Comet Ridge Mahalo North Coal Seam Gas Project

Application Number: **02083** Commencement Date: **20/10/2023** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Comet Ridge Mahalo North Coal Seam Gas Project

1.1.2 Project industry type *

Energy Generation and Supply (non-renewable)

1.1.3 Project industry sub-type

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1.1.4 Estimated start date *

01/07/2024

1.1.4 Estimated end date *

01/06/2054

1.2 Proposed Action details

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

Comet Ridge Mahalo North Pty Ltd (**the Proponent**) is proposing a greenfield coal seam gas (CSG) development **(the Proposed Action**), including the construction of CSG wells, gas and water gathering pipelines, a gas compression facility (GCF) and ancillary infrastructure. The Proposed Action is contained within Petroleum Lease (PL) 1128, which represents 45 sub-blocks of approximately 14,000 hectares (ha) (**the Project area**). The Proposed Action life span is estimated to be 30 years and will supply the domestic Australian gas market. The maximum disturbance of 185 ha (comprising of well pads and gas gathering networks, with a permanent disturbance of 20 ha).

The Project area is located approximately 45 kilometres (km) north of Rolleston, within the Central Highlands Regional Council (CHRC) Local Government Area (LGA) of Central Queensland. The Proponent has lodged a resource authority application to the Department of Resources (DoR) for the PL.

The Proposed Action is a standalone development that is not dependent on other projects or expansion to be commercially viable.

A description of each of the infrastructure component is provided below:

1. Gas Compression Facility

A 10 TJ / day GCF would be constructed to centrally gather gas produced from the production wells and pressurise this gas for export to domestic markets. The GCF will be located within a fenced compound. During its operation, the GCF includes equipment such as the gas compression and dehydration units, control systems, water infrastructure, and safety systems. The GCF also have amenities such as an office, workshop, fuel and chemical storage, vehicle washdown bay, potable water, vehicle parking, accommodation camp and internal access road.

Construction activities will involve planning and surveying, site preparation, building works and site restoration. Operational activities include further water, gas and solids separation, gas compression, produced water treatment (refer to Section 1.1 below), maintenance and emergency gas flaring.

1.1. Water Infrastructure

A water treatment facility will be constructed to treat produced water to facilitate the beneficial use of water at a nominal treatment rate of up to approximately 0.5 megalitres (ML)/day. The water treatment facility will include a package water treatment plant, above ground lined ring tanks, aboveground pipes to connect water treatment plant and the ring tanks, and pumping equipment to facilitate the transfer of treated produced water for beneficial re-use.

Treated produced water from any treatment process will be stored in up to 100 ML of above-ground storages (e.g. lined ring tanks), constructed and operated in accordance with the manufacturers' specifications. Treated produced water generated from the project will be beneficially used to support irrigation and industrial activities and development and operational activities (including drilling the wells and dust suppression).

Brine from any treatment process will be stored in up to 100 ML of above-ground storages (e.g. lined ring tanks), constructed and operated in accordance with the manufacturers' specifications, from where it may be further concentrated via solar and mechanical evaporation to a concentrated slurry or solid salt. The concentrated waste product will be disposed of at a licensed waste facility.

2. Gas Production Wells

A maximum of 68 coal seam gas wells will be installed, comprising a combination of vertical and lateral wells. The lateral wells will intersect the vertical wells within the section drilled within the coal seam. Gas and water will be collected from the vertical wells. There will be no hydraulic fracturing/stimulation or blasting activities as part of the proposed activities. Each production well will be located within a fenced compound of approximately 20 m x 20 m during operations. The equipment required during operation includes the well head, gas and water meter and separation equipment, control systems, particulate filter separator, manifolds, fuel storage, mixed fuel generator, fence and gate. Each associated lateral well will be in a suspended well state, and will have cattle panels installed around the well head, of approximately 8 m x 8 m. No other plant or equipment will be installed at a suspended lateral well site.

Construction activities for each gas well would include planning and survey work, site preparation (clearing and grubbing the disturbance boundary (approximately 1 ha per well site), well establishment, and site restoration (leaving an area of up to approximately 0.04 ha (20 m x 20 m) disturbed for operational activities.

Operations of the gas wells would include CSG extraction and maintenance of plant and equipment and workover of wells.

Decommissioning and rehabilitation of the gas wells would include cementing vertical and lateral wells back to surface, rehabilitation disturbed areas, and disposed of fluid displaced from well stored in onsite brine tank/s to an approved waste facility.

3. Gas and Water Gathering Pipelines

Gas and water from each of the well sites will be transported through a network of gathering pipelines to connect to the GCF. The gathering pipelines will be installed underground. The gathering pipelines will comprise the components including a steel underground pipeline and main lines valves.

Construction activities for the gas and water gathering lines would include planning and survey work, site preparation (including clearing and grubbing), excavation of trench (up to 0.85 m wide), wielding and stringing of pipelines, pipe laying, watercourse and waterway crossings constructions (refer **Section 3.1** below), backfilling, pressure testing pipeline, scour protection and site restoration of the entire disturbed area.

Decommissioning of the gas and water gathering lines would include purging the pipelines, ensuring underground infrastructure are made safe and remain in ground, cutting off each end of the line below ground level, and restored areas to pre-disturbance condition (top soil installed and reseeded).

Decommissioning of gas gathering pipelines is proposed to be completed progressively as wells are depleted, plugged, and abandoned over the life of the project. This will also include the associated water, power and communications infrastructure.

3.1 Watercourse and Waterway Crossings

The gas and water gathering pipelines are proposed to intersect watercourses (as defined under the *Water Act 2000* (Water Act)) and waterways (as defined under the *Fisheries Act 1994* (Fisheries Act). Installation of the pipeline across these watercourses will be via open-cut trenching or horizontal directional drilling (HDD). The installation method will be determined with consideration to environmental constraints, geotechnical characteristics, and standard conditions at each proposed crossing location. The construction of each crossing is expected to take approximately one week.

Waterway crossings would be designed with consideration to the *Accepted development requirements for operational work that is constructing or raising waterway barrier works* (Department of Agriculture and Fisheries (DAF) 2018). Watercourse crossings will be designed with consideration to the *Riverine Protection Permit Exemption Requirements* (DRDMW 2023a).

Each method of crossing has been described further below.

Open-Cut Trenching

Open-cut trenching will be used where impacts to identified environmentally sensitive areas or significant ecological values can be avoided. Open-cut trenching method will only be undertaken on times during no/low flow in the watercourse.

The method of construction for open-cut trenching will involve planning and survey works, installation of erosion and sediment control, vegetation clearing, trench excavation, pipeline installation, backfilling, pressure testing, scour protection and site restoration.

Horizontal Directional Drilling

A HDD method will be used in environmentally constrained watercourse crossings. This approach is a form of trenchless construction which reduces the disturbance footprint and limits the environmental impact associated with the Proposed Action.

This trenchless method of construction involves clearing and preparation of entry and exit pits (approximately 1 m x 2 m wide) on either side of the crossing, lowering of the drilling equipment into the entry pit, drilling a pilot hole underground from the entry pit toward the exit pit, pulling the strung pipe through the pilot hole, retrieving the drilling equipment from the exit pit, pressure testing the pipeline, and site restoration including grading and revegetation.

4. New Access Tracks

The majority of the access tracks required for the Proposed Action will utilise existing access tracks. In areas where no access tracks exist, new tracks will be established to allow access to project infrastructure. Based on the current project layout, the project requires approximately 8 km of new access tracks to be established to access project infrastructure.

Construction activities for the new access tracks would include planning and survey works, site preparation (including clearing and grubbing the access track, stripping and stockpiling top soil and cleared vegetation), access track establishing, and site restoration.

