

# Cullenswood Mine development of open cut coal pit No. 6

Application Number: **01454**Commencement Date: **01/10/2022**Status: **Locked**

## 1. About the project

### 1.1 Project details

#### 1.1.1 Project title \*

Cullenswood Mine development of open cut coal pit No. 6

#### 1.1.2 Project industry type \*

Mining

#### 1.1.3 Project industry sub-type

Coal

#### 1.1.4 Estimated start date \*

1/03/2023

#### 1.1.4 Estimated end date \*

1/03/2026

## 1.2 Proposed Action details

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

#### Proposed Action

The proposed action is to develop a new open cut pit at the Cullenswood Mine (the 'Pit') on the property 'Cullenswood'.

The Pit is called 'Cullenswood No. 6' and is comprised of 3 separate excavations spatially designed on the results of mineral exploratory works (Att\_A\_Development Application Supporting Information, Figs A-2 and B-3, Attachment 2 pp. 33). It is proposed to extract up to 50,000 tonnes of raw coal per annum. The proposed development footprint = 26 ha, including a disturbance footprint of 26 ha and avoidance area of 0 ha.

Information has been submitted to the Break O'Day Council as the planning authority in the form of **Development Application Supporting Documentation** (Att\_A\_Development Application Supporting Information).

Planning information and an assessment against the requirements of the Break O'Day Interim Planning Scheme 2013 is provided in Att\_A\_Development Application Supporting Information, Part C, pp. 20-30.

The proposed action includes the following activities –

- Upgrade of an existing on-farm road from the Cullenswood 2 ROM Pad to the Pit (e.g., repairs to existing road surfaces, road widening, culvert and drain installation) to a standard suitable for use by mining operations (see Att\_D\_Haul Road Technical Drawings for technical drawings and culvert sizing and form),
- The extraction of the raw coal resource by the progressive (using a 'block' mining sequence; may include drill and blast) removal of vegetation (plantation, pasture and some native forest and degraded heathland), surface soil and overburden,
- Stockpiling of topsoil and overburden for reuse in rehabilitation works post-closure,

- Establishment, installation and maintenance of surface water management infrastructure including perimeter drains and sediment basins, and the ancillary unsealed temporary tracks to access them.
- Transport of the extracted raw coal from the Pit to the existing Cullenswood 2 ROM pad for storage.
- The decommissioning of the blocks (infilling, levelling and recontouring) once the coal has been extracted and the subsequent rehabilitation of the land to be similar to pre-mining topography. Agricultural land is the proposed rehabilitated land use apart from 1.2 hectares of existing native regrowth forest which is to be regenerated.

The proposed action does not include the transport of the raw coal to the Duncan Washery, nor the receipt, handling and washing of coal at the Duncan Washery - that activity operates under Environment Protection Notice 9952/1 issued by the Tasmanian Environment Protection Authority based on the original approval (License to Operate Scheduled Premise) issued in 1996.

### Location and project area

The project area is located on the 'Cullenswood' property located at 6870 ESK MAIN RD ST MARYS TAS 7215 - Certificate of Title 135934 Folio 1 (Att\_A\_Development Application Supporting Information, Fig B-1). The Cullenswood property supports and has supported several open-cut coal pits over the past 40 years.

The project area is accessed from Esk Main Road (Att\_A\_Development Application Supporting Information, Figs A-1 and B-2). Trucks would turn left to transport the raw coal to the Duncan Washery at Fingal.

### Overview of proposed action

The Cullenswood 6 open cut pit has been test-drilled via a Mineral Resources Tasmania (MRT) approved exploration program and has a proven resource within the area identified. There are no alternatives. The Pit is likely to have a 3-year life span if production levels are at or near the maximum level (i.e., up to 50,000 tonnes per annum).

Cullenswood 6 will be mined in a 'Block' sequence and will include the following activities:

- site preparation by vegetation removal (mainly poorly performing or failed hardwood plantation), soil removal and stockpiling;
- excavation, ripping and stockpiling of overburden;
- occasional blasting, if required, to dislodge hard coal seam/overburden material;
- extraction of coal and transportation to the Cullenswood 2 ROM pad using dump trucks;
- each 'block' when fully exhausted of coal is to be filled with the overburden removed from the next block to be extracted; and then
- topsoil is added to the filled block and then contoured to be comparable to the pre-extraction topography.
- establishment of pasture on the contoured final surface with follow-up monitoring and remediation works as required (e.g., weed spraying, fertiliser application)
- 1.2 hectares of native forest is to be regenerated in approximately the same location as it currently occurs in the project area.

Blasting, if required, will be limited to between the hours of 10am and 4pm Monday to Friday. Explosives are not to be stored on the site, rather than will be handled and brought to the site by licensed blast operators as required.

### Infrastructure inside the project area

Cullenswood 6 is an open-cut extraction pit only.

There will not be a run-of-mine (ROM) pad, amenities or office block, or stockpile area for coal loading into road transport trucks. Raw coal from the Pits will be transported in dump trucks to the Cullenswood 2 ROM pad (Att\_A\_Development Application Supporting Information, Fig B-2 and B-4) where it will be managed under the existing permit for that activity. The haul road is to be upgraded. There is no intensification of use for the ROM Pad nor the access onto Esk Main Road.

The following new infrastructure is proposed in the project area to facilitate the proposed action:

- Three separate excavations (a 'Block') associated with the Pit from which coal will be extracted - there will be topsoil and overburden stockpiles created at each Block which will be used to bund the outer edge of the pit to manage surface water flows and to refurbish the haul road.
- Perimeter drains on the upslope sides of the Blocks, and an associated access track for vehicles and machinery to access the drain for maintenance.
- Upgraded/refurbished road (based on the existing on-farm road alignment) from the Cullenswood 2 ROM Pad to the Pit including culverts, perimeter bunds and drainage.
- 2 sediment ponds and associated inlets and spillway structures.

### Infrastructure outside the project area

No new infrastructure is required outside of the project area for the proposed action.

### The Proponent and related activities

The Cornwall Coal Company Pty Limited (Cornwall Coal) is a Tasmanian based mining operation owned by Cement Australia (ACN 009 485 518) and currently extracts and processes approximately 500,000 tonnes of ROM (run-of-mine) coal annually across 3 coal extraction locations (Blackwood, Cullenswood, and Kimbolton) which enables approximately 300,000 tonnes of processed coal (handled at the Duncan Washery in Fingal) to be supplied to clients.

In the Fingal Valley, Cornwall Coal operates the Cullenswood Mine (Cullenswood 2 is an existing and currently operational open cut pit at this mine), and the Blackwood Colliery (Blackwood 4 is an existing and currently operational underground mine).

Cornwall Coal also operates the Kimbolton open cut mine located near Hamilton. Raw coal material from all these operations feeds into the Duncan Washery at Fingal for processing. All the coal extracted by Cornwall Coal is used by industries in Tasmania such as Cement Australia at Railton and Norske Skog at New Norfolk. The continuation of coal supplies to these companies and other clients together with the resultant transportation requirements is paramount to the underpinning of a broader economic base across a large geographic area of Tasmania.

Coal extraction and handling is a major employment source within an otherwise rural landscape where there are few full-time employment opportunities. The proposed action further secures a coal resource to the operations of Cornwall Coal and subsequent employment opportunities to its employees and contractors.

### The coal resource

The nature of Tasmanian coal deposits in relatively thin beds in an area of complex geology means that the quality and availability of raw coal from the current operations is subject to variation over quite short time frames. The geology of the Fingal Valley is interbedded Triassic sandstones and siltstones (containing coal measures) over Permian mudstones. Subsequent Jurassic dolerite intrusions into the deposits have been exposed by erosion and are generally responsible for the steep hills of the area with dolerite caps and scree covered slopes. The flatter valley floor features stream alluvium of Quaternary age.

The major coal seams occur in a 200-400 metre-thick section of the 'Upper Parmeener Super – Group'. There are occasional intrusions of the coal measures by dolerite dykes and plugs with frequent faults of less than two metres vertical displacement and occasional faults of up to one hundred metres vertical displacement.

The coal itself is heavy and dull, comprising predominantly inertinite minerals. It is high in ash and contains kaolin layers comprising remnants of volcanic ash deposits. The coal has a low sulphur content of 0.3 to 0.5 % (oven dried basis); volatile combustible matter after washing of between 25 and 30% (oven dried basis); fixed carbon content of between 46 % and 53% (oven dried basis) and good (high) ash fusion characteristics. After washing, gross specific energy at 20.5% ash and 5.0% air dried moisture content is about 25 MJ/kg. (or 22.5 MJ/kg on wet coal "as received"). The coal is suitable for steam raising in conventional boilers and for use in pulverised fuel applications such as cement kilns.

### 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? \*

#### State Legislation

##### *Land Use Planning and Approvals Act 1993*

A [Planning Permit](#) is required under the Tasmanian *Land Use Planning and Approvals Act 1993* for the extraction Pit and upgraded road to the ROM Pad. The haulage of material from the ROM Pad to the Esk Main Road would be via the existing permit DA 008-10.

A **development application** has been lodged with the planning authority (Break O'Day Council) for the proposed action.

Planning information and an assessment against the requirements of the Break O'Day Interim Planning Scheme 2013 is provided in Att\_A\_Development Application Supporting Information, Part C, pp. 20-30.

##### *Environmental Management and Pollution Control Act 1994*

The planning authority referred the development application to the Board of the Tasmanian Environment Protection Authority (the 'EPA' or 'Board') under s25 of the *Environmental Management and Pollution Control Act 1994* ('EMPCA') because the proposed action includes an activity listed Schedule 2 of the EMPCA –

- '5. Extractive Industries. (c) Mines: the extraction of any minerals producing 1 000 tonnes or more of minerals per year.'

An Environmental Impact Statement (EIS) is likely to be requested by the EPA to support the development application. The EIS will consider and assess the environmental impacts from the extraction of material and is the basis on which the Board makes its assessment of an activity. The Board considers the EIS, as well as other relevant information, against the objectives of the Resource Management and Planning System and Environmental Management and Pollution Control System objectives applicable in Tasmania. These objectives focus on the concept of sustainable development, which requires consideration of the economic and social needs of people now and in the future, while sustaining the environment and avoiding or mitigating adverse effects.

The Board will consider the objectives of the RMPS/EMPCS and endeavour to make a decision which best furthers them when considered together. That decision may be to approve the proposal with conditions, or in some cases, the Board may decide the objectives cannot be upheld and the proposal is rejected.

#### *Mineral Resources Development Act 1995*

A Mining Lease granted under the *Mineral Resources Development Act 1995* is in force and provides various exemptions to other State Acts, including the *Forest Practices Act 1985* and associated Regulations.

#### **Commonwealth Legislation**

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

The *Environment Protection and Biodiversity Conservation Act 1999* is an Act of the Parliament of Australia that provides a framework for protection of the Australian environment, including its biodiversity and its natural and culturally significant places.

The objectives of the EPBC Act are to:

- provide for the protection of the environment, especially matters of national environmental significance
- conserve Australian biodiversity
- provide a streamlined national environmental assessment and approvals process
- enhance the protection and management of important natural and cultural places
- control the international movement of plants and animals (wildlife), wildlife specimens and products made or derived from wildlife
- promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources
- recognise the role of Indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity
- promote the use of Indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.

The EPBC Act comes into play when a proposal has the potential to have a significant impact on a matter of national environmental significance.

