

Harlin Quarry Expansion Project

Application Number: **02699**Commencement Date:
25/11/2024Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Harlin Quarry Expansion Project

1.1.2 Project industry type *

Mining

1.1.3 Project industry sub-type

Other

1.1.4 Estimated start date *

01/07/2025

1.1.4 Estimated end date *

31/12/2080

1.2 Proposed Action details

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

The Proposed Action relates to the ongoing operation of Harlin Quarry, located at Harlin in the Somerset Regional Council Local Government Area in Queensland ('QLD'). The Project Area comprises land within a portion of Lot 88 RP28542.

The Proposed Action constitutes the establishment of a second extraction area referred to as the “North Pit” comprising an area of approximately 20 hectares (the ‘Disturbance Area’). The North Pit is immediately adjacent to the existing operation. The existing operation was established in 2013. No change to the existing operations footprint has occurred since the listing of the Koala as endangered on 12 February 2022.

The existing hard rock quarry pit comprises an extraction area, fixed crushing and screening plant, stockpile areas, internal haulage roads and stormwater management infrastructure. The existing operation occurs over land properly described as Lot 2 RP77219, Lot 88 RP28542, Lot 17 RP146684, Lot 30 SP258504, Lot 5 RP134429 and that part of the bed and banks of the Brisbane River for access purposes (Area between Lot 88 on Plan RP28542 and Lot 30 on Plan SP258504) (refer **Attachment 1 – Site Plan**).

The Proposed Action will not result in any intensification of use, require novel quarrying methods, change to quarry-related traffic nor increase in production above that which is currently authorised under local and State authorities. The North Pit will develop progressively overtime, commencing in the south-east adjacent to the existing operational area, advancing the pit in an overall north-west direction working behind the topographic rim.

Actions associated with quarrying such as vegetation clearing will occur over time in line with extraction and construction of supporting infrastructure (i.e., bunding or stormwater basins). Unlike housing developments for example, where clearing generally occurs over the whole of a development area rapidly to necessitate a development, quarrying is a slow and gradual practice that occurs progressively over time. Actions such as vegetation clearing are capital intensive and it is normal practice for quarries to clear only what is needed ahead of extraction, while rehabilitation is progressively commenced in areas that have reached terminal benches. The progression of the footprint of disturbance associated with quarries occurs vertically thence horizontally resulting in a very gradual disturbance of the land surface over time.

The Proposed Action therefore comprises the following activities which are a natural and ordinary consequence of procurement of essential construction materials:

- Clearing of land in the North Pit and stripping of topsoil and overburden material using mechanical means (i.e., bulldozer or excavator).
- The unavoidable clearing in the North Pit of 4ha of State mapped vegetation, which is characterised by the “regrowth” ironbark-dominated community on the slopes.
- Drilling and blasting the exposed underlying rock to a manageable size for the developed quarry benches to the quarry pit or bench below.
- Rehabilitating disturbed areas progressively once terminal benches are reached.

Once exposed to a manageable size, raw material procured from the North Pit will then be:

- Transferred from the North Pit to the existing crushing and screening plant/stockpile hardstand areas using an excavator or front-end loader into off-road haul trucks.
- Crushed and screened using crushing and screening processing plant within the existing operation.
- Loaded and transported off-site for sale by road trucks from within the existing operation.
- Overburden and soils may be stockpiled in the adjacent operational area for incorporation into on-site rehabilitation works where required, or use in constructing of stormwater control structures (e.g., perimeter banks).

The Proposed Action comprises a Disturbance Area of 20.1 ha. Within the Disturbance Area, which 4.16 ha is mapped as RE 12.11.7 (remnant) by the *Vegetation Management Act 1994*. Ecological assessments characterised this vegetation as regrowth (ironbark) vegetation. The balance of the Disturbance Area is not mapped under the *Vegetation Management Act 1994*. Ecological assessments concluded that this area comprises 9.52 ha of scattered regrowth (RE 12.11.27) and 6.33 ha which is predominately cleared.

