Callan Coking Coal Bulk Sample Project

Application Number: **02785** Commencement Date: **18/02/2025** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Callan Coking Coal Bulk Sample Project

1.1.2 Project industry type *

Mining

1.1.3 Project industry sub-type

Coal

1.1.4 Estimated start date *

01/10/2025

1.1.4 Estimated end date *

30/06/2028

1.2 Proposed Action details

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

Vitrinite Pty Ltd (Vitrinite or the Company) is a privately owned Australian coal mining and exploration company with assets located throughout Queensland's major coal bearing basins. Forming a key part of Vitrinite's portfolio is Callan Coking Coal, held by Vitrinite's wholly owned subsidiary Callan Coking Coal Pty Ltd, which is comprised of Mineral Development Licence (MDL) 454 and Exploration Permit for Coal (EPC) 1444. The Company proposes to extract a bulk sample of 942kt of coal from a target area within Callan Coking Coal as part of the Callan Coking Coal Bulk Sample Project (CCC BSP).

The primary objectives of the proposed bulk sample project are to:

- Test coal quality and confirm product specifications through CHPP beneficiation and as a screened/unscreened product; and
- Form the basis of a marketing plan to support future Callan Coking Coal products into the market.

Whilst exploration works have provided valuable data and analysis, bulk sampling represents a critical step towards a more comprehensive evaluation of Callan Coking Coal as a full-scale operation. Bulk sampling will enable Vitrinite to undertake the range of mining techniques, coal treatment, product assessments and market evaluation required to adequately scope long term design parameters and make informed decisions on economic viability.

Open cut operations are planned utilising conventional truck and excavator combination with onsite stockpiling of topsoil, waste overburden and ROM coal. The bulk sample pit is designed for extraction of 942kt total coal, with 10.8Mbcm total waste moved. Coal quality results indicate a high-rank, low-ash PCI coal.

The scope of bulk sampling activities will include:

- Development and construction of site access and temporary mine infrastructure area.
- Construction of haul roads.
- Stripping and stockpiling of topsoil and overburden.
- Extraction, stockpiling and screening of ROM coal.
- Loading and hauling of ROM coal to existing 3rd party CHPP and rail loading facilities.
- Testing and analysis of product coal.
- Rehabilitation activities.

The project is proposed to commence in the second half of CY2025. Coal extraction will occur over two years, but the entire project (from the installation of infrastructure to the completion of rehabilitation works) will be carried out over three years.

The project area layout is shown in **Att 1 Project Area Layout Figure**. Access to the project is via Fitzroy Developmental Road which runs along the eastern boundary of Callan Coking Coal. The total disturbance area for the proposed project area is 238ha within MDL 454 and 4ha external to MDL 454 (access road).

The footprint of the proposed open cut pit is approximately 35ha. The pit will extend to a maximum depth of 60m, targeting the Phillips and Leichhardt seams. The geometry of the proposed pit provides flexibility to employ either strip or terrace mining method, dependent on coal dip.

Run-of-mine (ROM) coal will be trucked out of the pit and dumped on the ROM stockpile before road trains transport the coal off the project site. The primary option for processing is through facilities at the CapCoal complex, located approximately 45km from the bulk sample project with no coal processing to occur at the project site.

The proposed bulk sampling activities will operate with two fleets on a 24/7 continuous roster. It is anticipated that 166 personnel on a 7/7 rotating roster and 10 personnel on a 9-day fortnight roster will be employed by the project.

This referral (EPBC 2025/10122) is a stand-alone referral submitted to facilitate the extraction of a bulk sample (942kt) of coal from a target area within the broader Callan Coking Coal project area. EPBC 2025/10122 is therefore referred to as the Callan Coking Coal Bulk Sample Project (CCC BSP). The CCC BSP will enable Vitrinite to undertake the range of mining techniques, coal treatment, product assessments and market evaluation required to adequately scope long term design parameters and make informed decisions on the economic viability of a full-scale mining operation.

Should the results of the CCC BSP identify that a full-scale mining operation is viable, then a new referral would be submitted to facilitate a full scale mine. However, should the results of the CCC BSP identify that a full-scale mining operation is not viable, then the CCC BSP will be rehabilitated, and no further actions would be undertaken. For that reason, this referral has the potential to result in future actions but as a conservative approach is a standalone project requiring rehabilitation in the event no further actions are undertaken.

Regarding the relationship between EPBC 2025/10122 and other Vitrinite related mines in the broader area, Vitrinite has four EPBC referrals in the region:

- EPBC 2020/8676 (Vulcan Mine Jupiter Pit)
- EPBC 2022/09361 (Vulcan Mine Matilda Pit)
- EPBC 2023/09708 (Vulcan South Mine)
- EPBC 2025/10122 (Callan Coking Coal Bulk Sample Pit)

Please see **Att 1A Vitrinite Current EPBC Referrals**, which shows that EPBC 2025/10122 (CCCBSP) is approximately 100km by road from the nearest other Vitrinite related EPBC Referral (EPBC 2023/09708).

As such EPBC 2025/10122 is a fully separate project independent from any other existing Vitrinite EPBC referral.

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

No

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

Environmental Protection Act 1994 (Qld) – a new site-specific environmental authority (EA) is required for Vitrinite to carry out the bulk sampling project because it cannot be undertaken under the conditions of the current approval for the tenement. A new EA has been applied for, and Vitrinite are in the process of progressing this application.

Environment Protection and Biodiversity Protection Act 1999 (Cth) – and associated regulations provide for the identification and management of "matters of national environmental significance" (MNES). Under the EPBC Act, an action will require approval from the Federal Environment Minister if the action is *likely to have a significant impact on a MNES*. This referral is the first step in the Commonwealth approval process. Field ecological surveys confirmed the presence of one listed species within the disturbance area. The EPBC Act *Environmental Offsets Policy* provides guidance on how the federal government considers the suitability of a proposed offset, when there are residual impacts of a project on MNES.

Mineral Resources Act 1989 (Qld) – the work program for MDL 454 has been updated with the plans for the bulk sampling project.

Water Act 2000 (Qld) – establishes a system for planning, allocation and use of water, and for riverine protection. Sub-ordinate legislation, *Environmental Protection (Water and Wetland Biodiversity) Policy 2019* (EPP Water) governs discharges to surface water and groundwater and sets water quality objectives.

Nature Conservation Act 1992 (Qld) – regulates native flora, fauna and habitat conservation within Queensland.

Vegetation Management Act 1999 (Qld) – provides a planning framework for the management of native vegetation across Queensland. It regulates clearing of remnant vegetation, some types of regrowth, and vegetation in wetlands and along watercourses.

Environmental Offsets Act 2014 (Qld) – provides for environmental offsets to counterbalance significant residual impacts of activities on listed species. The *Queensland Environmental Offsets Policy* provides a policy for the assessment of offset proposals to satisfy offset conditions prescribed by the Act on matters of state or local environmental significance.