When a person (a 'Proponent') wants an action (often called a 'proposal' or 'project') assessed for environmental impacts under the EPBC Act, he or she must refer the project. This 'referral' is then released to the public, as well as relevant state, territory and Commonwealth ministers, for comment on whether the project is likely to have a significant impact on matters of national environmental significance. The minister or the minister's delegate will then decide whether the likely environmental impacts of the project are such that it should be assessed under the EPBC Act. Any relevant public comments are taken into consideration in making that decision.

In this case, the Proponent has decided to refer the proposed action given it may be determined to be a Controlled Action under the EPBC Act. The Proponent does not believe the proposed action will have or is likely to have a significant impact on any Matter of National Environmental Significance (MNES) with the application of relatively straightforward management practices for the action.

Avoidance and mitigation measures have been applied where relevant to MNES, and a Large Dasyurid Habitat Action Plan specifically developed to manage (primarily denning habitat) and monitor large dasyurid activity (in this case, Tasmanian devil (*Sarcophilus harrisii*), spotted-tailed quoll (*Dasyurus maculatus maculatus*), and eastern quoll (*Dasyurus viverrinus*)) and occurrence in the project area.

Mitigation and avoidance measures are explained in Section 4 of the EPBC Referral.

### **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. \***

#### **Public consultation**

In Tasmania, public consultation is provided through statutory processes for the assessment of a development application. Once the EPA is satisfied with the case for assessment provided to the Board by the Proponent the planning authority will be directed to advertise the development application. Any person can make a representation within the advertising period. Representations are considered in the assessment process as required by both the *Land Use Planning and Approvals Act 1993* and *Environmental Management and Pollution Control Act 1994*.

An EPBC Referral process includes a comment period for the public to consider and make representation on the proposed action.

#### **Indigenous stakeholders**

An Aboriginal heritage assessment has been conducted by consultants - Cultural Heritage Management Australia (CHMA).

An Aboriginal Heritage Officer (AHO) was included in the assessment team and Aboriginal Heritage Tasmania (AHT) was consulted prior to the surveys being conducted. The survey and assessment process conducted by CHMA, under guidance from the AHO and AHT, includes consultation with Indigenous stakeholders.

The report produced from the Aboriginal heritage assessment is to be withheld from publication for cultural sensitivity reasons.

## 1.3.1 Identity: Referring party

### Privacy Notice:

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

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

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

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

See our Privacy Policy to learn more about accessing or correcting personal information or making a complaint. Alternatively, email us at [privacy@awe.gov.au](mailto:privacy@awe.gov.au).

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

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

No

Referring party details	
<b>Name</b>	Richard Barnes
<b>Job title</b>	Director, Principal Planner and Principal Ecologist
<b>Phone</b>	0438588695
<b>Email</b>	<a href="mailto:rwbarnes73@gmail.com">rwbarnes73@gmail.com</a>
<b>Address</b>	PO Box 1 New Town TAS 7008

## 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	
<b>ABN/ACN</b>	48009485518
<b>Organisation name</b>	THE CORNWALL COAL COMPANY PTY LIMITED

<b>Organisation address</b>	18 Station Avenue, DARRA QLD 4076
Person proposing to take the action details	
<b>Name</b>	Keith Falconer
<b>Job title</b>	Operations Manager
<b>Phone</b>	0409 457 779
<b>Email</b>	keith.falconer@cemaust.com.au
<b>Address</b>	PO Box 402, Fingal, TAS 7214

**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. \***

Yes, The Cornwall Coal Company Pty Limited has a satisfactory record of responsible environment management.

There are no current nor historical proceedings against The Cornwall Coal Company Pty Limited under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources.

The Cornwall Coal Company Pty Limited has not made any previous EPBC Act Referrals.

**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**

As part of the wider Cement Australia group, The Cornwall Coal Company Pty Limited applies Cement Australia wide policies and procedures across its operations. Hence, while most operating policies, work procedures and environmental management systems and documentation are 'badged' with Cement Australia they equally apply to Cornwall Coal.

Cement Australia markets, manufactures and distributes cement and related products throughout Australia. Cement Australia and its subsidiaries strive for zero harm in all they do. Cement Australia commits to satisfying the expectations of its stakeholders and conducting business in an ethical and sustainable manner.

The Safety, Health, Environment and Quality (SHEQ) policy (Att\_B\_SHEQ Documentation, pp1) of Cement Australia (and Cornwall Coal) aims to:

- Provide a safe, healthy, productive and sustainable workplace.
- Prevent pollution and control the impact of our activities on the environment.
- Supply quality products and services that meet our customers' needs.

Cement Australia operates a Safety, Health, Environment and Quality Management System (SHEQMS) (Att\_B\_SHEQ Documentation) which includes compliance, monitoring, auditing and reviewing processes and how these are integrated into the Cement Australia business. The SHEQMS also describes the activities undertaken to continuously improve SHEQ performance. These activities are consistent with the five key principles espoused in the international safety, health, environment and quality elements:

- Principle 1: Commitment and Policy
- Principle 2: Planning
- Principle 3: Implementation & Operation
- Principle 4: Measurement & Evaluation
- Principle 5: Review & Improvement

The SHEQMS applies to all people (employees, contractors and visitors) on or associated with Cement Australia operations and facilities (over which it has operational control) and documents the SHEQ requirements that must be implemented and monitored to reduce or eliminate injuries, incidents and quality non-conformances and maintain legislative compliance.

Managers are empowered to implement the SHEQMS at each facility through the procedures and processes outlined in the Due Diligence framework - it provides managers of Cement Australia with guidance on their legislated SHE obligations and the methods by which they can discharge those obligations, especially in relation to due diligence.

## 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

<b>ABN/ACN</b>	48009485518
<b>Organisation name</b>	THE CORNWALL COAL COMPANY PTY LIMITED
<b>Organisation address</b>	18 Station Avenue, DARRA QLD 4076

Proposed designated proponent details

<b>Name</b>	Keith Falconer
<b>Job title</b>	Operations Manager
<b>Phone</b>	0409 457 779
<b>Email</b>	keith.falconer@cemaust.com.au
<b>Address</b>	PO Box 402, Fingal, TAS 7214

## 1.3.4 Identity: Summary of allocation

### Confirmed Referring party's identity

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

<b>Name</b>	Richard Barnes
<b>Job title</b>	Director, Principal Planner and Principal Ecologist
<b>Phone</b>	0438588695

Email rwbarnes73@gmail.com  
Address PO Box 1 New Town TAS 7008

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

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

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ABN/ACN	48009485518
Organisation name	THE CORNWALL COAL COMPANY PTY LIMITED
Organisation address	18 Station Avenue, DARRA QLD 4076
Representative's name	Keith Falconer
Representative's job title	Operations Manager
Phone	0409 457 779
Email	keith.falconer@cemaust.com.au
Address	PO Box 402, Fingal, TAS 7214

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**✔ Confirmed Proposed designated proponent's identity**

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

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



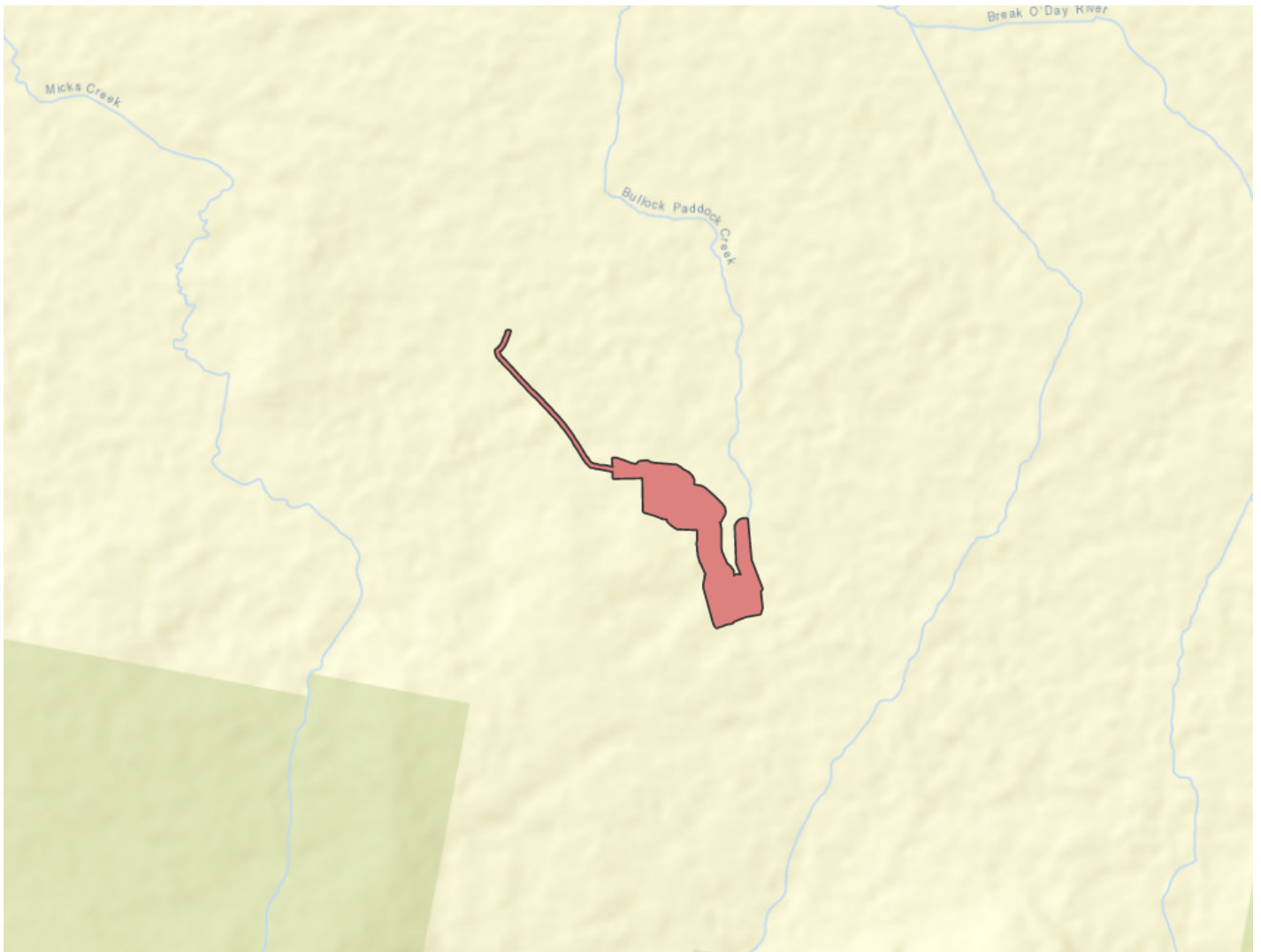
## 1.4 Payment details: Payment allocation

### 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



## 2.2 Footprint details

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

6870 ESK MAIN RD ST MARYS TAS 7215

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

Tasmania

**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 land included in the project area is Freehold land - Certificate of Title 135934 Folio 1 (Att\_A\_Development Application Supporting Information, Fig B-1).

A Mining Lease, known as 1937P/M (Att\_A\_Development Application Supporting Information, Fig A-1), is in force which was granted under the *Mineral Resources Development Act 1995* (Tasmanian legislation).

## 3. Existing environment

### 3.1 Physical description

**3.1.1 Describe the current condition of the project area's environment.****Location and existing environment**

The Cullenswood Mine open cut coal pit No. 6 is approximately 5.2 kms south-west of St Marys (Att\_A\_Development Application Supporting Information, Fig A-1). The project area is part of the broad-valley flats and low-relief hills of the 'Fingal Valley' system which extends from St Marys to Avoca, where the St Pauls River joins the South Esk River.

