

Northern Quartz Campus - Metallurgical Silicon

Application Number: **03343**

Commencement Date:
23/02/2026

Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Northern Quartz Campus - Metallurgical Silicon

1.1.2 Project industry type *

Manufacturing

1.1.3 Project industry sub-type

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1.1.4 Estimated start date *

01/10/2029

1.1.4 Estimated end date *

01/10/2060

1.2 Proposed Action details

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

Project Area - The Project area encompasses an area of approximately 95.71 hectares (ha) with the disturbance footprint conservatively corresponding to the entire Project area (100% overlap). The Project area spans across parts of two adjoining allotments:

- Lot 19 on SP321818
- Lot 34 on E124243.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 1.2, Page 1-2)

Disturbance Footprint - The total proposed disturbance footprint is equal to the Project area (95.71 ha).

Avoidance Area – There is no avoidance area for this development.

Study Area - The ecology study area used for database searches includes a 20 km buffer from the Project area.

Proposed action description - The proposed action involves the construction, operation and maintenance of the Northern Quartz Campus Metallurgical Silicon (referred to as NQC MG-Si). This development includes MG-Si Plant and Charcoal production facility.

The Project consists of the following elements sized up to produce 150,000 tonnes per annum (tpa) of MG-Si in three stages (50,000 tpa of MG-Si each):

- Feedstock and conveyor facilities for unloading, handling, and storage of raw materials, including quartz, timber to produce large woodchips / coarse wood blocks (referred to as wood blocks throughout), coal, and charcoal.
- Charcoal production facilities comprising three individual production facilities to be interconnected through conveyor systems with the melt shops.
- Smelter facilities comprising three melt shops, each with three submerged arc furnaces (nine in total) for smelting the quartz to MG-Si
- Product handling, sizing, and storage facilities
- By-product and waste handling systems, including dross, offgas, casting fume, raw material dust, skulls and fines, silica dust, waste heat, effluent and wastewater, and general waste
- Electrical power supply and distribution to support the facilities
- Facility control systems and instrumentation
- Services and utilities to support the smelter operations
- Civil works for the site to be suitable for the smelter facilities and operations.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 4.1, Pages 14-16)

Purpose of proposed action - This proposed action aims to establish the production of a sustainable, energy efficient, low carbon metallurgical grade silicon product to meet the undersupply of geopolitically de-risked high purity silicon and support the establishment of a sovereign Australian-made solar manufacturing industry. The NQC project is a strategically significant development for Townsville in terms of supporting the city's industrial diversification.

Proposed action activities - To enable the site to accommodate the above heavy industrial and manufacturing uses, the action is expected to include:

- Site access and establishment, including temporary construction facilities, security fencing and laydown areas.
- Excavation work, including ground preparation.
- Civil works including activities such as clearing of the site, earthworks, grading, compaction, stormwater drainage and sediment controls.
- Bulk earthworks and soil movement.
- Establishment of sediment ponds and all associated drainage including site diversion channels, ponds and release infrastructure.

- Concrete delivery, formwork placement and concrete pouring.
- Transit, craning, placement of equipment and electrical fit out the manufacturing facility, charcoal production facility and ancillary infrastructure including installation of the drainage (swales and pit and pipe networks), underground cabling and utilities.
- Commissioning of MG-Si and charcoal production facility, including testing of all equipment.
- Commissioning activities to be undertaken prior to commencement of operation.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 4.2, Pages 16-17)

Nature of activities and resultant impact - The Project area was previously used as an agricultural research station for cropping and grazing studies by Commonwealth Scientific and Industrial Research Organisation (CSIRO). Consequently, the Project area comprises of cleared, highly degraded non-remnant vegetation, heavily infested with weeds. Localized areas of remnant and regrowth vegetation have been identified outside of the Project area. As such, the direct and indirect environmental impacts resulting from the proposed action activities have been identified to have potential impact to the environment.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 7.1, Pages 34-38; Section 8, Pages 56-63. Section 10, Page 74-104)

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? *

The EPBC Act related policies/guidelines that are applicable to the proposed action include:

- The self-assessment process, including detailed criteria, has been used to assist in the decision of whether or not referral may be required and if the proposed action may have a 'significant' impact on MNES. *Significant Impact Guidelines 1.1: Matters of National Environmental Significance* (DoE 2013) [CT1] .
- Environmental offsets are required to be delivered in accordance with the *EPBC Act Environmental Offsets Policy* (DoEE 2012).

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 2.1, Pages 7-8)

Targeted survey guidelines and methods specific to mapping results were adopted for the field survey and data collection components. The survey guidelines specific to the proposed action and applicable by State and Commonwealth include:

- Terrestrial Vertebrate Fauna Survey Guidelines for Queensland – Version 3.0 (Eyre et al. 2018)
- Survey guidelines for Australia's threatened reptiles (DSEWPC 2011a)
- Survey guidelines for Australia's threatened mammals (DSEWPC 2011b)
- Survey guidelines for Australia's threatened birds (DEWHA 2010a)
- Survey guidelines for Australia's threatened bats (DEWHA 2010b)
- Referral guidelines for the vulnerable Koala (DoE 2014)
- Draft referral guidelines for the nationally listed Brigalow Belt reptiles (DSEWPC 2011c)
- Significant impact guidelines for the endangered black-throated finch (southern) (*Poephila cincta cincta*) - EPBC Act policy statement 3.13 (DEWHA, 2009).

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 2.2, Page 8)

The State approvals relevant to the project site that are being sought for the purpose of the proposed action include:

Planning Act 2016 - Development Permit for a Material Change of Use (MCU) following:

- This development is defined under the Planning Regulation 2017 as a battery storage facility, and is subject to assessment pursuant the State Development Assessment Provisions (SDAP) including State Code 27: Battery storage facility development.
- This development is defined under the Planning Regulation 2017 as a substation, and is pursuant to code assessment pursuant the TCC planning scheme.
- Planning Act 2016 and Vegetation Management Act 1999 - Development Permit for Operational Works (OPW) for clearing of native vegetation
 - Planning Regulation 2017: Schedule 10 Development assessment – Part 3 Clearing native vegetation.

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. *

PEP undertook community and stakeholder engagement on the Northern Quartz Campus (NQC) projects throughout 2025 and during 2026 to date. The Project forms one component of NQC projects which was discussed as part of PEP's consultation undertaken to date.

PEP's consultation included:

- Two dedicated community information sessions in Woodstock.
- Participation in a community information session organised by the Townsville City Council (TCC).
- Two-day workshops with Bindal People and Gurambilbarra Wulgurukaba People.
- Regular meetings with TCC and Department of State Development Infrastructure and Planning (DSDIP) to discuss the project and allied interests such as easements and infrastructure.
- Five written community updates distributed in the Woodstock district.
- Launching the Northern Quartz Campus Consultation Hub.
- Stakeholder briefings and meetings including:
 - Minister for Manufacturing and Minister for Regional and Rural Development
 - TCC
 - Department of State Development, Infrastructure and Planning
 - Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development, (DNRMMRRD)
 - Office of the Coordinator General (OCG)
 - Critical Minerals Queensland
 - Townsville Enterprise Limited (TEL)
 - Queensland Fire and Emergency service (QFES)
 - North Queensland Conservation Council (NQCC)
 - Powerlink Queensland.
- Community investment in Woodstock, including supporting Woodstock State School, the Woodstock Sport and Recreation Hub and Woodstock Country Women's Association branch.

