Draft terms of reference

Environmental Protection Act 1994

Yarrabee Coal Mine Continuation project - draft terms of reference (ESR-2017-4038)

This is the approved form to submit a draft terms of reference to the Department of the Environment, Tourism, Science and Innovation for projects being assessed by environmental impact statement (EIS) process under the Environmental Protection Act 1994 (EP Act)

Draft terms of reference for an environmental impact statement under the *Environmental Protection Act 1994*

Yarrabee Coal Mine Continuation project
proposed by Yarrabee Coal Company Pty Ltd.
November 2025

Prepared by: Yarrabee Coal Company Pty Ltd.

Completed in the approved form *ESR/2017/4038*, version 5.01, 18 July 2025 prepared by the Department of the Environment, Tourism, Science and Innovation for projects undergoing assessment by environmental impact statement under chapter 3, part 1, of the EP Act.

November 2025

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1. Purpose of the draft TOR

Document introduction

1.1 This document is the draft terms of reference (TOR) for the Yarrabee Coal Mine Continuation project (herein referred to as 'the project') proposed by Yarrabee Coal Company Pty Ltd. being assessed under the environmental impact statement (EIS) process in chapter 3, part 1, of the *Environmental Protection Act 1994* (EP Act). It describes the scope and content that the EIS must include to allow the purposes of the EIS and EIS process, as defined in the EP Act, to be achieved for the project (section 40 of the EP Act).

EIS purpose and process

1.2 The purposes of an EIS and the EIS process are:

(a) to assess the potential adverse and beneficial environmental, economic and social impacts of the project

(b) to assess management, monitoring, planning and other measures proposed to minimise any adverse environmental impacts of the project

(c) to consider feasible alternative ways to carry out the project

(d) to give enough information to the proponent, Commonwealth and State authorities and the public to assess the project and for the proponent to prepare an environmental management plan for the project

(e) to help the department decide an environmental authority (EA) application for which the EIS is required

(f) to give information to other Commonwealth and State authorities to help them make informed decisions.

Key EIS requirements of the EP Act and subordinate legislation

1.3 The EIS must address key requirements outlined in the EP Act and subordinate legislation, including:

(a) the requirements of section 40 of the EP Act, which specifies the purpose of an EIS and of the EIS process

(b) the requirements of sections 125, 126 and 126A which set out the general information requirements for applications for an EA

(c) the requirements of sections 126B, 126C and 126D which set out the information requirements for a proposed progressive rehabilitation and closure plan (PRC plan) for mining projects

(d) the requirements of chapter 2 and schedule 1 of the Environmental Protection Regulation 2019 (EP Regulation), including matters to be addressed by assessment under the bilateral agreement between the Australian Government and the State of Queensland

(e) the environmental objectives and performance outcomes specified in schedule 8 of the EP Regulation.

EIS information requirements

1.4 The EIS must provide all the information needed to enable the issuing of an EA (and PRC plan schedule for mining projects) for the project as set out in these TOR in conjunction with the latest version of the department's EIS information guidelines. This is because section 139 of the EP Act states that the information stage of the EA application and PRC plan does not apply if the EIS process is complete, unless there has been a subsequent change to the project including changes to a proposed PRC plan (where relevant).

1.5 While every attempt is made by the department to ensure the final TOR requires an assessment of all relevant matters, the final TOR may not be exhaustive. Therefore, the EIS must address other matters not covered in the final TOR in the following circumstances:

(a) Where studies reveal a matter that had not been foreseen when the TOR was finalised.

(b) An issue not identified previously is considered contentious by the public, such as a public perception of potential environmental harm or nuisance even though the perception might be mistaken.

(c) The department directs the proponent in writing to address a matter as an information request under section 62 of the EP Act.

(d) New or amended legislation or policies come into effect after the TOR has been finalised, regardless of whether the legislation or policies have been listed in the TOR. Transitional arrangements or exemptions may apply for individual projects.

(e) The proponent makes amendments to the project that would result in a change in the nature, timing or location of any impacts.

Information about the project and assessment

Project proponent

1.6 Yarrabee Coal Company Pty Ltd. (YCC) is the proponent for the project. YCC is a wholly owned subsidiary of Yancoal Australia Limited (Yancoal). Yancoal owns, operates or has interest in 12 mines across Australia, two of which are located within the Bowen Basin, Queensland. Yancoal is a leading Australian coal producer and one of Australia's largest coal exporters, producing a mix of premium thermal, semi-soft coking and pulverised coal injection coals for export.

Project description

1.7 The Yarrabee Coal Mine is an open cut mine located in the Central Highlands Regional Council local government area, approximately 40 kilometres (km) north-east of Blackwater, 150 km west of Rockhampton, and 280 km north-west of the Port of Gladstone (Figure 1 and Figure 2).

The project will be a direct continuation of the existing Yarrabee Coal Mine, located within the current Yarrabee Coal Mine mining leases (ML) ML 1770, ML 80049, ML 80050, ML 80096, ML 80104, ML 80172, ML 80195, ML 80196, ML 80197 and ML 80198 (Figure 3). The project includes an additional disturbance footprint of approximately 2,296 hectares (ha), in addition to the approximate 4,044 ha of existing approved disturbance (Figure 3). The project will utilise and augment existing infrastructure and where required, develop additional supporting infrastructure.

The Yarrabee Continuation project will continue and expand existing open cut operations at the Yarrabee Coal Mine to produce metallurgical coal for the international coal market. The project will maintain the currently approved production rate of up to 4 million tonnes per annum (Mtpa) of run of mine (ROM) coal until 2070, with an additional 74 million tonnes (Mt) ROM coal extracted over the life of the project. It is expected that the project will produce 100 percent (%) metallurgical coal, with product coal occasionally also sold as thermal coal.

The project (Figure 4) includes the following primary components and activities:

- continued development and operation of an open cut metallurgical coal mine within the existing Yarrabee Coal Mine MLs;
- additional extraction of approximately 74 Mt of ROM coal;
- continued extraction of up to 4 Mtpa ROM coal;
- extension of the mine life to 2070;
- up to a 15% increase in the operational workforce to approximately 490 FTE personnel (including labour hire and contract workers);
- material advancements and improvements to the final landform and final land uses;
- progressive development and augmentation of internal haul roads, light vehicle roads, and service tracks;
- relocation and development of onsite powerlines and upgrades to existing electrical infrastructure, as required;
- progressive development and augmentation of water management infrastructure including dams, pumps, pipelines, diversions, and drains, as required;
- maintenance of the existing sewage treatment facilities; and
- development and augmentation of other ancillary infrastructure, plant, equipment, and associated activities required to support the project.

The project will involve open cut mining within the Late Permian Rangal Coal Measures, with the Pollux seam being the primary target seam. Mining will continue to be undertaken using conventional truck, blasting and shovel mining methods. The open cut mining operational areas will generally include supporting infrastructure including haul roads, bunding, embankments, soil stockpiles, hardstands, and water management structures. The indicative open cut extent (Figure 4) is based on the location of the projects coal reserves and detailed mine planning.

The existing MIA, offices and workshops (Figure 4) are located to the northwest of A Pit and will continue to be utilised for the project. Minor upgrades to these facilities may be required over the life of the project. The Coal Handling and Preparation Plant (CHPP) is located to the south of D-Pit and will continue to be utilised for coal handling and processing for the project. No major upgrades to the CHPP are planned as part of the project.

The Yarrabee Coal Mine coal reject management strategy will continue to be utilised for the project. The coarse wastes produced will be disposed of in stockpiles, comingled with spoil, or used as construction material. Tailings will be pumped into the existing approved tailings storage facilities, DOM1 and DE-Pit (Figure 4), and the water reclaimed for reuse in the CHPP.

Waste rock produced by mining will continue to be preferentially placed in-pit, to progressively backfill previously mined areas. In-pit waste emplacement is not always possible at Yarrabee Coal Mine due to the structurally complex mining environment and need to keep open multiple pits. Therefore, the project will continue to utilise of pit waste rock emplacements located adjacent to open cut mining areas as per the current operations.

The major road transport routes currently used to access the Yarrabee Coal Mine are the Capricorn Highway and Boonal Haul Road. The Capricorn Highway links the Yarrabee Coal Mine to major towns and cities including Blackwater, Emerald and Rockhampton. Boonal Haul Road is a privately owned and maintained haul road, servicing Yarrabee Coal Mine, Jellinbah Mine and local property owners. Boonal Haul Road is the main road connecting the Yarrabee Coal Mine to the Capricorn Highway. These transport routes will continue to be used for the project.

Product coal from Yarrabee Coal Mine is currently trucked via the Boonal Haul Road to the Boonal Train Load-out Facility. The Boonal Train Load-out Facility operates under its own Environmental Authority and would continue to be used for the project. Product coal is transported from the Boonal Train Load-out Facility via rail to the Port of Gladstone, for export to international customers. With incorporation of the project, Yarrabee Coal Mine will continue to generate product coal at a rate similar to that of the current operation and subsequently, no changes to the existing rail network or port arrangements are expected to be required.

The existing operation receives electricity from the Ergon Energy Grid. Two existing 22 kilovolt (kV) and two existing 66 kV powerlines transmit power across the site. The 22 kV lines are used to feed the mine infrastructure area, offices and workshops. The 66 kV lines are used to feed the CHPP. Maintenance, upgrades, and new onsite electricity infrastructure (e.g. additional powerlines) may be developed for the project as required. There is not expected to be any additional demand on existing power and water services as a result of the project.

Water for the existing operation is sourced from incidental rainfall capture, natural/stormwater runoff, and trucked in potable water. Yarrabee Coal Company also hold a high priority water licence to access water from the Mackenzie River, which may be used to supplement raw water supply. Raw and potable water for the project will be sourced as per the existing Yarrabee Coal Mine operations. Yarrabee Coal Company's high priority water licence may be utilised, if required, to supplement raw water demand for the project. Water supply trucks will continue to be used to distribute potable water to service areas for the project.

The project will increase the current personnel by up to 60 full time equivalent (FTE) to a total of 490 FTE. In accordance with the *Strong and Sustainable Resource Communities Act 2017*, the operational workforce currently is not and will not be a 100% fly-in-fly-out (FIFO) workforce. The project will facilitate significant ongoing socio economic and ecologically sustainable benefits in the local area, region, and State of Queensland, as it will:

- provide for the continuation of the Yarrabee Coal Mine and its workforce;
- provide for the continuation of Yancoal's existing relationships with local suppliers, businesses and community organisations;
- result in improvements and material advancements to the final landform;
- payment of significant royalties to the State of Queensland and other tax payments; and
- utilise existing supporting infrastructure and services developed for the existing operation.

EIS assessment process

1.8 *A summary of the EP Act EIS process to date is outlined below:*

On *28 April 2025,* the department approved an application for *Yarrabee Coal Company Pty Ltd.* to voluntarily prepare an EIS under the EP Act for the *Yarrabee Coal Mine Continuation project*. Under section 139 of the EP Act, the EIS will form the application documents for the requirements of chapter 3 of the EP Act. This is provided that the environmental risks of the activity or way the activity will be carried out, including any proposed PRC plan, do not change between the EIS being completed under the EP Act and when the EA application pertaining to this EIS is made. To date, no EA amendment application has been made that relates to the EIS project.

The proponent has confirmed that they will undertake a separate application under the EPBC Act to determine whether the project is a controlled action. The project IAS indicates that it is likely the project will be determined a controlled action. However, this application process with the Commonwealth has not yet commenced.

As a result, the EP Act EIS for the project will ***not*** assess the potential impacts of the project on any possible controlling provisions under part 8 of the EPBC Act, nor will it be undertaken in accordance with the assessment bilateral agreement between the Australian Government and the State of Queensland or under an accredited process. Once finalised, this TOR and associated EIS process cannot be amended to incorporate an EPBC Act determination decision or apply an accredited or bilateral process.

Further information on the EIS process under the EP Act is described in the department's guideline The environmental impact statement process for resource projects under Chapter 3 of the *Environmental Protection Act 1994* (ESR/2016/2171) (DETSI 2024).