The environment of the project area is highly modified, caused primarily by the historical extensive clearing of native vegetation to establish agricultural land for grazing. The valley flats retain some remnant vegetation but remnants are small (generally less than 1 hectare in size), have edge-effects due to poor area to perimeter ratios, and contain many introduced species. Remnants are often stock grazed.

More information on the vegetation types in the project area are provided at section 3.2.

**Zoning**

The project area is zoned Rural Resource under the Break O'Day Interim Planning Scheme 2013 (Att\_E\_Existing Environment Maps, Fig A).

The proposed action is classified as an Extractive Industry under the Break O'Day Interim Planning Scheme 2013 - a Discretionary Use in the Rural Resource Zone. The proposed action is permissible without the rezoning of land. The current use of the land in the project area (agriculture including farm forestry and livestock grazing) is consistent with the objectives of the Rural Resource zone; focus on agricultural, mining and tourism activities.

A Planning Permit is required under the Tasmanian *Land Use Planning and Approvals Act 1993* for the extraction Pit and upgraded road to the ROM Pad. The haulage of material from the ROM Pad to the Esk Main Road would be via the existing permit DA 008-10. A development application has been lodged with the planning authority (Break O'Day Council) for the proposed action. Planning information and an assessment against the requirements of the Break O'Day Interim Planning Scheme 2013 is provided in Att\_A\_Development Application Supporting Information, Part C, pp. 20-30.

**Project Area Current and Potential Land Use**

The project area is part of a large farming activity which is based on cattle, and historically, sheep.

Under historical ownership, substantial areas of the 'Cullenswood' property near its southern extent were converted to hardwood plantation through Managed Investment Schemes. These areas prior to their conversion to hardwood plantation were either native forest and woodland, unproductive agricultural land (poorer soils, wet areas, rocky areas, 'rough grazing' country) or non-forest vegetation.

The project area (and proposed action) largely overlaps with poorly performing or failed hardwood plantation that was established on the southern edge of pastures at the base of Fingal Tier (see Att\_C\_Ecological Assessment Report - Part 1, Fig A-10). The proposed action is on land predominantly occupied by the failed or poorly performing hardwood plantation. Some areas are agricultural land but this is minor; the land has not been significantly improved where it could support high-value crops.

The project area remains intermittently grazed with cattle, otherwise it has little use. Cattle access will be prevented, for safety reasons, for the life of the action.

Near the project area are two dams (Att\_E\_Existing Environment Maps, Fig 3) which are used to collect water for on-farm use, or to sell to downstream farmers or for power generation. It is unlikely that either dam will be affected by the action.

### **Road Network**

The proposed action will be connected to the existing ROM Pad at the Cullenswood 2 open cut pit by a 'to be constructed' haul road (Att\_A\_Development Application Supporting Information, Fig A-2). The ROM Pad at Cullenswood 2 is the holding location for coal resource from the Cullenswood 2 pit, and the new closed C5 pit. Its use avoids the necessity to construct a new ROM pad and associated infrastructure.

The haul road is to have drains and culverts to manage and direct stormwater to sediment basins and natural drainage lines (Att\_D\_Haul Road Technical Drawings). The haul road will extend the existing road surface at Cullenswood 5 to Blocks A and B, then to Block C when Blocks A and B are under rehabilitation. The haul road will be used by light vehicles and dump trucks. Dump trucks would travel from the pit where coal is being extracted to the C2 ROM Pad where the coal would be dumped for storage and collection later by road transport trucks. Light vehicles (staff accessing the machinery at the site) and some service vehicles (i.e. small trucks/vehicles conducting repairs and maintenance on machinery at the pit) would also use the haul road. UHF Radio would provide a means of communication between the haul road users, as occurs for the active Cullenswood 2 pit.

Machinery, including dozer and an excavator, will be floated to the project area from the Cullenswood 2 pit when required. Road transport trucks would not use the haul road - they only access the C2 ROM Pad to load and transport coal through to the Duncan Washery at Fingal. The main haul road (extant) from the ROM Pad to the Esk Main Road is used by road transport trucks to transport coal to the Duncan Washery. It is an unsealed road with drainage, culverts and roadside furniture (i.e. signage and guide posts). It is not a public road.

Once the proposed action has ceased, the haul road will be retained if that is acceptable to the landowner. The haul road generally aligns with an existing on-farm track so its retention may be desirable to the landowner. The drains/culverts associated with the road have been designed for 1 in 20 year rainfall events and its surface and composition would be suited for heavy load haulage. If the upgraded road is not required by the landowner then it would be decommissioned and parts (culverts etc.) removed.

### **Surrounding Land Use and Reserves**

The project area is Freehold Land, as too is the adjacent land - it is in the same ownership as the Cullenswood property. The region around the project area includes public land tenures managed by the Tasmanian Parks and Wildlife Service (i.e., the Break O'Day Regional Reserve as shown in Att\_E\_Existing Environment Maps, Fig 2), Property Services in the Tasmanian Department of Natural Resources and Environment (DNRE) (i.e., the Future Potential Production Forest shown in Att\_E\_Existing Environment Maps, Fig 2), and Sustainable Timbers Tasmania (i.e., the Permanent Timber Production Zone shown in Att\_E\_Existing Environment Maps, Fig 2).

### **Sensitive Uses**

The project area where the proposed action is planned to be conducted is in a relatively remote location dominated by agricultural land. The nearest sensitive uses are 2 dwellings more than 3km to the project area, and a further 2 dwellings that are more than 4km to the project area (Att\_E\_Existing Environment Maps, Fig 6).

### **Geology and Soils**

The geology of the Fingal Valley is dominated by interbedded Triassic sandstones and siltstones (containing coal measures) over Permian mudstones (Att. E, Fig 4). Subsequent Jurassic dolerite intrusions into the deposits have been exposed by erosion and are generally responsible for the steep hills of the area with dolerite caps and scree covered slopes. The flatter valley floor features stream alluvium of Quaternary age. The major coal seams in the Fingal Valley generally occur in a 200-400 metre-thick section of the 'Upper Parmeener Super - Group' with occasional intrusions by dolerite dykes and plugs, with frequent faults of less than two metres vertical displacement and occasional faults of up to one hundred metres vertical displacement.

The variable sedimentary input sources (ie. eroded dolerites, mudstones, sandstones, siltstones), combined with fluvial processes (alluvial deposition) of historical movements of the Break O'Day River across the valley has created an equally variable alluvial formation on the flattest areas of The Land. The profile of the alluvial sediments vary from fine river cobbles inter-mixed with layers of clay and sand to a deep loam with high clay content with scant rock and cobbles. The valley flats are a sodosol while the slopes are a dermosol.

Land capability is Class 4, 5 and 6 (Att\_E\_Existing Environment Maps, Fig 5) which means it has moderate to significant constraints to its agricultural capability. The soils in the project area are not Prime Agricultural Land or Significant Agricultural Land for the purposes of the *State Policy on the Protection of Agricultural Land 2009*.

### **Hydrology**

The project area occurs within the Lower Break O'Day River Sub-Catchment of the Break O'Day River (Att\_E\_Existing Environment Maps, Fig 3). The Break O'Day River is a tributary of the South Esk River. The confluence of the two rivers is about one kilometre north of Fingal. Bullock Paddock Creek (BPC) is the primary drainage system of the project area, with Bullock Paddock Creek itself occurring in the project area (Att\_E\_Existing Environment Maps, Fig 3). BPC is already diverted (catch drain which traverses the flood plain) downstream of the Survey Area into a catchment dam for use in agriculture and power generation. The catchment to the east of the project area, which includes the dam to which BPC is diverted, is in the the Upper Break O'Day River Sub-Catchment. Lightwood Rivulet and its tributaries are the main drainage features in this catchment (Att\_E\_Existing Environment Maps, Fig 3).

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

The project area mainly supports poorly performing and failed hardwood plantation. The timber quality (pulp only) of the extant areas of plantation is low. The plantation was established but appears not to have been actively managed for insect control and pruning. The agricultural land to be temporarily affected is not substantially improved and is not actively used for cropping or intensive agriculture. The property owner uses the project area intermittently for cattle grazing, otherwise it has little use.

The project area has been within Mining Lease 1937P/M for a long period of time (>30 years) and there was always an intent to further explore and extract the coal resource known from that area. The project area has been test-drilled via a MRT approved exploration program and has a proven resource within the area identified. There are no alternatives. Extraction tonnage would be up to 50,000 tonnes per annum. The action is likely to have a 3-year life span if production levels are at or near the maximum level.

Recreational hunting and native animal control (shooting) occurs on the Cullenswood property.

The dams are used for recreational fishing (not open to the public), however these are outside the project area. The use of the dams will be unaffected by the proposed action.

There are no identified community uses of the project area nor immediately adjacent lands. Access to the Cullenswood property is controlled given its Freehold land status.

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

There are no outstanding natural features in the project area.

The 1.2 hectares of native forest in the project area (Att. C, Fig A-10) is young regrowth forest (*Eucalyptus amygdalina* forest and woodland on mudstone). The forest community is not under-represented or poorly represented in the CAR Reserve System. It is not a threatened ecological community listed on Schedule 3A of the *Nature Conservation Act 2002* and it is not listed as a threatened ecological community listed on the EPBC Act.

No threatened flora species listed on the EPBC Act or the Tasmanian *Threatened Species Protection Act 1995* have been recorded (historically or by the studies for this referral) in the project area (Att\_C\_Ecological Assessment Report - Part 2, Attachment 5, pp.129-133).

There are no formal reserves in or adjacent to the project area (Att\_E\_Existing Environment Maps, Fig 2).

There is den potential habitat for large dasyurid species in the project area, but no dens have been observed during the surveys for the referral (see Att\_C\_Ecological Assessment Report - Part 1, section C.6.2 Tasmanian devil (*Sarcophilus harrisii*), pp 60-68).

### 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 at the base of the Fingal Tier approximately where it meets the valley flats associated with the Break O'Day River system (Att\_C\_Ecological Assessment Report - Part 1, Fig A-6). Further southwards are steep hills which include Fingal Tier, Harefield Rock and Thebes Throne which attain a height of between 750 and 800 m AHD.

The project includes valley flats (mostly agricultural pasture) and some of the lower slopes of hills which form Fingal Tier. The valley flats gently slope towards the north (<1%) and range in the project area from 280 to 260 m AHD (Att\_C\_Ecological Assessment Report - Part 1, Fig A-6). The hills are undulating to gently (<3%) sloping terrain with the maximum height of the hills in the project area being approximately 320 m AHD. The relatively sharply defined gradation from valley flats to relatively steeply sloped hills is a common phenomena around the Fingal Valley system.

Cliffs and large rocky outcrops are absent.

## 3.2 Flora and fauna

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

The project area is highly modified vegetation located on the southern edge of the Fingal Valley floor system. Specifically, the project area is located along the break of slope from the valley floor (part of Break O'Day Plains) to the steep hills further south (the hills include Fingal Tier, Harefield Rock and Thebes Throne). The Ecological Report - **TERRESTRIAL ECOLOGY AND NATURAL VALUES ASSESSMENT**,

**CULLENSWOOD 6 OPEN CUT PIT, ST MARYS** (Att\_C\_Ecological Assessment Report - Part 1 and Att\_C\_Ecological Assessment Report - Part 2) provides detailed flora and fauna information about the project area and relevant biodiversity information.

A summary is provided here, with reference to Tables and Figures in the Ecological Report.

### VEGETATION COMMUNITIES

There is 1 native forest community within the Survey Area (Att\_C\_Ecological Assessment Report - Part 1, Fig A-10), a very small area of degraded wet heathland, with failed/poorly performing hardwood plantation and agricultural land comprising the remainder. Less than 1.2 hectares of native forest vegetation (*Eucalyptus amygdalina* forest and woodland on mudstone) will be affected by the establishment and operation of the proposed action.

