobilisation of contaminants from construction into the receiving waters of North Creek.
- Release of contaminants into the receiving waters of North Creek.

A preliminary flood assessment has been undertaken by WRM (2023) for North Creek (**Attachment F**). The flood assessment indicated that depth and velocity impacts will be minimal for all events up to and including the 0.1% Annual Exceedance Probability (AEP) and unlikely to be a significant cause of erosion for the proposed overburdens.

The likelihood of direct or indirect impacts to the GBRWHA is further diminished by the erosion control, sediment mitigation and management plans already implemented at MVS. These mitigation and management plans will be reviewed and updated to incorporate the impacts of the Action. Existing sedimentation management measures at MVS will be adopted for the Action and will include where suitable, erosion control structures that divert stormwater into natural or diverted watercourses, physical containment in sediment basins controlled or managed by de-siltation activities, and monitoring of receiving waters (upstream and downstream).

Water management for the Action will be incorporated into the existing water management system at MVS. MVS is authorised under Schedule G of EA EPML00380113 to release contaminants into North Creek at the release point located at the 450 ML Dam on ML70354 subject to the limits stated in Table G2.

The likelihood of direct or indirect impacts to the GBRWHA is further reduced through the regulation and management of these releases. The existing water management measures at MVS will be adopted for the Action including the monitoring of mine affected water storages and receiving waters (upstream and downstream).

Any potential alterations to water quality at North Creek – such as changes in dissolved inorganic nitrogen levels or sedimentation – will primarily be localised and become negligible at the GBRWHA due to extensive dilution and mixing over the 426 km to the outflow point.

Management and Mitigation Measures

MVS operates under several relevant monitoring and management plans. These plans are outlined in **Attachment B – Monitoring & Management Plans** and include the following most relevant to the management of erosion and sediment control:

- Water Management Plan (Peabody, 2023) (**Attachment B1,** page 2 of Attachment B)
- Erosion and Sediment Control Plan (Peabody, 2020) (**Attachment B2,** page 36 of Attachment B)
- Receiving Environment Monitoring Program (REMP) Design Document (Guage, 2022) (**Attachment B3,** page 84 of Attachment B)

The Water Management Plan (Peabody, 2023) provided in **Attachment B1** provides an overview of contaminant source assessment, the water management system, water balance model, management measures and surface water monitoring program at MVS. The existing MVS water management and mitigation measures will be reviewed and updated to incorporate the impacts of the Action.

The MVS ESCP (**Attachment B2**) provides a guide for managing erosion control, monitoring and emergency reporting. Water quality sampling is routinely undertaken at five locationson North Creek and the Isaac River, representing locations upstream and downstream of mining or mine water release points as part of the MVS REMP (design document is provided under **Attachment B3**). The monitoring has been undertaken in accordance with the MVS EA and includes water quality, sediment, and macroinvertebrate sampling. The sampling locations are shown in **Attachment B3,** Figure 1, page 6 of in the Receiving Environment Monitoring Plan Report 2022.

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. *

Direct and indirect impacts on the Great Barrier Reef National Heritage Place (GBRNHP) are unlikely due to the Action's planning and mitigation measures.

The nearest National Heritage Place is the Great Barrier Reef National Heritage place (GBRNHP), which was included in the National Heritage List in 2007 as it met five of the nine possible National Heritage criterion as below:

- Criterion A: Events Processes, as this place meets World Heritage criteria vii, viii, ix and x
- Criterion B: Rarity, as this place meets World Heritage criteria x
- Criterion C: Research, as this place meets World Heritage criteria viii, ix and x
- Criterion D: Principal characteristics of a class of places, as this place meets World Heritage criteria viii, ix and x, and
- Criterion E: Aesthetic characteristics, as this place meets World Heritage criteria vii.

The Project Area is situated within the Isaac River catchment, a tributary of the Fitzroy River which eventually discharges into the Coral Sea near Port Alma, over 426 km downstream of MVS. The eventual discharge is directly into the GBRNHP. The location of the Project in relation to the GBRNHP is provided on **Figure 12**.

Direct or indirect impacts to the GBRNHP may arise from:

- Erosion of the proposed overburden, or mobilisation of contaminants from construction into the receiving waters of North Creek.
- Release of contaminants into the receiving waters of North Creek.

A preliminary flood assessment has been undertaken by WRM (2023) for North Creek (**Attachment F**).The flood assessment indicated that depth and velocity impacts will be minimal for all events up to and including the 0.1% Annual Exceedance Probability (AEP) and unlikely to be a significant cause of erosion for the proposed overburdens.

The likelihood of direct or indirect impacts to the GBRNHP is further diminished by the erosion control, sediment mitigation and management plans already implemented at MVS. These mitigation and management plans will be reviewed and updated to incorporate the impacts of the Action. Existing sedimentation management measures at MVS will be adopted for the Action and will include where

suitable, erosion control structures that divert stormwater into natural or diverted watercourses, physical containment in sediment basins controlled or managed by de-siltation activities, and monitoring of receiving waters (upstream and downstream).

Water management for the Action will be incorporated into the existing water management system at MVS. MVS is authorised under Schedule G of EA EPML00380113 to release contaminants into North Creek at the release point located at the 450 ML Dam on ML70354 subject to the limits stated in Table G2.

The likelihood of direct or indirect impacts to the GBRNHP is further reduced through the regulation and management of these releases. The existing water management measures at MVS will be adopted for the Action including the monitoring of the mine affected water storages and receiving waters (upstream and downstream).

Any potential alterations to water quality at North Creek – such as changes in dissolved inorganic nitrogen levels or sedimentation – will primarily be localised and become negligible at the GBRNHP due to extensive dilution and mixing over the 426 km to the outflow point.

Management and Mitigation Measures

MVS operates under several relevant monitoring and management plans. These plans are outlined in **Attachment B – Monitoring & Management Plans** and include the following most relevant to the management of erosion and sediment control:

- Water Management Plan (Peabody, 2023) (**Attachment B1,** page 2 of Attachment B)
- Erosion and Sediment Control Plan (Peabody, 2020) (**Attachment B2,** page 36 of Attachment B)
- Receiving Environment Monitoring Program (REMP) Design Document (Guage, 2022) (**Attachment B3,** page 84 of Attachment B)

The Water Management Plan (Peabody, 2023) provided in **Attachment B1** provides an overview of contaminant source assessment, the water management system, water balance model, management measures and surface water monitoring program at MVS. The existing MVS water management and mitigation measures will be reviewed and updated to incorporate the impacts of the Action.

The MVS ESCP (**Attachment B2**) provides a guide for managing erosion control monitoring and emergency reporting. Water quality sampling is routinely undertaken at five locations on North Creek and the Isaac River, representing locations upstream and downstream of mining or mine water release points as part of the MVS REMP (design document is provided under **Attachment B3**). The monitoring has been undertaken in accordance with the MVS EA and includes water quality, sediment, and macroinvertebrate sampling. The sampling locations are shown on Figure 1, page 6 of **Attachment B3** in the Receiving Environment Monitoring Plan Report 2022.

4.1.3 Ramsar Wetland

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

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

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

—

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

No

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

The closest Ramsar Wetlands are the Shoalwater and Corio Bay areas, which comprises 330 km of coastline (including islands) along the central coast of Queensland. The southern boundary, at Corio Bay, and northern boundary, at Broome Head, are approximately 50 km and 125 km north of Rockhampton. The Shoalwater and Corio Bays Area Ramsar Site supports an abundance of waterbirds and is listed under the East Asian-Australasian Flyway Site Network with Shoalwater Bay and is also listed as an Important Bird Area by BirdLife International.