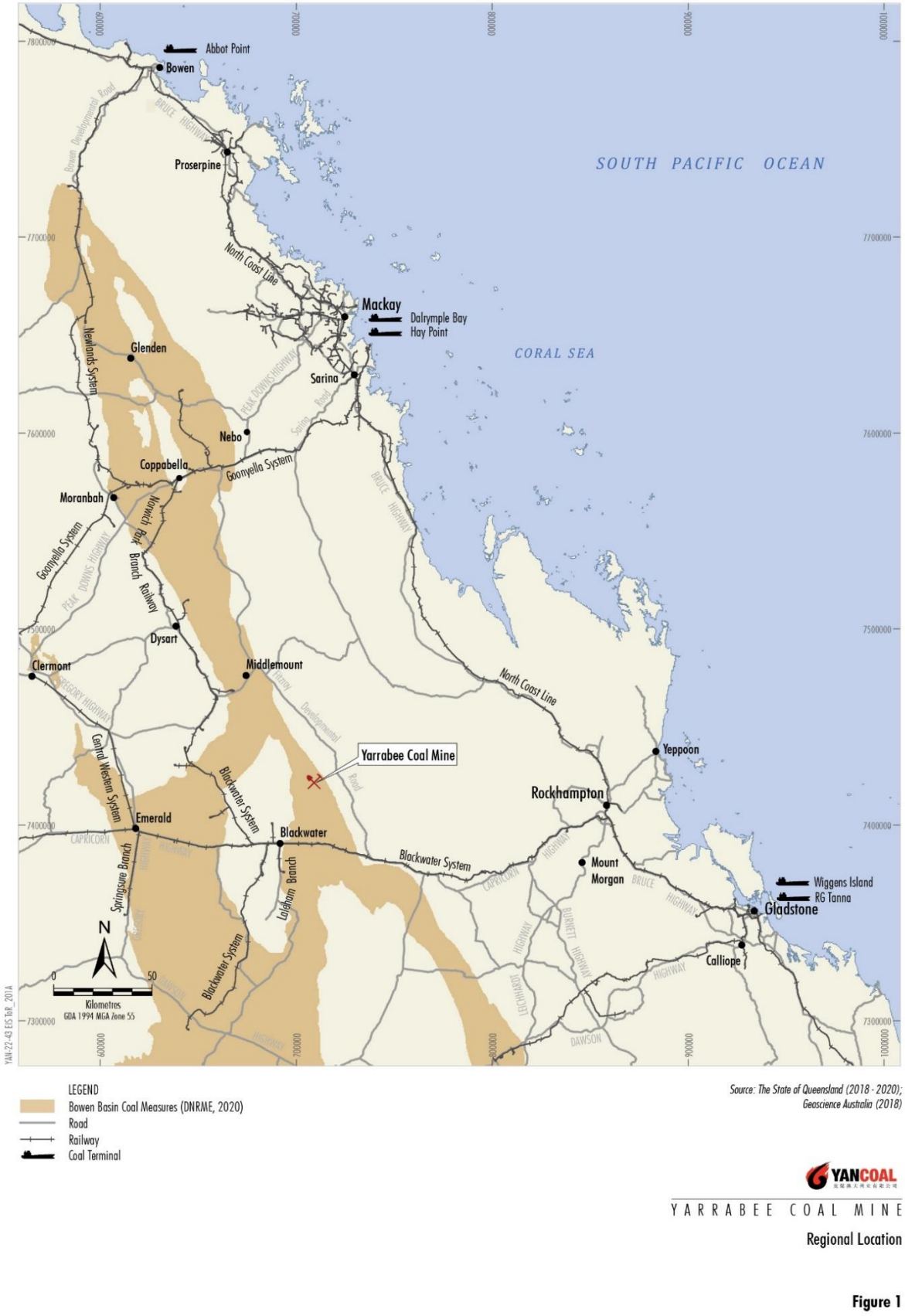

Figure 1 Regional Location

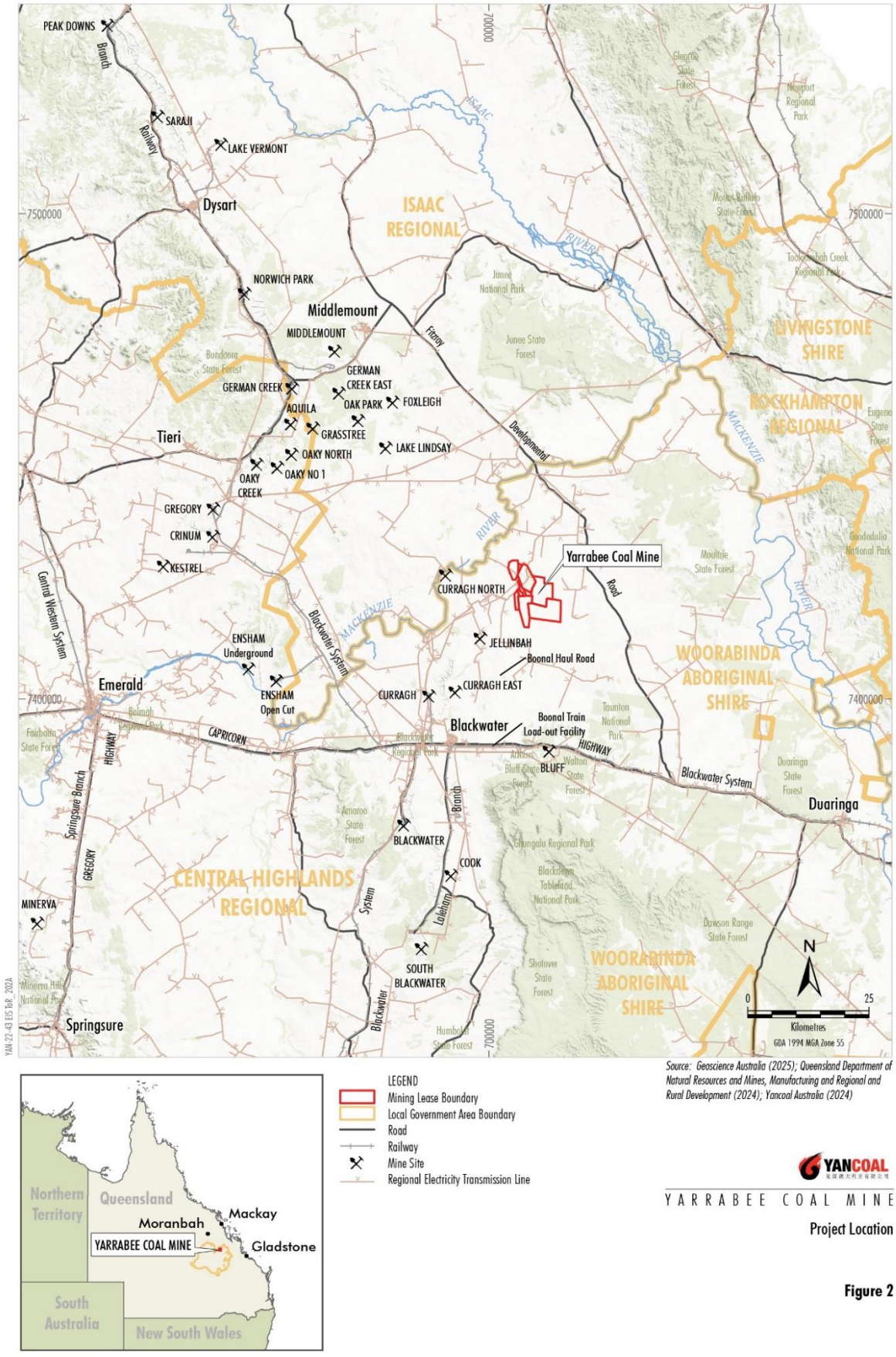

Figure 2 Project Location

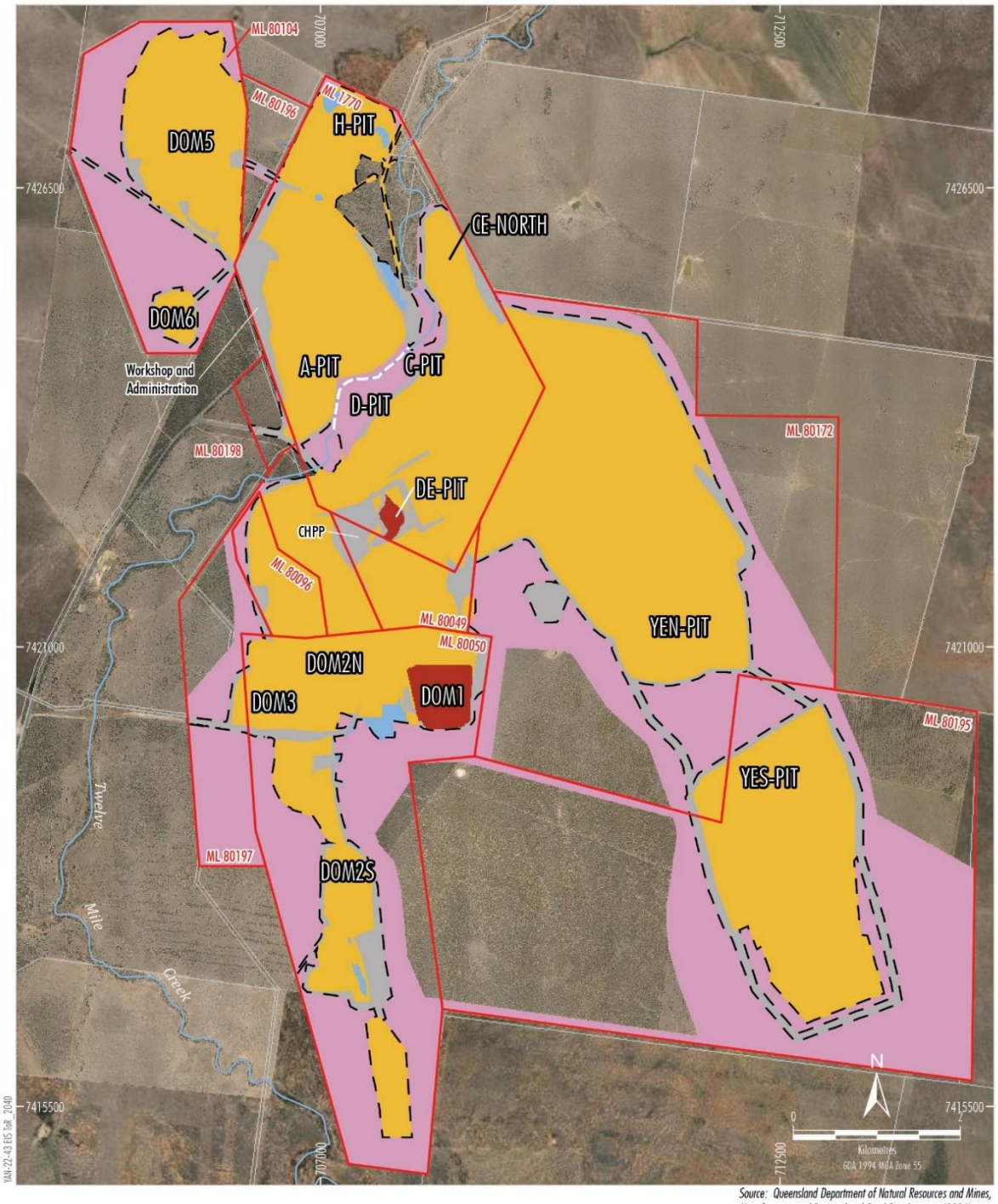

Figure 3 Existing, Approved and Proposed Disturbance Footprint

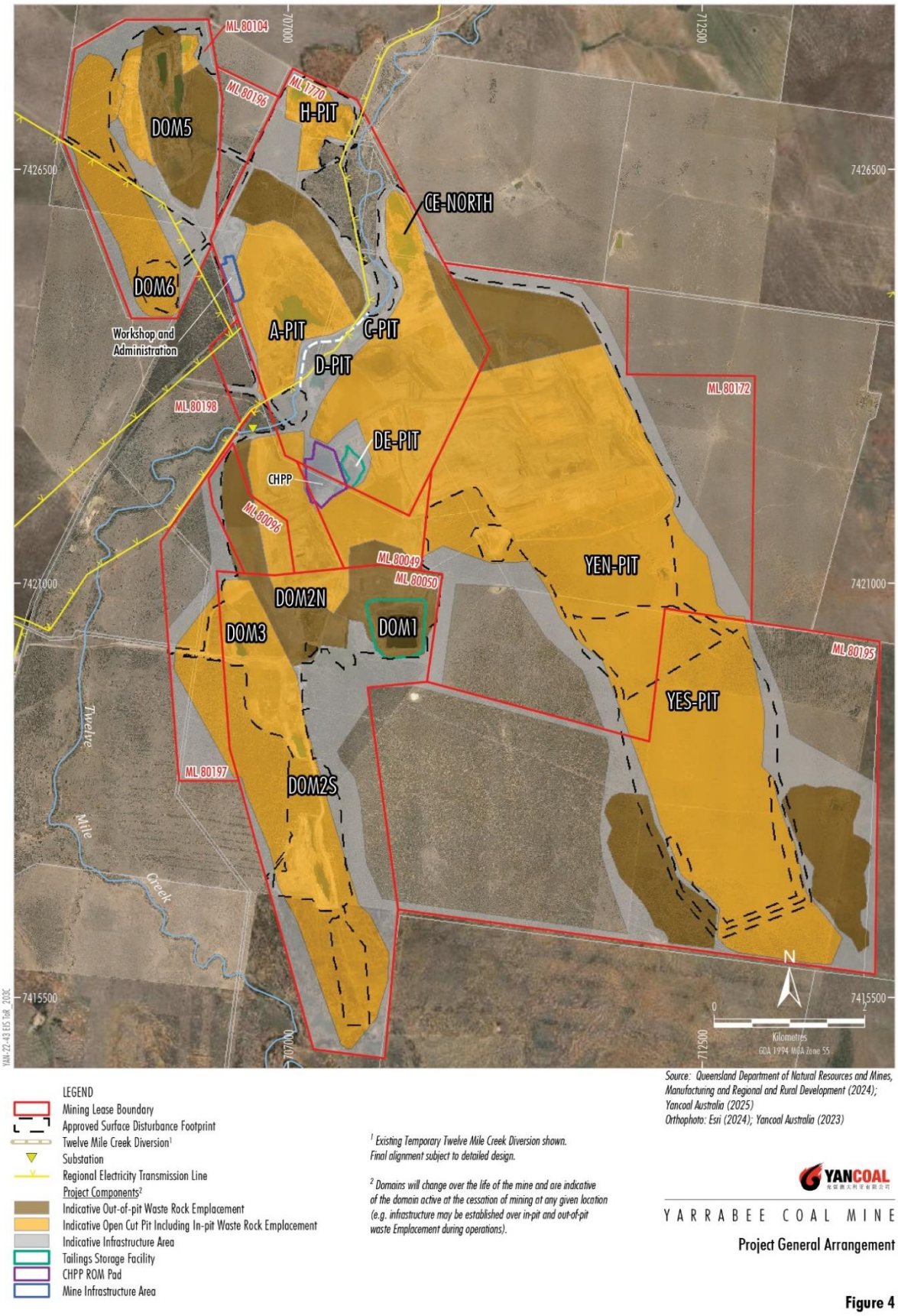

Figure 4 Project General Arrangement

2. EIS content requirements

2.1 The remaining sections outline the information requirements of an EIS under the EP Act for the proposed Yarrabee Coal Mine Continuation project. It is not necessary for the EIS to follow the structure outlined below, but the relevant requirements for each section must be included in the EIS.