Biosecurity Act 2014 (Qld) – lists weeds and pest animals that constitute prohibited or restricted matters, and obligations pertaining to these matters.

Aboriginal Cultural Heritage Act 2003 (Qld) and the *Cultural Heritage Duty of Care Guideline* – applies a duty of care to everyone in Queensland; provides protection and conservation of Aboriginal and Torres Strait Islander cultural heritage.

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

Vitrinite and the Barada Barna Aboriginal Corporation (BBAC) have a strong relationship, exemplified by parties entering into a life of mine Indigenous Land Use Agreement (ILUA) at the nearby Vulcan mine (a Vitrinite project) and investment in ongoing relationship. Through initial consultation, BBAC have expressed their support for Callan Coking Coal. The bulk sample project will not require a native title agreement, but Vitrinite are committed to ongoing engagement with BBAC about how the project can support BBAC in its endeavours (including, potentially, a formal agreement).

Vitrinite is active in the community and regularly holds family days. Stakeholder engagement has commenced including with local landholders, Isaac Regional Council, Department of Transport and Main Roads, Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development, Department of the Environment, Tourism, Science and Innovation and nearby mining road users. Engagement will be ongoing during approval and operations. A Stakeholder Engagement Plan has been developed for the project.

1.3.1 Identity: Referring party

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1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	38167211476
Organisation name	MEC MINING GROUP PTY LTD
Organisation address	300 Adelaide Street, Brisbane 4000 QLD

Referring party details

Name	MEC Environment Team
Job title	
Phone	07 3832 0301
Email	epbc@mecmining.com.au
Address	

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	11644199397
Organisation name	CALLAN COKING COAL PTY LTD
Organisation address	Level 34 “Central Plaza”, 345 Queen Street, Brisbane 4000 QLD

Person proposing to take the action details

Name	Michael Callan
Job title	Chief Operating Officer
Phone	(07) 3174 4816
Email	michael@vitrinite.com.au
Address	Level 34 “Central Plaza”, 345 Queen Street, Brisbane 4000 QLD

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

No

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

No

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

Vitrinite has been subject to compliance action under the EPBC Act related to the contravention of conditions attached to the EPBC Act approval for the Vulcan Coal Mine approval (EPBC 2020/8676). Vitrinite has accordingly worked through this directed variation of the approval conditions with the DCCEEW compliance team.

An environmental protection order (EPO) pursuant to the *Environmental Protection Act 1994* (Qld) was issued (22 March 2024) to Queensland Coking Coal Pty Ltd and QLD Coal Aust No.1 Pty Ltd (Vitrinite) by the Queensland administering authority. The EPO was issued with respect to the activities at Vulcan Coal Mine. It was issued on the grounds that a number of conditions of the environmental authority were considered to have been contravened as a result of incidental sediment releases from a sediment dam. The sediment exceedances were primarily the result of top-soil handling for the purposes of progressive rehabilitation activities, which were required to be completed in order to comply with the obligations of the PRCP schedule. These rehabilitation activities coincided with wet weather. Vitrinite has complied with the required conditions and on 12 February 2025 received advice from the Queensland administering authority that Vitrinite has satisfied the requirements of the EPO, and that the EPO is no longer in effect.

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

Vitrinite is committed to effectively managing its impact on Environment, Social and Governance (ESG) matters. This ESG statement provides for sustainable environmental management, socially responsible operations and ethical business management, driven by the board of directors.

Environment

- We aim to tread lightly and leave all lands as they are or better than we found them.
- We promote resource stewardship and sustainable land management through establishment of post mining land uses.
- We optimise equipment selection and its use to reduce Greenhouse Gas Emissions.
- We regularly report on environmental outcomes and maintain accountability of sites until relinquishment.

How we implement these values

We operate on a policy of being a good neighbour and corporate citizen, holding ourselves to the highest standard. We strive to minimise our environmental footprint and offset unavoidable ecological impacts at Vitrinite's operations. We manage the impact of our projects by:

- Reducing vegetation clearing by prioritising pre-cleared sites and access tracks;
- Avoiding ecological impacts where possible; and
- Progressively rehabilitating sites as soon as practicable.

We endeavour to be active members of the communities within which we work, support local business and strive to maximise project benefits and opportunities. Our board of directors acknowledge the need to respect human rights, acknowledge the transition to a lower carbon future and foster a corporate culture that considers all stakeholders. Vitrinite actively fosters positive working relationships with traditional owner groups associated with the land upon which it operates, through the commitment to involve Traditional Owners — who are the guardians, keepers, and knowledge holders of Aboriginal cultural heritage during our activities.

As residents of Queensland, we recognise the importance of the role we play in social, community, economic and environmental issues among our friends, family, neighbours and colleagues. We will never compromise any of these responsibilities and hold our role in the community paramount.

Governance

We are committed to human rights in line with the Guiding Principles on Business and Human Rights (United Nations). This also extends to elimination of modern slavery.

- Our suppliers are key partners in our commitment to operate in a way that is responsible, transparent and respects the rights of all.
- We have a zero-tolerance approach to bribery and corruption and are committed to conducting business with integrity.
- At Vitrinite, risk is managed in accordance with AS ISO 31000:2018 Risk Management—Guidelines.

Social

- Major Sponsorship of many Community Events.
- We have a recruitment strategy with a preference for local employees.
- We use local business where they are technically capable and commercially competitive.
- We have implemented Indigenous employment targets.
- We have implemented procedures to facilitate Equal Opportunities in recruitment.
- We encourage Indigenous business opportunities and recruitment where practicable.
- We actively promote healthy lifestyle choices through education and training.
- We actively promote occupational health and safety through education and training, in order to minimise the incidence of workplace accidents.

- Involve families of workers through Family Fun Day.

Refer to **Att 2 ESG Statement, pages 1-2**.

Consideration of Ecologically Sustainable Development Principles

The precautionary principal has been adopted throughout the action's risk assessment process and considered in all phases of action development. This includes the design, construction, operation, decommissioning and rehabilitation planning phases.

It is acknowledged that the action will result in impacts to the surrounding environment. The action will comply with required environmental legislation and the conditions of the action's Environmental Authority and EPBC conditions to address these impacts. Operations will also align with management plans that aim to ensure environmental sustainability and responsibility.