Direct impacts to the Shoalwater and Corio Bay areas are unlikely due to the significant distance from the outflow point (mouth of the Fitzroy River) relative to the location of Shoalwater and Corio Bay areas (**Figure 12 – World Heritage, National Heritage, Ramsar Wetlands & Great Barrier Reef**).

A preliminary flood assessment has been undertaken by WRM (2023) for North Creek (**Attachment F – Preliminary Surface Water Assessment**). The flood assessment indicated that depth and velocity impacts will be minimal for all events up to and including the 0.1% Annual Exceedance Probability (AEP) and unlikely to be a significant cause of erosion for the proposed overburdens. Any potential alterations to water quality – such as changes in dissolved inorganic nitrogen levels or sedimentation – will primarily be localised and become negligible at the GBRWHA due to extensive dilution and mixing over the 426 km to the outflow point.

The likelihood of direct or indirect impacts is further diminished by the erosion control, sediment mitigation and management plans already implemented at MVS. These mitigation and management plans will be reviewed and updated to incorporate the impacts of the Action. Existing sedimentation management measures at MVS will be adopted for the Action and will include where suitable, erosion control structures that divert stormwater into natural or diverted watercourses, physical containment in sediment basins controlled or managed by de-siltation activities, and monitoring of receiving waters (upstream and downstream).

Management and Mitigation Measures

MVS operates under several relevant monitoring and management plans. These plans are outlined in **Attachment B – Monitoring & Management Plans** and include the following most relevant to the management of erosion and sediment control:

- Water Management Plan (Peabody, 2023) (**Attachment B1,** page 2 of Attachment B)
- Erosion and Sediment Control Plan (Peabody, 2020) (**Attachment B2,** page 36 of Attachment B)
- Receiving Environment Monitoring Program (REMP) Design Document (Guage, 2022) (**Attachment B3,** page 84 of Attachment B)

The Water Management Plan (Peabody, 2023) provided in **Attachment B1** provides an overview of contaminant source assessment, the water management system, water balance model, management measures and surface water monitoring program at MVS. The existing MVS water management and mitigation measures will be reviewed and updated to incorporate the impacts of the Action.

The MVS ESCP (**Attachment B2**) provides a guide for managing erosion control monitoring and emergency reporting. Water quality sampling is routinely undertaken at five locations on North Creek and the Isaac River, representing locations upstream and downstream of mining or mine water release points as part of the MVS REMP (design document is provided under **Attachment B3**). The monitoring has been undertaken in accordance with the MVS EA and includes water quality, sediment, and macroinvertebrate sampling. The sampling locations are shown on Figure 1, page 6 of **Attachment B3** in the Receiving Environment Monitoring Plan Report 2022.

4.1.4 Threatened Species and Ecological Communities

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

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

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

Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Dasyurus hallucatus	Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu]
Yes	Yes	Denisonia maculata	Ornamental Snake
No	No	Dichanthium queenslandicum	King Blue-grass
No	No	Egernia rugosa	Yakka Skink
No	No	Elseya albagula	Southern Snapping Turtle, White-throated Snapping Turtle
No	No	Erythrotriorchis radiatus	Red Goshawk
No	No	Eucalyptus raveretiana	Black Ironbox
No	No	Falco hypoleucos	Grey Falcon
No	No	Furina dunmalli	Dunmall's Snake
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
Yes	Yes	Geophaps scripta scripta	Squatter Pigeon (southern)
No	No	Hemiaspis damelii	Grey Snake
No	No	Lerista allanae	Allan's Lerista, Retro Slider
No	No	Macroderma gigas	Ghost Bat
No	No	Neochmia ruficauda ruficauda	Star Finch (eastern), Star Finch (southern)
No	No	Nyctophilus corbeni	Corben's Long-eared Bat, South-eastern Long-eared Bat
Yes	Yes	Petauroides volans	Greater Glider (southern and central)
Yes	Yes	Phascolarctos cinereus (combined populations of Qld, NSW and the	Koala (combined populations of Queensland, New South Wales and the

Direct impact	Indirect impact	Species	Common name
		ACT)	Australian Capital Territory)
No	No	Poephila cincta cincta	Southern Black-throated Finch
No	No	Polianthion minutiflorum	
No	No	Rheodytes leukops	Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-eyed River Diver
No	No	Rostratula australis	Australian Painted Snipe
No	No	Samadera bidwillii	Quassia
No	No	Stagonopleura guttata	Diamond Firetail
No	No	Tringa nebularia	Common Greenshank, Greenshank

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

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

Yes

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

The Action has the potential to impact ecological values directly and indirectly within the Project Area and immediate surrounds, as well as contribute to cumulative impacts on these values within the region. Impacts will result from removal of native vegetation, habitat loss and degradation, light, noise and dust emissions, injury and/or mortality of fauna, and increased risk of fire, edge effects, changes, and modification of hydrology and potential spread of pest flora and fauna species.

The result of the impact assessment is detailed in Section 7.0 of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E** section 7.0, pages 67-76).

Direct Impacts

Vegetation clearing and habitat removal is likely to directly impact MNES flora and fauna species by eliminating or reducing the extent/availability of nesting, denning and roosting/shelter habitat, fragmenting habitat, removing or reducing the availability of food and foraging habitat; and increasing competition through reduced availability of resources.

The direct clearing impacts resulting from the Action are as follows:

- REs analogous with Brigalow (*A. harpophylla*) dominant and co-dominant TEC but does not meet conditional criterial of a TEC (Refer to **Figure 3 – Ground-truthed TECs**):
    - RE 11.4.8 – clearing of 1.07 ha of *E. cambageana* woodland to open forest with *A. harpophylla* or *A. argyrodendron* on Cainozoic clay plains, and
    - RE 11.9.1 – clearing of 4.16 ha *A. harpophylla-E. cambageana* woodland to open forest on fine-grained sedimentary rocks.
- RE analogous with Poplar Box Grassy Woodland on Alluvial Plain TEC but does not meet conditional criterial of a TEC (Refer to **Figure 3 – Ground-truthed TECs**):
    - RE 11.3.2 – clearing of 0.53 ha *E. populnea* woodland on alluvial plains remnant vegetation within the disturbance footprint.
- Greater glider – clearing of 0 ha of preferred habitat and 0.53 ha of suitable habitat. Refer to **Figure 4 – Greater Glider Habitat**.
- Koala – clearing of 0 ha of preferred habitat, 1.81 ha of suitable habitat, and 0.43 ha of marginal habitat. Refer to **Figure 5 – Koala Habitat**.
- Ornamental snake – clearing of 105.34 ha of preferred habitat and 0 ha of suitable habitat. Refer to **Figure 6 – Ornamental Snake Habitat.**
- Squatter pigeon – clearing of 26.13 ha of preferred habitat and 7.93 ha of suitable habitat. Refer to **Figure 7 – Squatter Pigeon Habitat**.

Refer to Section 7.1, Table 13 and 14 of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E** section 7.1, table 13 & 14, page 68-69).

Clearing and earth works within the disturbance footprint may result in the injury and/or mortality of MNES fauna. Open excavation areas also pose a risk to fauna with animals falling into open pits or trenches with potential for injuring and/or trapping individuals and subsequently dying (due to lack of cover, water and/or foraging resources and or drowning following heavy rain). Animals moving through the disturbance footprint may also be susceptible to vehicle strike during construction and operational phases of the Action.