The outcomes of PEP's engagement as listed above have been considered in the development of a Social Impact Assessment (SIA). PEP developed a Regional SIA in late 2025. This overarching SIA serves as a foundation for separate Northern Quartz Campus project SIAs.

Community and stakeholder engagement as part of the Regional SIA was conducted during September–December 2025. This addressed each of Private Energy Partners' five projects (Northern Quartz Campus, including NQC MG-Si and two solar farms) in the Woodstock area. In addition to distribution of a SIA fact sheet and stakeholder meetings, SIA engagement included six SIA workshops:

- Two Woodstock community workshops with a total of 29 participants ranging in age from 16 to 90 years.
- A workshop in Townsville involving four community, environmental, and economic organisations.
- A local and state government workshop involving TCC, Queensland Fire and Rescue service (QFES), Queensland Police Service (QPS), DSDIP, Department of Women, Aboriginal and Torres Strait Islander Partnerships and Multiculturalism (DWATSIPM), and Department of Customer Services, Open Data and Small and Family Business (DCSODSFB).
- A workshop with Bindal People with 9 participants.
- A workshop with Gurambilbarra Wulgurukaba People with 7 participants.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 1.5, Pages 2-4)

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.

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Alternatively, email us at privacy@dcceew.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 28141736558
Organisation name EMM CONSULTING PTY LIMITED
Organisation address 2065 NSW

Referring party details

Name Claudia Trave
Job title Associate Ecologist
Phone 0431880051
Email ctrave@emmconsulting.com.au
Address Level 2/95 N Quay, Brisbane City QLD 4000

1.3.2 Identity: Person proposing to take the action

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

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN 64692310240
Organisation name SOLQUARTZ MG-SI PTY LTD
Organisation address 4000 QLD

Person proposing to take the action details

Name Vignesh Bandi
Job title Senior Vice President - Investment Team Australia
Phone +61 493 218 895
Email vignesh.band@quinbrook.com
Address Level 5, 167 Eagle Street, Brisbane QLD 4000

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. *

- Vignesh Bandi has a satisfactory record of responsible environment management.
- Solquartz MG-Si Pty Ltd has a satisfactory record of responsible environment management
- Solquartz MG-Si Pty Ltd has no past or present proceedings under Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources.
- Solquartz MG-Si Pty Ltd does not have any actions previously referred under the EPBC Act.
- Solquartz MG-Si Pty Ltd does not have a corporate environmental policy or framework, however uphold a high environmental standard in all works undertaken.

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

Solquartz MG-Si Pty Ltd does not have an environmental policy and planning framework documentation available.

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 64692310240
Organisation name SOLQUARTZ MG-SI PTY LTD
Organisation address 4000 QLD

Proposed designated proponent details

Name Vignesh Bandi
Job title Senior Vice President - Investment Team Australia
Phone +61 493 218 895
Email vignesh.band@quinbrook.com
Address Level 5, 167 Eagle Street, Brisbane QLD 4000

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 | 28141736558 |
| Organisation name | EMM CONSULTING PTY LIMITED |
| Organisation address | 2065 NSW |
| Representative's name | Claudia Trave |
| Representative's job title | Associate Ecologist |
| Phone | 0431880051 |
| Email | ctrave@emmconsulting.com.au |
| Address | Level 2/95 N Quay, Brisbane City QLD 4000 |

✔ Confirmed Person proposing to take the action's identity

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

| | |
|----------------------------|---|
| ABN/ACN | 64692310240 |
| Organisation name | SOLQUARTZ MG-SI PTY LTD |
| Organisation address | 4000 QLD |
| Representative's name | Vignesh Bandi |
| Representative's job title | Senior Vice President - Investment Team Australia |
| Phone | +61 493 218 895 |
| Email | vignesh.band@quinbrook.com |
| Address | Level 5, 167 Eagle Street, Brisbane QLD 4000 |