*Eucalyptus amygdalina* forest and woodland on mudstone is not a threatened native vegetation community within the meaning of Schedule 3A of the *Nature Conservation Act 2002* (Tasmania) nor is it an ecological community listed under section 181 of the *Environment Protection and Biodiversity Conservation Act 1999*. The overall temporary loss of forest cover from the proposed action is insignificant to the bioregional (and Statewide) extant cover of the forest type. The native forest type will be rehabilitated post-closure of the project.

No significant direct or indirect impact to any ecological community listed on the EPBC Act will occur from the proposed action because they are absent.

Plant species observed are listed in Att\_C\_Ecological Assessment Report - Part 2, Attachment 6.

### THREATENED FLORA SPECIES

The field surveys were conducted over a 17-month period to capture the peak flowering times for species known or predicted to occur in the region. The species included ephemeral herbs and orchids (species with time sensitive windows of opportunity to conduct surveys to maximise the likelihood of detection if they are present) and also shrubs and small trees. Information about the flora species known to occur in the region, and notes about the likelihood of their occurrence in the Survey Area are provided in Att\_C\_Ecological Assessment Report - Part 2, Attachments 4 and 5.

No species listed on the *Threatened Species Protection Act 1995*, or the *Environment Protection and Biodiversity Conservation Act 1999* were observed during the surveys of the Survey Area.

### DECLARED AND ENVIRONMENTAL WEEDS

Few weeds (Declared or environmental/agricultural) are present in the Survey Area; most are associated with the existing track and edge of the hardwood plantation (mostly failed) and agricultural land.

Two plant species listed as a Declared Weed on the Tasmanian *Weed Management Act 1999* were recorded on or near the Survey Area –

- Slender thistle (*Carduus pycnocephalus*), and
- Blackberry (*Rubus anglocandicans*).

All species are identified in their respective Statutory Weed Management Plans for the Break O'Day Municipality as a Zone B Municipality - Containment is the principal management objective.

Other pasture and environmental weeds were observed sporadically across the Survey Area, most commonly in association with the edge of the pasture (northern edge of the Survey Area), and the margin of the existing property track –

- spear thistle (*Cirsium vulgare*),
- briar rose (*Rosa rubiginosa*),
- great mullein (*Verbascum thapsus*), and
- pasture grasses and herbs (e.g., *Holcus lanatus*, *Prunella vulgaris*, *Hypochaeris radicata*).

### PATHOGENS

#### Phytophthora cinnamomi, PC

Root-rot fungus (*Phytophthora cinnamomi*, PC) is a soil borne pathogen that causes death in a wide range of native plant species often leading to floristic and structural changes in susceptible plant communities. Only those areas of the State that are below an altitude of about 700m above sea level have soils sufficiently warm for this to occur. Vegetation types below 700m elevation may not be wholly or partly susceptible if closed canopies keep soil temperatures cool during the summer months, such as tall wet eucalypt forests over rainforest species, or rainforest communities.

PC can be spread through the movement of infected soil or plant material by people or animals and can even be transported by water percolating through soil or via surface water, such as in creeks and other drainage lines. Transport of PC to new areas is usually through soil/dirt adhering to vehicles and machinery. Transport into non-roaded areas of high human usage is mainly via bushwalking items such as tents or footwear but can also occur by bird activity. The fungus is not always evident in the landscape as it attacks root systems of susceptible species, usually causing death in new growth or the yellowing of leaves followed by loss of vigour and, in most cases, death. The fungus can inhabit the root systems of resistant species without any visible signs of infection within the host plant.

The Survey Area is not within a PC Management Area.

Samples to directly survey for PC were not collected - no symptomatic species were observed. Areas within and around the Survey Area were visually inspected in detail for signs of infection by PC which included areas of water accumulation such as spoon drains, culverts, and other drainage features. No plant 'symptom' evidence of the pathogen was observed, probably because there are very few susceptible species present, and that dry forest occurs across most of the Survey Area and surrounding region.

### MYRTLE WILT

Myrtle wilt, caused by a wind-borne fungus (*Chalara australis*), occurs naturally in rainforest where myrtle beech (*Nothofagus cunninghamii*) is present. The fungus enters wounds in the tree, usually caused by damage from wood-boring insects, wind damage and forest clearing. The incidence of myrtle wilt often increases forest clearing events such as windthrow and wildfire. *Nothofagus cunninghamii* is not present within or adjacent to the Survey Area.

### MYRTLE RUST

Myrtle rust is a disease limited to plants in the Myrtaceae family. This plant disease is a member of the guava rust complex caused by *Austropuccinia psidii*, a known significant pathogen of Myrtaceae plants outside Australia. Infestations are currently limited to NSW, Victoria, Queensland, and Tasmania. No evidence of myrtle rust was noted.

### CHYTRID FUNGUS

The freshwater pathogens *Batrachochytrium dendrobatidis* (chytrid frog disease) pose a threat to native frog species and habitat and can be spread via contaminated water, mud, gravel, soil and plant material or infected animals are moved between sites. Chytrid fungus causes the disease known as chytridiomycosis or chytrid infection. The fungus infects the skin of frogs destroying its structure and function and can ultimately cause death. Sporadic deaths occur in some frog populations, and 100 per cent mortality occurs in other populations.

The disease has been 'sighted' in 2006 at a small dam adjacent to Catos Road on the northern side of the Nicholas Range - the nearest Natural Values Atlas confirmed location to the project area. The location remains a dam today (firefighting purposes) on a creekline that drains to Durham Creek which then reports to the Avenue River – it is within a completely separate catchment to the Survey Area.

## **FAUNA HABITAT AND OCCURRENCE**

### **NATIVE BIRDS**

No nests of masked owl (*Tyto novaehollandiae castanops*) occur in the project area, nor in the areas adjacent to the project area (Att\_C\_Ecological Assessment Report - Part 1, Fig. A-18). There are no known eagle (wedge-tailed eagle - *Aquila audax fleayi*; white-bellied sea eagle - *Haliaeetus leucogaster*) nests within 1km of the project area and there is scant nest potential habitat present (Att\_C\_Ecological Assessment Report - Part 1, Fig. A-12) - searches yielded no nests.

No habitat for wetland-specific birds is present. Generalist migratory birds may use the area sporadically, such as fork-tailed swift or white-throated needletail.

The key foraging resources for swift parrot (*Lathamus discolor*) - *Eucalyptus ovata* and *E. globulus* - are absent from the footprint. No nest potential trees are present in the footprint.

### **NATIVE MAMMALS**

As expected, the most abundant mammal species detected with wildlife cameras were the red-necked wallaby, pademelon, wombat, and brush-tailed possum. The presence of Tasmanian devil was confirmed by tracks and scats and there are repeat observations of some Tasmanian devils (see discussion in Att\_C\_Ecological Assessment Report - Part 1, section C.5.2 Scat and Track Surveys).

There were two observations of spotted-tailed quoll (Att\_C\_Ecological Assessment Report - Part 1, Fig A-16, Camera locations 2-1 and 2-3) but no observations of eastern quoll, or eastern barred bandicoot. The absence of eastern barred bandicoot observations is unexpected given the Survey Area borders a fertile landscape (e.g., valley floor remnant vegetation on alluvial deposits, fertilised pastures where weed grown may have occurred including wet soaks, drainage lines and weed infestations).

Despite the lack of camera-based confirmation of eastern quoll in the Survey Area it is likely to occur in the Survey Area and surrounds. The species may be uncommon, or more frequently use habitats outside the Survey Area and/or the camera locations simply did not reflect their movement patterns or use of the Survey Area.

### **FERAL ANIMALS**

A single male fallow deer was recorded using a wildlife camera. There were several observations of the European hare and one observation of a pair of kookaburras. There are at least 2 feral cats active in the area based on the observations made through the cameras.

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

The project area is located at the edge of the Fingal Valley floor where it meets the base of the Fingal Tier. The project area is specifically located along the break of slope from the valley floor (part of Break O'Day Plains) to the steep hills that form Fingal Tier.

The project area includes valley flats which are now mostly agriculture pasture and some of the lower slopes of hills which are now hardwood plantation (poorly performing or failed).

The highly variable geological input sources to the soil profile (ie. eroded dolerite, mudstone, sandstone, siltstone), combined with the fluvial processes caused by historical movements of the Break O'Day River across the valley, has created an equally variable alluvial formation on the flattest areas of the project area. The profile of the alluvial sediments vary from fine river cobbles inter-mixed with layers

of clay and sand to a deep loam of high clay content with scant rock, gravel and cobbles. The valley flats are a sodosol while the slopes are a dermosol. Cliffs and large rocky outcrops are absent. These soil formations would have likely supported damp to dry forest and woodland, wetlands and native grassland vegetation prior to clearing of the land for agricultural uses.

### Vegetation Descriptions

There is 1 native forest community and 1 native non-forest community in the project area. The hectares of each vegetation type in the project area are provided in Att\_C\_Ecological Assessment Report - Part 1, Table 2.

None are a threatened native vegetation community within the meaning of Schedule 3A of the *Nature Conservation Act 2002* nor are they an ecological community listed under section 181 of the *Environment Protection and Biodiversity Conservation Act 1999*.

The following are descriptions of the vegetation communities present (using TASVEG vegetation mapping units), including the extent of each within the project area.

The vegetation communities/mapping units are spatially shown in Att\_C\_Ecological Assessment Report - Part 1, Fig A-10.

#### Eucalyptus amygdalina forest and woodland on mudstone - 1.2 hectares

- This TASVEG forest and woodland community is dominated by *Eucalyptus amygdalina* (black peppermint) growing on a mudstone-sandstone bedrock with minor overlaying dolerite derived talus (colluvium). *Eucalyptus obliqua* (stringybark, messmate) is an occasional sub-dominant tree with only sparse *E. viminalis* ssp. *viminalis* (white gum). Each of the *Eucalyptus* species present attain a height of up to 15 m, with most trees being of a regrowth age class. No trees with old-growth elements are present. *Acacia dealbata* (silver wattle), *A. mearnsii* (black wattle), *Allocasuarina verticillata* (drooping she-oak) and *Bursaria spinosa* (prickly box) form a sporadic stratum of very small shrubs. Sagg, sedges, grasses (mainly *Poa rodwayi*, *P. labillardierei* and *P. sieberiana*, *Elymus scaber*, *Microlaena stipoides* var. *stipoides*, *Dichelachne crinita*) and herbs are also present. Where there is some moisture from the roadside drain, the understorey is frequented by *Gahnia grandis*, *Lepidosperma elatius*, and an herb-rich ground cover (e.g., *Ajuga australis*, *Dichondra repens*, *Hydrocotyle hirta*, *H. sibthorpioides*, *Acaena echinata*). Shrubs to small trees occur on the very edge of a drainage line adjacent to the forest patch and include *Olearia lirata* (dolly bush), *Coprosma quadrifida* (native currant), *Bursaria spinosa* (prickly box), *Exocarpos cupressiformis* (native cherry), *Pomaderris apetala* (dogwood) and *Acacia melanoxylon* (blackwood).
- The community is young regrowth without any old-growth characteristics. That is, there are no trees or other habitat structural elements that represent old-growth or naturally senescent native forest. This forest type is common in the region, being especially abundant on Mathinna substrates (i.e., mudstone, siltstones and/or sandstones) typical of Tasmania's north-east region. The vegetation is dominated by native flora species and with very few weeds; those weeds present are cosmopolitan and widespread agricultural weed species like thistles and pasture grasses). The condition of the forest could be described as fair.