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	11644199397
Organisation name	CALLAN COKING COAL PTY LTD
Organisation address	Level 34 "Central Plaza", 345 Queen Street, Brisbane 4000 QLD

Proposed designated proponent details

Name	Michael Callan
Job title	Chief Operating Officer
Phone	(07) 3174 4816
Email	michael@vitrinite.com.au
Address	Level 34 "Central Plaza", 345 Queen Street, Brisbane 4000 QLD

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	38167211476
Organisation name	MEC MINING GROUP PTY LTD
Organisation address	300 Adelaide Street, Brisbane 4000 QLD
Representative's name	MEC Environment Team
Representative's job title	
Phone	07 3832 0301
Email	epbc@mecmining.com.au
Address	

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	11644199397
Organisation name	CALLAN COKING COAL PTY LTD
Organisation address	Level 34 “Central Plaza”, 345 Queen Street, Brisbane 4000 QLD
Representative's name	Michael Callan
Representative's job title	Chief Operating Officer
Phone	(07) 3174 4816
Email	michael@vitrinite.com.au
Address	Level 34 “Central Plaza”, 345 Queen Street, Brisbane 4000 QLD

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

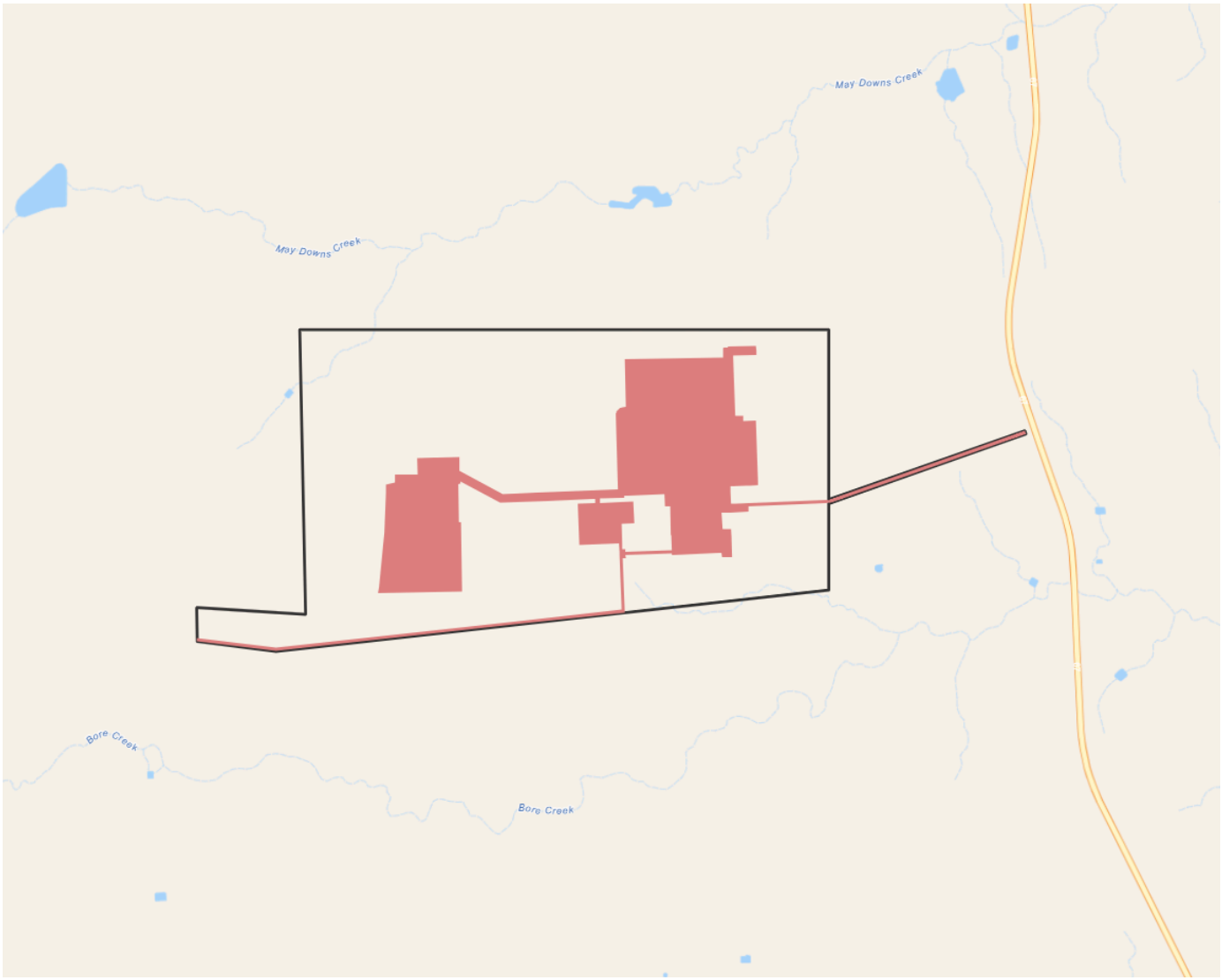
1.4 Payment details: Payment allocation

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

Person proposing to take the action

2. Location

2.1 Project footprint



Project Area: 1031.84 Ha **Disturbance Footprint:** 242.42 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Lot 5 CNS48; Fitzroy Developmental Road, Dysart, Qld, 4745; Blackwood Property

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 tenure of the underlying land (Lot 5 on CNS48) is freehold.

The action will take place on Mineral Development Licence MDL454 granted under the *Mineral Resources Act 1989*.

3. Existing environment

3.1 Physical description

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

The project area is approximately 27 km east of Dysart and 19 km north of Middlemount in the Bowen Basin in central Queensland. The region is dominated by mining and pastural grazing activities. The property and all surrounding properties are zoned rural in the Isaac Regional Council Planning Scheme. It has access from both Dysart and Middlemount via Fitzroy Developmental Road which runs along the eastern boundary of the property. The bulk sample project proposes to haul sample quantities of ROM coal to the CapCoal Complex via the Fitzroy Developmental Road and Dysart Middlemount Road. A road link impact assessment determined that impact mitigation works were not required, however Auxiliary Left (short) and Channelised Right (short) intersection turn treatments are recommended on Fitzroy Developmental Road. There will be pavement impact greater than 5% and therefore a contribution to road maintenance is required from Vitrinite. The bulk sample project is not expected to result in any material increased safety risk on the adjacent road network.

The project area has been cleared of its remnant vegetation in its entirety and has been heavily grazed by cattle. Approximately 80% of the area comprises treeless grazing pastures, while the remainder contains woody regrowth that is 2-12 m tall (median of 4 m) with 0.551% canopy cover (median of 7.4%). This regrowth is dominated by *Acacia argyrodendron* and, to a lesser extent, *Eucalyptus cambageana* and *Eucalyptus populnea*. Exotic pasture grasses (*Cenchrus ciliaris* and *Bothriochloa pertusa*) are the dominant ground storey vegetation. Most of the area lacks tree hollows. Occasional *Eucalyptus populnea* contained very small hollows (openings with diameters less than 5 cm). Coarse woody debris is generally scarce across the survey area and mainly consists of felled regrowth Acacia. Caves, cliffs, large surface rock and rock outcrops are absent. Refer to **Att 3 MNES Report, section 4.1, page 11**.