Direct impacts are discussed in detail in detail in Section 7.1 of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E** section 7.1, page 67).

Indirect Impacts

Habitat within the Project Area and surrounds is already significantly fragmented due to extensive clearing for agricultural activities. The Action may result in additional indirect disturbance and degradation of nearby ecological values via fragmentation and edge effects, establishment and spread of pest flora and fauna species, light, noise and dust emissions, injury and/or mortality of fauna, erosion, contamination from spills and leaks and increased fire risk.

Clearing within the disturbance footprint poses a risk of further hindering and fragmenting species movement within and surrounding the Project Area, particularly concerning the ornamental snake. Such fragmentation could lead to a decrease in genetic diversity, smaller population sizes, and limitations in the ability to move between suitable habitats to access resources throughout the species' lifespan, compounded by the lack of suitable soil and watercourse features connecting these areas.

Clearing and construction activities within the disturbance footprint may also degrade areas of adjoining habitat as a result of edge effects (i.e. reduced quality/suitability of habitat due to changes in vegetation cover along ecotones and adjacent disturbance areas).

Introduced flora species disrupt ecosystems by outcompeting and replacing native species, resulting in altered ecosystem diversity and function impacting MNES matters through the degradation of vegetation community structure and composition. Proliferation and spread of environmental weeds and pests within the Project Area may occur with vegetation clearing, soil disturbance and increased movement of heavy machinery and vehicles. Weed seeds can be transported in contaminated landfill and within material on machinery, vehicles or personnel. Construction activities also have the potential to spread or introduce weeds throughout adjacent environs, resulting in a reduction in vegetation/habitat quality and native species assemblages.

The Action could also result in an increase in the presence and abundance of feral animals through improper waste disposal and increased permanency of water sources (e.g. dams and troughs). This could result in adverse impacts to native fauna occurring within the Project Area such as increased competition of resources, predation, spreading weeds, grazing and trampling of native vegetation, introduction and spread of pathogens, poisoning (e.g. cane toads), soil disturbance (e.g. pig diggings), and reduced water.

Construction and operational activities can disrupt local fauna roosting, breeding and foraging activities as a result of increased exposure to artificial lighting, noise/vibration and dust. Artificial lighting used during construction and operational phases of the Action has the potential to impact fauna (including MNES species) occupying habitat adjacent work areas.

Noise levels in the north of the Project Area will likely increase during construction and operational phases of the Action, due to the shifting of mining operations northwards from the existing mining area. The resulting increase in noise levels may impact fauna occupying habitat adjacent to work areas by disrupting communication between individuals, startling or frightening animals, or forcing animals to avoid or abandon areas of nearby habitat.

Construction and operational activities are also likely to generate dust emissions. Excessive deposition of dust on leaves of plants can suppress growth and photosynthesis and result in reduced habitat quality for fauna. High levels of airborne dust particles can also irritate the respiratory systems of fauna and potentially result in ingestion of dust-coated seeds and other foods. Excessive deposition of dust on open water bodies may also degrade water quality and overall habitat quality for fauna adjacent to disturbance areas.

Increased risk of fire incursion is more likely to be associated with the construction phase of the Action. Construction activities have the potential to increase the risk of fire, causing injury or loss of human life, loss of flora, vegetation, fauna and habitat and impacting surface water quality.

Erosion and contamination of soils and water may occur as a result of construction and operational activities, such as vegetation clearing, unexpected releases of contaminants and operation of heavy machinery. Erosion can remove the most productive part of the soil profile, the topsoil, resulting in a greatly reduced opportunity for natural regeneration of vegetation communities (unless stockpiled).

Inappropriate disposal of liquid and solid wastes, including spills and leaks from transfers (fuel, chemicals) and inadequate storage may also result in point-source contamination of surrounding land, including habitats of threatened and migratory species.

The Action has the potential to alter existing hydrological conditions within the Project Area and surrounds, including surface water flows and groundwater levels. Changes in surface water quality and quantity within the Project Area can have implications for surrounding ecosystems, particularly concerning vegetation and moisture levels. The presence of pollutants or changes in nutrient levels can disrupt the balance of riparian communities, affecting the distribution and abundance of flora species. Such alterations in water quality may also have cascading effects on terrestrial habitats, influencing soil moisture levels and nutrient availability. Furthermore, reduced surface water quantity can exacerbate moisture stress in vegetation, potentially leading to decreased growth rates and increased susceptibility to disease and pests.

Changes in surface water quality may also impact terrestrial ecosystems within the Project Area due to increased erosion and sedimentation of receiving surface waters and mobilisation of other contaminants in runoff from construction and disturbance areas. These changes in water quality have the potential to impact vegetation and habitat fringing North Creek.

Groundwater drawdown and quality changes may result from the Action. Groundwater drawdown and quality changes may have an adverse impact on surrounding ecosystems. GDEs, including riparian communities along waterways, are highly sensitive to alterations in water dynamics. Riparian and floodplain tree species, which rely on access to reliable water sources, including surface flows and groundwater, face risks of habitat degradation due to shifts in water availability and quality. Species with obligate groundwater dependency, such as river red gum, may struggle to survive prolonged periods of drought if access to groundwater is compromised.

Indirect impacts are discussed in detailed in detail in Section 7.2 of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E** section 7.2, pages 69-73).

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. *

Ornamental snake (Denisonia maculata) (Vulnerable under the EPBC Act)

The Action will result in the direct clearing of 105.34 ha of preferred habitat for the ornamental snake, including areas known to be occupied by the species. Under the Draft referral guidelines for the nationally listed Brigalow Belt reptiles (SEWPC, 2011), important habitat for the ornamental snake is a surrogate for an important population for the species. Important habitat for ornamental snake includes areas with gilgai depressions and mounds, or habitat that functions as connectivity between such areas (SEWPC, 2011). Given that the disturbance footprint includes gilgai habitat and provides connectivity between gilgai habitats along drainage features and linear gilgai features, the habitat and population impacted by the Action are deemed to be important. The Action is expected to lead to a significant impact on ornamental snake as a result of:

- Leading to a long-term decrease in the population size and genetic diversity
- Fragmenting a population
- Adversely affecting habitat critical to the survival of the species
- Disrupting the breeding cycle of the population
- Removal of habitat that decreases the availability and quality of habitat to the extent that that species is likely to decline, and
- Interfering with the recovery of the species.

The significant impact assessment for the ornamental snake is further discussed in Appendix E of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report,** Appendix E, section E.4, pages 243-245).

MNES species known to occur within the Ecological Study Area but will not be significantly impacted by the Action are summarised below and the significant impact assessments for these species are provided under Appendix E of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report**, Appendix E, page 231).

Koala (Phascolarctos cinereus) (Endangered under the EPBC Act)

The Action will result in a direct loss of 1.81 ha of suitable habitat and 0.43 ha of marginal habitat for the species within the Disturbance Footprint. Preferred habitat along the watercourse will not be directly impacted by the Project. The removal of 1.81 ha of suitable habitat will remove shelter and feed trees at the edge of a larger connective patch associated with North Creek. The removal of this habitat is not expected to:

- Be of extent or quality that would result in a decline of the species
- Disrupt the breeding cycle of a population
- Interfere substantially with the recovery of the species
- Lead to a long-term decrease in the size of a population, due to the minimal disturbance to feed and shelter trees
- Reduce the area of occupancy of the species
- Adversely affect habitat critical to the survival of the species
- Fragment the local koala population into two or more populations, and/or
- Adversely affect habitat critical to the survival of the species

Indirect impacts from the Action may include changes to surface water, hydrology, or GDEs which have the potential to lower the moisture content in leaves along North Creek which the koala relies on to support the local population especially in times of stress. These indirect impacts will be avoided where possible and managed under Project-specific management plans.