✔ Confirmed Proposed designated proponent's identity

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

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

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

No

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

No

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

No

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

No

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

No

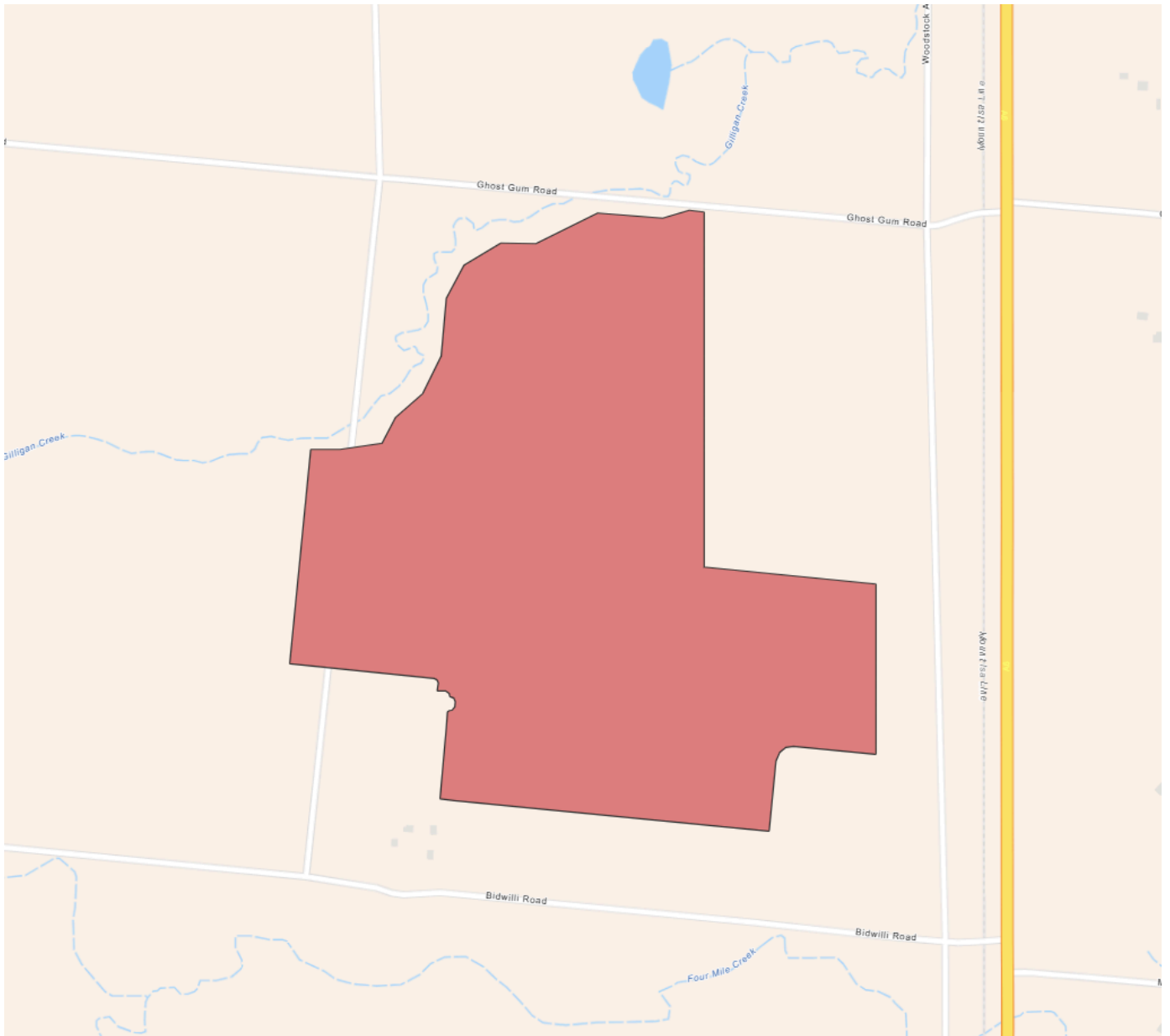
1.4 Payment details: Payment allocation

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

Person proposing to take the action

2. Location

2.1 Project footprint



Project Area: 96.07 Ha Disturbance Footprint: 96.07 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Bindal Road crossing with Ghost Gum Road, Calcium QLD 4816

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 Freehold land. This proposed action relates to activities to be undertaken on:

- Lot 19 on SP321818
- Lot 34 on E124243

Townsville City Council is the landowner of Lot 19 on SP321818 and Lot 34 on E124243 associated with the proposed action.

3. Existing environment

3.1 Physical description

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

Condition - The Project area was previously used as an agricultural research station for cropping and grazing studies by Commonwealth Scientific and Industrial Research Organisation (CSIRO). Consequently, most of the Project area has been cleared and is being heavily infested with non-native plant species. Scattered native trees remain, particularly along the existing roads and paddock fence lines within the Project area.

The Project area is characterised by cleared non-remnant vegetation, mostly in a highly degraded state, formerly state-mapped as *RE 11.3.30 - Eucalyptus crebra and Corymbia dallachiana woodland on alluvial plains* and a small section of *RE 11.3.35 - Eucalyptus platyphylla, Corymbia clarksoniana woodland on alluvial plains*, which are both classified as 'Least Concern' under the Vegetation Management Act 1999 (VM Act). The existing vegetation of the Project area is utilized for grazing purposes.

Closest localized areas of remnant and regrowth vegetation are located outside of the Project area, north-west of the Project border along Gilligan Creek and south of the Project border along Four Mile Creek.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 7.1, Pages 34-38)

Location - The Project area is situated within the Townsville LEIP, which is located approximately 3 km south of Woodstock. The Project area comprises almost entirely of cattle grazing paddocks with existing access to paddocks via private road. Flinders Highway and the Mount Isa rail line run parallel to the eastern Project boundary in a north-south direction, and Gilligan Creek runs adjacent to the north-western boundary of the Project area. The Project is in close proximity to Townsville, approximately 45 km south along Flinders Highway.

Zoning - The Project area is currently zoned as rural, high impact industry as per the TCC plan zoning map.

Land zoning of the surrounding lots to the Project area include:

- High impact industry to the north and south
- Sport and recreation to the west
- Key road infrastructure and rail infrastructure to the east followed by Rural zoning

Access - Access to the premises during both construction and operation phases will be via the northern LEIP access route which includes Flinders Highway via Glenn Road and Jones Road. The proposed site access on Bidwilli Road will act as a new left-in/right-out driveway as all vehicles will arrive and depart from/to the northern LEIP access route. The construction car parking area will be accommodated within the Project area. Operational car parking provision will be adjacent to administrative facilities within the site.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 4.2.2, Page 17)

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

Prior land use - the Project area was previously used as an agricultural research station for cropping and grazing studies by Commonwealth Scientific and Industrial Research Organisation (CSIRO). Consequently, most of the Project area has been cleared and is being heavily infested with non-native plant species. Scattered native trees remain, particularly along the existing roads and paddock fence lines within the Project area. The major industries in the area surrounding the project have previously been grazing and cropping land.

Current land use - grazing land

Proposed land use - high impact industry. To enable the site to accommodate the proposed action. The action will include site preparation activities (vegetation clearing, top soil stripping and stockpiling, fencing), construction activities (bulk civil earthworks, water management structures, infrastructure construction including warehouses car parks, admin buildings, road infrastructure) installation of all operational equipment (including mechanical equipment, electrical instrumentation and infrastructure, communication infrastructure and processing equipment). As the project is located within Townsville City Council's Lansdown Eco-Industrial Precinct, other neighbouring proponents are likely to develop the land for heavy industrial uses.

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

Parks and reserves – No national or state parks and reserves fall within the Project area. The closest are the Bowling Green Bay National Park located 5 km north-east of the site and the Mingela State Forest located 4 km west of the site.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Figure 1.2, Page 6)

Connectivity and biodiversity significance – No state or regional corridors exist within the Project area. In the wider context of the ecology study area the following is identified:

- State corridors which surround the site are located approximately 1.2 km north, 1.7 km west, 5 km south and 6.5 km east of the Project area.
- Regional corridors also exist approximately 5.5 km northwest, 5 km northeast and 4.5 km west of the Project area.

Watercourses and wetlands – No watercourses or wetlands fall within the Project area. The closest waterways are Gilligan Creek which runs adjacent to the north-western boundary of the Project area approximately 30 m from the Project boundary, and Four Mile Creek which runs in a west-east direction approximately 200m south of the Project area.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Figure 3.2, Page 12)

Vegetation – No *Vegetation Management Act 1999* (VM Act) listed 'endangered' or 'of concern' vegetation is present in the Project area. All vegetation within the Project Area has been ground-truthed and classified as non-remnant, formerly state-mapped as 'least concern' RE 11.3.30 and RE 11.3.35.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 7.1, Pages 34-38)

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 has a relatively flat gradient with surface elevations gradually decreasing from 80 m Australian Height Datum (AHD) measured along the western border to 70 m AHD measured throughout the site and past the eastern border (Queensland Government 2025).

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.

Surveys – Field surveys for the Project were undertaken over six survey events between March 2023 and May 2025. Survey effort, timing and the climactic conditions at the time of field surveys are described in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 5.4, Table 5.2, Pages 23-24). The location of field surveys is illustrated in (Attachment 'E230788_MNES Report_MGSi_V2.0', Figure 5.1, Page 22). No survey limitations were identified during any of the four survey periods. Surveys in March and November 2023 and May 2025 were conducted following substantial rainfall which provided optimal conditions for the identification of flora species due to the presence of fertile material.