Operations of the new access tracks would include maintenance of the access tracks to ensure safe and reliable access to plant, equipment, and facilities.

Decommissioning and rehabilitation of access tracks is proposed to be completed progressively as the infrastructure is no longer required for operations, provided the access tracks are not required by the landholder. Rehabilitation of the access tracks would include spreading top soil and grass seed on disturbed areas.

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

No

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

1. Commonwealth Legislation

1.1 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The Commonwealth EPBC Act is the key piece of Commonwealth legislation governing environmental protection in Australia. Administered by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW).

Under Part 3 of the EPBC Act, a person must not undertake an action that will have, or is likely to have, a significant impact on a protected matter, without approval from the Minister for the DCCEEW.

If after all reasonable avoidance and mitigation measures have been taken, there is still a residual impact on a protected matter, an offset may be required where the impact is, or is likely to be, significant.

An assessment of significant residual impact has been undertaken for the Proposed Action (refer Attachment 1 – Ecological Assessment Report, Section 9, page 68-87). Based on the significant residual impact assessments for MNES associated with the potential Proposed Action impacts, there are no predicted impacts to environmental values potentially requiring environmental offsets.

1.2 EPBC Act Environmental Offsets Policy 2012 (EOP)

The EPBC Act EOP provides upfront guidance on the role of offsets in environmental impact assessments, and how the DCCEEW considers the suitability of a proposed offset. The EOP aims to improve environmental outcomes through the consistent application of best practice offset principles, provide more certainty and transparency, and encourage advanced planning of offsets.

An assessment of significant residual impact has been undertaken for the Proposed Action (refer Att 1, Section 9, page 68-87). Based on the significant residual impact assessments for MNES associated with the potential Proposed Action impacts, there are no predicted impacts to environmental values potentially requiring environmental offsets.

2. State Legislation

2.1 Environmental Protection Act 1994 (EP Act)

The EP Act provides the key legislative framework for environmental management and protection in Queensland. The objective of the EP Act is to: “Protect Queensland’s environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains ecological processes on which life depends” (Section 3 of the EP Act). Under the EP Act, the Proponent must comply with the general environmental duty not to undertake an: “Activity that causes, or is likely to cause, environmental harm unless all reasonable and practicable measures to prevent or minimise the harm are taken” (Section 319 of the EP Act).

The Proposed Action is not considered to trigger an Environmental Impact Statement (EIS), based on an evaluation of the criteria contained within the Department of Environment and Science (DES) Guideline Criteria for environmental impact statements for resource Projects under the EP Act (ESR/2016/2167, version 3.00, dated 04/11/2020). The project does not trigger the requirement for an EIS due to the following reasons:

- The overall disturbance footprint is estimated to be approximately 185 hectares (ha), which is less than the 2,000 ha threshold
- The project does not involve the construction of a high-pressure pipeline
- The project does not involve the construction of a liquefied natural gas plant

2.2 Environmental Offsets Act 2014 (EO Act)

The EO Act, *Environmental Offsets Regulation 2014* and the *Queensland Government Environmental Offsets Policy* provide a streamlined framework for environmental offset requirements. Environmental offsets provide the flexibility to approve development in one place on the basis of a requirement to make an equivalent environmental gain in another place where there is not the same value to industry. An environmental offset may be required as a condition of approval where the activity is likely to result in a significant residual impact on prescribed environmental matters.

An assessment of significant residual impact has been undertaken for the Proposed Action (refer Att 1, Section 9, page 68-87). Based on the significant residual impact assessments for MSES associated with the potential Proposed Action impacts, there are no predicted impacts to environmental values potentially requiring environmental offsets.

2.3 Nature Conservation Act 1992 (NC Act)

The NC Act and subordinate documents *Nature Conservation (Animals) Regulation 2020* (NC Animals Regulation) and *Nature Conservation (Plants) Regulation 2020* (NC Plants Regulation) are in place to protect Queensland's native flora and fauna from potential environmental impacts of various activities through the requirement for protected plant clearing permits, species management programs and other permits.

The project area is not mapped within the protected plants trigger area, Therefore, no protected plant clearing permit will be triggered by the Proposed Action. Where the Proposed Action will involve tampering with animal breeding places, a species management plan will be obtained to authorise the potential tampering of the animal breeding place.

2.4 Vegetation Management Act 1999 (VM Act)

The VM Act regulates the clearing of vegetation in Queensland in a way that conserves remnant vegetation, ensures clearing does not cause land degradation, prevents loss of biodiversity, maintains ecological processes, reduces greenhouse gas emissions and allows for sustainable land use.

The clearing of native vegetation for the Proposed Action will be exempt from the provisions of the VM Act under Schedule 21 (Part 1, section 1, item 6) of the Planning Regulation 2017 where clearing occurs for a resource activity, defined under section 107 of the EP Act, which includes petroleum activities.

2.5 Water Act 2000 (Water Act)

The Water Act provides a structured system for the planning, protection, allocation and use of Queensland's surface waters and groundwater. Under the Water Act, a person must not take, supply, or interfere with water unless authorised for the taking of water from overland flow, groundwater, a watercourse, lake, or spring.

The gas and water gathering pipelines are proposed to intersect watercourses Water Act. Watercourse crossings will be designed with consideration to the *Riverine Protection Permit Exemption Requirements* (DRDMW 2023a).

Chapter 3 of the Water Act provides for the management of impacts on underground water (groundwater) due to the exercise of underground water rights by resource tenure holders. The project is located within the Surat cumulative management area (CMA), which was declared in 2011. The Office of Groundwater Impact Assessment (OGIA) was established under the Water Act and is responsible for preparing the Underground Water Impact Report (UWIR) and for establishing obligations to monitor and manage impacts on aquifers and spring. The OGIA has provided the Proponent with data from the Surat CMA UWIR regional scale groundwater flow model to inform the groundwater impact assessment which supports this EPBC Referral (refer Attachment 4 – DPM Groundwater Impact Assessment, Section 7.1.1-7.2.2, page 74-91)

2.6 Fisheries Act 1994 (Fisheries Act)

The Fisheries Act provides for the management, use, development and protection of fish habitats and resources. This includes waterways potentially used for 'fish passage' (considered as a MSES) as mapped within waterways for waterway barrier works mapping administered by the Department of Agriculture and Fisheries (DAF).

The Proposed Action is proposed to intersect mapped waterways, which each create the potential for barriers to fish passage. Waterway crossings for the Proposed Action will have consideration to the accepted development requirements.

2.7 Petroleum and Gas (Production and Safety) Act 2004 (P&G Act)

The object of the P&G Act is to facilitate and regulate the carrying out of responsible petroleum activities and the development of a safe, efficient and viable petroleum and fuel gas industry. PLs may be granted under Chapter 2 of the P&G Act. Under a PL, a proponent is authorised to construct and operate a petroleum activity, including a petroleum facility (i.e. GCF).

The Proponent has lodged a resource authority application to DoR under the P&G Act for a PL.

2.8 Coal Seam Gas Water Management Policy 2012 (CSG Water Policy)

The objective of the DES (formally DEHP) Guideline CSG Water Policy (DEHP 2012) is to encourage the beneficial use of CSG water in a way that protects the environment and maximises its production use. The policy focuses on the management and use of CSG water under the EP Act and does not vary the requirements of the Water Act.

The water management strategy for the project has been developed with consideration of the CSG Water Policy and will be addressed as part of future applications relating to the project activities.

2.9 Regional Planning Interests Act 2014 (Qld) (RPI Act)

Where resource or regulated activities impact on an area of regional interest and exemptions do not apply, a Regional Interests Development Approval (RIDA) is required under the RPI Act. If this applies to the Project, a RIDA will be lodged for approval, which is expected to be post-EA approval.