The Action is unlikely to result in invasive species harmful to koala being established in the species habitat. However, the Action will operate under specific pest management plans that will avoid and manage the establishment and spread of invasive species. As such it is unlikely the Action will introduce disease that may cause the species to decline.

For the reasons discussed above, the Action is unlikely to result in a significant impact on the koala. The significant impact assessment for the koala is detailed in Appendix E of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report,** Appendix E, Section E.1, page 232).

Greater Glider (Central and Southern) (Petauroides volans) (Endangered under the EPBC Act)

The Action will result in a direct loss of 0.53 ha of suitable habitat for the species within the Disturbance Footprint. Preferred habitat along the watercourse will not be directly impacted by the Action. The removal of 0.53 ha of suitable habitat will remove shelter and feed trees at the edge of a larger connective patch associated with North Creek. The removal of these few trees is not expected to:

- Be of extent or quality that would result in a decline of the species
- Disrupt the breeding cycle of a population
- Interfere substantially with the recovery of the species
- Lead to a long-term decrease in the size of a population, due to the minimal disturbance to feed and shelter trees
- Reduce the area of occupancy of the species
- Adversely affect habitat critical to the survival of the species
- Fragment the local koala population into two or more populations, and/or
- Adversely affect habitat critical to the survival of the species

Indirect impacts from the Action may include changes to surface water, hydrology, or GDEs which have the potential to lower the moisture content in leaves along North Creek which the greater glider relies on to support the local population, especially in times of stress. These indirect impacts will be avoided where possible and managed under specific management plans.

Indirect impacts to riparian vegetation along North Creek will be managed as per Project-specific management plans and are unlikely to result in a loss of habitat. Habitat is already fragmented due to barriers present along North Creek, with no further fragmentation expected. Therefore, the Action is not

anticipated to fragment the local greater glider population into two or more populations.

The Action will operate under specific pest management plans that will avoid and manage the establishment and spread of invasive species. Therefore, the Action is unlikely to result in invasive species harmful to greater glider being established in the species habitat or introduce disease that may cause the species to decline.

For the reasons discussed above, the Action is unlikely to result in a significant impact on the greater glider. The significant impact assessment for the greater glider is detailed in Appendix E of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report,** Appendix E, Section E.2, page 236).

Squatter Pigeon (Southern) (Geophaps scripta scritpa) (Vulnerable under the EPBC Act)

The Action will result in a direct loss of 26.13 ha of preferred habitat and 7.93 ha of suitable habitat for the species within the Disturbance Footprint. Habitat along the watercourse which represents the most notable area of preferred habitat within the Study Area will not be directly impacted by the Project.

The approved conservation advice for the species notes that populations south of the Carnarvon Ranges in Queensland are deemed to be important populations (DotE, 2015b). In this regard, the Study Area is located north of this divide. Furthermore, the Study Area is not near the limit of the species' range, and it is not expected to be a key source population for breeding, dispersal or genetic diversity. As such, it has been determined that the population of southern squatter pigeon within the Study Area is not part of an important population.

As such, the Action is not expected to:

- Lead to a long-term decrease in the size of an important population of a species
- Reduce the area of occupancy of an important population
- Fragment an existing important population into two or more populations
- Adversely affect habitat critical to the survival of a species
- Disrupt the breeding cycle of an important population
- Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
- Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat
- Introduce disease that may cause the species to decline, and/or
- Interfere substantially with the recovery of the species.

For the reasons discussed above, the Action is unlikely to result in a significant impact on the squatter pigeon. The significant impact assessment for the squatter pigeon is detailed in Appendix E of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report,** Appendix E, Section E.2, page 239).

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 Action is likely to result in a significant impact to Ornamental Snake (*Denisonia maculata*).

The significant impact assessment for this species is outlined in Appendix E of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report**, Appendix E, page 231).

Appendix E of the E2M Terrestrial Ecology Assessment (2024) (**Attachment E – Terrestrial Ecology Assessment Report**, Appendix E, page 231) also includes significant impact assessments for the koala, greater glider (central and southern) and squatter pigeon (southern) and details why significant impact to these species is unlikely.

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

The environmental management and monitoring plans in place at MVS are outlined in **Attachment B – Monitoring & Management Plans** and include the following:

- Water Management Plan (Peabody, 2023) (**Attachment B1,** page 2 of Attachment B)
- Erosion and Sediment Control Plan (Peabody, 2020) (**Attachment B2,** page 36 of Attachment B)
- Receiving Environment Monitoring Program (REMP) Design Document (Guage, 2022) (**Attachment B3,** page 84 of Attachment B)
- Groundwater Monitoring and Mitigation Plan (SLR, August 2019) (**Attachment B4,** page 114 of Attachment B)
- Cultural Heritage Management Plan (**Attachment B5,** page 158 of Attachment B)
- Air Quality Management Plan (ERM, 2023) (**Attachment B6,** page 200 of Attachment B), and
- Rehabilitation Manual (Highlands Env, 2024) (**Attachment B7,** page 247 of Attachment B).

In addition to any required updates to these plans prior to commencement of works to incorporate the Project Area, management and mitigation measures – including additional management plans – will be developed and implemented.

Vegetation clearing and habitat removal

A range of measures will be implemented over the construction and operational phases of the Action to mitigate and minimise impacts. These measures include:

- Vegetation clearing extents will be kept to the minimum area necessary for construction. Areas that must not be cleared or damaged would also be clearly identified on construction plans.
- Placement of temporary infrastructure is to be located outside of remnant vegetation, with areas previously cleared/degraded (non-remnant) to be prioritised.
- Boundaries of areas to be cleared, and those not to be cleared are to be clearly defined during clearing activities and clearly communicated to all necessary construction personnel. Where necessary, signage, flagging and/or barricade fencing may be used to demarcate areas not to be cleared.
- Threatened Species Management Plans will be developed prior to the commencement of construction to comply with Commonwealth and Queensland legislation and promote conservation outcomes for the Ornamental snake (*Denisonia maculata*). The Threatened Species Management Plan should include species-specific mitigation measures and controls to minimise and mitigate long term impacts on these species.
- Pre-clearance fauna surveys are to be undertaken by a suitably experienced and qualified ecologist to identify fauna at direct risk from clearing activities.
- A suitably experienced and qualified fauna spotter/catcher will be present during the clearing of any structures that may serve as habitat or refugia for animals.

- Prior to removal, all hollow-bearing trees approved for removal are to be thoroughly checked for fauna presence prior to felling. If fauna presence is confirmed, it is recommended that trees be left overnight to allow for self-dispersal.
- Hollow-bearing trees providing shelter for native fauna should be felled slowly (in sections), so as to minimise the risk of injury to fauna.
- Fauna captured during clearing will be treated for injuries and transferred to suitable habitat elsewhere within or adjacent the Project Area.
- In the event a koala is identified within areas to be cleared, the individual is to be left to vacate the area on its own accord.
- Vegetation clearing should be carried out sequentially over the life of the Action to allow fauna species the opportunity to disperse away from clearing areas.
- Directional clearing towards retained vegetation would be undertaken where practical to enable the movement of fauna into retained vegetation.
- During construction works, work areas and excavations (trenches) are to be checked for fauna that may have become trapped.
- Fauna exclusion fencing will be erected around open trenches >1 m in depth to minimise the risk of injury to fauna, exclusive of the open pit.
- If trenches remain open after daily site works have been completed, fauna ramps would be put in place.