Survey results

Vegetation communities – Ground-truthing of mapped vegetation was completed as part of the field surveys. All vegetation across the property comprises of highly degraded non-remnant vegetation formerly state-mapped as RE 11.3.30 - *Eucalyptus crebra* and *Corymbia dallachiana* woodland on alluvial plains and a small section of RE 11.3.35 - *Eucalyptus platyphylla*, *Corymbia clarksoniana* woodland on alluvial plains, which are both classified as 'Least Concern' under the Vegetation Management Act 1999 (VM Act).

A summary of the extent of vegetation communities across the Project area is provided in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 7.1, Pages 34-38) and mapped in (Attachment 'E230788_MNES Report_MGSi_V2.0', Figure 7.1, Page 38).

Threatened Flora – Flora surveys across the Project area did not identify any threatened flora species.

Pest Flora – The Project area is characterised by extensive and dense weedy groundcover comprising of various shrub, forb and grass pest flora species, such as *Urochloa mosambicensis*, *Stylosanthes scabra*, *Chloris inflata*, *Digitaria ciliaris*, *Senna spp.*, *Sida spp.*, *Alternanthera pungens*, *Alternanthera sessilis*, *Macroptilium atropurpureum* and *Hyptis spp.* Historically, the Project area has been cleared and cropped for intensive agriculture use and currently presents very high percentages of dense exotic groundcover (>80-90%).

Habitat assessments – A total of 52 formal habitat assessments were completed across the Project area, with 32 additional habitat assessments completed in the surrounding environment. These assessments identified overall low-quality fauna habitat across the Project area, which is consistent with the area's historical disturbance.

The Project area is characterised by cleared open paddocks utilized for cattle grazing and with very few suitable habitat features, which are effectively limited to the few scattered paddock trees.

No semi-permanent or permanent water sources were mapped on site. The closest identified are two semi-permanent water sources, comprising of water troughs for cattle, located south of the Project area and Gilligan Creek to the north. Other water sources, predominantly of anthropogenic origin (troughs and dams), are mapped in the environment surrounding the Project area.

More suitable and higher-quality habitat was identified in the sections of regrowth and remnant vegetation along Four Mile Creek south of the Project area and along Gilligan Creek north of the Project area, both showing varying levels of disturbance and invasion by exotic species.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 7.3.1, Page 39)

Fauna - Targeted fauna surveys detected a variety of fauna species in the Project area and immediate surrounds, including 101 bird species, 21 bat species, 4 mammals, 2 reptiles and one amphibian. Spotlighting surveys did not record any threatened fauna but did observe common species such as Common Brushtail Possum (*Trichosurus vulpecula*), Sugar Glider (*Petaurus breviceps*), Agile Wallaby (*Notamacropus agilis*) and Tawny Frogmouth (*Podargus strigoides*). A complete list of the native fauna recorded during the 2023-2025 survey rounds is found in (Attachment 'E230788_MNES Report_MGSi_V2.0', Appendix C, Table C1, Page 297).

Pest fauna – Ten terrestrial vertebrate pest species were recorded during surveys with three species detected in the Project area (European Rabbit, Common Myna and Asian House Gecko) and seven in the immediate surrounds. Of these species, four are listed as ‘restricted matters’ under the Biosecurity Act 2014:

- Wild Dog (*Canis lupus familiaris*)
- Feral Cat (*Felis catus*)
- European Rabbit (*Oryctolagus cuniculus*)
- Feral Pig (*Sus scrofa*)

A complete list of the pest fauna recorded during the 2023-2025 survey rounds is provided in (Attachment ‘E230788_MNES Report_MGSi_V2.0’, Appendix C, Table C2, Page 275).

Threatened, migratory or special least concern fauna - One threatened fauna species was detected within the Project area during the surveys undertaken across the 2023-2025 survey period: Bare-rumped Sheath-tailed Bat (*Saccolaimus saccolaimus nudicluniatus*). More detailed information on this detection has been presented in (Attachment ‘E230788_MNES Report_MGSi_V2.0’, Section 7.4.1, Pages 42-44).

No other threatened, migratory or special least concern fauna was identified in the Project area during the targeted and opportunistic fauna surveys undertaken.

However, the following species were identified by EMM within the surrounding environment, and have as such been considered relevant to this assessment:

- Squatter Pigeon (*Geophaps scripta scripta*) – within 700m of the southern border of the Project area

The following species were not recorded in the Project area during surveys but are conservatively considered in this MNES report based on presence of habitat and/or nearby records:

- Black-throated Finch (*Poephila cincta cincta*)
- Koala (*Phascolarctos cinereus*)
- Fork-tailed Swift (*Apus pacificus*) – observed by EMM in March 2021 and November 2022 within the property located 1 Km North of the Project area.
- White-throated Needletail (*Hirundapus caudacutus*).

Further details (Attachment ‘E230788_MNES Report_MGSi_V2.0’, Section 7.4, Pages 40-55)

Groundwater dependent ecosystems - A review of WetlandMaps did not identify mapping of any groundwater dependent ecosystems (GDEs) within the survey area. The project is not expected to impact on GDEs. No groundwater is proposed to be extracted, and appropriate spills response will be in place to ensure any seepage does not occur. As a result, there is no impact to groundwater expected.

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

Bioregion – the Project area is in the Townsville Plains sub-region (BBN01) of the Brigalow Belt North bioregion (BBN), which is characterised predominantly by Quaternary alluvial and alluvial plains fringed in the east by coastal and estuarine deposits and in the west by Devonian sediments and igneous rocks.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 3.1, Page 9)

Elevation – the Project area has a relatively flat gradient with surface elevations gradually decreasing from 80 m Australian Height Datum (AHD) measured along the western border to 70 m AHD measured throughout the site and past the eastern border.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 3.2, Page 9)

Vegetation – the Project area comprises of cleared, highly degraded non-remnant vegetation characterised by a dense groundcover layer formed by pasture-related exotic species (>80-90% cover), such as Sabi Grass (*Urochloa mosambicensis*), Southern Crabgrass (*Digitaria ciliaris*), Sessile Joyweed (*Alternanthera sessilis*) and Siratro (*Macroptilium atropurpureum*). The paddock presents also sparse woody shrub species such as Flannel Sida (*Sida cordifolia*), Chia (*Hyptis suaveolens*) and Senna spp., as well as very sparse and scattered individuals of Clarkson's Bloodwood (*Corymbia clarksoniana*) as isolated trees or stags, particularly along the existing roads and fence lines.

Denser patches of vegetation are located north and south of the Project area boundary, predominantly along the creeklines and south-west to Bidwilli road, corresponding to areas of remnant and regrowth vegetation mapped as RE 11.3.30 that are outside of the Project area.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 7.1, Pages 34-38)

Soils – soil types have been mapped in detail across the Project area and surrounds at the 1:10,000 scale. The Project area soils comprise predominantly of loam/sandy loam over heavy clays and include the following soil types as per the Australian Soil Classification (ASC):

- Wyoming Sandy Loam (Wysl)
- Glenomic Sandy Loam (Gsl)
- Stockyard Sandy Loam (Stsl)
- Woodridge Gilgai Complex (WC)
- Manton Gilgai Complex (MtC).