Within the project area, there are no defined watercourses under the *Queensland Water Act 2000*, with only minor unnamed highly ephemeral creeks and drainage features present. Clay soils exhibited moderate gilgai development in the eastern half of the bulk sample project area and were particularly prominent in areas mapped as pre-clear RE 11.4.5.

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

The project area is located on freehold land that is currently used for pastural purposes (cattle grazing). The entire area has been cleared of its original vegetation and sown with exotic pastural grasses such as Buffel Grass (*Cenchrus ciliaris*). Regrowth woody vegetation occurs in places, and this is dominated by species characteristic of the vegetation units that occurred on site prior to clearing (e.g., *Acacia argyrodendron*, *Eucalyptus cambageana* and *Eucalyptus populnea*).

Vitrinite are currently in negotiations with the landholder in relation to the bulk sample project.

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

No outstanding natural features apply to this project area.

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

The project area is gently undulating, with recorded slope percentages of 0-3%. The slopes generally fall from west to east and converge at drainage lines in the northwest that flow to May Downs Creek, and in the southeast that drains to Bore Creek.

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.

A total of 64 bird species, 10 mammal species, seven reptile species, 13 amphibian species and 91 vascular plant species were recorded within the broader survey area. Six animal species and 15 plant species were non-native. This species richness was low for a survey area of this size. This partly reflects the degraded nature of the site (exotic pastures on cleared land).

The most numerous plant species were *Bothriochloa pertusa* and *Cenchrus ciliaris*, recorded at 100% and 91% of secondary sites respectively. Both of these grass species are exotic pasture grasses. Dominant woody species included *Acacia argyrodendron* and *Carissa ovata* recorded at 58% and 75% of secondary sites. *Acacia argyrodendron* was present throughout most of the survey area as both a shrub and low tree.

The fauna of the site was characteristic of open pastures, with Brolgas (*Grus rubicunda*) and Australian Singing Bushlarks (*Mirafra javanica*) being the most numerous birds, Rufous Bettongs (*Aepyprymnus rufescens*) the most numerous mammal and Spotted Marsh Frog (*Limnodynastes tasmaniensis*) the most numerous frog. Tree-dependent species were very scarce. No hollow-dependent mammals were identified within the proposed disturbance footprint. The only location where hollow-dependent mammals (Common Brushtail Possum and Krefft's Glider) were observed was within the vicinity of the cattle yards where artificial structures and a small number of hollow-bearing trees provided shelter. These cattle yards are outside the proposed disturbance footprint.

Further information on findings of the field surveys is provided in the attached MNES Report (**Att 3 MNES Report, section 4.3, page 13**).

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

Vegetation

The project area was divided into eight vegetation units (AUs), all of which comprised regrowth of varying ages. The locations of these units are shown in **Att 4 Field-verified Vegetation Units Figure**. A description of these vegetation units is provided in dot points below (also refer to **Att 3 MNES Report, Table 4-2, page 13**).

- Regrowth *Eucalyptus cambageana* and *Acacia argyrodendron* woodland (4-7 m tall) on clay. Gilgais and *Eucalyptus populnea* are absent; former REs 11.4.8/11.9.1; 10.0 ha within project area.
- Regrowth *E. cambageana, Acacia argyrodendron* woodland (4-6 m tall) on clay containing *E. populnea* as a sub-dominant component. Gilgais absent; former REs 11.4.3/11.4.8; 1.7 ha within project area.
- Regrowth *Eucalyptus crebra* and *Corymbia clarksoniana* woodland on sand; former RE 11.5.9b; 6.4 ha within project area.
- Regrowth *Acacia argyrodendron* shrubland (young regrowth, 2-4 m tall) on clay without gilgais. *Acacia harpophylla* sometimes sub-dominant; former REs 11.4.5/11.4.9/11.9.5; 35.4 ha within project area.
- Regrowth *Acacia argyrodendron* shrubland (young regrowth, 2-4 m tall) on clay with gilgais. *Acacia harpophylla* sometimes sub-dominant; former REs 11.4.5/11.4.9; 93.7 ha within project area.
- Derived non-native grassland on sand; former RE 11.5.9b; 11.0 ha within project area.
- Derived non-native grassland on clay without gilgais; former REs 11.4.5/11.4.8/11.4.9/ 11.9.1/11.9.5; 242.0 ha within project area.
- Derived non-native grassland on clay with gilgais; former REs 11.4.5/11.4.8/11.4.9; 622.8 ha within project area.

Most of the survey area contained cracking clay soils. In the centre west of the survey area, there is a low, sandy rise supporting regrowth of *Eucalyptus crebra*, E. *populnea* and *Corymbia clarksoniana*.

Clay soils exhibited moderate gilgai development in the eastern half of the project area and were particularly prominent in areas mapped as pre-clear RE 11.4.5. Some gilgai depressions contained small senescing pools of water at the time of survey. Generally, gilgais were relatively shallow (approximately 0.2 m deep with a diameter of 5-8 m) with a limited diversity of vegetation. However, large and inundated gilgais (approximately 0.4-0.6m deep, 30 m diameter) supported a variety of sedges, grasses and herbs. Farm dams and farm troughs were present providing some opportunistic artificial water sources. No surface water was pooling in any of the on-site drainage lines, despite the recent, heavy rainfall, consistent with the highly ephemeral nature of the catchment.

The survey area lacks remnant vegetation or any large contiguous patches of vegetation. State and regional biodiversity corridors are present 3.8 km to the north of the bulk sample project footprint, associated with Stephens Creek. Stephens Creek connects to contiguous remnant vegetation approximately 9.6 km west. Satellite imagery suggests that gilgais extend approximately 6 km to the south and 19 km to the east of the survey area.

Soils

A baseline soils study was conducted with a total of 13 soil observations made within the potential disturbance area. Six Soil Mapping Units (SMUs) have been developed for the study area based on similarities with geomorphological, chemical properties and previous soil survey, these are shown in **Att 5 Soil Mapping Units Figure**. The SMUs developed in this survey are:

- Turon: Deep grey and brown cracking clays formed from Tertiary clay sheets. The soil has a neutral to alkaline trend in the mounds and acidic in the depressions. They are sodic throughout and have a hardsetting or weakly self-mulching surface with strongly developed melonhole gilgai microrelief (VI 0.7 - 1.5 m).