3. Glossary

3.1 Provide a glossary of terms and a list of acronyms and abbreviations at the start of the EIS.

4. Executive summary

4.1 The EIS must include an executive summary which describes the project and conveys the most important aspects and environmental management commitments relating to the project in a concise and readable form.

5. Introduction

5.1 The introduction of the EIS must clearly explain the function of the EIS, why it has been prepared and what it sets out to achieve. It must include an overview of the structure of the document.

Project proponent

5.2 Provide information about the proponent(s) and their business, including:

(a) the proponent's full name, street and postal address, and Australian Business Number, including details of any joint venture partners

(b) the nature and extent of the proponent's (including director's) business activities and experience in resource projects

(c) the proponent's (including director's) environmental record, including a list of any breach of, or proceedings against the proponent(s) under, a law of the Commonwealth or a State for the protection of the environment or the conservation and sustainable use of natural resources (an environmental law)

(d) the proponent's quality, environmental, health, safety and community policies

(e) experience, qualifications and certification of all appropriately qualified consultants and sub consultants engaged by the proponent to complete the EIS.

The environmental impact statement process

5.3 Outline the steps of the EIS process, noting any completed milestones, and an estimated completion date for each remaining EIS stage. Highlight the steps in which the public will have the opportunity to provide input or comment. This information is required to ensure readers are informed of the EIS process and are aware of their opportunities for input and commenting.

5.4 Inform the reader how and when properly made public submissions on the EIS can be made, and outline how the submissions are considered in the decision-making process.

Project approvals process

5.5 Describe all approvals under federal, state or local legislation that are required to enable the project to be constructed and operated. Include the following information:

(a) the legislation under which the approvals are assessed and issued, the administering authority, stages, timing considerations and associated public notification requirements

(b) how the EIS fits into the assessment and approval processes for the EA and other approvals required of the project before construction and operations can start

(c) whether the project would likely contravene a law of the Commonwealth or the State

(d) if there are any relevant government policies or legislation with which the project is inconsistent.

6. Consultation process

6.1 Describe the consultation that has taken place and how responses from stakeholders, including government agencies and members of the community, have been incorporated into the design and outcomes of the project.

6.2 Describe proposed future consultation activities and outline how the results of that consultation will be used in the ongoing management of the project. Provide information on the development and outcomes of the implementation of consultation for the people, organisations and communities identified as affected or interested persons and stakeholders for the project. Describe issues of potential concern to all stakeholders at various stages of the project from project planning to commencement, project construction, operations and decommissioning. The description of the consultation must address the following matters:

(a) the objectives of the consultation process

(b) timing of consultation

(c) the number and interests of the people, organisations and communities involved in the consultation (particularly the affected and interested persons defined in sections 38 and 41 of the EP Act)

(d) methods of consultation and communication

(e) consultation process reporting and feedback methods

(f) an assessment explaining how the consultation objectives have been met

(g) an analysis of the issues and views raised and their completed or planned resolution, including any alterations to the project because of feedback received.

7. Project description and alternatives

7.1 Describe all aspects of the project that are covered by the EIS assessment. If there are any aspects of the project that would be assessed separately, describe what they are, and how they would be assessed and approved. If the project is an expansion of an existing activity, clearly state the linkages, overlap and separation between them.

7.2 The project description must include all on lease and off lease activities relevant to the project including construction, operation and decommissioning activities. If the delivery of the project is to be staged, describe the nature and timing of the stages.

Project

7.3 Describe and illustrate the following specific information about the project:

(a) project title

(b) project objectives

(c) expected capital expenditure

(d) rationale for the project

(e) background to the project's development and justification for its need, including markets for the product

(f) project description, including the nature and scale of all project components and activities

(g) quality and quantity of coal resource

(h) whether it is a greenfield or brownfield site

(i) power and water supply

(j) transport requirements

(k) regional and local context of the project's footprint, including maps at suitable scales

(l) relationship to other major projects, developments or actions of which the proponent is reasonably aware

(m) the workforce numbers for all project phases and sources of local workforce (including peak, direct workforce numbers and estimated proportion of fly in- fly out (FIFO) workforce)

(n) where personnel would be accommodated and the likely recruitment and rostering arrangements to be adopted

(o) proposed travel arrangements of the workforce to and from work, including use of a FIFO workforce.

(p) proposed duration of the project, including proposed construction, operation, decommissioning and closure staging, and likely schedule of works

Site description

7.4 Provide real property descriptions of the project land and adjacent properties, any easements, any existing underlying resource tenures, and identification number of any resource activity lease for the project land that is subject to the application.

7.5 Describe and illustrate with scaled maps the key infrastructure in and around the site, including state-controlled and local roads, rail lines and loading yards, airfields, ports or jetties, electricity transmission infrastructure, pipelines, and any other infrastructure in the region relevant to the project.

7.6 Describe and illustrate the topography of the project site and surrounding area; highlight and identify any significant features shown on the maps. Map the location and boundaries of the project's footprint including all infrastructure elements and development necessary for the project. Show all key aspects including excavations, stockpiles, areas of fill, subsidence areas, services infrastructure, plant locations, water or tailings storages and infrastructure, buildings, bridges and culvert, haul and access roads, causeways, stockpile areas, barge loading facilities and any areas of dredging or bed levelling. Include discussion of any environmental design features of these facilities including bunding of storage facilities.

7.7 Describe and map the spatial distribution and cross-sections of geological and terrestrial and/or coastal landforms of the project area in a suitable electronic format. Provide detailed spatial information in a suitable electronic format, that clearly shows the boundaries of water catchments that are significant for the drainage of the project site, including the location of waterways as defined under the *Fisheries Act 1994*. Provide detailed spatial information in a suitable electronic format that clearly shows geological structures, such as aquifers, faults and economic resources that could have an influence on, or be influenced by, the project's activities.

7.8 Describe and illustrate the precise location of the project in relation to any designated and protected areas and waterbodies. This is to include the location of any proposed buffers surrounding the working areas and lands identified for conservation, either through retention in their current natural state or to be rehabilitated.

7.9 Describe, map and illustrate land and soil resources (types and profiles) of the project area at a scale relevant to the site and in accordance with relevant guidelines. Identify soils that would require particular management due to wetness, erosivity, depth, acidity, salinity or other feature, including acid sulfate soils.

7.10 Describe with concept and layout plans, in both plan and cross-section views, requirements for constructing, upgrading or relocating all infrastructure associated with the project. Show the locations of any necessary infrastructure easements on the plans, including infrastructure such as roads, rail (and the rail corridor), level crossings, conveyors, bridges, jetties, ferries, tracks and pathways, dams and weirs, bore fields, power lines and other cables, wireless technology (such as microwave telecommunications), and pipelines for any services, whether underground or above.

Proposed construction and operations

7.11 Where applicable, describe the following information about the project, including maps and concept, design and layout plans as relevant for the following:

(a) existing land uses and any previous land use that might have affected or contaminated the land

(b) existing buildings, infrastructure and easements on the potentially affected land

(c) the precise location of works to be undertaken, structures to be built or components of the project

(d) all pre-construction activities (including vegetation clearing, site access, interference with watercourses, wetlands and floodplain areas).

(e) the proposed construction methods, associated equipment and techniques

(f) road and rail infrastructure, and stock routes, including new constructions, closures and/or realignments

(g) the location, design and capacity of all other required supporting infrastructure, including water supply and storage, sewerage, electricity from the grid, generators and fuels (whether gas, liquid and/or solid), power stations, renewable energy and telecommunications.

(h) proposed water management plan and changes to watercourses, flooding and overland flow on or off the site, including water diversions, crossings, flood levees, water off-takes, and locations of any proposed water discharge points

(i) any take of surface and groundwater (both direct and in-direct)

(j) groundwater and surface water monitoring locations including the proposed locations of any additional monitoring locations

(k) proposed tailings management and storage

(l) any infrastructure alternatives, justified in terms of ecologically sustainable development (including energy and water conservation)

(m) days and hours of construction and operation

(n) proposed mine life, amount of resources to be mined and the resource base including total seam thickness and seam depths

(o) mining sequence and cross sections showing profiles and geological strata and faults

(p) the planned recovery of resources including the location of any resources not intended to be mined that may be sterilised during mining activity or from related infrastructure

(q) the proposed methods, equipment and techniques for resource separation, beneficiation and processing

(r) the sequencing and staging of activities

(s) the proposed methods and facilities to be used for the storage, processing, transfer, and loading of product

(t) the capacity of high-impact plant and equipment, their chemical and physical processes, and chemicals or hazardous materials to be used

(u) any activity that would otherwise be a prescribed environmentally relevant activity (ERA) if it were not undertaken on a mining or petroleum lease

(v) any new borrow pits, stream bed excavations, or expanded dredging, bed levelling, quarry and screening operations that may be required to service construction or operation of the project.

Feasible alternatives

7.12 Present feasible alternatives for the project. Address a range of alternatives including conceptual, technological, locality, configuration, scale and individual elements or components that may improve environmental outcomes as well as the alternative of not proceeding with the project.

7.13 Describe and evaluate the comparative environmental, social, and economic impacts of each alternative (including the option of not proceeding), with regard to the principles of ecologically sustainable development.

7.14 Discuss each alternative and its potential impacts in sufficient detail to enable an understanding of the reasons for preferring certain options and courses of action while rejecting others. Justify why the project and preferred options should proceed.

8. The environmental impact assessment process

8.1 For each project specific matter outlined in section 9, the EIS must identify and describe the relevant environmental values, assess potential adverse and beneficial environmental, economic and social impacts of the project; and outline the management, monitoring, planning and other measures proposed to avoid, minimise and/or mitigate any adverse environmental impacts of the project. This must be addressed within the scope of the following requirements.

Environmental values

8.2 For the purposes of the EIS process, 'environment' is defined in section 8 of the EP Act. Identify and describe the values that must be protected for all the relevant matters including:

(a) environmental values specified in the EP Act, the EP Regulation (e.g. environmental objectives and performance outcomes as defined in schedule 8), environmental protection policies and associated guidelines

(b) values under other State legislation, policies and guidelines including the *Vegetation Management Act 1999*, the *Nature Conservation Act 1992*, the *Regional Planning Interests Act 2014*

(c) values identified in the project specific matters in section 9 of the TOR.

8.3 Consider all available baseline information relevant to the environmental risks of the project, including seasonal and long-term variations. Describe the quality of all information, in particular the source of the information, how recent the information is, how the reliability of the information was tested, and any assumptions and uncertainties in the information. Collect sufficient additional baseline data for project specific matters as required by relevant guidelines and terms of reference.

Impact assessment

8.4 Assess the impacts of the project on environmental values. This includes demonstrating that the project meets the environmental objectives and outcomes for each matter in section 9 of the TOR and the environmental objectives and performance outcomes for any matters listed in Schedule 8 of the EP Regulation. Impact assessment must address:

(a) short-, medium- and long-term scenarios

(b) the scale of an impact, including:

i. the impact's intensity and duration

ii. cumulative effects of the project in combination with other major projects or developments of which the proponent is reasonably aware

iii. the risk of environmental harm

iv. avoidance, mitigation and management strategies and if necessary, offsets (Qld Government n.d.) provisions

v. the potential for unforeseen impacts

vi. the risks associated with unlikely but potentially major impacts

vii. direct, indirect, secondary, permanent, temporary, unknown, unpredictable and/or irreversible impacts

viii. both positive and negative impacts

ix. impact interactions.

Cumulative impacts

8.5 Assess the cumulative impacts of the project on environmental values. Every effort must be made to find information from all sources relevant to the assessment of cumulative impacts including other major projects or developments of which the proponent is reasonably aware. The EIS must outline ways in which the cumulative impact assessment and management could subsequently be progressed further on a collective

basis. Impact assessment must address cumulative impacts, including:

(a) impacts to environmental values of land, air and water, public health and the health of terrestrial and aquatic ecosystems

(b) impacts to environmental values over time or in combination with other impacts in the dimensions of scale, intensity, duration or frequency of the impacts

(c) impacts created by the activities on other adjacent, upstream and downstream developments and infrastructure, and landholders

(d) impact of project on overall state and national greenhouse gas (GHG) inventories and targets.