2.10 Waste Reduction and Recycling Act 2011 (WRR Act)

The WRR Act contains a suite of measures to reduce waste generation, landfill disposal and encourage recycling. The purposes of the WRR Act are to:

- Promote waste avoidance and reduction, and resource recovery and efficiency actions
- Reduce the consumption of natural resources and minimise the disposal of waste by encouraging waste avoidance and the recovery, re-use, and recycling of waste
- Minimise the overall impact of waste generation and disposal
- Ensure a shared responsibility between government, business and industry and the community in waste management and resource recovery
- Support and implement national frameworks, objectives and priorities for waste management and resource recovery

The waste management hierarchy has been addressed in the planning for the Proposed Action.

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

The Project area interacts with four rural properties and the closest town is approximately xx kms away, with access to the Proposed Action being along rural roads.

Comet Ridge has been active in the district since 2008, and the company name is derived from a geological feature in the district. Comet Ridge is familiar with local graziers and have sponsored local events throughout the years. Comet Ridge has two other ATPs in the district and is actively engaged in discussions with those landholders regarding its activities.

Commit Ridge's goal is to operate efficiently and responsibly, with the support of our stakeholders. We want our communities, to all enjoy the benefits of Comet Ridge developing Queensland's abundant gas resources.

Public Consultation – Land Holders

Since 2020, Comet Ridge has been engaging extensively with the four landholders within the Project area in regard to proposed activities on their properties, including the number of proposed wells, and the nature of drilling activities. All four of the properties have previous experience with CSG/petroleum wells, with drilling activities being undertaken on their properties (majority drilled in the past 10 years by both Comet Ridge and other gas companies), as well as experience with coal companies drilling coal core bores on their properties.

One of the properties in the Project area has approximately 950 coal core bores drilled across their property approximately 20 years ago (the current landholder owned the property during these activities).

Comet Ridge has a dedicated 'land agent' who keeps the landholders updated on activities, including the Proposed Action.

Early engagement with the four landholders commenced in 2019 when the ATP was first applied for, regular discussions have continued to today in regard to development throughout the ATP and Proposed Action.

In December 2022, the General Manager of Comet Ridge met with landholders of two of the four properties located within the Project area (these two properties have the bulk of the proposed CSG wells). Topics discussed included details of the proposed activities, the number and locations of proposed CSG wells, location and extent of gas gathering lines, new access tracks, and gas compression facility. Comet Ridge has existing Conduct and Compensation Agreements (CCA) with both of these properties in regard to exploration activities conducted under ATP 2048. Specifically for activities relating to the PL, Comet Ridge is in early stage of CCA negotiations with one of these two properties, with the General Manager having a subsequent meeting with the landholder in August 2023.

The Comet Ridge land access person has had regular engagement with all four landholders, including notifying them when the PL1128 application was submitted to Department of Resources (DoR).

Comet Ridge will continue to consult with the four landholders as the Project develops with the aim to keep them fully informed on the project and to achieve the required CCAs.

Public Consultation – Broader Community

Comet Ridge has provided briefings to the local Council, including the local council Mayor on the Proposed Action. The General Manager presented to the Council in August 2022 with a follow up briefing conducted in November 2022. Comet Ridge has attended a number of local functions (including with the Central Highlands Development Corporation (CHDC)) to provide updates on the Proposed Action's activities.

There are a number of PLs and ATP's in the district adjacent to the Project area. Over the past 10 years, a number of CSG exploration wells, boreholes, and pilot production tests have been conducted by Comet Ridge and other gas companies.

Comet Ridge proposed to undertake widespread public consultation, such as local town hall meetings after the PL is awarded, and when more information on environmental conditions and project timelines become available.

Indigenous Stakeholders

The main Cultural Heritage group for the Project area is the Gaangalu Nations People (GNP). ATP 2048 includes some areas of Native Title (NT) in the north outside of the Project area. The majority of the Project area consist of freehold tenure. The areas of NT within the Project area are confined to a few kilometre along public road corridors/easement. These areas are unclaimed, and Comet Ridge will initially exclude these from the PL area.

During the negotiation of the ATP 2048 tenure, Comet Ridge met with the GNP over a number of months and negotiated with them, which included discussions around what the Proposed Action would entail. Comet Ridge has subsequently worked with the GNP over the past three years to undertake Cultural Heritage surveys of land where CSG wells and new access tracks are proposed. Comet Ridge maintains a strong relationship with the GNP and will be providing them with more detailed briefing sessions once the PL is awarded, which will offer more clarity on EA conditions and project timeframes. It should be noted the majority of the land within the Proposed Action is extensively pre-disturbed grazing or cropping country, no clearing of mature vegetation or activities in the riparian zones of waterways are proposed.

1.3.1 Identity: Referring party

Privacy Notice:

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

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

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

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

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

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

1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	54608540496
Organisation name	COMET RIDGE MAHALO NORTH PTY LTD
Organisation address	4000 QLD

Referring party details

Name	Tor McCaul
Job title	Managing Director
Phone	07 3221 3661
Email	notices@cometridge.com.au
Address	Level 3, 410 Queen street , Brisbane Qld 4001

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

Yes

Person proposing to take the action organisation details

ABN/ACN	54608540496
Organisation name	COMET RIDGE MAHALO NORTH PTY LTD
Organisation address	4000 QLD

Person proposing to take the action details

Name	Tor McCaul
Job title	Managing Director
Phone	07 3221 3661
Email	notices@cometridge.com.au
Address	Level 3, 410 Queen street , Brisbane Qld 4001

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

No

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

No

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

There are no relevant past or present proceedings against Comet Ridge Mahalo North Pty Ltd.

Comet Ridge Mahalo North Pty Ltd is a 100% owned subsidiary of Comet Ridge Ltd (COI).

There are no relevant past or present proceedings against Comet Ridge Ltd and its related subsidiaries.

COI have been active in CSG exploration in Queensland since 2004. During this time, COI has held six Authority to Prospect (ATPs), with six related Environmental Authorities (EAs), and over 18 years of experience in gas exploration.

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

Environment
Comet Ridge strives to develop resources in an environmentally responsible manner. We conduct all of our activities consistent with sustainable development principles.

Environment Policy
Our environment policy sets out how Comet Ridge and our partners manage our commitment to avoid or minimise the impact on the environment from our activities.

Further information can be found in the website in the attached link.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	54608540496
Organisation name	COMET RIDGE MAHALO NORTH PTY LTD
Organisation address	4000 QLD

Proposed designated proponent details

Name	Tor McCaul
Job title	Managing Director
Phone	07 3221 3661
Email	notices@cometridge.com.au
Address	Level 3, 410 Queen street , Brisbane Qld 4001

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

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

ABN/ACN	54608540496
Organisation name	COMET RIDGE MAHALO NORTH PTY LTD
Organisation address	4000 QLD
Representative's name	Tor McCaul
Representative's job title	Managing Director
Phone	07 3221 3661
Email	notices@cometridge.com.au
Address	Level 3, 410 Queen street , Brisbane Qld 4001

Confirmed Person proposing to take the action's identity

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

Same as Referring party information.