- Warwick: Deep grey and brown cracking clays formed from Tertiary clay sheets. The soil has an alkaline trend in the mounds and acidic in the depressions. They are sodic throughout and have a hard-setting or weakly self-mulching surface with normal or shallow melonhole gilgai complex (VI 0.25 - 0.5 m).
- Racetrack Shallow phase: Moderately deep, sporadically bleached, brown, sodic texture contrast soil that are developed on colluvium over deeply weathered sediments (0.5 – 1.1 m). They are neutral to alkaline and have a hard-setting loamy surface.
- Stateschool: Moderately deep, brown or black, sodic texture contrast soil forming from labile sandstone, siltstone, or shale (0.5 – 1.2 m). They are alkaline and have a hard-setting clay loam surface.
- Burradoo: Moderately deep hard-setting or firm pedal, alkaline, brown and black non-cracking or cracking clay over labile sandstone, siltstone or shale. The surface forms normal gilgai micro-relief.
- Wieta: Moderately deep, gradational, brown non-cracking clay formed over deeply weathered sediments (0.6 – 1.0 m). They are acid to alkaline and have a hard-setting clay loam surface.

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 that apply to the project area.

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

There are no Indigenous heritage values that apply to the project area.

3.4 Hydrology

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

Surface Water

The project area is located within a highly ephemeral sub-catchment of the Isaac River sub-basin of the greater Fitzroy Basin. The Isaac River commences approximately 145 km to the north of the project site within the Denham Range. It drains in a south westerly direction through the Carborough and Kerlong Ranges before turning in a south easterly direction near the Goonyella Riverside Mine. It drains approximately 45 km to the east of the project and eventually flows to the Mackenzie River approximately 80 km to the southeast.

The project area is in the upper catchment headwaters of the May Downs and Bore creek catchments.

The upper catchment headwaters of May Downs Creek drain through the northern portion of the project area outside of the proposed disturbance footprint and is defined by the *Water Act 2000* as an 'unmapped' drainage feature. The May Downs Creek catchment area within the Project disturbance footprint is approximately 12.2 square kilometres. May Downs Creek is identified as a watercourse approximately 4.2 km northeast (downstream) of the Project area, and discharges into Rolf Creek, a tributary of the Isaac River, approximately 25 km east of the Project area. Rolf Creek discharges into Isaac River approximately 55 km east of the Project area.

Bore Creek drains through the southern portion of the Project area and is defined by the *Water Act 2000* as an 'unmapped' drainage feature. The Bore Creek catchment area within the Project disturbance footprint is approximately 2.0 square kilometres. Bore Creek discharges into Rolf Creek at a location approximately 15 km southeast of the Project area.

Groundwater

In the vicinity of the project, the majority of the geological formations yield low volumes of groundwater and would not typically be classified as aquifers in most hydrogeological settings. A summary of relevant formations is as follows:

- Quaternary alluvium: An unconfined unit with limited lateral extent, occurring as discrete channels associated with creeks. These alluvial sediments are typically unsaturated and disconnected laterally.
- Tertiary Duaringa Formation and Regolith; Silts and clays, which comprise the bulk of the regolith overlying the coal measures and are densely compacted and hard. This limits shallow groundwater flow and rainfall recharge into this formation. Local isolated groundwater can exist within sandy or gravel lenses within the formation, however these are typically unsaturated.
- Triassic Rewan Formation: A low-permeability aquitard with limited groundwater flow, variable recharge mechanisms, and typically high salinity groundwater. The Rewan formation is disconnected in extent, and is not present in the immediate vicinity of the bulk sample pit.
- Permian Coal Measures: The targeted Leichhardt and Phillips coal seams of the Rangal Coal Measures are poor aquifers due to limited thickness. Overburden and interburden layers function as aquitards, confining any groundwater above and below the coal seams. The limited groundwater present within these formations is highly saline.

Wetlands

No wetlands in a wetland protection area, wetlands of high ecological significance, or wetlands or watercourses in high ecological value waters are located within the vicinity of the project area.

4. Impacts and mitigation

4.1 Impact details

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

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	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. *

No World Heritage areas have been identified associated with the Callan Coking Coal Bulk Sample Project.

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. *

The project area is not located in the vicinity of any National Heritage areas and none are identified within the project area.

4.1.3 Ramsar Wetland

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

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

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

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

No

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

No Ramsar Wetlands occur within or in the vicinity of the project area. The project is therefore unlikely to have a direct or indirect impact on any Ramsar wetlands.

4.1.4 Threatened Species and Ecological Communities

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

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

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

Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	Cadellia pentastylis	Ooline
Yes	Yes	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	Dichanthium setosum	bluegrass
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
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	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

Direct impact	Indirect impact	Species	Common name
No	No	Petauroides volans	Greater Glider (southern and central)
No	No	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)
No	No	Poephila cincta cincta	Southern Black-throated Finch
No	No	Polianthion minutiflorum	
No	No	Pteropus poliocephalus	Grey-headed Flying-fox
No	No	Rheodytes leukops	Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-eyed River Diver
Yes	Yes	Rostratula australis	Australian Painted Snipe
No	No	Stagonopleura guttata	Diamond Firetail

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. *

Direct Impacts to the Ornamental Snake and Australian Painted Snipe

Two MNES threatened species, the Ornamental Snake and the Australian Painted Snipe will be directly impacted by the project. These impacts are potentially significant.

Within the MDL, the action will necessitate removal of 187.8 ha of foraging/shelter/dispersal habitat, as well as 12.6 ha of shelter habitat and 7.1 ha of dispersal habitat for the vulnerable Ornamental Snake (*Denisonia maculata*) (**refer to Att 3 MNES Report, section 5.4.1.11 page 85**). The habitat for the Ornamental Snake is shown in **Att 6 Ornamental Snake habitat figure**. The project will necessitate removal of 187.8 ha of occasional foraging habitat for the endangered Australian Painted-snipe (*Rostratula australis*) (**refer to Att 3 MNES Report, section 5.4.1.1 page 75**). The habitat for the Australian Painted Snipe is shown in **Att 7 Australian Painted Snipe habitat figure**.

Clearing of the access road off the MDL will remove 1.8 ha of occasional foraging habitat for the Australian Painted Snipe, and 4.2 ha of habitat for the Ornamental Snake.

Direct impacts to Latham's Snipe and Sharp-tailed Sandpiper

187.8 ha of foraging habitat for the Latham's Snipe is contained within the proposed clearing footprint. Latham's Snipe are expected to visit the site in small numbers annually, and the foraging habitat is not critical to their survival. Therefore, this impact is not significant under the EPBC Act (**refer to Att 3 MNES Report, section 5.4.1.2 page 76)**.

158.3 ha of potential foraging habitat for the Sharp-tailed Sandpiper is contained within the proposed clearing footprint. Small numbers of this species may briefly use the survey area for foraging while in transit. The survey area does not comprise an important habitat and it is not located near any important habitats. Therefore, this impact is not significant under the EPBC Act (**refer to Att 3 MNES Report, section 5.4.1.3 page 78)**.