Ecological assessments, completed to assess any potential environmental impacts of the Proposed Action, confirmed the Proposed Action does not have a significant impact on Matters of National Environmental Significance ('MNES'). Activities associated with the Proposed Action are expected to occur over a period of greater than 50 years. The timing and extent of the clearing and staged activities in the North Pit will be influenced by quarry development practices, capital investment, and market demand for essential construction materials. As a precautionary measure, the Proponent has chosen to refer the Proposed Action to the Minister under the *Environment Protection and Biodiversity Conservation Act 1999* ('EPBC Act'). This is being done for completeness and to ensure the long-term security of access to a State-significant resource over the next 60 years.

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 Proposed Action includes vegetation clearing as a consequence of the establishment of a second extraction area referred to as the "North Pit" to support the ongoing operation of the Harlin Quarry. The Proposed Action will have the necessary and State government approvals, as required under the *Planning Act 2016* ('Planning Act') and *Environmental Protection Act 1994* ('EP Act'). A description of the applicable State and local assessment benchmarks and legislative requirements has been summarised below. Relevant EPBC Act policies and guidelines have also been listed.

Queensland Planning and Environmental Legislation

Under Queensland environmental and planning legislation, an extractive industry development will require a:

- Land use approval issued under the Planning Act, or previous legislation, issued by the assessing authority (being local and/or State government). These are known as a Material Change of Use ('MCU') or a Planning Permit.
- Operational license issued under the EP Act, issued by the (now) Department of Environment, Tourism, Science and Innovation ('DETSI'). These are known as an Environmental Authority ('EA').

Harlin Quarry was first authorised in 2012 by the following:

- Material Change of Use – Development Permit for Extractive Industry and concurrence Environmentally Relevant Activities (the 'DA') issued by Somerset Regional Council under the (superseded) *Sustainable Planning Act 2009* ('SPA') and (superseded) *Esk Shire Planning Scheme*

2005 on 17 September 2012. Subsequently a decision on the DA was made by the Planning and Environment Court on 26 November 2012 (refer **Attachment 2 – Development Approval**).

- An Environmental Licence (now an EA) was issued by the (then) Department of Environment & Resource Management ('DERM') on 8 June 2012. The EA has been amalgamated with other activities undertaken by the proponent. The Halin Quarry is included as Part 4 of the Integrated EA (EPPR00953513). The most recent amendment to the EA occurred on 8 November 2024 to remove a component of the existing activity which no longer occurs on Lot 17 RP146684. No change to the Halin Quarry component of the EA has occurred since 2012 (refer **Attachment 3 – EA EPPR00953513**, Part 4, page 48 - 69).

The extension of the operation to include the North Pit requires the following:

- Change to the existing DA, currently being assessed by Council, with referral to the State Assessment and Referral Agency ('SARA') for clearing of state significant vegetation, potential impacts on the state-controlled road network and environmentally relevant activities (extraction and screening).
- Change to the existing EA, not yet lodged with the Department of Environment, Tourism, Science and Innovation ('DETSI'). This amended EA will include an assessment of impacts to Matters of State Environmental Significance.

The Planning Act and EP Act include mechanisms which consolidate assessment of Matters of State Environmental Significance identified under other legislation such as the *Vegetation Management Act 1994* and *South East Queensland Koala Conservation Strategy 2020 – 2025*. The purpose of the relevant planning and environmental legislation is explained in further detail below.

Planning Act 2016

Under the Planning Act, developments may require approval under a categorising instrument (i.e., a local categorising instrument or the Planning Regulations 2017 ('Planning Regulation')).

The Project Area is located in the Somerset Region, and therefore new developments, or changes in developments must consider the requirements under the Somerset Region Planning Scheme Version 4.2 ('Planning Scheme'). Where required under the Planning Regulation, applications made under the Planning Scheme are referred for assessment by other relevant agencies (i.e., State agencies or infrastructure providers).

As provided above, the proponent has lodged a change to the DA, and has been referred to SARA.

Vegetation Management Act 1991

Clearing of mapped remnant and regrowth vegetation is regulated by the *Vegetation Management Act 1999* ('VM Act') and the Planning Act. The Disturbance Area is mapped as containing category B (least concern) vegetation remnant vegetation as well as essential habitat.