Confirmed Proposed designated proponent's identity

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

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

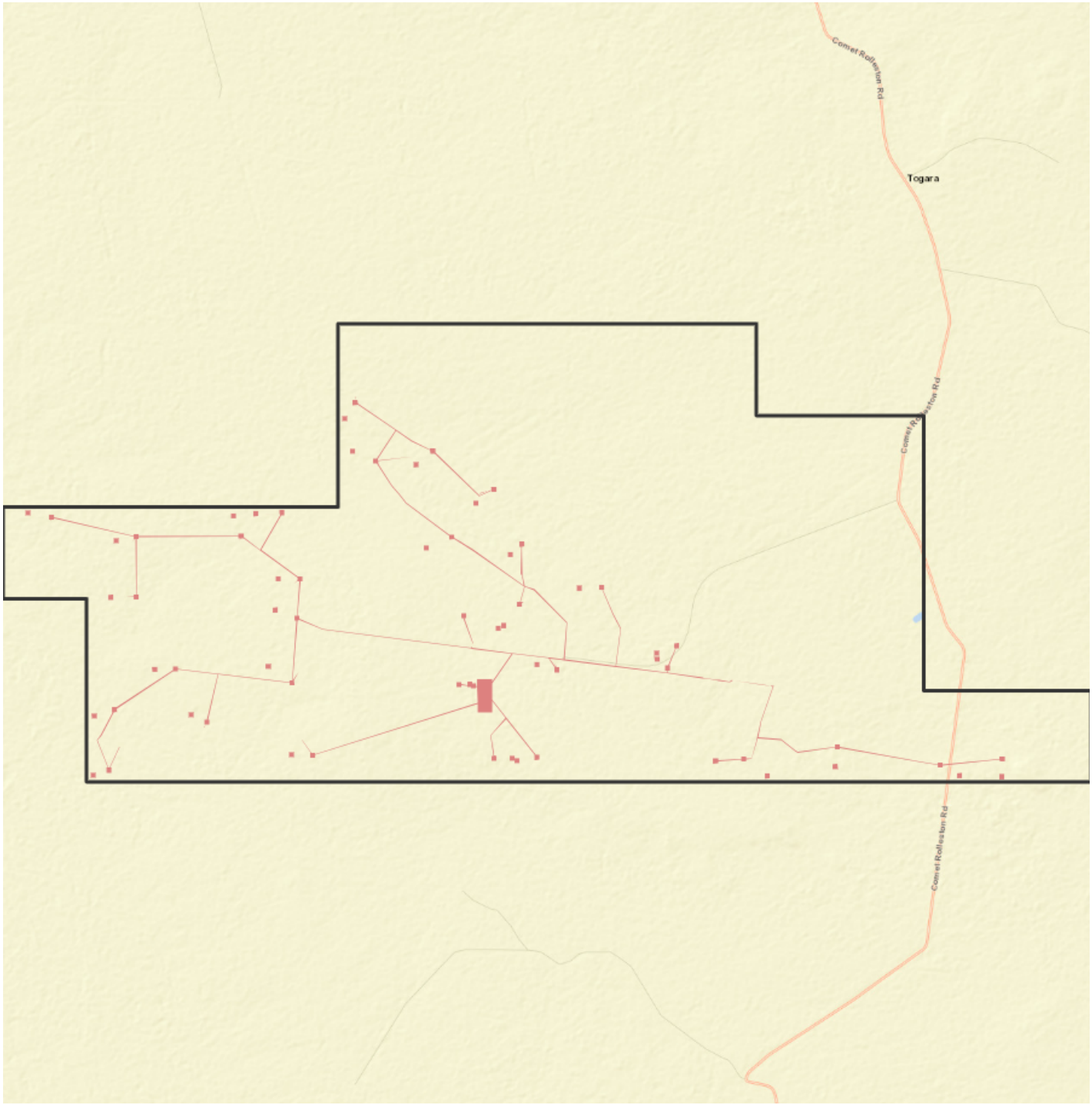
1.4 Payment details: Payment allocation

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

Person proposing to take the action

2. Location

2.1 Project footprint


Comet Rolleston Rd
Togara
Comet Rolleston Rd
Comet Rolleston Rd

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

The main centre of the project is on Meroo Downs property, Meroo Downs Rd, Togara Qld 4702

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

Queensland

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The Project area is located within Petroleum Lease (PL) 1128 (under application), and intersects sections of four rural properties, which are primarily used for grazing purposes as well as road parcels, easements and a railway corridor.

Lands lease (railway):

- 1SP187935
- 2SP187934

Freehold:

- 7SP187934
- 5WNA106
- 9SP187935
- 8WNA107
- 10WNA115

Easement:

- LSP173040
- MSP173041

3. Existing environment

3.1 Physical description

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

The Project area is located within the Brigalow Belt North Bioregion (BBNB), and lies within the Issac-Comet Downs subregion. The overall Project area encompasses approximately 14,078 hectares (ha). The Project area is largely disturbed and heavily modified, with the majority of the area cleared for cattle grazing and some cropping. Extant tracts of vegetation communities remain disturbed to some degree (previous tree clearing and existing cattle grazing) and largely occur in the north and north-east of the Project area and along the Comet River to the west. The Project area contains agricultural infrastructure such as fencing, water storage dams, cattle yards and unsealed tracks, The far eastern portion of the Project area is intersected by the Comet-Rolleston Road, which runs in a north-south direction.

The current condition of land surrounding the Project area includes cleared lands occurring in all directions of the Project area. Lands to the west of the Comet River are generally subject to cropping or irrigated cotton. The remaining surrounding area comprises land which has been subject to extensive disturbance including tree clearing and blade ploughing to discourage regrowth. Land to the north and northwest of the Project area has been substantially impacted by vegetation clearing associated with cattle grazing activity. Land to the northeast include an open cut coal mine.

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

Historically the Project area has been used largely for grazing practices and because of this most of the Project area has been cleared. Current site conditions are similar to those historically experienced with the Project area predominately used for cattle grazing and cropping. With the exception of the Proposed Action, no other identified proposed uses are identified for the Project area. The existing uses of grazing and cropping are proposed to continue in the Project area.

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

There are no outstanding natural features and/or any other important or unique values within the Project area. The closest natural feature is the Humboldt State Forest located approximately 15 km south-east of the Project area, and the next closest is the Amaroo State Forest, located approximately 20 km north of the Project area.

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

The Project area is comprised of relatively flat undulating Downs, descending from the higher alluvial areas on the eastern boundary to the alluvial flats associated with the Comet River. Elevation on the site remains relatively unchanged with the highest point situated at 250 m Australian Height Datum (mAHD) in the north-east corner and then sloping slightly to 190 m at the south-western boundary to the alluvial flats associated with the Comet River.

3.2 Flora and fauna

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

Desktop assessments, including searches of publicly available databases were undertaken to identify any MNES with potential to occur in the affected area. Field surveys were carried out in April 2022 and January-February 2023 by Epic Environmental Pty Ltd (Att 1, Section 4.2, page 12-14). Detailed description of the flora and fauna survey undertaken within the Project area is provided in (Att 1, Section 6, page 27-50). The following sections provide a summary of the survey results.

1. Flora Assessment

A total of 123 flora species were identified within the Project area during field surveys. The floral assemblage is dominated by native grasses, herbs and woody shrubs. Tree species were comprised of Acacias, eucalypts and soft-wood scrub species. No flora species listed as Critically Endangered, Endangered or Vulnerable under the EPBC Act were recorded. Fourteen non-native flora species were recorded, including Parthenium (*Parthenium hysterophorus*), Harrisia Cactus (*Harrisia martinii*), and Prickly Pear (*Opuntia stricta*) which are listed as Category 3 under the Biosecurity Act. Parthenium and Prickly Pear are also listed as Weeds of National Significance (WoNS).