Indirect Impacts to the Ornamental Snake and Australian Painted Snipe

Indirect impacts for the Ornamental Snake may include changes to prey availability (frogs) resulting from noise and vibration (**refer to Att 3 MNES Report, section 5.4.1.11 page 85**).

Indirect impacts for the Australian Painted Snipe may include artificial lighting (resulting in increased [or decreased] predation risk, noise (causing this species to be reluctant to use nearby habitats), and exclusion of cattle (resulting in an increase in weeds and reducing habitat suitability) (**refer to Att 3 MNES Report, section 5.4.1.2 page 76**).

Indirect Impacts to Sharp-tailed Sandpiper, Latham's Snipe and Squatter Pigeon

Light and noise from operational areas may discourage use of nearby habitat by these species. Modification of surrounding habitat from indirect effects of the project, such as exclusion of cattle, may also affect these species. No breeding habitat or refuge habitat will be impacted. These indirect impacts will be short-term given the limited life of the project and do not qualify as significant (**refer to Att 3 MNES Report, section 5.4.1.3 page 78; section 5.4.1.2 page 76; section 5.4.1.4 page 79**).

Indirect Impacts from Greenhouse Gas Emissions

The CCC BSP plans to extract a sample of approximately 942kt (0.942Mt) of coal across 2 years of production (523kt (0.523Mt) of coal is scheduled for extraction in the first year with approximately 419kt (0.419Mt) scheduled for the second year).

Project activities that will lead to Scope 1 GHG emissions are:

- Diesel combustion for generation of electricity, by mine plant, from hauling trucks and by light vehicles.
- Diesel oil consumed during blasting.
- Fugitive methane emissions during mining.

- Vegetation clearance at the onset of the Project.

There are no projected Scope 2 emissions resulting from the Project as no electricity will be purchased from the National Electricity Market (NEM).

The source of Scope 3 emissions relating to the project are:

- The combustion of sampled coal.
- Downstream distribution of coal from site to the CapCoal sampling facility at the German Creek coal mine.
- Upstream manufacturing and transportation of purchased diesel combusted on-site.

Due to the short timeframe and sampling nature of the Project, Scope 3 emissions resulting from worker commuting and purchased goods and services are considered immaterial and hence have not been calculated.

These Scope 1 and 3 emissions are quantified in **Att 8 CCC BSP Greenhouse Gas Assessment (Table 6 and Table 7, page 20)**.

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. *

An assessment of significant impacts was undertaken in accordance with the Matters of National Environmental Significance Significant Impact Guidelines 1.1. This assessment found that the impacts on the Latham's Snipe, the Sharp-tailed Sandpiper and the Squatter Pigeon were not significant (refer to **App 3 MNES Report, Tables 5-4, 5-5, and 5.6, pages 77-80**).

The significant impact assessment found that significant impacts were possible on the Ornamental Snake and Australian Painted Snipe.

Ornamental Snake **(Att 3 MNES Report, Table 5-12, pages 86-87)**:

1. The action may impact an important population. The Draft Referral Guidelines for the Nationally Listed Brigalow Belt Reptiles (DCCEEW, 2023) recommends using "important habitat" as a surrogate for "important populations" when assessing impacts to Brigalow Belt reptiles. These guidelines define important habitat for the Ornamental Snake as "gilgai depressions and mounds…Habitat connectivity between gilgais and other suitable habitats is important". Given that the possible foraging habitat within the project area contains gilgais, and that nearby shelter and dispersal habitat are important for habitat connectivity, the habitats for Ornamental Snakes within the project area potentially qualify as "important habitat". As gilgais are unlikely to be restorable within the post-mining landform, the loss of 187.8 ha of Ornamental Snake habitat within the MDL and 1.8 ha outside the MDL is assumed to be permanent. Shelter habitat may be recreated by provisioning fallen timber near existing gilgais. The loss of habitat is expected to impact the individuals occupying that habitat, and lead to a long-term decrease in the population in the project area.
2. The action may disrupt the breeding cycle of an important population. Ornamental Snakes give birth to 3-11 live young annually (probably in spring: Shine, 1983. Food habits and reproductive biology of Australian elapid snakes of the genus Denisonia. *Journal of Herpetology* 17(2): 171-175). At least two breeding cycles will coincide with the proposed CCC BSP. While the entire local population will not be affected by the project, any individuals in and within close proximity of the clearing footprint could be disrupted by habitat loss, noise and/or traffic.
3. Habitat critical to the survival of a species is defined by the Matters of National Environmental Significance Significant Impact Guidelines 1.1 (Commonwealth of Australia, 2013) as "areas that are necessary (a) for activities such as foraging, breeding, roosting, or dispersal, (b) for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators), (c) to maintain genetic diversity and long term evolutionary development, or (d) for the reintroduction of populations or recovery of the species or ecological community. Permanent loss of the identified habitat represents an adverse effect.
4. The removal of 207.5 ha of habitat would result in the permanent loss of home ranges that are contained within this footprint.

Australian Painted Snipe **(Att 3 MNES Report, Table 5-3, page 76)**:

1. The National Recovery Plan for the Australian Painted Snipe (Commonwealth of Australia, 2022) defines habitat critical to the survival of the Australian Painted Snipe as "any natural wetland habitat where the species is known or likely to occur (especially with suitable breeding habitat) within the indicative distribution map…[or] any location outside the above area that may be periodically occupied by Australian Painted Snipe when wetland conditions are favourable." The bulk sample project will take place outside the "known or likely to occur" distribution but is within an area that may be periodically occupied by the species. The removal of 187.8 ha of potentially periodically occupied habitat within the MDL and 1.8 ha outside the MDL possibly constitutes an adverse effect on critical habitat.
2. The National Recovery Plan for the Australian Painted Snipe (Commonwealth of Australia, 2022) lists 28 actions to assist in the recovery of the species. The CCC BSP will not interfere with 27 of those actions. Action 1b is to "protect areas of 'habitat critical for survival' not currently managed for nature conservation". Habitat within the clearing footprint potentially qualifies as "habitat critical for survival"

on the grounds that it may be periodically occupied by Australian Painted Snipe when wetland conditions are favourable. While the project does not interfere with the ability of state agencies to formally protect unprotected habitats or to provide financial incentives to private landholders to manage habitats elsewhere, the removal of this habitat will prevent its future protection or management for nature conservation. Given the relatively low value of this habitat to the species, it is unlikely that the impact site would have been included in such conservation programs if the proposed action were to not occur. Consequently, the action will have negligible interference with the recovery of the species.

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 will likely present significant impacts to two MNES (the Australian Painted Snipe and the Ornamental Snake).

The significant impact assessment for these species is provided in **Att 3 MNES Report, (Section 5.4.1.1, page 75 and Section 5.4.1.11, page 85)**.