The geology of the Project area and surrounds is characterised by Quaternary alluvium and lacustrine deposits (Qa) underlain by weathered to fresh granite.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 3.3, Pages 9-10)

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.

Commonwealth heritage places or other places recognised to have heritage values are not applicable to the Project area.

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

The Bindal people of the Birri Gubba nation are the traditional custodians of the land on which the Proposed action is located.

No native title determination or cultural heritage sites are known within the Project Area. A Cultural Heritage Assessment will be prepared for the project along with an Indigenous cultural clearance survey will be undertaken in association with the Bindal peoples prior to any onsite disturbance.

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. *

The Project area is located within the Haughton River Basin (HRB), part of the Burdekin Region catchment, and drains south into the adjacent ephemeral waterway, Four Mile Creek.

Gilligan Creek drains north-eastward and traverses (via culverts) the Mount Isa rail line, Flinders Highway, and Woodstock Giru Road. This waterway drains into Serpentine Lagoon approximately 6 km north-east of the Project area before flowing into Majors Creek. Majors Creek is a major tributary to the Haughton River which flows into the Pacific Ocean approximately 40 km north-east of the Project area.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 3.4, Page 10)

Watercourse adjacent to the Project area and surrounding land are presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Figure 3.3, Page 13).

4. Impacts and mitigation

4.1 Impact details

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

| EPBC Act section | Controlling provision | Impacted | Reviewed |
|-------------------------|--|-----------------|-----------------|
| S12 | World Heritage | No | Yes |
| S15B | National Heritage | No | Yes |
| S16 | Ramsar Wetland | No | Yes |
| S18 | Threatened Species and Ecological Communities | Yes | Yes |
| S20 | Migratory Species | Yes | Yes |
| S21 | Nuclear | No | Yes |
| S23 | Commonwealth Marine Area | No | Yes |
| S24B | Great Barrier Reef | No | Yes |
| S24D | Water resource in relation to large coal mining development or coal seam gas | No | Yes |
| S26 | Commonwealth Land | No | Yes |
| S27B | Commonwealth Heritage Places Overseas | No | Yes |
| S28 | Commonwealth or Commonwealth Agency | No | Yes |

4.1.1 World Heritage

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

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

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

—

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 action is unlikely to have any direct and/or indirect impact on World Heritage protected matters as none are located within the ecology study area.

Desktop search results identified that the Great Barrier Reef Marine Park is located approximately 37 km north of the Project area.

4.1.2 National Heritage

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

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

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

—

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 action will not have a significant impact to National Heritage protected matters as none are identified within the ecology study area and none are relevant to the Project area. Known National Heritage protected matter (Wet Tropics of Queensland World Heritage Area) is located approximately 52 km northwest of the Project area.

4.1.3 Ramsar Wetland

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

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

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

—

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.

*

Although the Project area does not include any permanent waterways, its proximity to an ephemeral creek (Gilligan Creek) adjacent to the north-western border of the site and presence of gulleys has warranted assessment of potential indirect impacts to downstream waterways and wetlands. The Project has the potential to impact surface water quality values which could in turn have a minor impact on this MNES.

The main construction activities that could impact surface water quality values include the following:

- Excavation and earthworks during construction for the construction of site access roads, and areas for the plant and processing infrastructure. If uncontrolled, it could lead to erosion and sedimentation, and deterioration of water quality and changes to on-site flows. If excess levels of sediment are mobilized, their discharge into drainage lines could adversely impact aquatic habitats and water quality. Specifically, increased suspended sediments can reduce light penetration, thus decreasing photosynthesis of aquatic flora and decrease dissolved oxygen.
- Use of fuels and chemicals in all Project phases, potentially resulting in contamination through spills, leaks or uncontrolled releases.
- Altered catchment conditions during Project operations. If stormwater runoff is not adequately contained, there is potential for adverse downstream impacts.
- Stormwater runoff, erosion and contaminants from Project infrastructure in operations. Water collected in on-site dams may contain a range of pollutants.

Due to the distance from Bowling Green Bay wetland (part of the Great Barrier Reef Marine Park), on-site management practices and infrastructure design, as well as downstream land uses from the Project area, the potential for adverse impacts on this MNES is reduced, and there is little pathway for credible impacts on these values. Further, downstream areas along Gilligan Creek are subject to intensive agricultural practices including sugar cane growing. As such, this MNES is not considered likely to be impacted directly or indirectly by the proposed action.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 8.2.3, Pages 61-63)

4.1.4 Threatened Species and Ecological Communities

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

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

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

Threatened species

| Direct impact | Indirect impact | Species | Common name |
|---------------|-----------------|--|--|
| Yes | Yes | <i>Geophaps scripta scripta</i> | Squatter Pigeon (southern) |
| Yes | Yes | <i>Phascolarctos cinereus</i> (combined populations of Qld, NSW and the ACT) | Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) |
| Yes | Yes | <i>Poephila cincta cincta</i> | Southern Black-throated Finch |
| Yes | Yes | <i>Saccolaimus saccolaimus nudicluniatus</i> | Bare-rumped Sheath-tailed Bat, Bare-rumped Sheath-tail Bat |

Ecological communities

—

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. *

Threatened Ecological Communities (TECs) - The action is unlikely to have any direct and/or indirect impact on TECs as none are located within the ecology study area.

Threatened Species - Based on the results of the desktop assessment, ground-truthing of fauna habitat and targeted fauna surveys, the Project has been assessed to have the potential to impact the following species:

- Bare-rumped Sheath-tailed Bat (*Saccolaimus saccolaimus nudicluniatius*)
- Squatter Pigeon (*Geophaps scripta scripta*)
- Black-throated Finch (*Poephila cincta cincta*)
- Koala (*Phascolarctos cinereus*)
- Fork-tailed Swift (*Apus pacificus*)
- White-throated Needletail (*Hirundapus caudacutus*).

Further details on the desktop assessment process and other assessment methodologies are presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 5, Pages 18-24)

Desktop summary results for matters are presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 6.1, Pages 25-28)

Likelihood of Occurrence table is presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Appendix B, Pages 276-295)

Field survey results for habitat and fauna are presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 7.3, Pages 39-40; and Section 7.4, Pages 40-55)

Direct Impacts – The Project is considered to provide potential habitat for the species listed above. Planned vegetation clearing activities will affect the potential habitat as per calculations below:

- Bare-rumped Sheath-tailed Bat – 95.71 ha of potential foraging habitat, 95.71 ha of potential dispersal habitat
- Squatter Pigeon – 95.71 ha of potential dispersal habitat
- Black-throated Finch – 95.71 ha of potential dispersal habitat
- Koala – 95.71 ha of potential dispersal habitat
- Fork-tailed Swift – 95.71 ha of potential foraging habitat (aerial only)
- White-throated Needletail – 95.71 ha of potential foraging habitat (aerial only)

Calculations of threatened fauna habitat mapped within the Project area are presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 7.4, Pages 40-55)

Calculations of fauna habitat impacted by the proposed action are presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 8.2.1.ii, Pages 57-58)

Additionally, direct fauna mortality may occur as a result of the Project during vegetation clearing (e.g. through removal of mature trees containing hollows), digging up breeding places such as reptiles residing under rocks, or vehicle collision.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 8.2.1.i, Page 57)

Indirect Impacts – The project has the potential to indirectly impact threatened species through habitat fragmentation, changes in water quality and hydrology, bushfire risk, noise and lighting, reduced air quality, and weeds, pests and alienation.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 8.2.2, Pages 58-61)

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. *

Significant impact assessments have been carried out for the six MNES that have been identified as 'known' or have 'high' or 'moderate' likelihood of occurrence in the Project area, and potentially impacted by the proposed activities, in accordance with the Significant Impact Guidelines 1.1: Matters of National Environmental Significance (DoE 2013).