1.1 Ground-truthed Regional Ecosystem

Much of the Project area is classified as non-remnant with patches of Remnant and Regrowth woodlands separately dominated by Brigalow (*Acacia harpophylla*), Poplar Box (*Eucalyptus populnea*) and Blackwood (*Acacia argyrodendron*). Ground-truthing of current Regional Ecosystems (REs) mapping confirmed the presence of six woodland vegetation communities analogous to the following six REs:

- RE 11.3.1 *Acacia harpophylla* and/or *Casuarina cristata* open forest on alluvial plains
- RE 11.4.8 *Eucalyptus cambageana* woodland to open forest with *Acacia harpophylla* or *A. argyrodendron* on Cainozoic clay plains
- RE 11.4.9 *Acacia harpophylla* shrubby woodland with *Terminalia oblongata* on Cainozoic clay plains
- RE 11.4.9a *Acacia harpophylla*, *Lysiphyllum carronii* +/- *Casuarina cristata* open forest to woodland
- RE 11.5.3 *Eucalyptus populnea* +/- *E. melanophloia* +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces
- RE 11.5.16 *Acacia harpophylla* and/or *Casuarina cristata* open forest in depressions on Cainozoic sand plains and remnant surfaces.

1.2 Threatened Ecological Communities

A single Threatened Ecological Community (TEC), Brigalow (*Acacia harpophylla* dominant or co-dominant) was identified within the Project area. The TEC is listed as Endangered under the EPBC Act. Two vegetation communities, remnant Brigalow woodland and regrowth Brigalow woodland are considered analogous to Brigalow TEC and are comprised of the following remnant and regrowth REs:

- RE 11.3.1
- RE 11.4.8
- RE 11.4.9
- RE 11.4.9a
- RE 11.5.16

Following ground-truthing of vegetation communities and analysis of aerial imagery the extent of Brigalow TEC within the Project area is estimated to be 347.24 ha.

1.3 Conservation Significant Flora Species

A single flora species of conservation significance, the Annual wiregrass (*Aristida annua*), is likely to occur within 50 km of the Project area, based on the PMR. Suitable habitat for the species occurs throughout the Project area. The species was not observed during field surveys although the species is a rare annual. Suitable habitat for the species occurs throughout the Project area. A total of 256 individuals of the species were identified across five locations within the eastern portion of the Project area during the 2019 survey undertaken by EMM (EMM 2022). The species was recorded in association with Brigalow (RE 11.4.8).

2. Fauna Assessment

The April 2022 and February 2023 surveys recorded a total of 138 fauna species including 10 frogs, 18 reptiles, 91 bird and 19 mammal species within and in the immediate surrounds of the area. This includes at least 11 microbat species recorded via Anabat monitoring. Seven species of feral animal were recorded, four of these are listed under Schedule 2 of the Biosecurity Act as ‘Restricted Matters’.

No conservation significant fauna listed as threatened or migratory were recorded during the 2022 or 2023 survey. A single species listed as Special Least Concern (SLC) under the NC Act was recorded: Short-beaked Echidna (*Tachyglossus aculeatus*).

White-throated Snapping Turtle (*Elseya albagula*) is known to occur within 50 km of the Project area, based on the PMR. The species was recorded in the Comet River to the west of the Project area in March 2023 during an aquatic ecology survey undertaken for the Project.

In recent surveys for other projects in the area, Koalas (*Phascolarctos cinereus*) were detected to the east of the Project area in riparian and Acacia woodlands (EMM 2022) and scats were detected along a creek line (Golder 2018). Within the Project area the most suitable habitat is along Humboldt Creek in the south-east. This species is considered likely to occur within the Project area.

Ornamental Snake (*Denisonia maculata*) was recorded during surveys for other Projects in the wider area (Golder 2018, EMM 2022). All sightings were located west of the Comet-Rolleston Road despite targeted surveys for the species within the east of the current Project area and to the immediate south. Two of these records are located within 3 km east of the Project area. There are areas of gilgai habitat on within the Project area in the central and north-east, which may support the species.

In general, faunal habitat quality at the time of the 2023 survey was in relatively good condition due to recent rainfall. Grass coverage was dense across much of the Project area. Shallow water-filled waterholes were scattered across central and north-east and frog activity was high. Nevertheless, the fauna habitat values present are limited by the extent of vegetation clearing and blade ploughing for cattle grazing purposes (Att 1, Section 6.2, pp 34-46).

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

Current Queensland regulated vegetation mapping indicates the majority of the Project area is considered as Category X (Non-remnant) under the State VM Act. Areas in the centre and northern extents of the Project area are mapped as Category B (Remnant) and Category C (High-value Regrowth). Refer to Att 1, Section 6.1, pp 26-34 for further details on native vegetation.

There are six vegetation communities identified as present as remnant (Category B) or high-value regrowth (HVR) (Category C). Two of these vegetation communities, Remnant and Regrowth Brigalow woodlands, are analogous with five REs recorded within the Project area listed as 'Endangered' under the VM Act. These Brigalow woodland communities are consistent with Brigalow (*Acacia harpophylla* dominant or co-dominant) TEC. This TEC is listed as 'Endangered' under the EPBC Act.

Field-verified REs and their status under the VM Act are:

- 11.3.1 – Endangered (remnant) – 21.77 ha
- 11.4.8 – Endangered (remnant and regrowth) – 193.12 ha
- 11.4.9 – Endangered (remnant) – 73.20 ha
- 11.4.9a – Endangered (remnant and regrowth) – 64.02 ha
- 11.5.3 – No concern at present (remnant and regrowth) – 1,470.43 ha
- 11.5.16 – Endangered (remnant) - 76.59 ha

The Project area comprises grey self-mulching cracking clays and red massive earths on undulating plains. Topography descends in a relatively even manner from 250 m Australian Height Datum (AHD) at the eastern boundary of the Project area to 190 m AHD at the south-western boundary to the alluvial flats associated with the Comet River. The dominant geological substrate of the Project area is sedimentary rock associated with the Emerald Formation and alluvium associated with Humboldt Creek. Isolated pockets of basalt occur adjacent to Humboldt Creek (Att 1, Section 5.1.1, pp 16).

3.3 Heritage

3.3.1 Describe any Commonwealth heritage places overseas or other places recognised as having heritage values that apply to the project area.

A search of Queensland's Commonwealth Heritage list found that there are no Commonwealth Heritage places located within the Project area. The nearest Commonwealth Heritage place is the Shoalwater Bay Military Training Area, located approximately 200 km northeast of the Project area, and is therefore considered not applicable to the Project.

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

A search of the Aboriginal and Torres Strait Islander Cultural Heritage Database (DSDSATSIP 2023) found 13 cultural heritage sites within the Project area, including artefact scatter, hearth/oven(s), and isolated finds. These sites are located along the northeast and southeast boundaries of the Project area, and predominantly located along Comet River Road and within the Blackwater railway system. These sites align with the broader surrounding where most of which are concentrated within the existing Blackwater Railway System. It is presumed that previous cultural heritage surveys have been conducted for projects associated with the rail alignment. It should be noted that the lands within the Project area have already been subjected to significant disturbance due to grazing and cropping.

The Project area is located within the following Cultural Heritage Parties:

- Gaangalu Nation People

- Kanolu People #1

There is currently no Cultural Heritage Management Plan (CHMP) established for the Project area. However it is anticipated one will be developed with the Gaangalu Nation People and as required with the Kanolu People #1.

The Proposed Action will exercise a duty of care in accordance with the *Aboriginal Cultural Heritage Act 2003* and *Torres Strait Islander Cultural Heritage Act 2003*, and will take all reasonable and practicable measures to ensure activities does not harm Aboriginal or Torres Strait Islander cultural heritage.

3.4 Hydrology

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

An Aquatic Values Assessment Report has been carried out by DPM EnviroSciences (DPM) to identify the aquatic ecology values of the Project area, which included undertaking aquatic surveys of the Project area. Refer to Att 2: Aquatic Values Assessment Report for the detailed report. A summary of the hydrology characteristics determined from the aquatic assessment is provided below.