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 relevant habitats were mapped and provided to the proponent during the planning stage of the CCC BSP, so that the footprint could be designed to avoid these habitats to the maximum extent practicable. Accordingly, the haul road and access road were designed and oriented to avoid habitats to the maximum extent practicable. For example, the access road between the MDL and the Fitzroy Development Road was relocated northward to avoid a dam that provides habitat for the Ornamental Snake and Australian Painted-snipe **(Att 3 MNES Report, Section 5.2, pages 71-72)**.

Post-mine rehabilitation will aim for a similar post-mine land use to the pre-mining land use. Topsoil removed from each site in preparation for bulk earth works, is to be stored and managed to protect a favourable growing medium for re-vegetation activities.

Throughout the project, the following will apply:

- Injured animals are to be taken to the nearest wildlife carer or veterinarian.
- Any injury and/or mortality to listed species are to be communicated to the Queensland Department of the Environment, Tourism, Science and Innovation within 24 hours.

During clearing the following methodology will apply:

- Prior to any clearing or earth works, an ecologist or fauna spotter/catcher is to conduct a walk-through prior to commencement of that section to identify likely refuges for threatened species and conduct active searches to reduce the likelihood of mortality. This will include but is not limited to looking under debris for reptiles, amphibians and small mammals and evidence of ground-nesting birds.
- A fauna spotter/catcher will be present during clearing to catch and remove disturbed fauna and take to a veterinarian or carer as appropriate.
- Clearing should occur in stages, to allow fauna the opportunity to exit the area.

Throughout all stages, the following will apply to reduce road mortality:

- In areas where roads intersect drainage features, culverts are to be installed that will allow for passage of fauna, particularly snakes and frogs.
- Speed limits will be 60 km/h on haul roads.

Dust will be managed with water trucks to limit dust generation.

The following lighting designs should be used, where appropriate, in operational areas within 500 m of habitat for threatened or sensitive species:

- Artificial lighting used in operational areas is to be angled away from habitats
- Floodlights with “low glare” louvres/attachments are recommended to limit lateral transmission of light. Note that newer LED-type flood lights may have glare-reduction technology built-in.
- Any streetlights used are recommended to be of the “aeroscreen” type (flat glass lenses), to reduce sideways glare.
- Light fittings should be positioned as close to horizontal as practicable.

Food wastes will be stored in sealed containers and disposed off-site.

Sewage will be disposed off-site.

All water management infrastructure will be constructed so that no discharges of mine-affected water occur into downstream environments.

All vehicles that will enter undisturbed parts of the site are to be washed to restrict the introduction of new weeds. Weed management activities will control weeds in high-traffic areas.

Light vehicles used for commuting between the project area and nearby towns (where they may be exposed to weeds) are to be parked in the visitor carpark.

Operational areas and the visitor carpark are to be inspected regularly to identify new infestations of restricted weeds. These are to be treated soon after detection, with follow-up treatment implemented until populations are eradicated.

Any weeds germinating on topsoil stockpiles are to be treated and eradicated to maintain a source of weed-free growing medium for rehabilitation activities.

Only species with low weed risk are to be included within seed mixes applied to rehabilitated sites. **(Att 3 MNES Report, Section 5.3, pages 72-74)**.

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

Offsets have not yet been identified.

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	Yes	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
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Motacilla flava	Yellow Wagtail

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

Yes

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

The Fork Tailed Swift may experience temporary indirect impacts due to a reduction in food availability (flying inspects) from a reduction pastures and introduction of artificial lighting. The Latham's Snipe may experience temporary direct and indirect impacts due to increased risk of predation (due artificial lighting) and changes in habitat suitability. **Refer to Att 3 MNES Report, section 5.4.1.13 page 88 and section 5.4.1.2 page 76.**

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

No

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

Direct and indirect impacts described will be short term only, as all lighting will be removed at the cessation of the project (within three years), and pastures will be returned to the post-mining land use. Furthermore, the magnitude of these effects on local insect populations is expected to be small, given the abundance of surrounding habitat in which insect populations can be maintained. It is doubtful whether the project will result in any detectable impacts on the Fork-tailed Swift and Latham's Snipe. These impacts do not qualify as significant under the EPBC Act.

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

No

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

As per the Matters of National Environmental Significance Significant Impact Guidelines 1.1 (Commonwealth of Australia 2013), a Significant Impact Assessment was undertaken. Based on the nature of the impacts and the status of the species on site, there is no potential for significant impacts. **Refer to Att 3 MNES report Table 5-4 page 77, and Table 5-14 page 89.**

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

The relevant habitats were mapped and provided to the proponent during the planning stage of the CCC BSP, so that the footprint could be designed to avoid these habitats to the maximum extent practicable. Accordingly, the haul road and access road were designed and oriented to avoid habitats to the maximum extent practicable. For example, the access road between the MDL and the Fitzroy Development Road was relocated northward to avoid a dam that provides habitat for the Ornamental Snake and Australian Painted-snipe. **(Att 3 MNES Report, Section 5.2, pages 71-72)**

Post-mine rehabilitation will aim for a similar post-mine land use to the pre-mining land use. Topsoil removed from each site in preparation for bulk earth works, is to be stored and managed to protect a favourable growing medium for re-vegetation activities.

Throughout the Project, the following will apply:

- Injured animals are to be taken to the nearest wildlife carer or veterinarian.
- Any injury and/or mortality to listed species are to be communicated to the Queensland Department of the Environment, Tourism, Science and Innovation within 24 hours.

During clearing the following methodology will apply:

- Prior to any clearing or earth works, an ecologist or fauna spotter/catcher is to conduct a walk-through prior to commencement of that section to identify likely refuges for threatened species and conduct active searches to reduce the likelihood of mortality. This will include but is not limited to looking under debris for reptiles, amphibians and small mammals and evidence of ground-nesting birds.
- A fauna spotter/catcher will be present during clearing to catch and remove disturbed fauna and take to a veterinarian or carer as appropriate.
- Clearing should occur in stages, to allow fauna the opportunity to exit the area.

Throughout all stages, the following will apply to reduce road mortality:

- In areas where roads intersect drainage features, culverts are to be installed that will allow for passage of fauna, particularly snakes and frogs.
- Speed limits will be 60 km/h on haul roads.

Dust will be managed with water trucks to limit dust generation.

The following lighting designs should be used, where appropriate, in operational areas within 500 m of habitat for threatened or sensitive species:

- Artificial lighting used in operational areas is to be angled away from habitats
- Floodlights with “low glare” louvres/attachments are recommended to limit lateral transmission of light. Note that newer LED-type flood lights may have glare-reduction technology built-in.
- Any streetlights used are recommended to be of the “aeroscreen” type (flat glass lenses), to reduce sideways glare.
- Light fittings should be positioned as close to horizontal as practicable.

Food wastes will be stored in sealed containers and disposed off-site.