Avoidance and mitigation

8.6 Propose and describe avoidance, mitigation and management strategies for the protection or enhancement of identified environmental values. Proposed strategies must:

(a) adhere to the department's management hierarchy: (a) to avoid; (b) to minimise and mitigate including best practice environmental management; once (a) and (b) have been applied, (c) if necessary and possible, to offset

(b) include a scientifically robust assessment of the expected or predicted effectiveness, of the mitigation measures for dealing with the project's relevant impacts

(c) the name of the entity responsible for endorsing or approving each mitigation measure or monitoring program

(d) any statutory or policy basis for the mitigation measures

(e) the cost of the mitigation measures

(f) include an Environmental Management Plan setting out the framework for continuing management, mitigation and monitoring programs for the project's relevant impacts, including any provision for independent environmental auditing.

(g) include an adaptive management approach to provide confidence that, based on current technologies, the impacts can be effectively managed over the long-term

(h) be described in context of proposed conditions including site-specific, outcome-focussed conditions that can be measured and audited.

8.7 For unproven elements of a resource extraction or processing process, technology or activity, identify and describe any global leading practice environmental management that would apply.

8.8 Demonstrate that the design of the project and its predicted outcomes:

(a) meet the environmental objectives and outcomes listed in section 9 of the TOR for each matter and the performance outcomes stated in Schedule 8 of the EP Regulation

(b) address the matters outlined in Schedule 1 of the EP Regulation (including items 2 and 4)

(c) are consistent with the state and national emissions reduction targets, including to power Queensland with 50% renewable energy by 2030, reduce emissions by 30% below 2005 levels by 2030 and achieve net zero GHG emissions by 2050, including any revisions to these targets

(d) are consistent with best practice environmental management during construction, operation, and decommissioning of the project

(e) meet all statutory and regulatory requirements of the federal, state and local government, including any relevant plans, strategies, policies and guidelines.

Conditions and commitments

8.9 Provide sufficient evidence and detail through studies, proposed management measures, commitments and supporting information:

(a) to demonstrate that the predicted outcomes for the project can be achieved

(b) to meet the requirements of sections 125 and126A of the EP Act and 126B–126D

(c) to meet the requirements of Schedule 1 of the EP Regulation

(d) for the administering authority to make recommendations about the suitability of the project, assess whether an approval be granted and recommend draft conditions for inclusion on relevant approvals

(e) to allow the administering authority to develop a register of commitments, and how those commitments will be achieved during the development and operation of the project.

Information sources

8.10 For information included in the EIS, provide the following: the source of the information, how recent the information is, how the reliability of the information was tested and any uncertainties in the information.

Critical matters

Definition of critical matters

8.11 The detail in which the EIS deals with all matters relevant to the project must be proportional to the potential scale of the impacts on environmental values. When determining the scale of an impact, consider the impact's intensity, duration, cumulative effect, irreversibility, the risk of environmental harm, management strategies and offset provisions. A critical matter is a project specific matter listed in section 9 of the TOR that has one or more of the following characteristics:

(a) It has a high or medium probability of causing serious or material environmental harm, or a high probability of causing an environmental nuisance

(b) It is considered important by the administering authority, and/or there is a public perception that an activity has the potential to cause serious or material environmental harm or an environmental nuisance, or the activity has been the subject of extensive media coverage

(c) It is relevant to a controlling provision under the EPBC Act

(d) It raises obligations under any other legislation applicable for the project (e.g. *Water Act 2000*).

8.12 The final scope of critical matters will be determined by the administering authority when finalising the TOR. However, if a new additional critical matter becomes apparent after the final TOR is issued, the EIS must address that new matter.

Critical environmental matters for this project

8.13 Critical environmental matters identified for this project which the EIS must give priority are:

(a) Water (Water Quality, Water Resources and Flooding)

(b) Flora and Fauna

(c) Climate (Greenhouse gas emissions).

9. Project specific matters

Climate

Critical

Environmental objective and outcomes
Keep global warming below 2°C, preferably 1.5°C, above pre-industrial levels through the reduction of GHG emissions by supporting Queensland's emission reduction targets. Prepare for climate change through climate resilient project development and operation.

9.1 Conduct the assessment in accordance with the latest version of the department's Climate—EIS information guideline (ESR/2020/5298) (DETSI 2024). Describe the project area's climate patterns that are relevant to the environmental impact assessment, particularly the project's discharges to water and air, and propagation of noise. Provide climate data in a statistical form including long-term averages and extreme values.

9.2 Assess the project's vulnerabilities to projected climate change (e.g. changing patterns of temperature, rainfall, hydrology, and extreme weather events). In the assessment of climate hazards and risks, reference relevant climate projection data and employ appropriate risk assessment methodologies.

9.3 Describe the adaptation strategies and/or activities designed to minimise climate change impacts to the project, subsequent land uses on that site (e.g. rehabilitation projects) and surrounding land uses. Adaptation activities must be designed to avoid perverse outcomes, such as increased emissions of GHG or maladaptive outcomes for surrounding land uses.

Greenhouse gas emissions

9.4 Assess emissions to demonstrate that the project can meet the environmental objectives and performance outcomes in Schedule 8 of the EP Reg. Meet the department's Guideline—Greenhouse gas emissions (ESR/2024/6819) (DETSI 2025). Broadly this guideline requires:

(a) Details of GHG emissions likely to be generated by the activities of the project, including both direct (Scope 1) and indirect (Scope 2 and Scope 3) emissions. GHG emission information in the EIS is required to sufficiently inform:

i. the EA assessment process including the regulatory requirements that must be complied with and the standard criteria that must be considered

ii. considerations under the *Human Rights Act 2019* and

iii. EA conditioning and compliance.

(b) Details of the management practices proposed to be implemented to prevent or minimise adverse impacts identifying how they conform with the GHG abatement hierarchy and the requirements specified for a GHG abatement plan.

(c) A risk assessment that that outlines the scale of expected GHG emissions from the project and how it is expected to contribute to climate change impacts on Queensland's environmental values.

9.5 Provide information regarding GHG emissions and energy production and consumption consistent with requirements of the Commonwealth *National Greenhouse and Energy Reporting Act 2007* (NGER Act) and its subordinate legislation including methodology, emissions factors, and calculations used to estimate project's GHG emissions.

9.6 Justify how the project will contribute to GHG emission reduction targets for the life of the project by:

(a) Supporting Queensland's Government's GHG emission reduction and clean energy targets as legislated in the *Clean Economy Jobs Act 2024* and *Energy (Renewable Transformation and Jobs) Act 2024,* including any revisions.

(b) Meeting the requirements of the NGER Act and where triggered, meet emission reduction targets and trajectory as specified by the commonwealth's Safeguard Mechanism.

Greenhouse gas abatement plan

9.7 Provide a GHG abatement plan for the project that details ongoing emission mitigation and management measures proposed to be implemented throughout the life of the project to progressively reduce emissions. The GHG emission reduction program must provide specific actions that will be implemented. Actions must be specific, measurable, achievable, realistic, and time-bound (following the SMART principals).

9.8 The GHG abatement plan must address the requirements outlined in Appendix A of the department's Guideline—Greenhouse gas emissions (ESR/2024/6819) (DETSI 2025) and also address the following:

(a) As part of assessment of project alternatives, detail, compare and quantify conceptual, technological, locality, configuration, scale and individual elements or components of feasible alternatives that were considered to avoid or reduce the project's emissions.

(b) Compare and detail preferred measures for emission controls and energy consumption in consideration of best practice and leading international environmental management for the relevant industry sector including evaluation of developing technologies.

(c) Describe the assumptions and data inputs applied to develop the emissions estimates and the emissions reduction targets. The calculation of baseline should follow the methodology outlined in the National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015 (Safeguard rule).

(d) Detail a process to ensure continuous improvement such that current industry emission reduction strategies are applied over the life of the project. Include identification of new technologies, management practices and personnel training consistent with strategies developed for best practice environmental management.

(e) Demonstrate that measures have been factored into the economic feasibility of the project.

(f) Identify any voluntary initiatives or research into reducing the lifecycle and embodied energy carbon intensity of the project's processes or products.

(g) Identify opportunities to reduce scope 3 emissions and detail measurable commitments where appropriate

(h) Provide a comparison of expected cumulative project GHG emissions with the remaining global, national and state emission budgets. Consider all Scope 3 emissions identified in the project estimate when comparing with the remaining global emission budget, and respective scope 3 emissions generated nationally or in Queensland for comparison with the remaining national and state emission budgets.

(i) Where offsets have been identified as the only remaining option for abatement, develop a comprehensive carbon offsets management plan. Detail expected market availability limitations of offset credits and show how the project will secure the required supply of offsets. Identify how opportunities and commitments for offsetting GHG emissions represent genuine emissions reductions within Australia that meet the principles of the *Carbon Credits (Carbon Farming Initiative) Act 2011.*

(j) For projects proposing to offset more than 30% of their emissions or offset outside of Queensland, provide as part of the EIS an independent review by an appropriately qualified person. This review will assess and confirm findings of the EIS that GHG emission avoidance, reduction and substitution measures have been expended and why suitable offsets are not available within Queensland.

(k) When multi-year emissions reduction targets are proposed to take into account emerging technologies over that period, ensure the same emissions result will be delivered at the end of the multi-year period such that the trajectory of the Queensland emissions targets are met.

Land

Environmental objective and outcomes
The activity is operated in a way that protects the environmental values of land including soils, subsoils, landforms and associated flora and fauna.
The choice of the site, at which the activity is to be carried out, avoids or minimises serious environmental harm on areas of high conservation value and special significance and sensitive land uses at adjacent places.
The location for the activity on a site protects all environmental values relevant to adjacent sensitive use.
The design of the facility permits the operation of the site, at which the activity is to be carried out, in accordance with best practice environmental management.

9.9 Conduct the impact assessment in accordance with the latest version of the department's Land—EIS information guideline (ESR/2020/5303) (DETSI 2024), Contaminated land—EIS information guideline(ESR/2020/5300) (DETSI 2024), Applications for activities with impacts to land (ESR/2015/1839) (DETSI 2025), DAF Environmental impact assessment companion guide (DAF 2024), RPI Act statutory guideline 11/16 companion guide (DSDMIP 2019a) and, if any quarry material is needed for construction, the department's Quarry material—EIS information guideline (ESR/2020/5306) (DETSI 2024).

9.10 Demonstrate that the project can meet the environmental objectives and performance outcomes in Schedule 8 of the EP Regulation.

9.11 Describe the existing features and environmental values of the land that may be affected by the project. Address topography, cadastral data, land use, infrastructure, areas of regional interest, native title and Indigenous Land Use Agreements, geology and geomorphology, mineral resources, ore reserves, petroleum and energy resources, and GHG storage resources, soils, land evaluations, contaminated land, landscape character, visual amenity and lightning.

9.12 Describe potential impacts of the proposed land uses, taking into consideration the proposed measures that would be used to avoid or minimise impacts. The impact prediction must address the following matters:

(a) Any changes to the landscape and its associated visual amenity in and around the project area.

(b) Any existing or proposed mining tenement under the *Mineral Resources Act 1989*, petroleum authority under the *Petroleum and Gas (Production and Safety) Act 2004*, petroleum tenure under the *Petroleum Act 1923*, geothermal tenure under the *Geothermal Energy Act 2010* and GHG tenure under the *Greenhouse Gas Storage Act 2009* overlying or adjacent to the project site.

(c) Temporary and permanent changes to land uses of the project site and adjacent areas, considering:

i. actual and potential agricultural uses

ii. regional plans and local government planning schemes

iii. any Key Resource Areas that were identified as containing important extractive resources of state or regional significance which the State considers worthy of protection

iv. strategic cropping land, priority agricultural areas, priority living area and strategic environmental areas under the *Regional Planning Interests Act 2014* and the trigger map for strategic cropping land

v. findings of the Agricultural land audit (including land of agriculture state interest under State Planning Policy)

vi. impacts on Property and Project Plans approved under the *Soil Conservation Act 1986*

vii. constraints to the expansion of existing and potential agricultural land uses.

(d) Identify any existing or proposed incompatible land uses within and adjacent to the site, including the impacts on economic resources and the future availability and viability of the resource including extraction, processing and transport location to markets.

(e) Identify any infrastructure proposed to be located within, or which may have impacts on, the stock route network associated with the *Stock Route Management Act 2002*.

9.13 Assess the project against the requirements of the *Regional Planning Interests Act 2014*.

9.14 Propose suitable measures to avoid or minimise impacts related to land use.

9.15 Show how landforms, during and after disturbance, will meet any requirements of project or property plans approved under the *Soil Conservation Act 1986*.

9.16 Detail any known or potential sources of contaminated land that could be impacted by the project. Describe how any proposed land use may result in land becoming contaminated.

9.17 Identify existing or potential native title rights and interests possibly impacted by the project and the potential for managing those impacts by an Indigenous Land Use Agreement or other measure in accordance with the *Native Title (Queensland) Act 1993* and consistent with the Queensland Government's Native title work procedures (Qld Government 2024c).

9.18 Detail (including with the use of maps) the following native title considerations:

(a) current tenure of all land or waters within the project area (which may include creeks)

(b) land or waters where native title has been determined to exist by the Federal Court

(c) land or waters that are covered by a native title determination application

(d) land or waters that are covered by a registered Indigenous Land Use Agreement.