The results of the analysis indicate that no significant impact is expected to occur on MNES as a result of the proposed action. Species-specific explanations of the assessments' results are presented below:

Bare-rumped Sheath-tailed Bat (BSB) - While the Project will result in a minor loss of potential BSB foraging and dispersal habitat it is not expected to an extent that will impact a potential important population occurring on site to decline, due to the large areas of available retained habitat in the surrounding environment.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 10.1, Pages 75-80)

Squatter Pigeon (SP) - While the Project will result in a minor loss of potential SP dispersal habitat it is not expected to an extent that will impact a potential important population occurring on site to decline, due to the large areas of available retained habitat in the surrounding environment.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 10.2, Pages 80-84)

Black-throated Finch (BTF) - No BTF have been detected within the Project area and surrounding environment. While the Project will result in a minor loss of potential BTF dispersal habitat it is not expected to an extent that will impact a potential important population occurring on site to decline, due to the large areas of available retained habitat in the surrounding environment.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 10.3, Pages 85-92)

Koala – No koala have been detected within the Project area and surrounding environment. While the Project will result in a minor loss of potential koala dispersal habitat it is not expected to an extent that will impact a potential important population occurring on site to decline, due to the large areas of available retained habitat in the surrounding environment.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 10.4, Pages 92-98)

Fork-tailed Swift - While the proposed action will result in clearing of vegetation, being this species an aerial feeder that does not breed in Australia, the Project area can still be utilised by this species during the construction and operational phases of the project, and the risk of an impact on an ecologically significant proportion of the population is considered to be low.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 10.5, Pages 98-101)

White-throated Needletail - While the proposed action will result in clearing of vegetation, being this species an aerial feeder that does not breed in Australia, the Project area can still be utilised by this species during the construction and operational phases of the project, and the risk of an impact on an important population is considered to be low.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 10.6, Pages 101-104)

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

No

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

*

The action is not to be considered a controlled action as it does not result in significant impact to Threatened Species and Ecological Communities.

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. *

Despite the proposed action having been considered as not a controlled action for Threatened Species, a series of avoidance and mitigation measures are proposed to be implemented to further reduce the potential direct and indirect impacts on the environment.

Key avoidance and mitigation measures proposed to be implemented are:

- Avoidance and minimisation have been prioritised as the most effective measure, however, noting the design progress is in its infancy, it is highly likely that avoidance, mitigation and minimisation measures will be further developed as a part of an iterative design development approach measures may include:
 - avoidance of or minimisation of clearing of species habitat through design layout, such as remnant or regrowth vegetation and water sources
 - maintaining connectivity between areas of habitat
 - maintaining condition of retained habitat by limiting grazing
 - implementing vegetation management activities under an appropriate management plan during construction and operation.
- Develop a Species Management Program (required by DESI under the NC Act when impacting on animal breeding places) to identify specific measures to be implemented that will mitigate impacts to threatened fauna species and animal breeding places during clearing, as well as operation of the Project.
- Pre-clearance surveys and sequential clearing are to be implemented. This will ensure impacts to fauna during clearing are avoided and minimised. A suitably qualified fauna spotter-catcher will be present during clearing to ensure native fauna are not impacted.
- Vegetation clearing will be limited to those areas required for earthworks and construction of the Project. Those areas which are not required for the ongoing operation and maintenance of the Project will be rehabilitated as soon as practicable following construction. Rehabilitation will also occur in retained areas of habitat adjacent to the Project infrastructure. Rehabilitation will be detailed in a Vegetation Management Plan to be prepared prior to commissioning of the Project.
- The approved disturbance area will be clearly demarcated prior to clearing to avoid unnecessary clearing of vegetation and to ensure personnel and vehicles stay within the approved footprint. Measures to ensure clearing limits are adhered to will be documented in the CEMP and addressed in site inductions.
- During operations, there will be controlled atmospheric emissions through permitted vent stacks meeting national air quality regulations.
- Clearing limits will be clearly demarcated on site, including through use of temporary fencing (eg flagging tape to mark out areas or plastic mesh fencing installed with star pickets) to avoid unintentional access to retained sensitive environmental areas.
- Sequential clearing of remnant vegetation will occur to minimise impacts on native fauna, particularly arboreal fauna which may be using tree hollows.
- Retained riparian corridors and vegetation will be managed appropriately as a priority with setback buffers in accordance with appropriate guidelines and protocols.
- During operations, there will be controlled atmospheric emissions through permitted vent stacks meeting national air quality regulations.
- Clearing limits will be clearly demarcated on site, including through use of temporary fencing (eg flagging tape to mark out areas or plastic mesh fencing installed with star pickets) to avoid unintentional access to retained sensitive environmental areas.
- Sequential clearing of remnant vegetation will occur to minimise impacts on native fauna, particularly arboreal fauna which may be using tree hollows.
- Retained riparian corridors and vegetation will be managed appropriately as a priority with setback buffers in accordance with appropriate guidelines and protocols.
- Potential indirect impacts to MNES will be managed through implementation of measures such as weed hygiene protocols, managing weeds in retained bushland areas, reducing noise and lighting

and managing stormwater runoff. Managing runoff including through full capture of stormwater and treatment prior to any discharge will occur to maintain water quality in adjacent watercourses. These measures will be detailed in management plans to be prepared during detailed design.

Further impact management, mitigation and monitoring measures are detailed within (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 9, Pages 64-73)

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

Not applicable - impact to Threatened Species and Ecological Communities is not anticipated, therefore offsets not appropriate in relation to this matter.

4.1.5 Migratory Species

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

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

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

| Direct impact | Indirect impact | Species | Common name |
|---------------|-----------------|------------------------------|---------------------------|
| Yes | Yes | <i>Apus pacificus</i> | Fork-tailed Swift |
| Yes | Yes | <i>Hirundapus caudacutus</i> | White-throated Needletail |

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

Yes

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

Based on the results of the desktop assessment, ground-truthing of fauna habitat and targeted fauna surveys, the Project has been assessed to have the potential to impact the following migratory species:

- Fork-tailed Swift (*Apus pacificus*)
- White-throated Needletail (*Hirundapus caudacutus*).