Habitat disturbance and degradation

Potential impacts associated with fragmentation and edge effects will be largely managed in association with measures detailed within the following sections. In summary, potential impacts to adjacent vegetation and habitat will be managed through the management plans provided in **Attachment B2, Attachment B6** and **Attachment B7**. Those plans will be updated to incorporate the Project Area and a Weed and Pest Management Plan is being developed by the CMJV.

A Weed and Pest Management Plan for the Action will be developed to help minimise/mitigate impacts of pest species on native flora and fauna within the Project Area. This plan will include measures to manage/control weed and pest animal species within the Project Area and surrounds during construction and operational phases, as detailed below.

- Weeds or associated soil removed as a result of construction activities are to be appropriately disposed of or stored separately to minimise potential spread and proliferation of weed species.
- Prior to vegetation clearing activities, a pre-clearance survey will be undertaken to identify and map infestations of biosecurity matter to minimise the spread during clearing works and operational phase.
- Waste management, including suitable disposal of waste food, to minimise occurrences of pest fauna.
- All vehicles, equipment and materials (e.g. landfill, soil etc) brought to site are to be certified free of biosecurity matter and carry weed hygiene certification.
- Rehabilitation monitoring to identify environmental weeds within rehabilitation areas
- Biosecurity monitoring to identify and assess the risk of weed and pest occurrences within the Project Area.
- Control measures for target biosecurity species and other weed and pest species identified within the Project Area.

Increased light, noise and dust levels

To mitigate the potential impacts of light, noise and dust during construction and operation of the Project, the following management measures will be applied:

- Where artificial lighting is required, directional lighting should be implemented
- Implementation of a Dust Management Plan, and

- Regular maintenance of machinery and mobile plants should be undertaken to minimise unnecessary noise.
    - Manage vegetation within the Project Area to maintain safe fuel loads and firebreaks

Increased risk of fire

Potential impacts from bushfire risk for the Action will be mitigated through the following measures:

- Any chemicals to be handled and disposed of in accordance with the relevant Material Safety Data Sheets
- Establish and maintain access tracks to be used by Queensland Fire and Rescue Service for emergency purposes, and
- Implement an Emergency Response Procedure for fires prepared in consultation with emergency services.

Fauna injury and/or mortality

To mitigate potential impacts to MNES species, the following management measures should be implemented during construction and operational phases of the Action:

- Vehicles are to remain on designated access tracks and adhere to site rules relating to default or sign posted speed limits
- Speed limits, where different to site default limits, are to be clearly signposted to minimise potential fauna strike
- Removal of roadkill should be undertaken to minimise the risk of attracting other fauna to the road corridor
- Contingencies and procedures for the treatment of injured fauna
- Where installation of wire fencing is required to exclude personnel or vehicular traffic, consideration should be given to movement of fauna around and/or through such fencing, and
- Barbed wire should not be used on the top strand of wire fences unless necessary for security.

The above measures should also be included in Threatened Species Management Plans.

Changes in hydrology

Further assessment and modelling of hydrologic conditions within and adjacent to the Project Area is required to characterise and quantify Action impacts to groundwater and surface water hydrology on terrestrial GDEs and associated MNES fauna habitat.

Effective management and mitigation of impacts on terrestrial GDEs and associated MNES habitats will require development of a GDE Monitoring and Management Plan, including annual monitoring of groundwater quality and potential drawdown to identify trends and changes over time in terrestrial GDEs, vegetation and habitat, within the predicted drawdown extent and downstream of the Action.

Monitoring

Monitoring will be undertaken during the construction and operation phases of the Action (and, where necessary, after completion of the Action) in order to assess Action impacts on MNES and gauge the efficacy of proposed impact mitigation measures. Monitoring will focus on the quality and condition of vegetation and MNES fauna habitat adjacent to mining activities as well as vegetation communities located downstream of the Project. Monitoring methods, frequency of monitoring, and criteria for assessing the success (or otherwise) of impact mitigation measures will be detailed in the following management plans:

- Weed and Pest Management Plan
- Threatened Species Management Plan for threatened fauna, and
- Groundwater Dependent Ecosystem Monitoring and Management Plan.

The management plans currently in place at MVS are provided under **Attachment B – Monitoring & Management Plans** and will be updated as required to incorporate the Project Area and mitigate impacts from the Action.

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

Peabody are in the early stages of investigating potential offset properties in their existing property portfolio to determine an appropriate area(s) for acquitting impacts associated with the Action. In due course, Peabody will engage a third party to develop an Offset Strategy and Offset Area Management Plan(s) to a standard acceptable by DCCEEW. The location and extent of offsets will be established after detailed Project design and the precise extent of impacts are understood. Environmental offsets will be managed under appropriate management plans and subject to monitoring and performance criteria such that offsets are compliant with the Commonwealth Environmental Offsets Policy offset principles.

4.1.5 Migratory Species

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

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

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

Direct impact	Indirect impact	Species	Common name
No	No	Actitis hypoleucos	Common Sandpiper
No	No	Apus pacificus	Fork-tailed Swift
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Calidris melanotos	Pectoral Sandpiper
No	No	Cuculus optatus	Oriental Cuckoo, Horsfield's Cuckoo
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Motacilla flava	Yellow Wagtail
No	No	Tringa nebularia	Common Greenshank, Greenshank

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

No

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

The E2M Terrestrial Ecology Assessment (2024) (**Attachment E- Terrestrial Ecology Assessment Report,** Appendix D, section D.3, pages 204-230) provides the likelihood of occurrence assessment for threatened fauna species in the project area, including migratory species. No migratory species were assessed as being likely or known to occur in the project area. No migratory species were identified during the field survey conducted as detailed in **Attachment E- Terrestrial Ecology Assessment Report,** section 4.2, pages 47-60.

Details of the survey approach for the assessment are provided in Section 2.0, pages 15 – 33 of **Attachment E- Terrestrial Ecology Assessment Report**.

4.1.6 Nuclear

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

No

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

The Action is not 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 Commonwealth Marine Areas occur within the Project Area or surrounds (**Attachment H – PMST Report (DCCEEW, 2024**). 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. *

Direct and indirect impacts on the GBR are unlikely due to the Action’s planning and mitigation measures.

The key values of the GBR include biodiversity (habitats, terrestrial habitats that support the Great Barrier Reef, and species), geomorphological features, Aboriginal and Torres Strait Islander heritage, historical heritage, community benefits of the environment, and key environmental processes (GBRMPA, 2021). Current pressures on the GBR and its key values include climate change and extreme weather, catchment run-off, coastal development, and direct uses.

The Project Area is situated within the Isaac River catchment, a tributary of the Fitzroy River which eventually discharges into the Coral Sea near Port Alma, over 426 km downstream of MVS. The eventual discharge is directly into the GBR. The location of the Project in relation to the GBR is provided on **Figure 12 – World Heritage, National Heritage, Ramsar Wetlands & Great Barrier Reef**.

Direct or indirect impacts to the GBR may arise from:

- Erosion of the proposed overburden, or mobilisation of contaminants from construction into the receiving waters of North Creek.
- Release of contaminants into the receiving waters of North Creek.

A preliminary flood assessment has been undertaken by WRM (2023) for North Creek (**Attachment F – Preliminary Surface Water Assessment**). The flood assessment indicated that depth and velocity impacts will be minimal for all events up to and including the 0.1% Annual Exceedance Probability (AEP) and unlikely to be a significant cause of erosion for the proposed overburdens.