9.19 Describe pathways for resolving any native title considerations that comply with the Queensland Government's Native title work procedures (Qld Government 2024c) (such as the negotiation and registration of an Indigenous Land Use Agreement).

Rehabilitation and closure

Environmental objective and outcomes
Land disturbed by mining activities will be rehabilitated progressively as it becomes available, to minimise the risks of environmental impacts and reduce cumulative areas of disturbed land. The activity is operated in a way that protects the environmental values of land including soils, subsoils, landforms and associated flora and fauna. The activity is operated in a way that disturbed land will be rehabilitated or restored to a stable condition; the land is safe and structurally stable, there is no environmental harm being caused by anything on or in the land, and the land can sustain a post-mining land use. The progress and outcomes of progressive rehabilitation activities will be monitored and reported on to demonstrate how successful they have been in achieving progress towards the agreed final land use, and to inform corrective action where required.

Mining projects

9.20 Address the rehabilitation requirements of the EP Act including the provisions requiring a proposed PRC plan. Demonstrate that the proposed rehabilitation is consistent with the department's guideline Progressive rehabilitation and closure plans (ESR/2019/4964) (DES 2023a) and best practice approaches about the strategies and methods for progressive and final rehabilitation.

9.21 Demonstrate that the rehabilitation of the environment disturbed by construction, operation, and decommissioning of the project can meet the environmental objectives and performance outcomes in Schedule 8A of the EP Regulation.

Proposed PRC plan

9.22 Provide a proposed PRC plan for the project. The plan must show how and where activities will be carried out on land in a way that maximises the progressive rehabilitation of the land to a stable condition and provide for the condition to which the holder must rehabilitate the land before the EA may be surrendered.

The proposed PRC plan must consist of two components:

(a) rehabilitation planning part

(b) progressive rehabilitation and closure plan schedule (PRCP schedule).

9.23 The proposed PRC plan must be consistent with the information requirements in the department's Submission of a progressive rehabilitation and closure plan (ESR/2019/4957) (DETSI 2025).

Rehabilitation planning part

9.24 Provide the rehabilitation planning part of the proposed PRC plan, by addressing the following:

(a) Describe each resource tenure, including the area of each tenure

(b) Describe the relevant activities and the likely duration of the relevant activities

(c) Include a detailed description, including maps, of how and where the relevant activities are to be carried out

(d) Include details of the consultation undertaken by the applicant in developing the proposed PRC plan

(e) Include details of how the applicant will undertake ongoing consultation in relation to the rehabilitation to be carried out under the plan

(f) State the extent to which each proposed post-mining land use or non-use management area is consistent with the outcome of consultation with the community in developing the plan and any strategies or plans for the land of a local government, the State or the Commonwealth

(g) For each proposed post-mining land use (PMLU), state the applicant's proposed methods or techniques for rehabilitating the land to a stable condition in a way that supports the rehabilitation milestones under the proposed PRCP schedule

(h) Identify the risks of a stable condition for land identified as a proposed post-mining land use not being achieved, and how the applicant intends to manage or minimise the risks

(i) For each proposed non-use management area, state the reasons the applicant considers the area cannot be rehabilitated to a stable condition because of either of the below:

i. carrying out rehabilitation of the land would cause a greater risk of environmental harm than not carrying out the rehabilitation or

ii. the risk of environmental harm as a result of not carrying out rehabilitation of the land is confined to the area of the relevant resource tenure and the applicant considers, having regard to each public interest consideration, that it is in the public interest for the land not to be rehabilitated to a stable condition.

(j) Include copies of reports or other evidence relied on by the applicant for each proposed non-use management area

(k) For each proposed non-use management area, state the applicant's proposed methodology for achieving best practice management of the area to support the management milestones under the proposed PRCP schedule for the area

(l) Include other information requirements outlined in the department's statutory guideline Progressive rehabilitation and closure plans (ESR/2019/4957) (DETSI 2025).

PRCP schedule

9.25 Provide a proposed PRCP schedule which describes time-based milestones for achieving each post-mining land use or non-use management area for the project. Present the proposed PRCP schedule in the table template included in the department's Submission of a progressive rehabilitation and closure plan (ESR/2019/4957) (DETSI 2025).

The proposed PRCP schedule, must identify:

(a) all land within the resource tenure as either a post-mining land use or non-use management area

(b) when land becomes available for rehabilitation or improvement

(c) rehabilitation milestones to achieve a post-mining land use

(d) management milestones to achieve a non-use management area

(e) milestone criteria that demonstrate when each milestone has been completed

(f) completion dates for each milestone to be achieved

(g) a final site design.

9.26 All milestone criteria must be consistent with the SMART principles described in the Progressive rehabilitation and closure plans (ESR/2019/4957) (DETSI 2025).

Water

Critical

Water quality

Environmental objective and outcomes
The activity will be operated in a way that protects environmental values of waters.
The activity will be operated in a way that protects the environmental values of groundwater and any associated surface ecological systems.
The activity will be managed in a way that prevents or minimises adverse effects on wetlands.

9.27 Conduct the impact assessment in accordance with the following guidelines: Water—EIS information guideline (ESR/2020/5312) (DETSI 2024), Applications for activities with impacts to water (ESR/2015/1837) (DETSI 2025), Water quality guidelines (DETSI n.d.), Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC and ARMCANZ 2000); (ANZG 2018); 2023), Queensland Water Quality Guidelines (DEHP 2009), Wastewater release to Queensland waters (ESR/2015/1654) (DETSI 2025), Monitoring and sampling manual (DES 2018), Information guidelines on deriving site-specific guideline values for physico-chemical parameters and toxicants (IESC 2019) and Using monitoring data to assess groundwater quality and potential environmental impacts (DES 2021).

9.28 Demonstrate that the project can meet the environmental objectives and performance outcomes in Schedule 8 of the EP Regulation.

9.29 With reference to the Environmental Protection (Water and Wetland Biodiversity) Policy 2019 and section 9 the EP Act, identify the environmental values of surface- and ground- waters within the project area and immediately downstream or downgradient that may be affected by the project, including wetlands, semi-permanent and permanent pools, seagrass beds, corals, any human uses and cultural values of water.

9.30 Undertake baseline surface water and groundwater monitoring of the project area to determine existing water quality and levels in accordance with the relevant guidelines listed in 9.27.

9.31 Define the relevant water and sediment quality guidelines applicable to the environmental values and demonstrate how these will be met by the project during construction, operation, decommissioning and following project completion. Locally derived trigger values must be derived in accordance with best practice environmental management including the guidelines listed in Water—EIS information guideline (ESR/2020/5312) (DETSI 2024).

9.32 Detail the hydrological, hydrogeological, chemical, physical and biological characteristics of surface waters and groundwater within the area that may be affected by the project and at suitable reference locations using sufficient data to define natural variation, including for various water types, and seasonal and spatial variation. Present all available and collect further site-specific water quality and flow data for each monitoring location, incorporating any relevant historical data. Include the data date range of sampling for each indicator and location, as well as number of samples collected. Include summary statistics for validated data in a tabulated form and present clear time series graphs for all indicators and each monitoring location within the EIS. Where relevant, graph and describe the interrelationship between local stream flow and electrical conductivity for receiving waterways. Provide raw monitoring data in a specified electronic format, upon request.

9.33 Describe the quantity, quality, location, duration and timing of all potential and/or proposed releases of contaminants. Releases may include controlled water discharges to surface water streams, uncontrolled discharges when the design capacity of storages is exceeded, spills of products during loading or transportation, contaminated run-off from operational areas of the site (including seepage from waste rock dumps), or run-off from disturbed acid sulfate soils. Refer to Waste management section for further information requirements applicable to releases.

9.34 Assess the potential impact of any releases from point or diffuse sources on all relevant environmental values and water quality objectives of the receiving environment. The impact assessment must consider the resultant quality and hydrology of receiving waters, cumulative impacts, and the assimilative capacity of the receiving environment.

9.35 Describe how water quality guidelines and objectives would be achieved and environmental impacts would be avoided or minimised through the implementation of management strategies that comply with the management hierarchy and management intent of the Environmental Protection (Water and Wetland Biodiversity) Policy 2019. Appropriate management strategies may include the use of erosion and sediment control practices, and the separation of clean storm water run-off from the run-off from disturbed and operational areas of the site. Include an erosion and sediment control plan for the project within the EIS.

9.36 Describe how monitoring would be used to demonstrate that objectives were being assessed, audited and met. For example, provide measurable criteria, standards and/or indicators that will be used to assess the condition of the ecological values, environmental values and health of surface- and ground- water environments. Propose detailed corrective actions to be used if objectives are not likely to be met.

Water resources

Environmental objective and outcomes
Equitable, sustainable and efficient use of water resources.
Maintenance of environmental flows and water quality to support the long term condition and viability of terrestrial, riverine, wetland, lacustrine, estuarine, coastal and marine ecosystems.
Maintenance of the stability of beds and banks of watercourses, and the shores of waterbodies, estuaries and the coast.
Maintenance of supply to existing users of surface and groundwater resources.

9.37 Conduct the impact assessment in accordance with the department's Water—EIS information guideline (ESR/2020/5312) (DETSI 2024) and DAF Environmental impact assessment companion guide (DAF 2024). Address the requirements of section 126A of the EP Act.

9.38 Describe present and potential users and uses of water in areas potentially affected by the project, including municipal, agricultural, industrial, recreational and environmental uses of water.

9.39 Describe the quality, quantity and significance of groundwater in the project area and any surrounding area potentially affected by the project's activities. Include the following:

(a) characterise: the nature, type, geology/stratigraphy and depth to and thickness of the aquifers; their hydraulic properties; and value as water supply sources

(b) analyse the movement of underground water to and from the aquifer(s), including how the aquifer(s) interacts with other aquifers and surface water, and the effect of geological structures on this movement

(c) characterise the quality and volume of the groundwater including seasonal variations of groundwater levels

(d) provide surveys of existing groundwater supply facilities (e.g. bores, wells, or excavations).

(e) describe any groundwater dependent ecosystems, springs and/or water course impacts related to the take of underground water

9.40 Model and describe the inputs, movements, exchanges and outputs of surface water and groundwater that would or may be affected by the project. The models used to estimate associated water take must take into account the climatic conditions at the site, assess the potential impacts on water resources and include a site water balance. The model should be peer-reviewed by an independent appropriately qualified person(s) consistent with the *Australian groundwater modelling guidelines* (Barnett et al. 2024).

9.41 Develop a numerical groundwater model that includes modelling of existing mining and any predicted increased impacts from the project that is supported by adequate groundwater monitoring data. Both the additional impacts and cumulative impacts from the proposed project need to be specifically identifiable in the technical information.

9.42 Provide a description of the project's impacts at the local scale and in a regional context including:

(a) changes in flow regimes from diversions, water take and discharges

(b) groundwater draw-down and recharge

(c) management of mine affected water

(d) alterations to riparian vegetation and bank and channel morphology

(e) direct and indirect impacts arising from the development.

9.43 Provide an ecohydrological conceptual model that identifies the potential pathways and mechanisms of the effects of altered surface flows on groundwater connectivity, in-stream water quality, and surface and groundwater ecosystems in consideration of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development's (IESC) Information Guidelines Explanatory Note – Using impact pathway diagrams based on ecohydrological conceptualisation in environmental impact assessment. This conceptual model would help to identify and justify strategies proposed to mitigate and manage potential impacts. The findings should be considered in relation to the potential GDEs identified in the project area.

9.44 Provide a water management plan, for the life of the project, which details management strategies of mine-affected water, sediment-affected water and drainage from areas not disturbed by mining activities. Any water taken off site for further use must also be accounted for and must be consistent with the General Use Approval for associated water.

9.45 Identify any approvals or entitlements that would be needed under the *Water Act 2000*. Specifically address whether or not the project would take water from, or affect recharge to, aquifers of the Great Artesian Basin. Describe the practices and procedures that would be used to avoid or minimise impacts on water resources.

9.46 Describe how 'make good' provisions would apply to any water users that may be adversely affected by the project. Propose a network of groundwater monitoring bores before and after the commencement of the project that would be suitable for the purposes of monitoring groundwater quality and hydrology impacts that may occur as a result of the resource activity. Include details on investigation timeframes and actions if exceedances are detected.

9.47 Include maps of suitable scale showing the location of diversions and other water-related infrastructure in relation to resource infrastructure. Detail any significant diversion or interception of overland flow, including the effects of subsidence.

9.48 Describe watercourse diversion design, operation and monitoring based on current engineering practice and relevant guidelines. For watercourse diversions authorised by the conditions of the EA under the EP Act, use the guideline Works that interfere with water in a watercourse for a resource activity—watercourse diversions (DNRME 2019).

9.49 Describe the various options for supplying water to the project and assess any potential consequential impacts in relation to the objectives and strategies of any water plan and associated planning documents that may apply. The construction of in-stream water storages to collect water supply for the project should not be the only option presented. Alternative water supply options must be fully detailed.

9.50 Describe the proposed supply of potable water for the project, including temporary demands during the construction period. Also describe on-site storage and treatment requirements for wastewater from accommodation and/or offices and workshops.