#### Wet heathland - 0.08 hectares

- This TASVEG mapping unit, in this case, represents a highly degraded area of what would have been wet heathland dominated by *Melaleuca* (*M. virens* - lime bottlebrush and *M. pallidus* - bread-leaved bottlebrush) and *Leptospermum* (*L. lanigerum*- woolly tea-tree) species. The example in the Survey Area supports *Gahnia grandis* (cutting grass) with occasional small *Leptospermum lanigerum* (woolly tea-tree), with *Acacia dealbata* (silver wattle) as a disturbance/colonising species. To the east of the Survey Area, but in a different catchment, is Lightwood Rivulet which supports better quality examples of this community.
- The heathland is heavily degraded caused by cattle grazing activities, and is in very poor condition even though many of the native species typical of the vegetation are present.

#### Plantations for silviculture - hardwood - 14.5 hectares

- A large proportion of the project area is hardwood plantation dominated by *Eucalyptus nitens* (shining gum). The plantation was established under a managed investment scheme; most trees have performed poorly, and some areas have less than 10% survival of the original planted trees. *Acacia dealbata* (silver wattle) is a common regrowth shrub to small tree (it is a colonising species) in the areas where plantation trees have suffered a high failure rate. The drainage lines through the plantation (areas set aside from conversion to plantation) are generally comprised of regrowth shrubs to small trees and include *Acacia dealbata* (silver wattle), *Bursaria spinosa* (prickly box), and occasional *Exocarpos cupressiformis* (native cherry), *Pomaderris apetala* (dogwood) and *Acacia melanoxylon*. Sagg (*Lomandra longifolia*), exotic grasses (mainly *Holcus lanatus*, *Agrostis stolonifera*, and *Bromus* species), and native grasses (mainly *P. labillardierei*, *Elymus scaber*, *Microlaena stipoides* var. *stipoides*) are present in the sparse to dense ground layer, with the greatest densities being where plantation tree failure has been high.
- The hardwood plantation has failed in some areas and is poorly performing in others. It's conditions is poor.

#### Agricultural land - 9.2 hectares

- Land supporting agricultural pasture (degraded or improved) is included in this TASVEG mapping unit. Exotic grasses and herbs are prolific and dominate this mapping unit, with some native grasses, herbs and sedges also present.

#### Extra-urban miscellaneous - 1.0 hectares

- This TASVEG mapping unit includes mine disturbed areas of the adjacent Cullleswood 5 pit (now closed and under rehabilitation).

## 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.

No Commonwealth heritage places overseas or other places recognised as having heritage values apply to the project area.

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

An Aboriginal heritage assessment has been conducted by consultants - Cultural Heritage Management Australia (CHMA). An Aboriginal Heritage Officer (AHO) was included in the assessment team and Aboriginal Heritage Tasmania (AHT) was consulted prior to the surveys being conducted. The survey and assessment process conducted by CHMA, under guidance from the AHO and AHT, includes consultation with Indigenous stakeholders.

No Aboriginal heritage was found within the disturbance footprint of the project area. The report and its concluding recommendations prepared by CHMA in consultation with the AHO.

The report produced from the Aboriginal heritage assessment is to be withheld from publication for cultural sensitivity reasons.

## 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. \*

#### Catchments and Surface Water Drainage

The project area occurs within the Lower Break O'Day River Sub-Catchment of the Break O'Day River (Att\_E\_Existing Environment Maps, Fig 3). The Break O'Day River is a tributary of the South Esk River. The confluence of the two rivers is about one kilometre north of Fingal.

Bullock Paddock Creek (BPC) is the primary drainage system of the project area, with Bullock Paddock Creek itself occurring in the project area (Att\_E\_Existing Environment Maps, Fig 3). BPC is already diverted (catch drain which traverses the flood plain) downstream of the Survey Area into a catchment dam for use in agriculture and power generation.

The catchment to the east of the project area, which includes the dam to which BPC is diverted, is in the the Upper Break O'Day River Sub-Catchment. Lightwood Rivulet and its tributaries are the main drainage features in this catchment (Att\_E\_Existing Environment Maps, Fig 3).

#### Groundwater

Groundwater was not encountered when exploration drilling was conducted to prove the location and quality of the coal resource.

There are no users of groundwater within 5 kms of the proposed action, nor are there any DNRE registered bore wells or groundwater spikes within 5km of the proposed 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
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. \*

There are no World Heritage estates or values in, adjacent to or in the vicinity of the Project Area.

### 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. \***

There are no National Heritage values within, adjacent to or nearby 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. \***

There are no Ramsar Wetlands within, adjacent to or nearby the project area. The proposed action is very unlikely to directly or indirectly cause a significant impact to a Ramsar Wetland.

**4.1.4 Threatened Species and Ecological Communities**

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

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

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

**Threatened species**

Direct impact	Indirect impact	Species
No	No	Antipodia chaostola leucophaea
No	No	Aquila audax fleayi
No	No	Botaurus poiciloptilus
No	No	Caladenia caudata
No	No	Calidris ferruginea
No	No	Ceyx azureus diemenensis
No	No	Colobanthus curtisiae
Yes	Yes	Dasyurus maculatus maculatus (Tasmanian population)
Yes	Yes	Dasyurus viverrinus
No	No	Galaxias fontanus
No	No	Glycine latrobeana
No	No	Hirundapus caudacutus
No	No	Lathamus discolor
No	No	Lepidium hyssopifolium
No	No	Leucopatus anophthalmus
No	No	Litoria raniformis
No	No	Numenius madagascariensis
No	No	Perameles gunnii gunnii
No	No	Prototroctes maraena
No	No	Pterodroma leucoptera leucoptera
Yes	Yes	Sarcophilus harrisii
No	No	Senecio psilocarpus
No	No	Spyridium lawrencei
No	No	Tyto novaehollandiae castanops (Tasmanian population)
No	No	Xerochrysum palustre

**Ecological communities**

Direct impact	Indirect impact	Ecological community
No	No	Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (Eucalyptus ovata / E. brookeriana)
No	No	Tasmanian white gum (Eucalyptus viminalis) wet forest

**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. \***

### Listed Threatened Flora Species

The following listed threatened flora species are identified in the Protected Matters Search Tool (see Att\_C\_Ecological Assessment Report - Part 2, Attachment 3) as possibly occurring within the project area:

- *Boronia gunnii* - Gunn's boronia, VU
- *Boronia hippopala* - velvet boronia, VU
- *Caladenia caudata* - Tailed-spider orchid, VU
- *Colobanthus curtisiae* - Curtis' colobanth, VU
- *Glycine latrobeana* - Clover glycine, VU
- *Lepidium hyssopifolium* - soft peppergrass, EN
- *Leucochrysum albicans* ssp. *tricolor* - hoary sunray, EN
- *Senecio psilocarpus* - swamp Fireweed, VU
- *Xerochrysum palustre* - swamp everlasting, VU

None of these species were observed in the project area during the surveys conducted over 17 months for the preparation of an ecological assessment report - see Att\_C\_Ecological Assessment Report - Part 2, Attachment 5.

### Listed Threatened Fauna Species

#### Bird species

No nests of masked owl (*Tyto novaehollandiae castanops*) occur in the project area, nor in the areas adjacent to the project area (Att\_C\_Ecological Assessment Report - Part 1, Fig A-18).

There are no known eagle (wedge-tailed eagle - *Aquila audax fleayi*; white-bellied sea eagle - *Haliaeetus leucogaster*) nests within 1km of the project area and there is scant nest potential habitat present (Att\_C\_Ecological Assessment Report - Part 1, Fig A-12) - searches yielded no nests.

No habitat for wetland-specific birds is present. Generalist migratory birds may use the area sporadically, such as fork-tailed swift or white-throated needletail. There is no suitable riparian habitat present in or adjacent to the project area for the Tasmanian Azure Kingfisher (*Ceyx azureus diemenensis*).

The key foraging resources for swift parrot (*Lathamus discolor*) - *Eucalyptus ovata* and *E. globulus* - are absent from the footprint. No nest potential trees are present in the footprint mainly because the forest is plantation, or regrowth without trees of structural form to support old-growth characteristics - see Att\_C\_Ecological Assessment Report - Part 1, Figs A-20 and A-21.

The proposed action is very unlikely to have any impact, direct or otherwise, on any EPBC-listed bird species.

#### Invertebrate species

The proposed action is in the range of the Blind velvet worm (*Leucopatus anophthalmus*, Att\_C\_Ecological Assessment Report - Part 1, Figure A-22 and pp. 103-104) however there is no habitat suitable for the species. The project area supports unsuitable vegetation types (i.e., dry forest (with ephemeral drainage lines), failed hardwood plantation and non-forest vegetation) and an incompatible land use history of the forest that is present (livestock grazing, land clearing and use of fire).

The proposed action is outside the range of the Giant velvet worm (*Tasmanipatus barretti*, Att\_C\_Ecological Assessment Report - Part 1, Figure A-22) and suitable habitat is absent.

There are no food or shelter species present (i.e., *Gahnia* (cutting grass/saw-sedge) species, especially *G. radula* and *G. microstachya*) to support a population of Chaostola skipper (*Antipodia chaostola* ssp. *leucophaea*).

The proposed action is very unlikely to have any impact, direct or otherwise, on any EPBC-listed invertebrate species mainly because the project area is outside the range of such species and/or habitat is absent.

#### Aquatic and semi-aquatic species

Wetlands, perennial creeks and aquatic connections to the marine environment are absent from the project area. The proposed action is very unlikely to have any impact, direct or otherwise, on any EPBC-listed frog/fish species mainly because the project area is outside the range of such species and/or habitat is absent.

#### Mammal species

Three EPBC-listed terrestrial mammals - members of the Dasyuridae - are known to occur in the region. The proposed action has the potential to directly and/or indirectly impact on these species: the Tasmanian devil (*Sarcophilus harrisi*), spotted-tailed quoll (*Dasyurus maculatus maculatus*), and eastern quoll (*Dasyurus viverrinus*). Survey methods for the large dasyurids are described in the Ecological Report - Att\_C\_Ecological Assessment Report - Part 1, Section B.3, pp 25 to 32. The Ecological Report also considered the relevant guidelines and conservation assessment documents issued.

Occurrence and potential direct and indirect impacts to each of the three species are provided below.

*Tasmanian devil (Sarcophilus harrisi)*

The presence of Tasmanian devil was confirmed by tracks and scats (Att\_C\_Ecological Assessment Report - Part 1, pp 48) and wildlife camera footage/pictures (Att\_C\_Ecological Assessment Report - Part 2, Attachment 10). There are repeat observations of some Tasmanian devils (Att\_C\_Ecological Assessment Report - Part 1, pp 62). At least 3 devils utilise the Survey Area (i.e., project area) and three areas in particular where road usage appeared to drive the observed abundance of scats, tracks, and overall activity (wildlife cameras). The Ecological Report provides illustrations of the devil tracks (Att\_C\_Ecological Assessment Report - Part 1, Table 7, pp 51) and scats (Att\_C\_Ecological Assessment Report - Part 1, Table 6, pp 50) observed.

No dens attributable to the Tasmanian devil were recorded in or around the Survey Area during the surveys but potential denning habitat is present; mainly in the form of woody debris in windrows created from historical land clearing activities.

Tasmanian devils are clearly utilising the formed (but unsealed) road as a means to traverse the landscape. This was confirmed by the regular, seemingly deliberate, use of the road surface (animals ran or walked **along** the road in the camera viewfield) more frequently than **crossing** the road in a perpendicular manner. In contrast, wallabies, pademelon, and wombats were regularly seen crossing the road at multiple camera locations, and less so travelling along the road; these animals seemed to regularly cross the road in a deliberate act of travelling to the paddocks northwards of the camera locations from the forest/plantation further southwards.