Further details on the desktop assessment process and other assessment methodologies are presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 5, Pages 18-24)
 Desktop summary results for matters are presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 6.1, Pages 25-28)
 Likelihood of Occurrence table is presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Appendix B, Pages 276-295)
 Field survey results for habitat and fauna are presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 7.3, Pages 39-40; and Section 7.4, Pages 40-55)

Planned vegetation clearing activities will affect the potential habitat as per calculations below:

- Fork-tailed Swift – 95.71 ha of potential foraging habitat (aerial only)
- White-throated Needletail – 95.71 ha of potential foraging habitat (aerial only)

Calculations of threatened fauna habitat mapped within the Project area are presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 7.4, Pages 40-55)
 Calculations of fauna habitat impacted by the proposed action are presented in (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 8.2.1.ii, Pages 57-58)

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

*

No

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

Significant impact assessments have been carried out for the two migratory species that have been identified as likely to occur in Project area and potentially impacted by the proposed activities, in accordance with the *Significant Impact Guidelines 1.1: Matters of National Environmental Significance* (DoE 2013).

The results of the analysis indicate that no significant impact is expected to occur on migratory species as a result of the proposed action. Species-specific explanations of the assessments' results are presented below:

Fork-tailed Swift - While the proposed action will result in clearing of vegetation, being this species an aerial feeder that does not breed in Australia, the Project area can still be utilised by this species during the construction and operational phases of the project, and the risk of an impact on an ecologically significant proportion of the population is considered to be low.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 10.5, Pages 98-101)

White-throated Needletail - While the proposed action will result in clearing of vegetation, being this species an aerial feeder that does not breed in Australia, the Project area can still be utilised by this species during the construction and operational phases of the project, and the risk of an impact on an important population is considered to be low.

Further details (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 10.6, Pages 101-104)

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

No

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

*

No significant impact was identified for the migratory species that are relevant to the action as there is unlikely direct impact expected as a result of habitat clearing. There is no evidence to indicate a population of any of the aforementioned species in the project area, likely due to the Project area not being suitable for breeding, dispersal or maintaining genetic diversity in the species. As such the species' occurrence on the Project area is unlikely to constitute an ecologically significant proportion of the population. It is for this reason Migratory species should not be considered a controlled action.

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

Despite the proposed action having been considered as not a controlled action for Migratory Species, a series of avoidance and mitigation measures are proposed to be implemented to further reduce the potential direct and indirect impacts on the environment.

Key avoidance and mitigation measures proposed to be implemented are:

- Avoidance and minimisation have been prioritised as the most effective measure, however, noting the design progress is in its infancy, it is highly likely that avoidance, mitigation and minimisation measures will be further developed as a part of an iterative design development approach measures may include:
 - avoidance of or minimisation of clearing of species habitat through design layout, such as remnant or regrowth vegetation and water sources
 - maintaining connectivity between areas of habitat
 - maintaining condition of retained habitat by limiting grazing
 - implementing vegetation management activities under an appropriate management plan during construction and operation.
- Develop a Species Management Program (required by DESI under the NC Act when impacting on animal breeding places) to identify specific measures to be implemented that will mitigate impacts to threatened fauna species and animal breeding places during clearing, as well as operation of the Project.
- Pre-clearance surveys and sequential clearing are to be implemented. This will ensure impacts to fauna during clearing are avoided and minimised. A suitably qualified fauna spotter-catcher will be present during clearing to ensure native fauna are not impacted.
- Vegetation clearing will be limited to those areas required for earthworks and construction of the Project. Those areas which are not required for the ongoing operation and maintenance of the Project will be rehabilitated as soon as practicable following construction. Rehabilitation will also occur in retained areas of habitat adjacent to the Project infrastructure. Rehabilitation will be detailed in a Vegetation Management Plan to be prepared prior to commissioning of the Project.
- The approved disturbance area will be clearly demarcated prior to clearing to avoid unnecessary clearing of vegetation and to ensure personnel and vehicles stay within the approved footprint. Measures to ensure clearing limits are adhered to will be documented in the CEMP and addressed in site inductions.
- During operations, there will be controlled atmospheric emissions through permitted vent stacks meeting national air quality regulations.
- Clearing limits will be clearly demarcated on site, including through use of temporary fencing (eg flagging tape to mark out areas or plastic mesh fencing installed with star pickets) to avoid unintentional access to retained sensitive environmental areas.
- Sequential clearing of remnant vegetation will occur to minimise impacts on native fauna, particularly arboreal fauna which may be using tree hollows.
- Retained riparian corridors and vegetation will be managed appropriately as a priority with setback buffers in accordance with appropriate guidelines and protocols.
- During operations, there will be controlled atmospheric emissions through permitted vent stacks meeting national air quality regulations.
- Clearing limits will be clearly demarcated on site, including through use of temporary fencing (e.g. flagging tape to mark out areas or plastic mesh fencing installed with star pickets) to avoid unintentional access to retained sensitive environmental areas.
- Sequential clearing of remnant vegetation will occur to minimise impacts on native fauna, particularly arboreal fauna which may be using tree hollows.
- Retained riparian corridors and vegetation will be managed appropriately as a priority with setback buffers in accordance with appropriate guidelines and protocols.
- Potential indirect impacts to MNES will be managed through implementation of measures such as weed hygiene protocols, managing weeds in retained bushland areas, reducing noise and lighting

and managing stormwater runoff. Managing runoff including through full capture of stormwater and treatment prior to any discharge will occur to maintain water quality in adjacent watercourses. These measures will be detailed in management plans to be prepared during detailed design.

Further impact management, mitigation and monitoring measures are detailed within (Attachment 'E230788_MNES Report_MGSi_V2.0', Section 9, Pages 64-73)

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

Not applicable - impact to Migratory Species is not anticipated, therefore offsets not appropriate in relation to this matter.

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.

*

Nuclear is not relevant nor applicable to this action.

4.1.7 Commonwealth Marine Area

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

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

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

—

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 action is unlikely to have a direct and/or indirect impact on Commonwealth Marine Areas as none are located within the ecology study area.

4.1.8 Great Barrier Reef

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

No

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

*

The action is unlikely to have direct and/or indirect impacts on the Great Barrier Reef as it is not located within the ecology study area or in close proximity to the project. The Great Barrier Reef Marine Park is located approximately 37 km north of the Project area.

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.

*

Not applicable – use or influence to water resource (in relation to large coal mining development or coal seam gas) is not anticipated, therefore direct and/or indirect impacts are not applicable to this action.

4.1.10 Commonwealth Land

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

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

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

—

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

No

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

*

The action is unlikely to have any direct and/or indirect impact on Commonwealth land matters as none are located within the ecology study area.

4.1.11 Commonwealth Heritage Places Overseas

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

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

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

—

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

No

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

*

The action will not have a direct and/or indirect impact on Commonwealth Heritage Places Overseas matters as it is not relevant the site, or the proposed action.