The Project area is located within the Comet River drainage sub-basin of the greater Fitzroy Basin. The Project area is intersected by the sixth-order Humboldt Creek, the third-order Rockland Creek and several smaller, unnamed tributaries, all of which flow into the seventh-order Comet River west of the Project area.

The topography across the Project area generally falls from east to west, towards the Comet River, which is the main river in the region, located approximately 800 m west of the Project area. Humboldt Creek transects the south-west corner of the Project area and flows into the Comet River. Comet River continues in a general northern direction for approximately 80 km to where the Comet River converges with the Nogoa River to form the Mackenzie River just north of the township of Comet. The Mackenzie River ultimately joins the Fitzroy River, which flows initially north and then east towards the east coast of Queensland and discharges into the Coral Sea south-east of Rockhampton near Port Alma.

The waterways of the Project area are likely ephemeral or episodic, experiencing flow only after sustained or intense rainfall and runoff in the catchment area. Stream flows are highly variable with the channels expected to dry up during winter to early spring when rainfall and runoff is usually low. Surface flows are more likely in the wetter months from November to March. Consequently, physical attributes, water quality, and the composition of aquatic flora and fauna communities are expected to be highly variable based on the time of year.

One State-mapped Wetland Protection Area (WPA) is mapped as occurring within the northern portion of the Project area (DES 2023d). This includes a HES wetland comprising State-mapped palustrine wetland RE 11.5.16 (palustrine wetland dominated by *Acacia harpophylla* and/or *Casuarina cristata* open forest). A larger area of RE 11.5.16 had been mapped in an earlier version of the Queensland RE mapping, which formed the basis for the extent of the State-mapped HES wetland. The latest version of RE mapping (version 12.02, DoR 2023a) has removed the cleared component of this RE polygon comprising the eastern half of the State-mapped HES wetland. The remaining half of this HES wetland is mapped as RE 11.5.16 but was field verified as being RE 11.5.3 (*Eucalyptus populnea* on Cainozoic sand plains; not a wetland).

4. Impacts and mitigation

4.1 Impact details

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

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	No	Yes

EPBC Act section	Controlling provision	Impacted	Reviewed
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

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

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

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

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

No

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

The PMR report (refer Att 3) did not identify any World Heritage Properties. The nearest World Heritage Property is the Great Barrier Reef World Heritage Property. This area is approximately 208 km east of the Project area. No direct or indirect impacts on World Heritage Properties are deemed possible.

4.1.2 National Heritage

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

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

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

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

No

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

The PMR report (refer Att 3) did not identify any National Heritage Properties. The nearest National Heritage Property is the Great Barrier Reef World Heritage Property. This area is approximately 208 km east of the Project area. No direct or indirect impacts on World Heritage Properties are deemed possible.

4.1.3 Ramsar Wetland

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

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

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

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

No

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

The PMR (refer Att 3) did not identify any RAMSAR wetlands. The nearest RAMSAR wetland is the Shoalwater and Corio Bays Area. This wetland is located approximately 240 km northeast of the Project area. No direct or indirect impacts on World Heritage Properties are deemed possible.

4.1.4 Threatened Species and Ecological Communities

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

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

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

Threatened species

Direct impact	Indirect impact	Species
No	Yes	Aristida annua
No	Yes	Cadellia pentastylis
No	No	Calidris ferruginea
No	No	Dasyurus hallucatus
No	No	Delma torquata
Yes	Yes	Denisonia maculata
No	No	Dichanthium queenslandicum
No	No	Dichanthium setosum

Direct impact	Indirect impact	Species
No	No	Egernia rugosa
No	No	Elseya albagula
No	No	Erythrotriorchis radiatus
No	No	Falco hypoleucos
Yes	Yes	Geophaps scripta scripta
No	Yes	Grantiella picta
Yes	Yes	Hemiaspis damelii
No	No	Leichhardtia brevifolia
No	No	Macroderma gigas
No	No	Neochmia ruficauda ruficauda
No	No	Nyctophilus corbeni
No	No	Petauroides volans
Yes	Yes	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)
No	No	Rheodytes leukops
Yes	Yes	Rostratula australis
No	No	Stagonopleura guttata

Ecological communities

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

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

Yes

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

One TEC (Brigalow (Acacia harpophylla dominant and co-dominant) and nine threatened species listed under the EPBC Act have some potential to occur in the Project area, based on the PMR and field studies (refer Att 1, Section 6.1.4, pp 34-36 and Section 6.2.3, pp 42-50). Three species are considered likely to occur in the wider area associated with the Project: Koala (*Phascolarctos cinereus*), Ornamental Snake (*Denisonia* maculata) and *Aristida annua.* White-throated Snapping Turtle (*Elseya* albagula) was identified to the west of the Project during aquatic studies or the Project. All other species are only considered possibly present.

The layout of the Project gas field infrastructure currently encompasses a total of approximately 178.27 ha. The landscape surrounding the Project has been heavily modified for cattle grazing. The layout of Project infrastructure has gone through several iterations in order to avoid sensitive ecological values as much as is feasible. The project will result in the clearing (direct impact) of the following:

- 1.17 ha of remnant Poplar Box woodland on old loamy sandy plains providing potential habitat for Squatter Pigeon (southern) (*Geophaps scripta scripta*), Ooline (*Cadellia pentastylis*) and Koala
- 0.89 ha of cleared habitat comprising gilgai habitat and providing potential habitat for Ornamental Snake, Grey Snake (*Hemiaspis damelii*), Australian Painted Snipe (*Rostratula australis*)

The remainder of the layout impacts 176.21 ha of lands cleared of vegetation and without values supporting threatened flora and fauna. There will be no direct impacts to the TEC or habitat for the other four threatened species with some potential to occur: *Aristida annua,* White-throated Snapping Turtle or Painted Honeyeater. (*Grantiella picta*). Vegetation clearing for the Proposed Action will be in place for the proposed duration of the Proposed Action - 30 years.

Indirect impacts resulting from the Project include the following:

Habitat fragmentation, connectivity and edge effects - The landscape associated with the Project has been heavily impacted by tree clearing for cattle grazing purposes. The Project infrastructure has been situated in areas already cleared of vegetation wherever possible. There will be very little clearing of remnant vegetation required. The majority of infrastructure will be underground following completion of construction. There will be no impact to landscape connectivity and habitat fragmentation as a result of the Project.

Edge effects - The habitats that remain extant in the Project area are likely already subject to the potential for edge effects caused by increased exposure (along the edges of remaining patches) to wind and sun as well as increased weed invasion risk. Many patches within the Project are of a size or shape (thin remnants) as to be considered all edge. Regardless, the Project is proposing to clear a very minor extent of wooded habitat and is considered to have a negligible impact on increasing the impact of edge effects within the Project area.

Fauna mortality – May result from vegetation clearing (minimal in extent), vehicle movements, and fauna trapping during trenching works.

Airborne dust - Earthworks and vehicular traffic associated with Project construction and operation can generate substantial amounts of dust during dry weather. The pronounced wet and dry seasons associated with the Project area (inland southern Brigalow Belt) may make vegetation in these areas less susceptible to the impacts of dust. In general, the construction disturbance will take place well away from extant woody vegetation communities and will be localised. Construction will be temporary and airborne dust is not considered to be an issue during the operational phase.

Noise and lighting - Noise impacts from the Project to surrounding fauna habitat will largely be restricted to that emitted during construction activities. The gas compression facility is likely to be the only substantial source of noise and lighting impacts during operations. The facility is located in cleared habitat on Meroo Downs with relatively poor habitat for fauna present. Post-construction it is expected that any resident fauna will become accustomed to the ongoing noise generated by the facility. The CSG production wells will be powered by a generator and is expected to emit low level noise that is not expected to impact fauna. Similarly, lighting at well sites will be unnecessary, or restricted to low levels that will not be an impact on fauna.