Scats and tracks were more frequently observed near drainage lines or at the opening of tight gully formations, however camera footage was not able to confirm if animals were actually moving through or along these topographic features/areas to access the existing road. Notwithstanding this, enough information exists to demonstrate that roads and tracks are being used by the species.

Potential adverse impacts from the proposed action are described below.

**Direct** potential impacts from the proposed action include:

- Foraging and denning habitat removal, loss and/or modification.
- Deliberate unauthorised interference with animals (e.g., handling, disturbance).
- Increased likelihood of animal-vehicle collision. Collision may also occur during flushing and/or vegetation removal with construction vehicles or machinery.
- Removal or disruption of movement pathways (e.g., Att\_C\_Ecological Assessment Report - Part 1, pp.65).

**Indirect** potential adverse indirect impacts from the proposed action include:

- Visual and acoustic disturbance, or physical disturbance, such as vibrations from heavy machinery use.
- Putrescible waste (e.g., food scraps) from staff and contractors.
- Introduction of diseases, and pathogens.

#### *Spotted-tailed quoll (Dasyurus maculatus maculatus)*

There were two observations of spotted-tailed quoll (Att\_C\_Ecological Assessment Report - Part 1, Table 5). Potential adverse impacts from the Project are described below.

**Direct** potential impacts from the proposed action include:

- Foraging and denning habitat removal, loss and/or modification.
- Deliberate unauthorised interference with animals (e.g., handling, disturbance).
- Increased likelihood of animal-vehicle collision. Collision may also occur during flushing and/or vegetation removal with construction vehicles or machinery.
- Removal or disruption of movement pathways.

**Indirect** potential adverse indirect impacts from the proposed action include:

- Visual and acoustic disturbance, or physical disturbance, such as vibrations from heavy machinery use.
- Putrescible waste (e.g., food scraps) from staff and contractors.

#### *Eastern quoll (Dasyurus viverrinus)*

Despite eastern quoll not confirmed as present (no imagery captured on wildlife cameras) it is likely to use the project area, even intermittently or in low numbers, given it's known occurrence in the landscape (identified near St Marys according to Natural Values Atlas held records - Att\_C\_Ecological Assessment Report - Part 2, Attachment 1). The species may be uncommon, more frequently uses habitats outside the Survey Area or the camera locations simply did not reflect their movement patterns or use of the Survey Area.

Potential adverse impacts from the proposed action are described below.

**Direct** potential impacts from the proposed action include:

- Foraging and denning habitat removal, loss and/or modification.
- Deliberate unauthorised interference with animals (e.g., handling, disturbance).
- Increased likelihood of animal-vehicle collision. Collision may also occur during flushing and/or vegetation removal with construction vehicles or machinery.
- Removal or disruption of movement pathways.

**Indirect** potential adverse indirect impacts from the proposed action include:

- Visual and acoustic disturbance, or physical disturbance, such as vibrations from heavy machinery use.
- Putrescible waste (e.g., food scraps) from staff and contractors.

### Listed Ecological Communities

None of the Protected Matters Search Tool Report (Att\_C\_Ecological Assessment Report - Part 2, Attachment 3) listed ecological communities occur within the project area:

- Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (*Eucalyptus ovata* / *E. brookeriana*); and
- Tasmanian white gum (*Eucalyptus viminalis*) wet forest.

There is no direct or indirect impact to these ecological communities nor any other EPBC-listed ecological community.

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

No

#### 4.1.4.6 Describe why you do not consider this to be a Significant Impact. \*

For each of the three dasyurid species where there is an assessed potential direct and indirect impact to them, a significant impact assessment was conducted - Att\_F Tasmanian Devil Significant Impact Assessment (Tasmanian devil, *Sarcophilus harrisii*), Att\_G Spotted tailed quoll Significant Impact Assessment (spotted-tailed quoll, *Dasyurus maculatus maculatus*), and Att\_H Eastern quoll Significant Impact Assessment (eastern quoll, *Dasyurus viverrinus*).

The assessments demonstrated that the overall risk of a any impact (let alone a 'significant' impact) to a Tasmanian devil, spotted-tailed quoll and eastern quoll individual (and species generally) is exceptionally low, bordering on negligible. They are not likely to be significant in isolation or in a cumulative context.

##### Tasmanian devil (*Sarcophilus harrisii*)

Primary threats to the Tasmanian devil (*Sarcophilus harrisii*) based on SPRAT information (e.g. Department of the Environment, Water, Heritage and the Arts (2009). Approved Conservation Advice for *Sarcophilus harrisii* (Tasmanian Devil). Canberra: Department of the Environment, Water, Heritage and the Arts, and Threatened Species Scientific Committee (TSSC) (2009). Commonwealth Listing Advice on *Sarcophilus harrisii*. Department of the Environment, Water, Heritage and the Arts, and Tasmanian Devil (*Sarcophilus harrisii*) - EPBC Policy Statement 3.6 (Department of the Environment and Heritage (AGDEH), 2006) and their relationship/relevance to the proposed action are provided below -

- Devil facial tumour disease (DFTD) - a disease that has caused significant decline to the number of animals of the species across Tasmania, especially the east. The proposed action is unlikely to cause the spread or persistence of DFTD to the population.
- road mortality - devils can be struck by vehicles on roads especially where they may be attracted by existing roadkill (i.e., they may be struck as 'secondary roadkill'). All vehicles (trucks, cars, light vehicles) can cause a negative outcome to a struck animal.
- deliberate killing - not an activity of the proposed action.
- poison baiting - no poisons will be used in the proposed action.
- competition and predation from introduced carnivores - feral cats are already present in the project area (Att\_C\_Ecological Assessment Report - Part 1, Table 5) and are not part of nor would they be advantaged by the action. Foxes are absent from Tasmania.

The relevant matters to the proposed action are road mortality and habitat loss and modification. Road mortality is likely to be negligible given the low number of traffic movements, the short distance which they travel and their very low speed. Habitat loss is of negligible extent.

##### Spotted-tailed quoll (Tasmanian population) (*Dasyurus maculatus maculatus*)

Primary threats to the spotted-tailed quoll (*Dasyurus maculatus maculatus*) based on SPRAT information (e.g., Department of Environment, Land, Water and Planning (2016). *National Recovery Plan for the Spotted-tailed Quoll* *Dasyurus maculatus*. Australian Government, Canberra, and Threatened Species Scientific Committee (TSSC) (2004). *Commonwealth Listing Advice on Dasyurus maculatus maculatus* (*Spot-tailed Quoll, Spotted-tailed Quoll, Tiger Quoll*.) and their relationship/relevance to the proposed action are provided below -

- Habitat loss and modification - No quoll dens have been confirmed as present in the project area despite visual searches of suitable habitat. The habitat is already highly modified and the 1.2 hectares of native forest present is silvicultural (timber harvested) regeneration.
- Fragmentation - the limited footprint of the project area will not cause isolation, fragmentation or population to become genetically disjunct.
- Timber harvesting - clearing of 1.2 hectares of native forest will occur but it will be regenerated as part of the rehabilitation process. The forest is silvicultural regeneration, having already been logged.
- Poison baiting - no poisons will be used in the proposed action.
- Competition and predation from introduced carnivores - feral cats are already present in the project area (Att\_C\_Ecological Assessment Report - Part 1, Table 5) and are not part of nor would they be advantaged by the action. Foxes are absent from Tasmania.
- Deliberate killing - not an activity of the proposed action
- Wildfire and prescription burning - no burning is proposed as part of the action.

The relevant matters to the proposed action are road mortality and habitat loss and modification. Road mortality is likely to be negligible given the low number of traffic movements, the short distance which they travel and their very low speed. Habitat loss is of negligible extent.

#### **Eastern quoll (*Dasyurus viverrinus*)**

Primary threats to eastern quoll (*Dasyurus viverrinus*) based on SPRAT information (e.g., Threatened Species Scientific Committee (2015). *Conservation Advice Dasyurus viverrinus eastern quoll*. Canberra: Department of the Environment) and their relationship/relevance to the proposed action are provided below -

- predation by feral cats - feral cats are present at the project area, the action will not cause any increase in feral cats.
- disease - the action is unlikely to cause the introduction or spread of disease.
- climate change - the causal mechanisms of climate change are cumulative and likely
- predation by red foxes - foxes are absent from Tasmania, and the action is not to introduce them.
- non-target poisoning associated with 1080 - the action is not using 1080
- non-target poisoning associated with rodent control - rodent control is not proposed by the action
- road mortality - noted as a minor and localised impact in the SPRAT conservation advice.

The **only** relevant matter to the proposed action is road mortality which is likely to be negligible given the low number of traffic movements, the short distance which they travel and their very low speed.

Overall, the following can be said about the proposed action which makes it unlikely to have a significant impact to any listed fauna species (i.e. a protected matter relevant to the proposed action):

**Limited Footprint of the proposed action** - The scale of the proposed action is simply insufficient to have any meaningful landscape level impact to any of the 3 large dasyurid species such that they would decline even if the impacts (e.g., animal - vehicle interactions) were not to have avoidance and mitigation measures applied.

**Apparent lack of maternal dens in the project area** - No dens of either the devil or quoll species have been confirmed as present in the project area despite visual searches of suitable habitat.

**Short Duration of proposed action** - The proposed action has a finite duration of about 3 years. If coal extraction slows then the 3 year timeframe may extend by 1-2 years. Even if the proposed action has a general deterrent effect on the use of the area by large dasyurids (i.e., the Tasmanian devil and the two quoll species) it would unlikely be any longer lasting than the activity itself; once machinery have completed rehabilitation earthworks then remedial works would be intermittent and require only small vehicles.

**Potential and significant habitat will be unaffected by the action and its activities** - in the project area for all three large dasyurid species, and on adjoining lands (including the thousands of hectares of native vegetation of the Fingal Valley and surrounding hill systems, some of which support higher quality habitats such as structurally complex wet sclerophyll forests, scrubs, and swamp forests) such that the overall loss of habitat is insignificant. The native vegetation (1.2 hectares of regrowth dry forest) will be re-established when the action is concluded, site decommissioned and the land rehabilitated; this is typical of a mining activity that has a finite lifespan.

**Traffic movements** - The proposed action is likely to have negligible impact to devils and quolls given the low number of traffic movements, the short distance which they travel and their very low speed.

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

No

#### **4.1.4.9 Please elaborate why you do not think your proposed action is a controlled action. \***

The action is not a controlled action because it is unlikely to cause a significant impact to any protected matter even without the application of avoidance and mitigation measures.

Specifically, the proposed action is a very small activity of a short timeframe in a highly modified part of a broader agricultural/plantation forestry landscape. The Ecological Report (Att\_C\_Ecological Assessment Report - Part 1 **and** Att\_C\_Ecological Assessment Report - Part 2) determined that the only *potential* impacts of the proposed action were to the Tasmanian devil (*Sarcophilus harrisi*), spotted-tailed quoll (*Dasyurus maculatus maculatus*), and eastern quoll (*Dasyurus viverrinus*).

Further comments on the key factors as to why the action is not a controlled action are provided below:

**Low Habitat Quality - mostly non-native, dominated by hardwood plantation** - The project area, is of very low habitat quality.

Hardwood plantation dominates the footprint, with agricultural land and degraded wet heathland. The plantation has windrows from past land clearing activities; no dens were observed in the windrows, but there is a small potential that dens are established before/during the implementation of the action.