The clearing of native vegetation can be exempt in some circumstances, as listed in Schedule 21 of the Planning Regulation, or if compliant with an accepted development vegetation clearing code. Neither Schedule 21 of the Planning Regulation nor the Accepted Development Vegetation Clearing Code apply to the Proposed Action and as such, assessment under the Planning Act and VM Act is required.

This assessment will occur as a part of the changes to the existing DA and EA as provided above.

South East Queensland Koala Conservation Strategy 2020 – 2025.

The *South East Queensland Koala Conservation Strategy 2020 – 2025* commenced on 29 August 2020 after the Harlin Quarry DA was approved and commenced operation (in 2012).

Pursuant to Schedule 10, Part 10, Division 3 (section 16B(2)(d)) of the Planning Regulation, further assessment of the potential impacts to koala habitat is not required where the activity is carried out under a development permit given for an application that was properly made (or approved) before 7 February 2020. This exclusion does not apply to an extension to the quarry footprint. As such, further assessment against the South East Queensland Koala Conservation Strategy 2020 – 2025 will occur as a part of the changes to the existing DA and EA as provided above.

Environmental Protection Act 1994

The EP Act and Planning Act regulate Environmentally Relevant Activities ('ERA') through a licensing system. EAs authorise the carrying out of an ERA and include conditions to regulate the activity. The Environmental Licence issued by DERM in 2012, and the current EA issued by DETSI authorise the ERA16(2)(b) and ERA16(3)(b) at Harlin Quarry, being the extraction and screening on 100,000 – 1,000,000 tonnes of material in a year.

The EA includes conditions related to the operation of the site, environmental outcomes and acceptable levels of risk, and required management measures. The EA further prescribes the extent and location of clearing of vegetation. As provided above, the EA will be amended to enable clearing of the Disturbance Area.

Other Queensland Legislation

The following legislation has been considered, and is not relevant in the context of the Proposed Action:

- *Fisheries Act 1994*, as no mapped waterways for waterway barrier works are identified in the Disturbance Area.
- *Nature Conservation Act 1994*, as the Disturbance Area is not identified as a high-risk area of the protected plants trigger map.
- *Water Act 2000*, which regulates the taking of water or undertaking of other activities within a watercourse. The features mapped in the Disturbance Area are drainage features for the purposes of the *Water Act 2000*, and require no further consideration.

Commonwealth EPBC Act 1999

The Harlin Quarry commenced under the above-mentioned State permits in 2013. The current area of disturbance associated with the Harlin Quarry has not changed since early 2022 (refer **Attachment 1 – Site Plans**).

The EPBC Act protects certain nationally significant (protected) animals, plants, habitats or places, referred to as 'protected matters'. Under the EPBC Act, there are circumstances (listing events) which may result in a species becoming a listed threatened species; and ecological community becoming a listed threatened ecological community; or a listed threatened species or a listed threatened ecological community becoming listed in another category representing a higher degree of endangerment.

For the Proposed Action, the only listing events relevant is the elevation of the Koala from Vulnerable to Endangered on 12 February 2022.

Ecological assessments conducted to evaluate the potential environmental impacts of the Proposed Action confirmed that it would not result in a significant impact on MNES. An assessment of whether the Proposed Action is likely to adversely affect habitat critical to the survival of the Koala, and/or will interfere substantially with the recovery of the species, in accordance with Sections 7 and 8 of the EPBC Act referral guidelines for Koala (DoE 2013), is provided as **Attachment 4 - Terrestrial Vertebrate Fauna Report**. The results of this assessment indicate the Proposed Action is not likely to result in a significant impact to the Koala.

Actions associated with the Proposed Action are expected to occur over a period of more than 50 years. The timing and extent of the clearing and staged activities in the North Pit will be influenced by quarry development practices, capital investment, and market demand for essential construction materials. As a precautionary measure, the Proponent has chosen to refer the Proposed Action to the Minister under the EPBC Act. This is being done for completeness and to ensure the long-term security of access to a State-significant resource over the next 60 years.