Weeds and pests - The Project has potential to promote the proliferation of weeds and pests through:

- the use of construction machinery, plant and materials sourced from outside the region and increased vehicular traffic in general may introduce and spread weed seeds
- the establishment of weeds due to increased light and soil disturbance
- Inappropriate disposal and storage of putrescible wastes may attract feral animals

Introduced weed species are already present throughout the Study area which is dominated by Buffel Grass in the ground layer throughout. Parthenium was observed to be common, particularly in the non-remnant grassland areas. Impacts will be managed by implementing simple and standard biosecurity hygiene and control measures during Project activities.

Surface water impacts - Waterways in the Project area are highly ephemeral and were observed to be largely dry at the time of the 2022 and 2023 ecology surveys. The Project will develop and implement an Erosion and Sediment Control Plan (ESCP) to mitigate uncontrolled sediment flows into waterways as a result of Project works. Pipeline crossings at waterways will be avoided where possible during the final Project design phase. Where pipeline crossings are required (such as at Humboldt Creek), they will be located underground through the application of directional drilling. Where required, instream construction impacts such as trenching will be temporary and occur during the dry season to minimise the impact of sediment entrainment during rainfall-associated flow events. Storage of chemicals associated with Project activities and vehicle refuelling sites will be located a minimum of 200 m from the nearest watercourse to further reduce the potential for accidental spills to impact waterways.

The Project will treat produced water generated by CSG extraction through reverse osmosis processing. Produced water will be stored in ‘feed tanks’ and saline water produce by processing will be stored in separate ‘brine tanks’ within the water treatment facility site. Treated water is proposed to be transferred to landholders for a beneficial use such as agriculture. The Project’s treated wastewater will be managed under the State’s End of Waste Code such that no impacts to aquatic ecological values are expected. No treated wastewater will be discharged to creek lines within or adjacent to the Project.

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

No

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

One TEC and nine threatened species listed under the EPBC Act have some potential to occur in the Project area, based on the PMR and field studies (refer Att 1, Section 6.1.4, pp 34-36 and Section 6.2.3, pp 42-50). Three species are considered likely to occur: Koala, Ornamental Snake and *Aristida annua.* White-throated Snapping Turtle was identified to the west of the Project during aquatic studies or the Project. All other species are only considered possibly present.

An assessment of the potential for significant impact has been undertaken for these MNES (refer Att 1, Section 9.1, pp 61-76) and a summary of the assessment result associated with each MNES is provided below. Based on the assessment for these MNES associated with the Proposed Action, no significant impacts are expected.

1. TEC

Brigalow TEC

The Project infrastructure has been located away from sensitive ecological values as much as is feasible. The disturbance footprint has been subject to several revisions in order to further avoid identified higher values habitats. All occurrences of Brigalow TEC have been avoided. Given the highly disturbed state of the surrounding area the extent of indirect impacts on the Brigalow TEC are considered negligible at worst. No significant impacts to a TEC are considered possible.

2. Threatened Species

Aristida annua

The species is restricted to Central Queensland in the Emerald and Springsure districts where it is known to occur in eucalypt woodlands (with Eucalyptus orgadophila) and natural grasslands on basalt derived black clay soils (DE 2014). The species was not detected within the Project area during field surveys but is considered a possible occurrence within the Project area. Potential habitat for the species within the Project area is considered to be restricted to Brigalow habitats on land zone 4 (RE 11.4.8 and 11.4.9). These communities have been avoided completely and no significant impact on the species is expected.

Ooline

Suitable habitat for the species occurs throughout the Study area in the form of Brigalow and to a lesser extent Poplar box dominated woodland and open-forest. The species is distinctive (i.e readily observable where it occurs) and was not observed during project field surveys. The only suitable habitat for the species within the disturbance footprint is provided by remnant RE 11.5.3 (Poplar Box woodland) with a total area of 1.17 ha occurring within the disturbance footprint. Brigalow communities which are more likely to support the species have been avoided. The extent of disturbance is considered negligible given the species was not observed within the Project area. A significant impact is considered highly unlikely.

Painted Honeyeater

Brigalow communities as well as other acacia dominant communities provide the preferred habitat supporting the mistletoe species associated with Painted Honeyeater. No Brigalow communities will be impacted and as such, there are no impacts expected on this species.

Squatter Pigeon (southern)

The species was not observed onsite. It occurs across a very large area within central Queensland. The Project proposes to clear a maximum of 1.17 ha of potential habitat for the species. There is abundant identical habitat remaining in the Study area which will not be impacted. The potential for any impact on Squatter Pigeon is considered very minor at worst.

White-throated Snapping Turtle

The species was recorded to the immediate west of the Study area at a waterhole on the Comet River in March 2023.The project is not proposing to contain any surface water flows and will maintain as far as possible all overland flow paths. The project will not be releasing any CSG produced water into the receiving environment and any overland flows affected by construction will be managed in accordance with best practice erosion and sediment control. No activities associated with the Project will impact the Comet River, either through direct disturbance or indirectly (no impact to habitat or water quality values). The species will not be impacted by the Project.

Ornamental Snake

The species has not been recorded within the Project area but important habitat is considered as potentially occurring. The Proposed Action's extent of impact to suitable habitat comprising gilgais in cleared lands is minor (0.89 ha) given the extent of habitat present within the Project area (1,513 ha). The *Draft referral guidelines for the nationally listed Brigalow Belt reptiles* (Referral guidelines) (DSEWPC 2011) notes that clearing of two or more hectares of important habitat may comprise a high risk of a significant impact on the species. Based on the SRI assessment completed for the Proposed Action (Att 1, Section 9.1.2.1, page 63-66), it is considered unlikely a significant impact to Ornamental Snake will occur as a result of the Proposed Action.

Grey Snake

It is uncertain if the species actually occurs within the Project area or the region. The Proposed Action's extent of impact to low-value habitat comprising gilgais in cleared lands is minor (0.89 ha) given the extent of habitat present within the Project area (1,513 ha). Based on the SRI assessment completed for the Proposed Action (Att 1, Section 9.1.2.2, page 68-70), it is considered highly unlikely a significant impact to Grey Snake will occur as a result of the Proposed Action.

Australian Painted Snipe

It is uncertain if the species actually occurs within the Project area. Suitable habitat for breeding is unlikely to occur. The Proposed Action's extent of impact to potential habitat comprising gilgais is minor (0.89 ha) given the extent of habitat present within the Project area which will remain undisturbed (1,513 ha). No farm dams or other wetland habitat will be impacted. Based on the SRI assessment completed for the Proposed Action (Att 1, Section 9.1.2.3, page 70-73), it is considered highly unlikely a significant impact to Australian Painted Snipe will occur as a result of the Proposed Action.

Koala

It is uncertain to what extent the species actually occurs within the Study area. A large number of database records in the wider area including two records (1976 and 1996) within the Study area itself. Most records are older (pre1990). The nearest recent record is from 2012 and located 17 km south-east of the Study area. In recent surveys for other projects in the area Koalas were detected to the east of the site in riparian and Acacia woodlands (EMM 2022) and scats were detected along a creek line by Golder (2019). Within the Study area the most suitable habitat is along Humboldt Creek in the south-east. The Proposed Action's extent of impact to potential habitat is very minor (1.17 ha) given the extent of identical habitat present elsewhere within the Project area (1,470 ha). Based on the SRI assessment completed for the Proposed Action (Att 1, Section 9.1.2.4, page 73-76), it is considered unlikely a significant impact to Koala will occur as a result of the Proposed Action.

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

No

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

Project infrastructure has been located away from sensitive ecological values as much as is feasible. The disturbance footprint has been subject to several revisions in order to further avoid identified higher values habitats.