**Limited Footprint** - The scale of the proposed action is simply insufficient to have any meaningful landscape level impact to the species such that it would decline even if the impacts (e.g., animal - vehicle interactions) were not to have avoidance and mitigation measures applied



**Short Duration** - The proposed action has a finite duration of about 3 years. If coal extraction slows then the 3 year timeframe may extend by 1-2 years. Even if the proposed action has a general deterrent effect on the use of the area by large dasyurids (i.e., the Tasmanian devil and the two quoll species) it would unlikely be any longer lasting than the activity itself; once machinery have completed rehabilitation earthworks then remedial works would be intermittent and require only small vehicles.

**Active avoidance of animal - vehicle impacts** - After the Devil Facial Tumour Disease (DFTD), roadkill is a threat to the Tasmanian devil. Roadkill is also a major threat to quoll species as noted in the SPRAT for both; however, based on the roadkill data from the Department of Natural Resources and Environment (Tasmania) there are no major roadkill 'hotspots' on the Esk Main Road or Tasman Highway.

As an extra precautionary measure, the proposed action will apply a no works/vehicle activity from 1-hour before dusk to 1-hour after dawn throughout the year; wildlife camera collected imagery showed all devil activity occurred within the vehicle/work exclusion period.

#### Implementation of mitigation measures

Mitigation measures are to be applied through the construction, operational and closure/rehabilitation phases of the proposed action. The risk profile to the three large dasyurid species is comparable between them, but varies between the phases of the action.

#### 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 Proponent engaged Van Diemen Consulting to conduct ecological and natural values assessments of the Cullenswood 6 area and to document those in a report (Att\_C\_Ecological Assessment Report - Part 1 and Att\_C\_Ecological Assessment Report - Part 2). A key recommendation of the Ecological Report was to develop and implement a habitat action plan (Att\_I\_Large Dasyurid Habitat Action Plan) to provide clear management actions for the large dasyurids (and their habitat) that do or may occur from time to time in the area; the Tasmanian devil (*Sarcophilus harrisii*), spotted-tailed quoll (*Dasyurus maculatus maculatus*), and eastern quoll (*Dasyurus viverrinus*).

The LDHAP supports the Commonwealth *Environment Protection and Biodiversity Conservation Act* referral application to DCCEEH for the Cullenswood 6 open-cut extraction pit No.6 project.

Mitigation measures are to be applied through the construction, operational and closure/rehabilitation phases of the proposed action. The risk profile to the three large dasyurid species is comparable between them, but varies between the phases of the action.

While no significant impact is likely to occur to any of the 3 large dasyurid species, a habitat action plan (Att\_I\_Large Dasyurid Habitat Action Plan) has been prepared that describes strategies and actions to manage large dasyurid marsupials and their habitat across Cullenswood 6 for all stages of mine life; prior to breaking-ground at the site, during mining operations and into the decommissioning and post-closure phases of the mining activity.

The LDHAP describes how the Project will address, manage, monitor, and mitigate impacts to Large Dasyurid (LD) species, which are:

- Tasmanian devil (*Sarcophilus harrisii*),
- spotted-tailed quoll (*Dasyurus maculatus maculatus*), and
- eastern quoll (*Dasyurus viverrinus*).

The LDHAP has the following objectives:

- Minimise the spatial and temporal extent of large dasyurid denning and foraging habitat cleared;
- Document the risks to large dasyurids from Project activities and identify/describe practical avoidance and mitigation measures commensurate with the identified level of risk;
- Outline the roles and responsibilities of the Project team;
- Prescribe monitoring methods/strategies to assess the effectiveness of the mitigation measures implemented; and
- Document Project review/auditing, reporting and compliance requirements.

The LDHAP includes the following management measures and processes to reduce the potential for any impact to any of the three large dasyurid species to negligible levels –

- Pre-clearance den surveys of vegetation and woodpiles must be completed prior to their disturbance for works. The management of dens or potential dens found in pre-clearance surveys is to be in accordance with a protocol (Att\_C\_Ecological Assessment Report - Part 2, Attachment 7).
- Installation of harm minimisation measures such as bunding around the perimeter of any open pit to minimise the risk of animals falling into the pit (noting that this has never happened at Cullenswood 2 or 5), and an accessible ramp out of the pit if animals were to enter the pit.
- Establishment of windrows/woodpiles as alternative denning habitat for large dasyurids, which they can choose to use shortly after their creation or at some distant time in the future. The recreation of woodpiles is a means to maintain denning potential habitat in the landscape. Plans in the LDHAP methodically identify the woodpiles to be removed for mining, the planned location and process of woodpile recreation in the vicinity (with new or recycled timber generated from the clearing works) and the establishment of an alternate 'road' for animal use above the pits and associated cut-off drains.
- To provide alternate formed tracks and other structures to maintain accessibility for animals, particularly large dasyurids, while the action is operational. These features, where appropriate and the assessed risk to impacting animals is negligible, may be associated with mining infrastructure such as cut-off drains and roads.
- A monitoring regime using scat and track surveys, and wildlife cameras, to identify large dasyurid usage of new woodpiles, the upgraded 'road', new tracks, and installed accessibility structures (e.g., 'habitat culverts') and the post-decommissioning and rehabilitation stages of the action.

The LDHAP is supported by induction processes for site personnel, and the identification/instatement of a Project Ecologist with clearly defined roles and responsibilities of monitoring outcomes, organising the assessment and decommissioning of any dens or potential dens and the capture and management of any injuries and deaths during the action.

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

No offsets are proposed because there are no residual impacts to protected matters.

**4.1.5 Migratory Species**

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

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

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

Direct impact	Indirect impact	Species
No	No	Actitis hypoleucos
No	No	Apus pacificus
No	No	Calidris acuminata
No	No	Calidris ferruginea
No	No	Calidris melanotos
No	No	Gallinago hardwickii
No	No	Hirundapus caudacutus
No	No	Myiagra cyanoleuca
No	No	Numenius madagascariensis

**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 proposed action is very unlikely to directly or indirectly cause an impact to a Migratory Species.

Migratory bird species such as the fork-tailed swift (*Apus pacificus*), white-throated needletail (*Hirundapus caudacutus*), and satin flycatcher (*Myiagra cyanoleuca*) were only broadly considered in the ecological assessments and report because they are not specific to any single habitat type; they are habitat generalists.

Fork-tailed swift and white-throated needletail are non-breeding visitors to Australia; they do not rely upon nest potential hollows. Satin flycatcher breeds in south-eastern Tasmania; however hollows are absent from the forests (native and hardwood plantation) present in the project area.

Habitat specific wetland bird species, such as the Australasian bittern (*Botaurus poiciloptilus*), require moderate to large wetland or coastal estuarine mudflat habitats. These species are very unlikely to use the project area because their required habitat is also absent.

Marine, estuarine and pelagic birds are unlikely to be impacted because their habitat is absent from the project area.  
There is likely to be no significant impacts to any EPBC-listed migratory species.

**4.1.6 Nuclear**

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

No

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

The proposed action does not include any nuclear component.

**4.1.7 Commonwealth Marine Area**

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

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

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

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

No

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

There are no Commonwealth Marine Areas within, adjacent to or nearby the project area. The proposed action is very unlikely to directly or indirectly cause a significant impact to Commonwealth Marine Areas.

**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. \***

There Great Barrier Reef is not within, adjacent to or nearby the project area. The proposed action is very unlikely to directly or indirectly cause a significant impact to the Great Barrier Reef.

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

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

Yes

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

An amendment was made by the *Environment Protection and Biodiversity Conservation Amendment Act 2013* (the Amendment Act) to provide that water resources are a matter of national environmental significance in relation to coal seam gas and large coal mining development. The amendment came into effect on 22 June 2013. Under the EPBC Act, an action which involves a CSG development or a large coal mining development now requires approval from the Australian Government Environment Minister if the action has, will have, or is likely to have a significant impact on a water resource.

The application of the water trigger relates to a development's likely impact on a water resource, and not the size of the proposed CSG or coal mining activity per se.

The following information and assessment is made for each of the two components of the water resource protected matter.

###### Coal Seam Gas

A 'coal seam gas development' is defined under the EPBC Act (section 528) as: any activity involving coal seam gas extraction that has, or is likely to have, a significant impact on water resources (including any impacts of associated salt production and/or salinity): (a) in its own right; or (b) when considered with other developments, whether past, present or reasonably foreseeable developments.

The proposed action does not seek to extract coal seam gas so this component of the protected matter is not relevant.

###### Large coal mining development

A 'large coal mining development' is defined under the EPBC Act (section 528) as: any coal mining activity that has, or is likely to have, a significant impact on water resources (including any impacts of associated salt production and/or salinity): (a) in its own right; or (b) when considered with other developments, whether past, present or reasonably foreseeable developments.

The proposed action seeks to extract coal so this component of the protected matter is possibly relevant.

Water is **not** used in the extraction process and there is no processing of raw coal at the action location so the extraction and/or use of water at the project area is not a part of the action. The following descriptions provide information about water use and management for the proposed action, including those matters of relevance to this protected matter.

###### Potential impacts to water resource

###### Surface Water

There is likely to be no impact to surface water volume because the drainage system associated with the action will mimic the existing. Specifically, surface water flows and their location are to be largely retained at current levels and locations during the proposed action through the careful siting and sizing of culverts and drains (see Att\_D\_Haul Road Technical Drawings). Drains and culverts have been sized to suit 1 in 20 year flow events.

Recharge to groundwater from surface water is unlikely to be impacted given the small area being opened and the maintenance (approximate location and volumes) of surface water flows.

The proposed action in its own right does have the potential to modify water chemistry if pit accumulated water is pumped from the pit in an uncontrolled manner. Water that falls into the pit is predominantly from rainfall that becomes surface flows once it either falls into the pit or associated with the pit surface in the catchment of the pit. Bunds and cut-off drains would otherwise direct surface flows around the pit to avoid the entry of extraneous water volumes to the pit. Irrespective of bunds to exclude extraneous water entering the pit, water is likely to accumulate in the pit over time which may reflect some of the chemical composition of the Parmeener supergroup mudstones associated with the coal seam.

Groundwater

Past and current projects including Cullenswood No. 2 pit (active) and Cullenswood No. 5 pit (closed, now under rehabilitation) did not intersect any significant volumes of groundwater.

Groundwater was not intersected when exploration drilling the area, and coal in the valley-system is not recorded as being an aquifer. There are no groundwater bores associated with the project area or the Bullock Paddock Creek area of the Cullenswood agricultural enterprise.

There are no reasonably foreseeable developments to which the proponent is aware that would be relevant to this matter.

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

No

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

The 'Significant impact guidelines 1.3, Commonwealth of Australia 2013' were consulted in determining whether the proposed action would or is likely to have any direct/and or indirect impact on this protected matter.

The core purpose of the 'Significant impact guidelines 1.3, Commonwealth of Australia 2013' is to assist any person who proposes to take an action which involves a CSG (coal seam gas) development or a large coal mining development to decide whether the action has or is likely to have a significant impact on a water resource. If the action is likely to have such an impact, the proponent should submit a referral to the Australian Government Department of the Environment (the Department) for a decision by the Minister on whether assessment and approval is required under the EPBC Act.