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. *

Harlin Quarry has been operational since 2012. In mid-2023 the proponent met with Council in relation to the quarry extension. Pursuant to Section 53 of the Planning Act, the public had the opportunity to comment on the proposed action during the approval process. The public notification period occurred between 6 September 2024 and 27 September 2024 and comprised:

- A published notice in *The Lockyer & Somerset Independent* on 5 September 2024.
- A notice placed on the premises in the way prescribed by the Development Assessment Rules on 5 September 2024 until 28 September 2024.
- Notification to all adjoining landowners via registered letters in priority post on 3 September 2024.

During the legislative public notification period of 15 business days, one (1) submission was made to Council as the assessing authority (refer **Sensitive Attachment 1 – 2024 DA Public Notification Submission**). Council will consider this submission during the course of the decision making process which at this time is ongoing.

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.

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1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN 87123783157

Organisation name SLR Consulting Pty Ltd

Organisation address 6 Mayneview Street, Milton QLD 4064

Referring party details

Name Megan Benham

Job title	Project Director
Phone	38710411
Email	planning@groundwork.com.au
Address	6 Mayneview Street

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	60010168742
Organisation name	KARREMAN QUARRIES PTY LTD
Organisation address	616 – 632 West Mount Cotton Road, Sheldon QLD 4157

Person proposing to take the action details

Name	Dirk Karreman
Job title	Director
Phone	0428 711 118
Email	dick@karreman.com.au
Address	616 – 632 West Mount Cotton Road, Sheldon QLD 4157

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. *

Karreman Quarries understands and recognises it has a duty of care to the environment, as shown by their decision to refer the Proposed Action.

Karreman Quarries also operate an extractive industry known as the West Mount Cotton Quarry, which was subject to an EPBC referral (December 2018), and subsequent Approval Decision dated 3 March 2022 (reference: EPBC referral 2018/8340). This activity commenced on 22 July 2024, comprising clearing which occurred to commence relocation of a central powerline. On 17 June 2024 a request to amend the EPBC 2018/8340 approval conditions and associated Offset management Plans was submitted by Attexo Group Pty Ltd. The request is ongoing.

As detailed in the 2018 EPBC referral for West Mount Cotton Quarry, in 2004 proceedings were commenced against Karreman Quarries Pty Ltd in the Magistrates Court at Cleveland for:

1. a breach of the Environment Protection Act 1993 (QLD) for an action that might cause environmental harm; and
2. for a development offence under the Integrated Planning Act (QLD) 1997, arising from quarrying activities outside of an approved quarry footprint.

Subsequently a development approval was obtained to authorise retrospectively those activities. No other proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources have been commenced against Karreman Quarries.

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

An environmental policy is not available in this instance. Karreman Quarries understands and recognises it has a duty of care to the environment, as shown by their decision to refer the Proposed Action.

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	60010168742
Organisation name	KARREMAN QUARRIES PTY LTD
Organisation address	616 – 632 West Mount Cotton Road, Sheldon QLD 4157

Proposed designated proponent details

Name	Dirk Karreman
Job title	Director
Phone	0428 711 118
Email	dick@karreman.com.au
Address	616 – 632 West Mount Cotton Road, Sheldon QLD 4157

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	87123783157
Organisation name	SLR Consulting Pty Ltd
Organisation address	6 Mayneview Street, Milton QLD 4064
Representative's name	Megan Benham
Representative's job title	Project Director
Phone	38710411
Email	planning@groundwork.com.au
Address	6 Mayneview Street

✔ 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	60010168742
Organisation name	KARREMAN QUARRIES PTY LTD
Organisation address	616 – 632 West Mount Cotton Road, Sheldon QLD 4157
Representative's name	Dirk Karreman
Representative's job title	Director
Phone	0428 711 118
Email	dick@karreman.com.au
Address	616 – 632 West Mount Cotton Road, Sheldon QLD 4157