As such the impacts of the Proposed Action on threatened species and ecological communities are considered minor at worst. No significant impacts to the TEC and threatened species are considered likely to occur based on the result of the SRI assessment (refer Att 1, Section 9, page 68-87). As such, the Proposed Action is not considered as a controlled action.

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

Project infrastructure has been located away from sensitive ecological values as much as is feasible. The disturbance footprint has been subject to several revisions in order to further avoid identified higher values habitats. In addition, the following mitigation measures will be adopted on the Project:

- Suitably qualified ecologist to undertake pre-clearance surveys
- Fauna spotter catcher present during any vegetation clearing activities
- Clearing extents will be surveyed and marked on the ground
- Dust suppression activities to be undertaken during any construction work
- Erosion and sediment control will be implemented in accordance with best practice
- Speed limits will be enforced for Project areas' access tracks
- All field personnel will be inducted into the Project

Any potential indirect impacts to adjacent fauna/flora habitat from the Project are expected to be minimised through the above mitigation measures, which will be documented under the project Construction Environmental Management Plan (CEMP) and Operational environmental Management Plan (OEMP).

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

Not applicable. The Project will not have any significant impacts on TECs or threatened species, no offsets are considered required or proposed.

4.1.5 Migratory Species

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

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

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

Direct impact	Indirect impact	Species
No	No	Actitis hypoleucos
No	No	Apus pacificus
No	No	Calidris acuminata
No	No	Calidris ferruginea
No	No	Calidris melanotos
No	No	Cuculus optatus
No	No	Gallinago hardwickii
No	No	Motacilla flava
No	No	Myiagra cyanoleuca

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

No

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

Six bird species listed as Migratory under the EPBC Act have some potential to occur within 50km of the Project area. An assessment of significant residual impact (SRI) has been undertaken for these MNES. A summary of the assessment result associated with each migratory species is provided below. Based on the SRI assessment for these MNES associated with the Proposed Action, no direct and/or indirect impacts are expected.

Migratory species

There is a possibility for a number of migratory wetland-associated bird species to be present. The Project will not impact any of the existing waterbodies, including several farm dams of various sizes, within the Project area. Gull-billed Tern or Caspian Tern will not be impacted by the Project as a result. Following heavy rainfall events three of the species (Sharp-tailed Sandpiper, Latham's Snipe and Glossy Ibis) may also have a low potential to use water-filled gilgais within the Project area although no migratory species were identified during either Project survey. Any potential impacts on these species are considered to be of a very minor risk and managed under general mitigation measures outlined in refer Att 1, Section 7.2, page 53.

Fork-tailed Swift is an aerial species that may occur over any habitat including inland, coastal and marine areas and disturbed habitat such as urban areas. It has only occasionally been recorded as landing in Australia. The species is highly mobile and may forage anywhere from 1 m up to 100s of metres above ground (Higgins 1999; DCCEEW 2023). Given the species' aerial habits it is inconceivable the Project area would represent 'important habitat' (as defined in DE 2013a) for the species and the Project activities would be highly unlikely to impact the species in any way.

The PMR (refer Att 4) identifies nine Listed Migratory Species. Six of these species are considered to possibly occur within the Project area given the kind of habitat utilised by these migratory species. Large damns are located in the south and south-west of the Project area, which have the potential to provide suitable habitat. No migratory species were observed during field surveys.

Any potential impacts on these species are considered to be of a very minor risk and managed under general mitigation measures (Att 1, Section 7.2, pp 51-54).

4.1.6 Nuclear

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

No

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

Not applicable. The Proposed Action does not involve any nuclear activities or material.

4.1.7 Commonwealth Marine Area

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

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

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

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

No

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

The Project area is located over 200 km west of the nearest coastline and is separated hydraulically by at least two major sub-catchments, the Mackenzie River and Fitzroy River. No direct or indirect impacts are deemed possible.

4.1.8 Great Barrier Reef

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

No

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

The nearest portion of the Great Barrier Reef is located approximately 200 km east of the Project area. No direct or indirect impacts are deemed possible.

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

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

No

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

A groundwater impact assessment has been carried out by RDM Hydro to identify the groundwater values of the Project area and understand the potential project impacts to groundwater. The technical assessment is provided in Att 4 - Groundwater Impact Assessment. Based on the assessment, no significant impacts have been identified.

4.1.10 Commonwealth Land

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

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

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

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

No

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

The Significant Impact Guidelines 1.1 (DE 2013a) defines Commonwealth land as the islands within the Marine Park. The Proposed Action is unlikely to have a direct or an indirect impact on any commonwealth land as the nearest Marine Park is the Great Barrier Reef Marine Park, which is approximately 200 km to the east of the Project area in a straight-line distance, and approximately 400 km downstream along the watercourses. No direct or indirect impacts on Commonwealth land are deemed possible.

4.1.11 Commonwealth Heritage Places Overseas

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

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

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

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

No

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

The PMR (refer Att 3) did not identify any Commonwealth Heritage Places overseas associated with the Proposed Action or surrounds. The Proposed Action is located within Australia. As such, no direct or indirect impacts on Commonwealth Heritage Places overseas are deemed possible.

4.1.12 Commonwealth or Commonwealth Agency

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

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

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

None

Conclusion on the likelihood of unlikely significant impacts

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

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

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

No

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

Comet Ridge is in the process of applying for a PL to undertake CSG activities. The extracted gas will be sold in the domestic gas market (a condition of the awarding of the ATP 2048). The Queensland government issues petroleum exploration permits (such as ATPs) to petroleum companies with the expectation that if commercial quantities of petroleum or gas are discovered, the companies will apply for a Petroleum Lease and extract that gas for sale in the energy market.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att6-References & Acronyms.pdf Att6-References and Acronyms	20/10/2023	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Comet Ridge home page https://cometridge.com.au/			High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1-Epic-EcologicalAssessmentReport.pdf Att1-Ecological Assessment Report	18/09/2023	No	High
#2.	Document	Att3-Protected Matters-08102023 (50km).pdf Att3-Protected Matters Search Report	10/08/2023	No	High
#3.	Document	Att5-WildNet_species_list-08102023.pdf Att5-WildNet Species	10/08/2023	No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document				

		Att2-DPM-AquaticValuesAssessment.pdf Att2-Aquatic Values Assessment	14/07/2023	No	High
#2.	Document	Att4-RDM-GroundwaterImpactAssessment-Final.pdf Att4-Groundwater Impact Assessment	27/09/2023	No	High
#3.	Document	Att7-Chemical Risk Assess-Rev 0.pdf Att7-Chemical Risk Assessment	18/08/2023	No	High
#4.	Document	Att8-RDM_Water Management Plan.pdf Att8-Water Management Plan	31/07/2023	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1-Epic-EcologicalAssessmentReport_V2-2024-01-31.pdf Att1-Ecological Assessment Report_V2-2024-01-31	31/01/2024	No	High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	54608540496
Organisation name	COMET RIDGE MAHALO NORTH PTY LTD
Organisation address	4000 QLD
Representative's name	Tor McCaul
Representative's job title	Managing Director
Phone	07 3221 3661
Email	notices@cometridge.com.au
Address	Level 3, 410 Queen street , Brisbane Qld 4001

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

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

☑ By checking this box, I, **Tor McCaul of COMET RIDGE MAHALO NORTH PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

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

Completed Person proposing to take the action's declaration

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

Same as Referring party information.

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

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

I, **Tor McCaul of COMET RIDGE MAHALO NORTH PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

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

Completed Proposed designated proponent's declaration

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

Same as Person proposing to take the action information.

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

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

I, **Tor McCaul of COMET RIDGE MAHALO NORTH PTY LTD**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

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