Water-related cultural values

9.51 Discuss traditional owners' cultural values and water-related cultural use as relevant to the project, including information regarding economic development opportunities and methods proposed to protect these values, including but not limited to Aboriginal peoples and Torres Strait Islander peoples distinct cultural rights under the *Human Rights Act 2019*.

9.52 Describe the project's potential impacts on water-related cultural values, uses and aspirations of water resources for Aboriginal and Torres Strait Islander peoples.

9.53 Describe how water-related cultural values, uses and aspirations of water resources for Aboriginal and Torres Strait Islander peoples will be protected and/or promoted through water allocation and management strategies, relevant to the project.

9.54 Where country may be affected by existing or future water infrastructure projects in the area, assess the cumulative impacts of these projects on the water-related cultural values, uses and aspirations linked to water for Aboriginal and Torres Strait Islander peoples.

Flooding

Environmental objective and outcomes
The construction and operation of the project aims to ensure that the risk and potential adverse impacts from flooding are avoided, minimised or mitigated to protect people, property and the environment.

9.55 Describe the history of flooding onsite and in proximity to the project site. Describe current flood risk for a range of annual exceedance probabilities up to the 0.1% annual exceedance probability (AEP) and probable maximum flood levels for the project site. Use flood modelling to assess how the project may potentially change flooding and run-off characteristics on-site and both upstream and downstream of the site. The assessment must consider all infrastructure associated with the project including levees, roads, and linear infrastructure, and all proposed measures to avoid or minimise impacts.

9.56 Evidence must be provided to demonstrate that the securing of storage containers of hazardous contaminants during flood events meets the requirements of schedule 8 of the EP Regulation.

9.57 Describe, illustrate and assess where any proposed infrastructure, including tailing storage facilities, dams, voids and waste rock dumps, disturbed and rehabilitated areas, would lie in relation to modelled flood levels, including the 0.1% AEP and probable maximum flood levels. Describe management actions to minimise impacts of flooding to mine infrastructure and manage in mine pit water post-flooding.

9.58 Assess the project's vulnerabilities to climate change (e.g. changing patterns of rainfall, hydrology, temperature and extreme weather events). Describe possible adaptation strategies (preferred and alternative) based on climate change projections for the project site.

Regulated structures

Environmental objective and outcomes
The design of the facility permits the operation of the site, at which the activity is to be carried out, in accordance with best practice environmental management. The potential consequences of the failure of a regulated structure on human life and the environment require that the highest standards are used for their design, construction, operation, modification and decommissioning. The industry, government and the Australian National Committee on Large Dams Inc. have published several guidelines, which are to be used to further develop objectives and outcomes for individual projects and the regulated structures they involve.

9.59 Conduct the impact assessments in accordance with the latest version of the department's guidelines on Regulated structures—EIS information guideline (ESR/2020/5307) (DETSI 2024), Structures which are dams or levees constructed as part of environmentally relevant activities (ESR/2016/1934) (DETSI 2025) and Manual for assessing hazard consequence categories and hydraulic performance of structures (ESR/2016/1933) (DETSI 2025).

9.60 Describe the purpose of all dams or levees proposed on the project site. Show their locations on appropriately scaled maps, and provide plans and cross-sections, illustrating embankment lengths, heights and widths, spillways, discharge points, design storage allowances, and maximum volumes.

9.61 Describe and illustrate how dams and levees would be:

(a) sited to avoid or minimise risks from flooding using flood mapping showing the 0.1% AEP and probable maximum flood

(b) located, constructed and operated to avoid, minimise and mitigate impacts on environmental values

(c) located and designed to maximise progressive rehabilitation and closure.

9.62 Undertake a consequence category assessment for each dam or levee, according to the criteria outlined in department's Manual for assessing hazard consequence categories and hydraulic performance of structures (ESR/2016/1933) (DETSI 2025). The assessment must be undertaken for the three different failure event scenarios described in the department's manual, i.e. for seepage, overtopping and dam break. Regulated structures must comply with the Manual for assessing hazard consequence categories and hydraulic performance of structures (ESR/2016/1933) (DETSI 2025) in accordance with schedule 8, division 2 of the EP Regulation.

9.63 Following the consequence category assessment, determine the consequence category ('low, significant, or high') according to table 1 of department's Manual for assessing hazard consequence categories and hydraulic performance of structures (ESR/2016/1933) (DETSI 2025) and provide certified copies of the consequence category determination for each of the proposed dams or levees assessed.

9.64 Describe how risks associated with dam or levee failure, seepage through the floor, or embankments, and/or with overtopping of the structures will be avoided, minimised or mitigated to protect people, property and the environment.

Flora and fauna

Critical

Environmental objective and outcomes
The activity will be operated in a way that protects the environmental values of land including soils, subsoils, landforms and associated flora and fauna.
There will be no potential or actual adverse effect on a wetland as part of carrying out the activity.
The project minimises serious environmental harm on areas of high conservation value and special significance and sensitive land uses at adjacent places.
The location for the activity on a site protects all environmental values relevant to adjacent sensitive use.
The project manages the impacts on the environment by seeking to achieve ecological sustainability, including protected wildlife and habitat.
Critical habitat receives special management considerations and protection through a management plan for the project.
The project avoids significant residual impacts to matters of national environmental significance (MNES) and matters of state environmental significance (MSES), mitigates impacts where they cannot be avoided, and offsets any residual impacts.
The construction, operation and decommissioning of the project must be consistent with all statutory and regulatory requirements of the federal, state and local government and be consistent with their relevant plans, strategies, policies and guidelines that relate to the terrestrial, aquatic and marine ecological environment.

9.65 Conduct the impact assessment in accordance with relevant guidelines, including the latest version of the department's EIS information guidelines that cover terrestrial ecology (ESR/2020/5309) (DETSI 2024), aquatic ecology (ESR/2020/5295) (DETSI 2024), coastal (ESR/2020/5299) (DETSI 2024), groundwater dependent ecosystems (ESR/2020/5301) (DETSI 2024), water (ESR/2020/5312) (DETSI 2024), matters of national environmental significance (ESR/2020/5304) (DETSI 2024), and biosecurity (ESR/2020/5297) (DETSI 2024).

9.66 Demonstrate that the project can meet the environmental objectives and performance outcomes in Schedule 8 of the EP Regulation.

Biodiversity

Existing environment

9.67 Identify, describe and map all terrestrial, and/ or aquatic (including groundwater dependent ecosystems) ecological values present or likely to be present within an area potentially affected either directly or indirectly by the project. Base the description on the desktop assessment, vegetation surveys, plant and animal species surveys, and the assessment of the condition of the vegetation communities and species habitats.

9.68 Describe all significant species and ecological communities, MSES prescribed environmental matters, and all flora and fauna species, and regional ecosystems, on the project site and in its vicinity.

9.69 Describe the potential for significant species (e.g. threatened, near threatened or special least-concern species) to occur, or potentially occur, within the area potentially affected either directly or indirectly by the project. Show the location of significant species found during field surveys on suitable maps and figures and describe their habitat.

9.70 Include any other environmental value(s) that the desktop studies identified as occurring or potentially occurring in, and adjacent to, the project area (e.g. wildlife corridors, environmentally sensitive areas) and display them on maps and figures.

9.71 Describe the connectivity of habitats and the integrity of ecosystems.

9.72 Describe, with photographs and detailed mapping at suitable scales, the current extent of regional ecosystems, species habitat, threatened ecological communities, groundwater dependent ecosystems, wetlands and springs at the project area(s).

9.73 Identify analogue sites and acquire baseline information to inform rehabilitation criteria post mining

Impact assessment

9.74 Assess, describe, quantify and illustrate all potential direct and indirect significant impacts on terrestrial/ aquatic and/or marine ecological values. Assess the impacts on all potentially affected areas, whether on or off the project site. Include all stages of the project from initial development through to rehabilitation.

9.75 Address in the assessment:

(a) all significant species and ecological communities (MSES, MLES, threatened flora and fauna species and regional ecosystems)

(b) the conservation status of each identified ecological value under the *Nature Conservation Act 1992, Vegetation Management Act 1999* and the EP Act

(c) the integrity of ecological processes, including habitats of threatened, near threatened or special least-concern species

(d) interactions between terrestrial and aquatic ecosystems (including groundwater dependent ecosystems and stygofauna)

(e) connectivity of habitats and ecosystems

(f) the integrity of landscapes and places, including wilderness and similar natural places

(g) biological diversity

(h) chronic, low-level exposure to contaminants or the bio-accumulation of contaminants

(i) direct and indirect impacts on terrestrial, aquatic or marine species and ecosystems whether acting individually or in combination. Relevant matters include vegetation clearing, hydrological changes, discharges of contaminants to water, air or land, noise, road strikes, and the influence of climate change

(j) impacts of waterway barriers on fish passage in all waterways mapped on the Queensland Waterways for Waterway Barrier Works spatial data layer

(k) propose measures that would avoid the need for waterway barriers or propose measures to mitigate the impacts of their construction and operation

9.76 Describe any actions of the project that require an authority under the *Nature Conservation Act 1992,* and/or would be assessable development for the purposes of the *Vegetation Management Act 1999*, the *Regional Planning Interests Act 2014*, the *Fisheries Act 1994* and the *Planning Act 2016*. Features to consider include regional ecosystems, environmentally sensitive areas, wetlands, nature refuges, protected areas and strategic environmental areas.

9.77 Specifically address any obligations imposed by State or Commonwealth legislation or policy or international treaty obligations.

9.78 Assess the cumulative impacts on terrestrial ecological values that could potentially occur because of the impacts of the project added to the past, present and reasonably foreseeable impacts of other activities in the region. Assess cumulative impacts at a local, subregional and bioregional scale and over time.

Mitigation measures

9.79 Propose effective and proven measures to avoid, minimise, mitigate and/or offset direct or indirect impacts on environmental values. In particular, address measures to protect or preserve any threatened,

near-threatened or special least concern species. Describe the practicality, effectiveness and risks for each avoidance and mitigation measure. Include the timeframes in which the results would be delivered.

9.80 Justify how applying all proposed avoidance and management measures would result in acceptable outcomes for terrestrial, aquatic and/ or marine ecology. Describe how achieving the measures successfully will be monitored, measured and audited. Include provisions to regularly evaluate all the mitigation measures so that improvements may be made as new technologies and best practices evolve.

9.81 Assess the need for buffer zones and the retention, rehabilitation or planting of movement corridors. The assessment must consider the role of buffer zones in maintaining and enhancing riparian vegetation and wetlands to enhance water quality, promote habitat connectivity and provide habitat.

Offsets

9.82 After demonstrating that all reasonable on-site avoidance and mitigation measures are to be applied, identify whether the project will result in a significant residual impact (SRI) on MSES, requiring an offset with reference to the current versions of the Queensland Environmental Offsets Policy (EPP/2015/1658 Version 1.17) (DETSI 2025) and Significant Residual Impact Guideline 2014 (DEHP 2014) and the Queensland environmental offsets framework.

9.83 Propose offsets consistent with the applicable State and Commonwealth legislation or policies for where a SRI will occur on a prescribed environmental matter as outlined in the Environmental Offsets Regulation 2014, the offset proposal(s) must demonstrate how any proposed land-based offset sites and their suitability and habitat quality, or alternative offset types, are consistent with the requirements of Queensland's *Environmental Offsets Act 2014* and the latest version of the Queensland Environmental Offsets Policy (EPP/2015/1658 Version 1.17) (DETSI 2025).

9.84 Provide an offset proposal which outlines the proposed offset delivery approach to address the project's SRI on MSES. The document should:

(a) For staged offsets, consider the full extent of potential impacts on prescribed environmental matters from the entire proposal as part of the SRI test.

(b) For land-based offsets, assess the vulnerability and resilience of an offset site under climate change scenarios (e.g. reduced water availability and increased bushfire risk).

Biosecurity

Environmental objective and outcomes
The construction, operation and decommissioning of the project must ensure: • the introduction and spread of weeds, pests (including marine pests) and disease, pathogens and contaminants are avoided or minimised • existing weeds and pests, including marine pests, are controlled, including biosecurity threats and their management • the performance outcomes correspond to the relevant policies, legislation and guidelines, and that sufficient evidence is supplied (through studies and proposed management measures) to show these outcomes can be achieved.

9.85 Conduct the impact assessment in accordance with the latest version of the department's Biosecurity—EIS information guideline (ESR/2020/5297) (DETSI 2024).

9.86 Describe the current distribution and abundance of pest animals and weeds on the project site.

9.87 Describe the impact the project's construction and operation will have on the spread of pest animals, weed species and disease.

9.88 Propose detailed measures to remove, control and limit the spread of pests, weeds, diseases, pathogens and contaminants on the project site and any areas under the proponent's control. This includes declared plants and animals and restricted areas under Queensland's *Biosecurity Act 2014*, the Commonwealth *Biosecurity Act 2015* and weeds of national significance and designated pests under the Queensland *Public Health Act 2005*. All proposed measures are to be in accordance with biosecurity surveillance or prevention

measures authorised under Queensland's *Biosecurity Act 2014* and aligned with local government pest management priorities.

9.89 Detail a monitoring program that would audit the success of biosecurity measures, identify whether objectives have been met, and describe corrective actions to be used if monitoring indicates objectives are not being met.

Air

Environmental objective and outcomes
The activity will be operated in a way that protects the environmental values of air.