Sewage will be disposed off-site.

All water management infrastructure will be constructed so that no discharges of mine-affected water occur into downstream environments.

All vehicles that will enter undisturbed parts of the site are to be washed to restrict the introduction of new weeds. Weed management activities will control weeds in high-traffic areas.

Light vehicles used for commuting between the project area and nearby towns (where they may be exposed to weeds) are to be parked in the visitor carpark.

Operational areas and the visitor carpark are to be inspected regularly to identify new infestations of restricted weeds. These are to be treated soon after detection, with follow-up treatment implemented until populations are eradicated.

Any weeds germinating on topsoil stockpiles are to be treated and eradicated to maintain a source of weed-free growing medium for rehabilitation activities.

Only species with low weed risk are to be included within seed mixes applied to rehabilitated sites. **(Att 3 MNES Report, Section 5.3, pages 72-74)**.

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

No offsets are required because these impacts are not assessed as significant.

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 Callan Coking Coal Bulk Sample Project does not involve any nuclear actions.

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 are present within or in the vicinity of the Callan Coking Coal Bulk Sample Project.

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. *

No direct or indirect impacts to the Great Barrier Reef have been identified.

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? *

No

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

This bulk sample project is not a large coal mining development. It comprises a small scale and short duration sampling project, with a finite life and capped quantity of sample allowable.

Groundwater

For completeness, a groundwater assessment was undertaken (Groundwater Impact Assessment - Groundwater Modelling Nexus 2024) and is provided as **Att 9 Groundwater Impact Assessment**.

Numerical groundwater modelling indicates that the maximum drawdown is contained to the surrounds of the pit, which will be temporary as a recovery is expected once the pit is backfilled. There are no interactions with groundwater dependent ecosystems, inter aquifer connections or surface-groundwater connections. Proposed operations won't affect alluvium; groundwater inflows will come from regolith and Permian units.

Groundwater quality in the area is highly saline, with EC values from 21,900 to 44,000 uS/cm. Groundwater does not meet human drinking water standards, with limited uses except for stock watering and potential industrial purposes. Existing bores are over 2 km away from the pit, outside the drawdown zone, as such there is no potential impact identified on private water supplies.

Groundwater level and quality monitoring has commenced at the CCC BSP for the purposes of baseline data collection. Vitrinite is committed to continuing groundwater monitoring relevant to the Project throughout the CCC BSP operation.

Surface Water

All surface water features are highly ephemeral and not sustained by groundwater. The bulk sample project does not intercept any defined watercourse or named creeks.

The bulk sample pit is designed to not release “mine affected” water with infrastructure sized by an appropriately qualified person to have sufficient “mine affected water” storage in accordance with the required guidelines (e.g. 0.1% AEP). Other runoff types (e.g. non-mine affected and clean water) will be managed under a Water Management Plan and an Erosion and Sediment Control Plan, developed by an appropriately qualified person and reviewed by the Queensland administering authority.

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. *

The Callan Coking Coal Bulk Sample Project is not located on Commonwealth Land.

4.1.11 Commonwealth Heritage Places Overseas

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

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

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

—

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

No

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

No Commonwealth Heritage Places Overseas have been identified as relevant to the Callan Coking Coal Bulk Sample Project.

4.1.12 Commonwealth or Commonwealth Agency

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

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

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

- Threatened Species and Ecological Communities (S18)

Conclusion on the likelihood of unlikely significant impacts

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

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

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

No

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

Time alternative

This project is to obtain samples to test the viability of a coal resource that has been identified. An alternative timeline will not alter the potential impacts on MNES identified in this referral.

Location alternative

The location of the sample pit is dictated by the location of the coal resource. The placement of associated infrastructure has avoided the sterilisation of any future coal resource as well as avoided as much as possible MNES.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 Project Area Layout Figure.pdf Map showing layout of project activities		No	High
#2.	Document	Att 1A Vitrinite Current EPBC Referrals.pdf Map showing locations of other Vitrinite EPBC referrals.	07/03/2025	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2 ESG statement.pdf Vitrinite's Environmental, Social and Governance Statement		No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 3 MNES Report.pdf Reporting on results of ecological surveys and significant impact assessment	16/02/2025	No	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 4 Field Verified Vegetation Units Figure.pdf Map showing field verified vegetation units		No	High
#2.	Document	Att 5 Soil Mapping Units Figure.pdf Map showing soil units in project area		No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 3 MNES Report.pdf Reporting on results of ecological surveys and significant impact assessment	16/02/2025	No	High
#2.	Document	Att 6 Ornamental Snake Habitat Figure.pdf Habitat map for the Ornamental Snake.		No	High

#3.	Document	Att 7 Potential Habitat for the Australian Painted Snipe Figure.pdf Potential habitat map for the Australian Painted Snipe		No	High
#4.	Document	Att 8 CCC BSP Greenhouse Gas Assessment.pdf A greenhouse gas assessment for the Callan Coking Coal Bulk Sampling Project	03/03/2025	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Draft Referral guidelines for the nationally listed Brigalow Belt reptiles https://www.dcceew.gov.au/sites/default/files/do..			High
#2.	Link	Food Habits and Reproductive Biology of Australian Elapid Snakes of the Genus Denisonia https://doi.org/10.2307/1563458			High
#3.	Link	Matters of National Environmental Significance Significant Impact Guidelines 1.1 https://www.dcceew.gov.au/sites/default/files/do..			High
#4.	Link	National Recovery Plan for the Australian Painted Snipe Rostratula australis https://www.dcceew.gov.au/sites/default/files/do..			High

4.1.5.9 (Migratory Species) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Matters of National Environmental Significance Significant Impact Guidelines 1.1 https://www.dcceew.gov.au/sites/default/files/do..			High

4.1.9.3 (Water resource in relation to large coal mining development or coal seam gas) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 9 Groundwater Impact Report.pdf Assessment of potential groundwater impacts		No	High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	38167211476
Organisation name	MEC MINING GROUP PTY LTD
Organisation address	300 Adelaide Street, Brisbane 4000 QLD
Representative's name	MEC Environment Team
Representative's job title	
Phone	07 3832 0301
Email	epbc@mecmining.com.au
Address	

☑ 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, **MEC Environment Team of MEC MINING GROUP 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	11644199397
Organisation name	CALLAN COKING COAL PTY LTD
Organisation address	Level 34 “Central Plaza”, 345 Queen Street, Brisbane 4000 QLD
Representative's name	Michael Callan

Representative's job title	Chief Operating Officer
Phone	(07) 3174 4816
Email	michael@vitrinite.com.au
Address	Level 34 “Central Plaza”, 345 Queen Street, Brisbane 4000 QLD

☑ 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, **Michael Callan of CALLAN COKING COAL 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, **Michael Callan of CALLAN COKING COAL 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. *