The likelihood of direct or indirect impacts to the GBR are further diminished by the erosion control, sediment mitigation and management plans already implemented at MVS. These mitigation and management plans will be reviewed and updated to incorporate the impacts of the Action. Existing sedimentation management measures at MVS will be adopted for the Action and will include where suitable, erosion control structures that divert stormwater into natural or diverted watercourses, physical containment in sediment basins controlled or managed by de-siltation activities, and monitoring of receiving waters (upstream and downstream).

Water management for the Action will be incorporated into the existing water management system at MVS. MVS is authorised under Schedule G of EA EPML00380113 to release contaminants into North Creek at the release point located at the 450 ML Dam on ML70354 subject to the limits stated in Table G2.

The likelihood of direct or indirect impacts to the GBR is further reduced through the regulation and management of these releases. The existing water management measures at MVS will be adopted for the Action including the monitoring of the mine affected water storages and receiving waters (upstream and downstream).

Any potential alterations to water quality at North Creek – such as changes in dissolved inorganic nitrogen levels or sedimentation – will primarily be localised and become negligible at the GBR due to extensive dilution and mixing over the 426 km to the outflow point.

Management and Mitigation Measures

MVS operates under several relevant monitoring and management plans. These plans are outlined in **Attachment B – Monitoring & Management Plans** and include the following most relevant to the management of erosion and sediment control:

- Water Management Plan (Peabody, 2023) (**Attachment B1**)
- Erosion and Sediment Control Plan (Peabody, 2020) (**Attachment B2**), and
- Receiving Environment Monitoring Program (REMP) Design Document (Guage, 2022) (**Attachment B3**).

The Water Management Plan (Peabody, 2023) provided in **Attachment B1** provides an overview of contaminant source assessment, the water management system, water balance model, management measures and surface water monitoring program at MVS. The existing MVS water management and mitigation measures will be reviewed and updated to incorporate the impacts of the Action.

MVS ESCP (**Attachment B2**) provides a guide for managing erosion control monitoring and emergency reporting. Water quality sampling is routinely undertaken at five locationson North Creek and the Isaac River, representing locations upstream and downstream of mining or mine water release points as part of the MVS REMP (design document is provided under **Attachment B3**). The monitoring has been

undertaken in accordance with the MVS EA and includes water quality, sediment, and macroinvertebrate sampling. The sampling locations are shown on Figure 1, page 6 of **Attachment B3** in the Receiving Environment Monitoring Plan Report 2022.

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 Action has the potential to impact surface water resources through the creation of new temporary and permanent landforms that affect floodwaters 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 through the authorised release point located on the 450 ML Dam within ML70354).

WRM (2023) undertook a preliminary flood impact assessment for the Action that modelled the impact the proposed X-pit and overburden dumps may have on North Creek (**Attachment F – Preliminary Surface Water Assessment)**. The results indicated that depth and velocity impacts are minimal for all events up to an including the 0.1% AEP, with no ingress of water into the proposed X-pit for any stage of mining with a minimum provided freeboard of 600 mm. Velocities in the 0.1% AEP design event adjacent to the overburden dumps varies from less than 0.1 m/s to 0.7 m/s and are unlikely to be a significant cause of erosion.

In the Probable Maximum Flood (PMF) design event, there are depth increases of up to 200 mm on the North Creek floodplain adjacent to the proposed overburden dumps. There are general depth increases of up to 50 mm for approximately 2 km upstream of the existing haul road crossing. There are water level decreases downstream of the haul road and adjacent to the mining disturbance area of up 70 mm. There is ingress of flood waters into the pit in the PMF. Apart from at the overflow location, and isolated areas predicted to experience velocities between 1.7 to 2.2 m/s, modelled PMF velocities adjacent to the overburden dumps are generally below 0.2 m/s.

Indirect impacts may result from changes to the surface water quality and quantity on the fringing riparian habitats of the directly adjacent North Creek identified as potential Terrestrial GDEs and supporting habitat for MNES threatened fauna. Changes in surface water quality may also impact riparian habitats downstream of the Project Area due to increased erosion and sedimentation of receiving surface waters and mobilisation of other contaminants in runoff from construction and disturbance areas. These contaminants disrupt the balance of riparian communities and affect the distribution and abundance of flora species.

Existing sedimentation management measures at MVS include erosion control structures that divert stormwater into natural or diverted watercourses, physical containment in sediment basins controlled or managed by de-siltation activities, and monitoring of receiving waters (upstream and downstream). The existing MVS water management and mitigation measures will be reviewed and updated to incorporate the impacts of the Action and to manage surface waters in accordance with the MVS EA. Management plans are provided -under **Attachment B – Monitoring & Management Plans**.

Peabody recognises the requirement for project-specific water impact assessments to be undertaken to effectively determine the potential impacts of the Action on water resources, including changes to flood and flow regimes as a result of the Action. Peabody has engaged WRM to complete surface water modelling and impact assessment to meet the requirements of the EPBC Act, the IESC and all relevant guidelines.

Groundwater

The Action has the potential to impact groundwater resources through direct interaction with aquifers by open cut mining activities 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 the final void.

Direct impacts may also occur to third party users of water resources.

Groundwater drawdown and quality changes may have an indirect impact on terrestrial GDSs and associated habitat for MNES fauna. The Action is likely to result in impacts to ecosystems and GDEs whose function is reliant on water resources.

Peabody recognises the requirement for project-specific groundwater impact assessments to be undertaken to effectively determine the potential impacts of the Action on water resources. Peabody has engaged SLR Consulting Australia Pty Ltd to complete surface water modelling and impact assessment to meet the requirements of the EPBC Act, the IESC and all relevant guidelines.

Groundwater Dependent Ecosystems

Vegetation clearing for the Action may have direct impacts on potential terrestrial GDEs fringing the adjacent North Creek.

Indirect impacts may result from changes to the surface water quality and quantity on the fringing riparian habitats of the directly adjacent North Creek identified as potential Terrestrial GDEs and supporting habitat for MNES threatened fauna. Changes in surface water quality may also impact riparian habitats downstream of the Project Area due to increased erosion and sedimentation of receiving surface waters and mobilisation of other contaminants in runoff from construction and disturbance areas disrupting the balance of riparian communities and affecting the distribution and abundance of flora species. Groundwater drawdown may also impact GDEs and associated habitat for MNES fauna species (in particular greater glider and koala).

Peabody recognises the requirement for a project specific GDE impact assessment to be undertaken to effectively determine the impacts of the Action. The impact assessment will be commenced in due course and will align with the Groundwater Modelling and Impact Assessment for the Action.

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

Yes

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

According to Section 4.2 of the "*Significant impact guidelines 1.3: Coal seam gas and large coal mining developments – impacts on water resources"* an Action is considered to have a significant impact on a water resource if it has a real or not remote chance or possibility of directly or indirectly causing changes in the water's hydrology or quality, which decreases, or risks decreasing, the utility of the water for other users, including for environmental and public benefits.

The Action involves the extraction of coal and is likely to directly impact water resources in relation to a large coal mining development or coal seam gas.

In lieu of project-specific modelling and impact assessment results, Peabody has adopted the precautionary principal, and as such, considers the Action's potential impacts to water resources to be significant.

Peabody has engaged SLR Consulting Australia Pty Ltd to complete a groundwater modelling and impact assessment to meet the requirements of the EPBC Act, the IESC and all relevant guidelines. Given that a period of data collection is required, Peabody anticipates that the Groundwater Modelling and Impact Assessment for the Action will be available to inform the assessment stage of the EPBC Act approval in Q1 2025.