9.90 Describe the existing air environment at the project site and the surrounding area and the airshed, including the background/ambient levels of those air contaminants. Include all available data from any site-specific air monitoring, the National Pollutant Inventory (NPI) reporting, and/or ambient air quality monitoring undertaken by the Queensland government.

9.91 Provide an emissions inventory and description of the characteristics of contaminants or materials that would be released from point and diffuse sources and fugitive emissions when carrying out the activity (point source and fugitive emissions). The description must address the construction, commissioning, operation, upset conditions, and closure of the project.

9.92 Demonstrate that the project can meet the environmental objectives and performance outcomes in Schedule 8 of the EP Regulation.

9.93 Predict the impacts of the releases from the activity on environmental values of the receiving environment using established and accepted methods and in accordance with the EP Regulation, Environmental Protection (Air) Policy 2019 and the latest version of the department's Air—EIS information guideline (ESR/2020/5294) (DETSI 2024) and Applications requirements for activities with impacts to air (ESR/2015/1840) (DETSI 2025). The impact prediction must:

(a) Take into consideration the sensitivity and assimilative capacity of the receiving environment and the practices and procedures that would be used to avoid or minimise impacts.

(b) Address the cumulative impact of any release with other known releases of contaminants, materials or wastes associated with existing development and possible future development (as described by approved plans and existing project approvals).

(c) Quantify the human health risk and amenity impacts associated with emissions from the project for all contaminants whether or not they are covered by the National Environmental Protection (Ambient Air Quality) Measure or the Environmental Protection (Air) Policy 2019.

9.94 Describe the proposed mitigation measures to limit impacts from air emissions and how the proposed activity will be consistent with best practice environmental management. Address the compatibility of the project's air emissions with existing or potential land uses in surrounding areas. Potential land uses might be gauged from the zonings of local planning schemes, State Development Areas or other relevant planning frameworks.

9.95 Describe how the project's air emission objectives would be achieved, monitored, audited and reported, and how corrective actions would be managed for the life of the project.

9.96 Describe flare emissions if gas flaring will be used during the commissioning stages and/or during the emergency under normal operation. If the flare is expected to be used continuously for more than three months to incinerate the waste gases, then conduct the impact assessment from this source for inclusion in the EIS as a separate item of the assessment.

Noise and vibration

Environmental objective and outcomes
The activity will be operated in a way that protects the environmental values of the acoustic environment.

9.97 Describe and illustrate the locations of any sensitive receptors that are listed in Schedule 1 of the Environmental Protection (Noise) Policy 2019. Also describe any other environmental values that could be impacted by emissions from the project.

9.98 Describe the sources and characteristics of noise and vibration that would be emitted during the construction, commissioning, operation, upset conditions, and closure of the project.

9.99 Conduct a noise and vibration impact assessment in accordance with the latest version of the department's Noise and vibration—EIS information guideline (ESR/2020/5305) (DETSI 2024) and Applications requirements for activities with noise impacts (ESR/2015/1838) (DETSI 2025). The assessment must address low-frequency (<200 Hz) noise emissions and potential cumulative impact of the project with other emissions of noise from any existing developments and known possible future development in the area.

9.100 Demonstrate that the project can meet the environmental objectives and performance outcomes in Schedule 8 of the EP Regulation.

9.101 Describe how the proposed activity would be managed to be consistent with best practice environmental management, including the control of background creep in noise as outlined in the Environmental Protection (Noise) Policy 2019. The EIS must address the compatibility of the project's noise emissions with existing or potential land uses in surrounding areas. Potential land uses might be gauged from the zonings of local planning schemes, State Development Areas or other relevant planning frameworks.

9.102 Describe how the environmental management objectives for noise and vibrations would be achieved, monitored, audited and reported, and how corrective actions would be managed.

Waste management

Environmental objective and outcomes
Any waste generated, transported, or received as part of carrying out the activity is managed in a way that protects all environmental values.

9.103 Conduct the impact assessment in accordance with the latest version of the department's Waste—EIS information guidelines (ESR/2020/5311) (DETSI 2024) and Application requirements for activities with waste impacts (ESR/2015/1836) (DETSI 2025).

9.104 Demonstrate that the project can meet the environmental objectives and performance outcomes in Schedule 8 of the EP Regulation.

9.105 Describe all the expected waste streams from the project activities during the construction, operational, rehabilitation and decommissioning phases of the project. Waste streams for resource projects would typically include: waste rock, tailings and coarse rejects from mining and mineral processing; and brackish, saline or mine affected water from all types of resource projects. Describe any potential regulated or prescribed waste streams in full detail.

9.106 Describe the quantity, and physical, chemical, and toxicological characteristics of each significant waste, any attributes that may affect its dispersal, chemical reactivity and persistence in the environment, and its associated risk of causing environmental harm.

9.107 Define and describe objectives and practical measures for protecting or enhancing environmental values from impacts from wastes.

9.108 Assess and describe the proposed management measures against the preferred waste management hierarchy, namely: avoid and reduce waste generation; cleaner production; reduce; recycle; reuse; reprocess and reclaim; waste to energy; treatment; disposal. This includes the generation and storage of waste.

9.109 Describe how nominated quantitative standards and indicators may be achieved for waste management, and how the achievement of the objectives would be monitored, audited and managed.

9.110 Detail waste management planning for the project, in particular how measures have been applied to prevent or minimise environmental impacts due to waste according to best practice criteria at each stage of the project.

9.111 Use a material/energy flow analysis to provide details of natural resource use efficiency (such as energy and water), integrated processing design, and any co-generation of power and by-product reuse.

9.112 Detail the geochemistry of all waste rock, including spoil, tailings and rejects. Assess the potential risks associated with this waste stream and describe the management of progressive placement and any disposal strategy to minimise any potential impacts on environmental values of the project area. Detail how high risk waste material will be managed in the rehabilitation plan.

9.113 Identify the quantity, quality and location of all potential discharges of water and contaminants by the project, including treated wastewater and sewage. Describe whether the discharges would be from point sources (whether uncontrolled and controlled discharges) or diffuse sources (such as irrigation to land of treated wastewater/sewage effluent) and describe the receiving environment (such as land or surface waters). Refer to the Water section of the TOR and Water—EIS information guideline (ESR/2020/5312) (DETSI 2024) for further guidance. For potential discharges to surface waters, provide detail to demonstrate consistency with the assessment approaches outlined in the guideline Wastewater release to Queensland waters (ESR/2015/1654) (DETSI 2025). For potential discharges to groundwaters, provide an assessment using the appropriate approaches and guidelines listed in the Water—EIS information guideline (ESR/2020/5312) (DETSI 2024). Note that the EP Act and EP regulation hold strict provisions in terms of waste discharges to groundwaters or sensitive areas.

9.114 Provide a risk assessment of the potential impacts on waters, in the near-field and far-field, resulting from controlled or uncontrolled discharges from the site. Address the following matters with regard to every potential discharge of contaminated water, contaminants or wastes:

(a) Describe the circumstances in which controlled and uncontrolled discharges might occur

(b) Provide stream flow data and information on discharge water quality, including any potential variation in discharge water quality that will be used in combination with proposed discharge rates to estimate in-stream dilution and water quality. Chemical and physical properties of any wastewater, including concentrations of constituents, at the point of entering natural surface waters must be discussed along with toxicity of effluent constituents to human health, flora and fauna.

(c) Provide an assessment of the available assimilative capacity of the receiving waters given existing water quality and other potential point source discharges in the catchment. Options for controlled discharge at times of natural stream flow must be investigated to ensure that adequate flushing of wastewater is achieved.

(d) Provide water quality limits that are appropriate to maintain background water quality and protect other water uses

(e) Describe the necessary streamflow conditions in receiving waters under which controlled discharges will be allowed.

9.115 Provide relevant information on existing and proposed sewage infrastructure relevant to ERA 63, by referring to relevant department policies and guidelines, depending on the proposed sewage collection and treatment infrastructure proposed the reuse and/or disposal of treated wastewater and sewage wastes generated.

9.116 Identify end of waste codes (Qld Government n.d.) under the *Waste Reduction and Recycling Act 2011* which may be relevant for the project. This may include minor construction, coal washing and processing, dust suppression, landscaping and revegetation, and sewage plant operations.

9.117 Proponents are responsible for determining if they have obligations under the *National Environment Protection (National Pollutant Inventory) Measure 1998 (NPI NEPM)* and ensuring that data provided meets the requirements of this Act and its subordinate legislation. The EIS is to identify the types and amounts of certain substances being emitted to air, land, and water and both on-site or off-site waste transfers that will be reported.

Hazards and safety

Environmental objective and outcomes
The construction and operation of the project must ensure: • the risk of, and the adverse impacts from, natural and man-made hazards are avoided, minimised or mitigated to protect people and property • the community's resilience to natural hazards is maintained or enhanced • the storage and handling of hazardous materials are appropriately located, designed and constructed to minimise health and safety risks to communities and individuals and adverse effects on the environment • that any risk associated with explosives use, transportation, storage or manufacture is within an acceptable level, in accordance with the *Explosives Act 1999* and codes and standards including the *Australian Standard AS2187.1 Explosives - Storage, transport and use - storage* • the project prevents or minimises the production of hazardous contaminants and waste • if the production of hazardous contaminants and waste is unavoidable, the project treats and/or contains hazardous contaminants until their disposal at an approved facility.

9.118 Assess the vulnerability of the area to natural and induced hazards, including floods, bushfires and cyclones. Consider the relative frequency and magnitude of these events together with the risk they pose to the construction, operation and decommissioning of the project, as well as the rehabilitation of the site. Describe measures that would be taken to minimise the risks of these events.

9.119 Describe the potential risks to people and property that may be associated with the project in the form of a risk assessment for all components of the project and in accordance with relevant standards. The assessment must address the following matters:

(a) The safety of employees during design and planning of the project.

(b) Potential hazards (including those associated with petroleum and gas pipelines, abandoned mines, explosive magazines and the storage and use of explosives as part of construction), accidents, spillages, fire and abnormal events that may occur during all stages of the project, including estimated probabilities of occurrence.

(c) Hazard analysis and risk assessment in accordance with:

i. *AS/NZS ISO 31000:2018 Risk management guidelines* (Standards Australia 2018) and with *HB203:2006 Managing environmental-related risk* (Standards Australia 2012).

ii. Consider the suite of risk assessments included in the relevant Local Disaster Management Group Plans and the Queensland State Risk Assessments available at https://www.disaster.qld.gov.au/qermf/Pages/Assessment-and-plans.aspx (State heatwave assessment, State Earthquake Risk assessment, Sever Wind Hazard Assessment)

iii. consider the Queensland Government Climate action resources (Qld Government 2024a) including the Queensland Future Climate Dashboard (Qld Government 2024b)

iv. the Queensland Emergency Risk Management Framework (Qld Government n.d.) as the endorsed approach to disaster and emergency risk management in Queensland.

9.120 Consider geophysical risk management such as earthquakes. The State Earthquake Risk Assessment includes probabilities of major seismic events for all local government areas and must be used to inform risk consideration and management.

9.121 Address the potential cyclone and severe wind hazard and risk to the project and the heat and heatwave risk management refer to the State Heatwave Risk.

9.122 Demonstrate that any major hazard facility involving dangerous and hazardous materials is appropriately located in accordance with State Development Assessment Provisions, Code 21, Hazardous chemical facilities (DSDMIP 2021).

9.123 Identify all hazardous substances and any explosives to be used, transported, stored, processed or produced and the rate of usage.

9.124 Evaluate the risks associated with the secure storage, use and transportation of explosives to ensure the risks are within an acceptable standard in accordance with *Australian Standard AS2187.1 Explosives - Storage, transport and use – storage* (AS2187.1) (Standards Australia 1998).

9.125 Identify the need for appropriate explosive licences and notice of proposed blasting prior to explosives use.

9.126 Potential wildlife hazards, including a development of a mosquito management plan in accordance with Queensland Health guidelines, natural events (e.g. cyclone, storm tide inundation, flooding, bushfire) and implications related to climate change and adaptation.

9.127 Describe natural hazards that may affect the site with at least a 1% annual exceedance probability or 100 year average reoccurrence interval level, including mapping of the potential hazard areas at the site.

9.128 How siting, layout and operation of the development will avoid or mitigate the risks, particularly with regard to the release of hazardous materials during natural hazard events.

9.129 Provide details on the safeguards that would reduce the likelihood and severity of hazards, consequences and risks to persons, within and adjacent to the project area(s). Identify the residual risk following application of proposed mitigation measures. Present an assessment of the overall acceptability of the impacts of the project in light of the residual uncertainties and risk profile.

9.130 As part of the emergency response plan include:

(a) a bushfire management plan, certified by a suitably qualified person, in consultation with the Queensland Fire and Emergency Services addressing construction and operations, and including the following information at a minimum:

i. a bushfire hazard analysis

ii. mitigation strategies to achieve the relevant development outcomes in Part E of the State Planning Policy– Natural Hazards, Risk and Resilience (DSDMIP 2019b).

iii. provides details of the proposed ongoing management of fuel loads across the subject site through grazing or mechanical means including the asset protection zone proposed.