Specifically, the prescribed matters in the guideline that were considered on the basis of the flowchart in the guidelines (*Significant impact guidelines 1.3: Coal seam gas and large coal mining developments— impacts on water resources*, pp 6) are -

- 5.3. Guidance on changes to hydrological characteristics
- 5.4. Guidance on changes to water quality

The proposed action is unlikely to cause any change to the hydrological characteristics project area (and immediate surrounds) given the small extent of the action, and the intended almost unaltered redirection of surface waters around the pits when they are open. Water is not used in the extraction process and there is no processing of raw coal at the action location so the extraction and/or use of water at the project area is not a part of the action; there is no water abstraction by the action

The haul road has been designed to cater for surface water flows to maintain their location and flow (Att\_D\_Haul Road Technical Drawings) and the final location where surface waters now currently report - Bullock Paddock Creek or the dam via the existing diversion drain located in the Lightwood Rivulet catchment (Att\_E\_Existing Environment Maps, Fig. 3). Therefore, surface water would continue to flow, in unaltered natural volumes relative to rainfall, to those locations where it reports now, including the catchment dam downstream of the water diversion drain on Bullock Paddock Creek.

The quality of surface water is also unlikely to be altered given surface flows are to be redirected around each Block and any water that falls into the disturbed area (excluding the pit itself) would be captured for sediment removal prior to discharge into the environment. Pit water would only be pumped to the sediment pond if it was of sufficient volume to prevent access to the coal resource or inhibit the mining process. Testing of pit water during the pumping process would enable quality to be checked and additives applied to ameliorate any quality issues, such as elevated sodium, iron, sulphates and/or calcium.

**Changes to hydrological characteristics - Section 5.3 of the 'Significant impact guidelines 1.3, Commonwealth of Australia 2013'**

A significant impact on the hydrological characteristics of a water resource may occur where there are, as a result of the action: a) changes in the water quantity, including the timing of variations in water quantity b) changes in the integrity of hydrological or hydrogeological connections, including substantial structural damage (e.g. large scale subsidence) c) changes in the area or extent of a water resource where these changes are of sufficient scale or intensity as to significantly reduce the current or future utility of the water resource for third party users, including environmental and other public benefit outcomes.

The following can be said about the three items in this significant impact criterion:

(a) Surface water flows and their location are to be largely retained as current levels during the proposed action through the careful sighting and sizing of culverts and drains (Att\_D\_Haul Road Technical Drawings). Water is **not** used in the extraction process and there is no processing of raw coal at the action location so the extraction and/or use of water at the project area is not a part of the action.

(b) Subsidence has not occurred at any closed and rehabilitated Cullenswood pit, including the closed and rehabilitated areas of Cullenswood 2, and Cullenswood 1. Pit closure involves the backfilling of material in the layers of material they are extracted to retain sedimentary similarity with the surrounding undisturbed geology. Groundwater is unlikely to be intersected in significant volumes based on experience at the nearby Cullenswood 2 and 5 pits.

(c) the change in the area or extent of a water resource are insignificant relative to the catchment as a whole so the action is unlikely to significantly reduce the current or future utility of the water resource for third party users, including environmental and other public benefit outcomes. Surface waters will continue to flow and report to those catchments and features (e.g., the landowners dam) as they do now.

**Water Quality - Section 5.4 of the 'Significant impact guidelines 1.3, Commonwealth of Australia 2013'**

A significant impact on a water resource may occur where, as a result of the action: a) there is a risk that the ability to achieve relevant local or regional water quality objectives would be materially compromised, and as a result the action: i. creates risks to human or animal health or to the condition of the natural environment as a result of the change in water quality ii. substantially reduces the amount of water available for human consumptive uses or for other uses, including environmental uses, which are dependent on water of the appropriate quality iii. causes persistent organic chemicals, heavy metals, salt or other potentially harmful substances to accumulate in the environment iv. seriously affects the habitat or lifecycle of a native species dependent on a water resource, or v. causes the establishment of an invasive species (or the spread of an existing invasive species) that is harmful to the ecosystem function of the water resource, or b) there is a significant worsening of local water quality (where current local water quality is superior to local or regional water quality objectives), or c) high quality water is released into an ecosystem which is adapted to a lower quality of water.

The following can be said about the three items in this significant impact criterion:

(a) (i) water quality objectives per the Environmental Management Goals for Tasmanian Surface Waters: DORSET & BREAK O'DAY MUNICIPAL AREAS (Att\_J\_Dorset\_and\_BreakODay\_Catchment\_Area\_Final\_Paper, pp. 15-16, and Table 5 for 'private waters'). These values are unlikely to be compromised by the proposed action.

(a)(ii) the action will not use water abstracted from the environment. Surface flows will be largely the same as they are now given culverts and drains have been located and sized to suit likely flows (at least 1 in 20 year rainfall events).

(a)(iii) the action is one that does not use chemicals or other potentially hazardous inputs to the extraction process such as organic chemicals used in coal seam gas works. Hydrocarbons are to be used at the project area (fuel for machinery and equipment) but standard operating and storage measures apply.

(a)(iv) the action is very unlikely to seriously affect the habitat or lifecycle of a native species dependent on a water resource because the creeklines above the action (and project area) in the catchment are ephemeral, and they are to be provided culverts and drains to maintain connectivity.

(a)(v) the action is unlikely to cause the introduction or spread of an invasive species that is harmful to the ecosystem function of the water resource. Surface water flows will largely be retained as they are in terms of volume and their location.

(b) there is unlikely to be a significant worsening of local water quality (where current local water quality is superior to local or regional water quality objectives). The operation of Cullenswood 2 and 5 has illustrated that water quality objectives and those of local relevance are not compromised.

(c) water released from the project area, either as naturally diverted surface flows or that extraneous water pumped from the pit is unlikely to be of any material 'quality difference to that water

Groundwater is absent which was confirmed through the mineralogical exploration works conducted to determine the location and quality of the coal resource. There are no groundwater bores associated with the project area or the Bullock Paddock Creek area of the Cullenswood agricultural enterprise.

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

No

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

The very small size and short-term nature (3 to 5 years of operation) of the action means that there is unlikely to be any significant impact to the water resource protected matter.

Surface water flows and their location are to be largely retained as current levels during the proposed action through the careful siting and sizing of culverts and drains (Att\_D\_Haul Road Technical Drawings). Groundwater is unlikely to be intersected based on previous experience from Cullenswood 2 and 5 open cut pits and the results of exploration drilling of the Cullenswood 6 resource (i.e., no groundwater intersected).

**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. \***

No specific avoidance and mitigation measures are proposed.

Surface water flows and their location are to be largely retained as current levels during the proposed action through the careful sighting and sizing of culverts and drains (Att\_D\_Haul Road Technical Drawings). This approach is standard mine management practice for open cut pits to minimise the ingress of surface water flows into the pit being worked.

Sediment ponds to be installed for each Block would be used to receive pit water (slowly pumped to the ponds) that may need to be dewatered to gain access to the coal seam if rainfall has been heavy or sustained. Water will be tested prior to discharge to the environment to ensure that it is of suitable quality. Additives may need to be used to adjust water quality.

Hydrocarbons are to be used at the project area (fuel for machinery and equipment) but industry standard operating and storage measures apply.

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

No offsets are proposed as there is no residual impact to the relevant component of the protected matter.

**4.1.10 Commonwealth Land**

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

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

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

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

No

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

There is no Commonwealth Land within, adjacent to or nearby the project area. The proposed action is very unlikely to directly or indirectly cause a significant impact to 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. \***

There are no Commonwealth heritage places overseas within, adjacent to or nearby the project area.

**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:

*None*

### 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)
- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth heritage places overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)



## 4.3 Alternatives

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

No

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

The Cornwall Coal Company Pty Limited commenced production in 1886 and have been a significant employer in the Fingal valley over a long number of years and continue to be a primary employer to this day. Active operations include an underground mine, Blackwood 4, as well as an open-cut mine, Cullenswood 2 and a Coal Wash Plant in the Fingal Valley. There is also an open-cut mine at Hamilton.

The combined extractive operations supply coal to meet the manufacturing requirements of Cement Australia Railton cement works, the Norske Skog paper mill at Boyer, the reduction requirements at Liberty Bell Bay as well as several horticultural activities such as hothouses for the floriculture industry located across the state.

No alternative locations were considered because the coal resource to be extracted is spatially constrained to the identified location - it has been exploration drilled to test for quality and location of the resource.

The infrastructure at the Cullenswood 2 activity proposed to be used for the Cullenswood 6 open-cut pit is mainly existing (i.e., ROM Pad, amenities and office, the road to Esk Main Road, junction at Esk Main Road and transport road). It's use for the Cullenswood 6 Open-Cut Pit is economically and environmentally responsible because it avoids the need to decommission the existing ROM Pad only to develop another further to the south-east.

## 5. Lodgement

### 5.1 Attachments

#### 1.2.1 Overview of the proposed action

#1.	Att_A_Development Application Supporting Information	Document	The supporting information to the development application lodged with the Break O'Day Council
#2.	Att_D_Haul Road Technical Drawings	Document	The technical drawings for the haul road and stormwater management systems for the haul road

#### 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

#1.	Att_B_SHEQ Documentation	Document	The SHEQ Management System Manual of Cement Australia which includes The Cornwall Coal Company Pty Limited
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#### 3.1.1 Current condition of the project area's environment

#1.	Att_D_Haul Road Technical Drawings	Document	Technical drawings of the haul road and associated stormwater infrastructure for the road including culverts
#2.	Att_E_Existing Environment Maps	Document	Maps which show features of the existing environment such as geology, catchments and planning zones

#### 3.2.1 Flora and fauna within the affected area

#1.	Att_C_Ecological Assessment Report - Part 1	Document	The ecological and natural values assessment conducted for the Cullenswood 6 Development
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#2.	Att_C_Ecological Assessment Report - Part 2	Document	The ecological and natural values assessment conducted for the Cullenswood 6 Development
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## 4.1.4.6 (Threatened Species and Ecological Communities) Why you do not consider the direct and/or indirect impact to be a Significant Impact

#1.	Att_F Tasmanian Devil Significant Impact Assessment	Document	Significant impact assessment for the proposed action on the Tasmanian devil
#2.	Att_G Spotted tailed quoll Significant Impact Assessment	Document	Significant impact assessment for the proposed action on the spotted tailed quoll
#3.	Att_H Eastern quoll Significant Impact Assessment	Document	Significant impact assessment for the proposed action on the eastern quoll

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

#1.	Att_I Large Dasyurid Habitat Action Plan	Document	A plan that outlines the framework to avoid and mitigate impact to the large dasyurid species known to occur in the region
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## 4.1.9.6 (Water resource in relation to large coal mining development or coal seam gas) Why you do not consider the direct and/or indirect impact to be a Significant Impact

#1.	Att_J Dorset and Break O Day Catchment Area Final Paper	Document	Environmental Management Goals for Tasmanian Surface Waters: DORSET & BREAK O'DAY MUNICIPAL AREAS
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## 5.2 Declarations

### Completed Referring party's declaration

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

Name	Richard Barnes
Job title	Director, Principal Planner and Principal Ecologist
Phone	0438588695
Email	rwbarnes73@gmail.com
Address	PO Box 1 New Town TAS 7008

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, **Richard Barnes**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. \*

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

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**✔ Completed Person proposing to take the action's declaration**

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

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ABN/ACN	48009485518
Organisation name	THE CORNWALL COAL COMPANY PTY LIMITED
Organisation address	18 Station Avenue, DARRA QLD 4076
Representative's name	Keith Falconer
Representative's job title	Operations Manager
Phone	0409 457 779
Email	keith.falconer@cemaust.com.au
Address	PO Box 402, Fingal, TAS 7214

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, **Keith Falconer of THE CORNWALL COAL COMPANY PTY LIMITED**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. \*

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

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

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

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Same as Person proposing to take the action information.

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

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

I, **Keith Falconer of THE CORNWALL COAL COMPANY PTY LIMITED**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. \*

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