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

Yes

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

Peabody consider that the Action is a "Controlled Action" based on the potential impacts on MNES or is likely to have, a significant impact on MNES which requires further assessment under the EPBC Act for impacts to threatened species and TECs, and a water resource in relation to coal seam gas development and large coal mining development.

In lieu of the project-specific assessment results, Peabody has adopted the precautionary principal, and as such, considers the Action's potential impacts to water resources to be significant.

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. *

MVS operates under several relevant monitoring and management plans. These plans are outlined in **Attachment B – Monitoring & Management Plans** and include the following most relevant to the management of erosion and sediment control:

- Water Management Plan (Peabody, 2023) (**Attachment B1,** page 2 of Attachment B)
- Erosion and Sediment Control Plan (Peabody, 2020) (**Attachment B2,** page 36 of Attachment B), and
- Receiving Environment Monitoring Program (REMP) Design Document (Guage, 2022) (**Attachment B3,** page 84 of Attachment B).

Following the outcomes of detailed impact assessments, any additional measures will be developed to supplement the existing monitoring and management systems at MVS. Management plans specific to the Action, such as an Erosion and Sediment Control plan for the construction of the Action, will be developed and implemented prior to works commencing.

The Water Management Plan (Peabody, 2023) provided in **Attachment B1** provides an overview of contaminant source assessment, the water management system, water balance model, management measures and surface water monitoring program at MVS. The existing MVS water management and mitigation measures will be reviewed and updated to incorporate the impacts of the Action.

The environmental management and monitoring plans in place at MVS are outlined in **Attachment B – Monitoring & Management Plans**. Following the outcomes of detailed impact assessments, any additional measures will be developed to supplement the existing monitoring and management systems at MVS.

The existing MVS water management and mitigation measures will be reviewed and updated to incorporate the impacts of the Action. The MVS ESCP (**Attachment B2**) provides a guide for managing erosion control, monitoring and emergency reporting.

Water quality sampling is routinely undertaken at five locations on North Creek and the Isaac River, representing locations upstream and downstream of mining or mine water release points as part of the MVS REMP (design document is provided under **Attachment B3**). The monitoring has been undertaken in accordance with the MVS EA and includes water quality, sediment, and macroinvertebrate sampling. The sampling locations are shown on Figure 1, page 6 of **Attachment B3** in the Receiving Environment Monitoring Plan Report 2022. A Groundwater Management and Monitoring Plan will also be developed following completion of detailed impact assessments.

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 and assessment of the relevant impact assessments 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.

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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, 2024) (**Attachment H – PMST Report (DCCEEW, 2024**) 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.

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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, 2024) (**Attachment H – PMST Report (DCCEEW, 2024)**) indicates that no areas of overseas Commonwealth heritage places 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)
- Water resource in relation to large coal mining development or coal seam gas (S24D)

Conclusion on the likelihood of unlikely significant impacts

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

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

4.3 Alternatives

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

No

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

No alternatives to the Action are possible due to the following constraints:

- Location of economically viable coal resources, and
- Utilisation of existing infrastructure, in line with continuing existing mining activities.

Resource extraction is constrained by the local geology and location of a targeted economically viable resource. The approved and existing MVS operations have constructed infrastructure to target and extract the coal resource within the Leichhardt Lower seams and the Vermont seams of the Rangal and Fort Cooper Coal Measures occurring within ML70354.

The Action aims to extend existing approved mining activities within ML70354 into the northern adjacent MDL3034, optimising the use of existing infrastructure at MVS and MVL, thus negating the need to construct new supporting infrastructure.

If the Action did not proceed, it would not contribute to the significant economic growth provided by QLD's growing export industry, the value that the coal resource would provide through State royalties and Commonwealth tax revenue would be foregone, and 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	Attachment I - Key Terms, Acronyms & References.pdf Key Terms, Acronyms & References	09/08/2024	No	High
#2.	Document	Figure 1 Project Location.pdf Project Location	09/08/2024	No	High
#3.	Document	Figure 2 Project Overview.pdf Project Overview	09/08/2024	No	High

1.3.2.17 (Person proposing to take the action) Proposer's history of responsible environmental management

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment A - Peabody Safety-Health-and-Environment-Policy.pdf Safety, Health & Environment Procedures	09/08/2024	No	High
#2.	Document	Attachment B - Monitoring & Management Plans.pdf Attachment B - Monitoring & Management Plans	09/08/2024	No	High

#3.	Document	Attachment B5 - Cultural Heritage Management Plan (Sensitive).pdf Attachment B5 - Cultural Heritage Management Plan (Sensitive)	09/08/2024	Yes	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.	Document	Attachment A - Peabody Safety-Health-and-Environment-Policy.pdf Safety, Health & Environment Procedures	08/08/2024	Yes	High
#2.	Document	Attachment C - Peabody 2024 Sustainability Report_Final.pdf Peabody 2024 Sustainability Report	09/08/2024	No	High

2.2.5 Tenure of the action area relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Figure 2 Project Overview.pdf Project Overview	08/08/2024	No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment D - Aquatic Ecology Assessment Report.pdf Aquatic Ecology	09/08/2024	No	High
#2.	Document	Figure 1 Project Location.pdf Project Location	08/08/2024	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment E - Terrestrial Ecology Assessment Report_Optimized.pdf Terrestrial Report	09/08/2024	No	High
#2.	Document	Figure 3 Ground truthed TEC.pdf Ground truthed TEC	09/08/2024	No	High
#3.	Document	Figure 4 Great Gliders Habitat.pdf Greater Glider Habitat	09/08/2024	No	High
#4.	Document	Figure 5 Koala Habitat.pdf Koala Habitat	09/08/2024	No	High
#5.	Document	Figure 6 Ornamental Snake Habitat.pdf Ornamental Snake Habitat	09/08/2024	No	High
#6.	Document				

		Figure 7 Squatter Pigeon Habitat.pdf Squatter Pigeon Habitat	09/08/2024	Yes	High
#7.	Link	Agriculture.gov https://www.agriculture.gov.au/sites/default/fil..			High
#8.	Link	DCCEEW https://www.dcceew.gov.au/sites/default/files/do..			High
#9.	Link	DCCEEW https://www.dcceew.gov.au/environment/epbc/publi..			High
#10.	Link	DES.qld.gov.au https://www.des.qld.gov.au/policies?a=272936:pol..			High
#11.	Link	DES.qld.gov.au https://www.des.qld.gov.au/policies?a=272936:pol..			High
#12.	Link	DES.qld.gov.au https://environment.desi.qld.gov.au/__data/asset..			High
#13.	Link	environment.gov.au https://www.environment.gov.au/biodiversity/thre..			High
#14.	Link	environment.gov.au https://www.environment.gov.au/sprat			High
#15.	Link	QLD.gov https://www.qld.gov.au/__data/assets/pdf_file/00..			High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment E - Terrestrial Ecology Assessment Report_Optimized.pdf Terrestrial Report	08/08/2024	Yes	High
#2.	Document	Figure 3 Ground truthed TEC.pdf Ground truthed TEC	08/08/2024	Yes	High