(b) a safety and emergency management plan addressing construction and operations, and including the following information at a minimum:

i. evacuation plans for the construction and operation phases of the development

ii. safety management plans and emergency response procedures in consultation with the state and regional emergency service providers (including Queensland Fire and Emergency Services) and provide an adequate level of training to staff who will be tasked with emergency management activities.

9.131 Provide an outline of the proposed integrated emergency management planning procedures, including evacuation plans, if required, for the range of situations identified in the risk assessment developed in this section.

9.132 Outline any consultation undertaken with the relevant emergency management authorities, including the local disaster management group.

Cultural heritage

Environmental objective and outcomes
The construction and operation of the project must achieve the purposes of the *Aboriginal Cultural Heritage Act 2003* and the *Torres Strait Islander Cultural Heritage Act 2003* with respect to the project site and ensure that the nature and scale of the project does not compromise the cultural heritage significance of a heritage place or heritage area.

9.133 Conduct the impact assessment in accordance with the latest version of the department's Aboriginal and Torres Strait Islander cultural heritages—EIS information guideline (ESR/2020/5296) (DETSI 2024) and Non-Indigenous cultural heritage—EIS information guideline (ESR/2020/5302) (DETSI 2024).

9.134 Unless section 86 of the *Aboriginal Cultural Heritage Act 2003* or *Torres Strait Islander Cultural Heritage Act 2003* applies, the proponent must develop a Cultural Heritage Management Plan in accordance with the requirements of Part 7 of these Acts.

9.135 For non-Indigenous historical heritage, undertake a study of, and describe, the known and potential historical cultural and landscape heritage values of the area potentially affected by the project. Any such study must be conducted by an appropriately qualified cultural heritage practitioner. Provide strategies to mitigate and manage any negative impacts of the project on non-Indigenous cultural heritage values and enhance any positive impacts.

Social

Environmental objective and outcomes
The construction, operation and closure of the project must ensure that: • adverse social impacts arising from the project are avoided or mitigated • benefits for local and regional communities are enhanced.

9.136 Prepare a social impact assessment (SIA) for the project that is consistent with the requirements of the *Strong and Sustainable Resource Communities Act 2017* (SSRC Act) and the Coordinator-General's SIA guideline (DSDIP 2025).

9.137 Develop the SIA in consultation with the Office of the Coordinator-General, Department of State Development, Infrastructure, Local Government and Planning.

9.138 Include in the SIA detailed assessment of the following five key matters in accordance with the SIA guideline (DSDIP 2025):

(a) community and stakeholder engagement

(b) workforce management

(c) housing and accommodation

(d) local business and industry procurement

(e) health and community well-being.

Key SIA outcomes

9.139 Describe in the SIA:

(a) the existing social environment of communities that are potentially impacted by the project

(b) the potential social impacts (both positive and negative) of the project, as well as how they will be managed and monitored

(c) how the project will contribute to enhancing the sustainability of these communities.

Consultation for the SIA

9.140 The SIA is to be informed by an inclusive and collaborative community and stakeholder engagement process, consistent with the SIA guideline. Community and stakeholder engagement is to be iterative throughout preparation of the SIA. Engagement with local government must commence at an early stage.

9.141 Demonstrate evidence in the SIA of consultation outcomes from key stakeholder groups (refer to Appendix 1 in the SIA guideline). The SIA must be informed by the results of community and stakeholder engagement.

Workforce arrangements

9.142 Include in the SIA a workforce profile summary for the construction and operational phases of the project, including the estimated proportion of local and fly-in, fly-out workers. This is to be informed by an analysis of the capacity of towns within 125km radius of the project to:

(a) provide workers for the construction and operational phases of the project,

(b) receive workers and their families who move to the towns, and

(c) address barriers that may impact choice for workers to live local.

9.143 The SIA will need to include a target for obtaining a local workforce and set the maximum proportion of FIFO workers for the project. This is to be supported by a rationale to ensure local benefit.

9.144 Identify in the SIA measures for prioritising the recruitment of workers from local and regional communities. This includes describing how the recruitment hierarchy for workers in section 9(3A) of the SSRC Act will be implemented.

9.145 The SIA is to consider the impact of new technologies on the operation of the project including possible impacts on the proposed workforce composition, potential new labour requirements and opportunities for local training and development (where relevant).

9.146 Where a FIFO workforce is proposed, identify measures for managing this workforce in accordance with the SIA guideline (DSDIP 2025), as well as sections 6 and 8 of the SSRC Act and the relevant provisions in the *Anti-Discrimination Act 1991*.

9.147 The information provided in the EIS (including the SIA) will inform the Coordinator-General's decision under section 12 of the SSRC Act on whether personnel employed during the construction phase of the project should be protected by the SSRC Act's anti-discrimination and 100 per cent FIFO prohibition provisions.

Social impact management plan

9.148 Include in the SIA a social impact management plan (SIMP) with management measures to mitigate the impacts and enhance the potential benefits identified in the assessment of the five key matters. The SIMP must describe a practical basis for the implementation of management measures.

9.149 The SIMP is to include timeframes for implementation of management measures, key performance indicators, roles and responsibilities, stakeholders and potential partnerships. Potential partnerships include opportunities for linkages with other projects planned or operating in the area and possible alignment with existing strategies or proposed new initiatives that would benefit the management of any cumulative social impacts.

9.150 The SIMP must include a process of review throughout the project lifecycle to ensure management measures continue to be effective and, where the stated outcomes are not achieved, are amended to appropriately mitigate impacts.

Economic

Environmental objective and outcomes
The construction and operation of the project must ensure that: • avoid or mitigate adverse economic impacts arising from the project • capitalise on opportunities potentially available for capable local industries and communities • create a net economic benefit to the region and state.

9.151 Identify the potential adverse and beneficial economic impacts of the project on the local and regional area and the State. Estimate the costs and benefits and economic impacts of the proposal using both regional impact analysis and cost–benefit analysis. Undertake the analysis in accordance with the Coordinator-General's Economic impact assessment guideline (DSDI 2021). Separately address each stage of the project (e.g. construction, operation and decommissioning).

9.152 Identify recreational, commercial or indigenous fisheries potentially impacted by the project and undertake consultation with these stakeholders.

9.153 Provide an analysis of the economic costs to agricultural activities on land including any impacts to supply chains.

9.154 Provide an analysis of the project's contribution to climate change-related economic and financial risks and benefits to Queensland based on best practice assessment frameworks, such as the Task Force on Climate-related Financial Disclosures (TCFD) framework. This analysis must be based on a scenario consistent with achieving the goals of the Paris Agreement (of which Australia is a signatory) to limit global warming to as

close to 1.5°C as possible. Additional scenarios can be included for comparison, however, the central assessment should be aligned with 1.5°C.

9.155 Consider the 'social cost of carbon' (or other form of carbon cost) in cost benefit analysis for the project. Provide an analysis of the economic costs of developing and implementing GHG measures to meet the Queensland's Government's GHG emission reduction and clean energy targets as legislated in the *Clean Economy Jobs Act 2024* and *Energy (Renewable Transformation and Jobs) Act 2024.*

9.156 Discuss and quantify the economic costs of scope 3 GHG emissions.

9.157 Discuss potential alternative pricing scenarios for the social cost of carbon for scope 1, 2 and 3 GHG emissions, including scenarios using the current European Union Emission Allowance Units price (or the price at the time of drafting the revised draft EIS) and futures prices by the European Union.

9.158 Discuss costs and risks associated with difficulty securing debt finance, insurance or other financial services, as a result of the divestment policies of major financial institutions.

Transport

Environmental objective and outcomes
The construction and operation of the project must aim to: • maintain the safety and efficiency of all affected transport modes for the project workforce and other transport system users • avoid and mitigate impacts including those on the condition of transport infrastructure • ensure any required works are compatible with existing infrastructure and future transport corridors.

9.159 The EIS must include a clear summary of the total transport task for the project, including workforce, inputs and outputs, during the construction, operational and decommissioning phases of the project. Proponents must make appropriate choices for modes of transport to ensure efficiency and minimise impacts on the community.

9.160 Undertake the impact assessment in accordance with the department's Transport—EIS information guideline (ESR/2020/5310) (DETSI 2024). The methods used must include the following matters:

(a) for impacts on roads: a traffic impact assessment report in accordance with the Guide to traffic impact assessment (TMR 2019), with traffic data in Department of Transport and Main Roads-suitable formats.

(b) for impacts on rail level crossings: the Australian Level Crossing Assessment Model (ALCAM 2024).

9.161 Present the transport assessment for each project-affected mode (road, rail, air, port and sea) as appropriate for each phase of the project. Provide sufficient information to allow an independent assessment of how existing transport infrastructure will be affected by project transport at the local and regional level (e.g. local roads and state-controlled roads).

9.162 Discuss how identified impacts will be mitigated for each transport mode. Mitigation strategies may include works, contributions or other strategies that can be documented in a road-use management plan. The strategies must be prepared in close consultation with relevant transport authorities, including local government and the Queensland Police Service. They must consider the transport authorities' works programs and forward planning, and be in accordance with the relevant methodologies, guidelines and design manuals.

10. Commitments

10.1 Provide a consolidated description of all the proponent's commitments to implement avoidance, mitigation, management and design measures (including monitoring programs and management plans) that would need to be applied to meet the predicted project outcomes. Should the project proceed, these commitments would be carried over into conditions as relevant.

11. Conditions

11.1 Propose conditions that may be placed on the EA and any other required approvals or licenses. For EA conditions refer to the Queensland Government's Environmental authority conditions website (Business Queensland 2023) and/or propose site-specific conditions relevant to the project.

11.2 As part of the PRC plan (refer to Section 9.3) provide a PRCP schedule which sets out the milestones and conditions that relate to the completion of progressive rehabilitation and mine closure. The PRC plan must be consistent with the department's guideline Progressive rehabilitation and closure plans (ESR/2019/4964) (DETSI 2024).

12. Appendices to the EIS

12.1 Appendices to the EIS must include the technical data collected, and evidence used to develop assertions and findings in the main text of the EIS.

12.2 No significant issue or matter, including statements of uncertainty associated with assertions and findings, should be mentioned for the first time in an appendix—it must be addressed in the main text of the EIS.

12.3 Include a table listing the section and sub-sections of the EIS where each requirement of the TOR is addressed.

13. Spatial and electronic data presentation

13.1 Maps included in the EIS must have contours at suitable increments relevant to the scale, location, potential impacts and type of project, shown with respect to Australian Height Datum (AHD) and drafted to Geocentric Datum of Australia 2020 (GDA2020). In relatively flat locations, contours must be at one metre intervals. Present geographical coordinates as latitude and longitude against the GDA2020.

13.2 Provide spatial data presented in the EIS to the department in appropriate electronic form, such as shape files. This includes all water quality, wastewater quality data and geological structures, such as aquifers, faults and economic resources. Refer to the department's guideline Spatial information submission (ESR/2018/4337) (DETSI 2025) for information on the format for spatial information.

13.3 For rehabilitation matters, provide spatial information in accordance with the department's guideline Progressive rehabilitation and closure plans (ESR/2019/4964) (DETSI 2024) and the department's application form Submission of a progressive rehabilitation and closure plan (ESR/2019/4957) (DETSI 2025).

13.4 If the project is an extension or a continuation of an existing site, submit all relevant historical data from the initial project/s. If the existing site is already set up in the department's WaTERS database water tracking and electronic reporting system, submit all historical water monitoring data via WaTERS.

Appendix 1 Glossary

The following acronyms, initialisms and abbreviations have been used in this document.

Acronym/abbreviation	Definition
AHD	Australian Height Datum
Bilateral agreement	an agreement between the Australian Government and the State of Queensland under section 45 of the *Environment Protection and Biodiversity Conservation Act 1999* relating to environmental assessment
Department	the Queensland Department of the Environment, Tourism, Science and Innovation
DLGWV	the Queensland Department of Local Government, Water and Volunteers
EA	environmental authority
EIS	environmental impact statement
EP Act	*Environmental Protection Act 1994*
EP Regulation	Environmental Protection Regulation 2019
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ERA	environmentally relevant activity
FIFO	fly-in-fly-out
FTE	full time equivalent
GDA2020	Geocentric Datum of Australia 2020
GHG	Greenhouse gases including carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulphur (or sulfur) hexafluoride (SF6), hydro fluorocarbons (HFCs) and perfluorocarbons (PFCs)
ha	hectares
IBP benchmark	International Best Practice (IBP) benchmark emission limits
IESC	Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development
km	kilometres
kV	kilovolt
MEDLI	Model for Effluent Disposal via Irrigated Land
ML	mining lease
MNES	matters of national environmental significance
MSES	matters of state environmental significance
NGER Act	National Greenhouse Energy Reporting Act 2007
NPI	National Pollutant Inventory
%	percent
PMLU	post-mining land use
PRC plan	progressive rehabilitation and closure plan
PRCP schedule	progressive rehabilitation and closure plan schedule
SIA	social impact assessment
SSRC Act	Strong and Sustainable Resource Communities Act 2017
TOR	terms of reference
Yancoal	Yancoal Australia Limited
YCC	Yarrabee Coal Company Pty Ltd.

Appendix 2 Policies, guidelines and references

Note: These references were correct at the time of publication. Where more recent versions are available, these must be used. For all Department of the Environment, Tourism, Science and Innovation publications, the latest version of a publication can be found by using the publication number as a search term at the Queensland Government website www.qld.gov.au.

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