4.1.12 Commonwealth or Commonwealth Agency

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

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

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

None

Conclusion on the likelihood of unlikely significant impacts

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

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

4.3 Alternatives

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

No

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

The action is proposed to be situated at the proposed location due to its suitability within LEIP. These are for the following reasons:

- close proximity to the proposed LEIP electrical easement, traversing south from the proposed action to the Powerlink Calcium Substation.
- locality within the LEIP for its provision of power to the precinct
- availability of skilled labour and engineering services in Townsville.

The Project also has the potential and the opportunity to add value on both a national and regional scale, as outlined below:

- Facilitate the development of the LEIP by providing an alternative, reliable and low-cost energy source for prospective LEIP users.
- Support the transition to a low-carbon economy and assist the Queensland Government in achieving its climate targets.
- The Project will play an integral role in the Queensland Energy and Jobs Plan, both by providing significant load to bolster the electricity grid in north Queensland and support the development of Copperstring and by delivering clean, reliable and affordable energy to provide power for future generations.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 23/02/2026 | No | High |

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |
| #2. | Link | EPBC Act - Draft Referral guidelines for the nationally listed Brigalow Belt reptiles https://www.dcceew.gov.au/environment/epbc/publi.. | | | High |
| #3. | Link | EPBC Act environmental offsets policy https://www.dcceew.gov.au/environment/epbc/publi.. | | | High |
| #4. | Link | EPBC Act referral guidelines for the vulnerable koala https://www.agriculture.gov.au/sites/default/fil.. | | | High |
| #5. | Link | Planning Act 2016 https://www.legislation.qld.gov.au/view/html/inf.. | | | High |
| #6. | Link | Planning Regulation 2017 https://www.legislation.qld.gov.au/view/html/inf.. | | | High |
| #7. | Link | Significant Impact Guidelines 1.1 - Matters of National Environmental Significance https://www.dcceew.gov.au/environment/epbc/publi.. | | | High |
| #8. | Link | Significant impact guidelines for the endangered black-throated finch (southern) (Poephila cincta) https://www.dcceew.gov.au/environment/epbc/publi.. | | | High |

| | | | |
|------|------|--|------|
| #9. | Link | Survey guidelines for Australia's threatened bats https://www.dcceew.gov.au/environment/epbc/publi.. | High |
| #10. | Link | Survey guidelines for Australia's threatened birds https://www.dcceew.gov.au/environment/epbc/publi.. | High |
| #11. | Link | Survey guidelines for Australia's threatened mammals https://www.dcceew.gov.au/environment/epbc/publi.. | High |
| #12. | Link | Survey guidelines for Australia's threatened reptiles https://www.dcceew.gov.au/environment/epbc/publi.. | High |
| #13. | Link | Terrestrial vertebrate fauna survey guidelines https://www.qld.gov.au/environment/plants-animal.. | High |
| #14. | Link | Vegetation Management Act 1999 https://www.legislation.qld.gov.au/view/html/inf.. | High |

1.2.7 Public consultation regarding the project area

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|---|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |
| #2. | Link | Social Impact Assessment https://www.coordinatorgeneral.qld.gov.au/work-w.. | | | High |

3.1.1 Current condition of the project area's environment

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|---|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |

| | | | |
|-----|------|---|------|
| #2. | Link | Vegetation Management Act 1999 https://www.legislation.qld.gov.au/view/html/inf.. | High |
|-----|------|---|------|

3.1.3 Natural features, important or unique values that applies to the project area

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|---|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |
| #2. | Link | Vegetation Management Act 1999 https://www.legislation.qld.gov.au/view/html/inf.. | | | High |

3.1.4 Gradient relevant to the project area

| | Type | Name | Date | Sensitivity | Confidence |
|-----|------|--|------|-------------|------------|
| #1. | Link | Queensland Globe online interactive tool https://qldglobe.information.qld.gov.au/ | | | High |

3.2.1 Flora and fauna within the affected area

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|---|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |
| #2. | Link | Biosecurity Act 2014 https://www.legislation.qld.gov.au/view/html/inf.. | | | High |
| #3. | Link | Vegetation Management Act 1999 https://www.legislation.qld.gov.au/view/html/inf.. | | | High |

3.2.2 Vegetation within the project area

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |

3.4.1 Hydrology characteristics that apply to the project area

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |

4.1.3.3 (Ramsar Wetland) Why your action is unlikely to have a direct and/or indirect impact

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | 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 | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |

4.1.4.6 (Threatened Species and Ecological Communities) Why you do not consider the direct and/or indirect impact to be a Significant Impact

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |
| #2. | Link | Significant Impact Guidelines 1.1 - Matters of National Environmental Significance https://www.dcceew.gov.au/environment/epbc/publi.. | | | High |

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

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|--------------------------------------|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf | 22/02/2026 | No | High |

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4.1.5.2 (Migratory Species) Why your action has a direct and/or indirect impact on the identified protected matters

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |

4.1.5.6 (Migratory Species) Why you do not consider the direct and/or indirect impact to be a Significant Impact

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |
| #2. | Link | Significant Impact Guidelines 1.1 - Matters of National Environmental Significance https://www.dcceew.gov.au/environment/epbc/publi.. | | | High |

4.1.5.10 (Migratory Species) Avoidance or mitigation measures proposed for this action

| | Type | Name | Date | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | E230788_MNES Report_MGSi_V2.0.pdf MNES Impact Assessment Report for the Northern Quartz Campus - Metallurgical Silicon project | 22/02/2026 | No | High |

5.2 Declarations

Completed Referring party's declaration

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

| | |
|----------------------------|---|
| ABN/ACN | 28141736558 |
| Organisation name | EMM CONSULTING PTY LIMITED |
| Organisation address | 2065 NSW |
| Representative's name | Claudia Trave |
| Representative's job title | Associate Ecologist |
| Phone | 0431880051 |
| Email | ctrave@emmconsulting.com.au |
| Address | Level 2/95 N Quay, Brisbane City QLD 4000 |

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

Check this box to confirm these are the correct identification details. *

By checking this box, I, **Claudia Trave of EMM CONSULTING PTY LIMITED**, 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. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

Completed Person proposing to take the action's declaration

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

| | |
|-----------------------|-------------------------|
| ABN/ACN | 64692310240 |
| Organisation name | SOLQUARTZ MG-SI PTY LTD |
| Organisation address | 4000 QLD |
| Representative's name | Vignesh Bandi |

| | |
|----------------------------|---|
| Representative's job title | Senior Vice President - Investment Team Australia |
| Phone | +61 493 218 895 |
| Email | vignesh.band@quinbrook.com |
| Address | Level 5, 167 Eagle Street, Brisbane QLD 4000 |

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

Check this box to confirm these are the correct identification details. *

I, **Vignesh Bandi of SOLQUARTZ MG-SI 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. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

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. *

Check this box to confirm these are the correct identification details. *

I, **Vignesh Bandi of SOLQUARTZ MG-SI 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. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.