3.3.1 Commonwealth heritage places overseas or other places that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	DES.qld.gov.au https://apps.des.qld.gov.au/heritage-register/			High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Figure 2 Project Overview.pdf Project Overview	08/08/2024	No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment D - Aquatic Ecology Assessment Report.pdf Aquatic Ecology	08/08/2024	No	High
#2.	Document	Attachment E - Terrestrial Ecology Assessment Report_Optimized.pdf Terrestrial Report	08/08/2024	No	High
#3.	Document	Attachment G - Groundwater PRCP Assessment.pdf Groundwater Assessment	09/08/2024	No	High
#4.	Document	Figure 10 Interpreted HH contours Qa.pdf Interpreted HH contours Qa	09/08/2024	No	High
#5.	Document	Figure 11 Potential Groundwater Dependent Ecosystems.pdf Potential Groundwater Dependent Ecosystems	09/08/2024	No	High
#6.	Document	Figure 8 Surface Water Resources.pdf Surface Water	09/08/2024	No	High
#7.	Document	Figure 9 Interpreted HH contours Permian.pdf HH Contours	09/08/2024	No	High
#8.	Link	Bom.gov.au http://www.bom.gov.au/water/groundwater/gde/map...			High
#9.	Link	DES.qld.gov.au https://wetlandinfo.des.qld.gov.au/wetlands/fact..			High
#10.	Link	Whitehavencoal.com.au https://whitehavencoal.com.au/wp-content/uploads..			High

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	Attachment B - Monitoring & Management Plans.pdf Monitoring & Management Plans	08/08/2024	Yes	High
#2.	Document	Attachment F - Preliminary Surface Water Assessment_Optimized.pdf Preliminary Surface Water Assessment	09/08/2024	No	High
#3.	Document	Figure 12 World Heritage, National Heritage, RAMSAR Wetlands & Great Barrier Reef.pdf	08/08/2024	No	High

	World Heritage, National Heritage, RAMSAR Wetlands & Great Barrier Reef		
#4.	Link	gbrmpa.gov.au https://www2.gbrmpa.gov.au/learn/world-heritage-..	High
#5.	Link	gbrmpa.gov.au https://www2.gbrmpa.gov.au/learn/world-heritage-..	High
#6.	Link	QLD.gov.au https://www.qld.gov.au/environment/coasts-waterw..	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	Attachment B - Monitoring & Management Plans.pdf Monitoring & Management Plans	08/08/2024	Yes	High
#2.	Document	Attachment F - Preliminary Surface Water Assessment_Optimized.pdf Preliminary Surface Water Assessment	08/08/2024	No	High
#3.	Document	Figure 12 World Heritage, National Heritage, RAMSAR Wetlands & Great Barrier Reef.pdf World Heritage, National Heritage, RAMSAR Wetlands & Great Barrier Reef	08/08/2024	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	Attachment B - Monitoring & Management Plans.pdf Monitoring & Management Plans	08/08/2024	Yes	High
#2.	Document	Attachment F - Preliminary Surface Water Assessment_Optimized.pdf Preliminary Surface Water Assessment	08/08/2024	No	High
#3.	Document	Figure 12 World Heritage, National Heritage, RAMSAR Wetlands & Great Barrier Reef.pdf World Heritage, National Heritage, RAMSAR Wetlands & Great Barrier Reef	08/08/2024	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	Attachment E - Terrestrial Ecology Assessment Report_Optimized.pdf Terrestrial Report	08/08/2024	Yes	High

#2.	Document	Figure 3 Ground truthed TEC.pdf Ground truthed TEC	08/08/2024	No	High
#3.	Document	Figure 4 Great Gliders Habitat.pdf Greater Glider Habitat	08/08/2024	No	High
#4.	Document	Figure 5 Koala Habitat.pdf Koala Habitat	08/08/2024	No	High
#5.	Document	Figure 6 Ornamental Snake Habitat.pdf Ornamental Snake Habitat	08/08/2024	No	High
#6.	Document	Figure 7 Squatter Pigeon Habitat.pdf Squatter Pigeon Habitat	08/08/2024	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	Sensitive	Confidence
#1.	Document	Attachment E - Terrestrial Ecology Assessment Report_Optimized.pdf Terrestrial Report	08/08/2024	Yes	High
#2.	Link	Agriculture.gov https://www.agriculture.gov.au/sites/default/fil..			High
#3.	Link	Agriculture.gov https://www.agriculture.gov.au/sites/default/fil..			High
#4.	Link	environment.gov.au https://www.environment.gov.au/biodiversity/thre..			High

4.1.4.8 (Threatened Species and Ecological Communities) Why you think your proposed action is a controlled action

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment E - Terrestrial Ecology Assessment Report_Optimized.pdf Terrestrial Report	08/08/2024	Yes	High

4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment B - Monitoring & Management Plans.pdf Monitoring & Management Plans	08/08/2024	Yes	High

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

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment H - PMST Report (DCCEEW, 2024).pdf PMST Report	09/08/2024	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	Sensitive	Confidence
#1.	Document	Attachment B - Monitoring & Management Plans.pdf Monitoring & Management Plans	08/08/2024	Yes	High
#2.	Document	Attachment F - Preliminary Surface Water Assessment_Optimized.pdf Preliminary Surface Water Assessment	08/08/2024	No	High
#3.	Document	Figure 12 World Heritage, National Heritage, RAMSAR Wetlands & Great Barrier Reef.pdf World Heritage, National Heritage, RAMSAR Wetlands & Great Barrier Reef	09/08/2024	No	High

4.1.9.2 (Water resource in relation to large coal mining development or coal seam gas) Why your action has a direct and/or indirect impact

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment B - Monitoring & Management Plans.pdf Monitoring & Management Plans	08/08/2024	Yes	High
#2.	Document	Attachment F - Preliminary Surface Water Assessment_Optimized.pdf Preliminary Surface Water Assessment	08/08/2024	No	High

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

	Type	Name	Date	Sensitive	Confidence
#1.	Link	DCCEEW.gov.au https://www.dcceew.gov.au/environment/epbc/publi..			High

4.1.9.10 (Water resource in relation to large coal mining development or coal seam gas) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment B - Monitoring & Management Plans.pdf Monitoring & Management Plans	08/08/2024	Yes	High
#2.	Document	Figure 1 Project Location.pdf Project Location	08/08/2024	No	High

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

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment H - PMST Report (DCCEEW, 2024).pdf PMST Report	08/08/2024	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	Attachment H - PMST Report (DCCEEW, 2024).pdf PMST Report	08/08/2024	No	High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	65077890932
Organisation name	PEABODY ENERGY AUSTRALIA PCI (C&M MANAGEMENT) PTY LTD
Organisation address	4006 QLD
Representative's name	Marianne Gibbons
Representative's job title	Senior Manager - Environment & Approvals
Phone	+61427321361
Email	mgibbons@peabodyenergy.com
Address	Level 14, 31 Duncan Street, Fortitude Valley, QLD 4006

☑ 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, **Marianne Gibbons of PEABODY ENERGY AUSTRALIA PCI (C&M MANAGEMENT) PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

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

Completed Person proposing to take the action's declaration

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

ABN/ACN	65077890932
Organisation name	PEABODY ENERGY AUSTRALIA PCI (C&M MANAGEMENT) PTY LTD
Organisation address	4006 QLD
Representative's name	Marianne Gibbons
Representative's job title	Senior Manager - Environment & Approvals
Phone	+61427321361
Email	mgibbons@peabodyenergy.com
Address	Level 14, 31 Duncan Street, Fortitude Valley, QLD 4006

☑ 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, **Marianne Gibbons of PEABODY ENERGY AUSTRALIA PCI (C&M MANAGEMENT) PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

☑ I 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, **Marianne Gibbons of PEABODY ENERGY AUSTRALIA PCI (C&M MANAGEMENT) PTY LTD**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

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