✔ 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

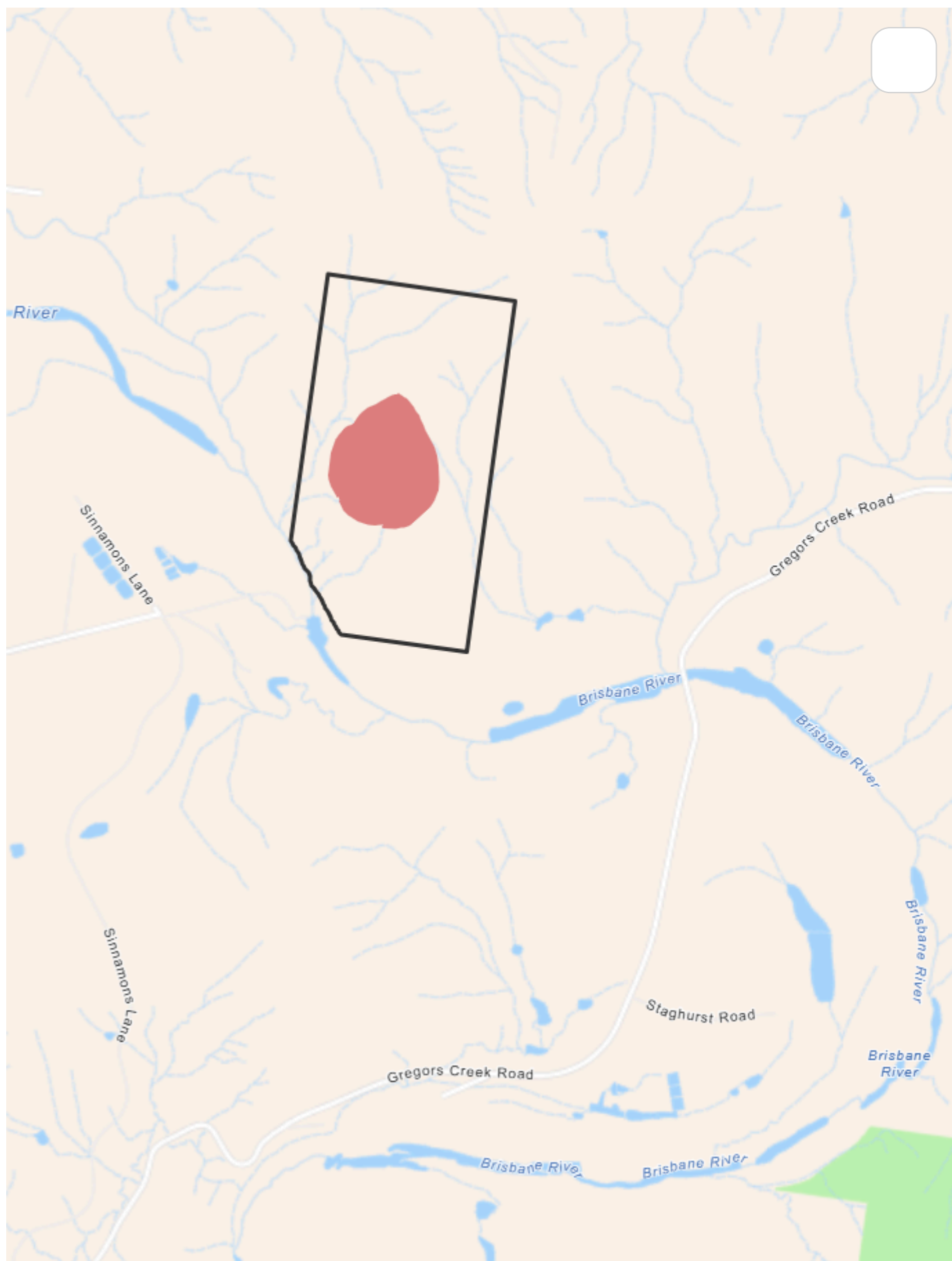
1.4 Payment details: Payment allocation

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 (117.65 Ha)

Disturbance footprint (20.06 Ha)

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2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Sinnamons Lane, Harlin QLD 4306, properly described as Lot 88 RP28542

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? *

Freehold

3. Existing environment

3.1 Physical description

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

The Project Area, being part of Lot 88 RP28542 is located 3km east of Harlin within the Somerset Council (refer **Attachment 1 – Site Plan**). The Disturbance Area is approximately 20ha and is zoned as 'Rural' under the *Somerset Region Planning Scheme Version 4.2*.

The Project Area has historically been used for rural activities including cattle grazing and logging. A review of historical aerial imagery suggests that the Project Area has been subjected to historical disturbance dating back to at least 1951 (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 1.2, Page 1).

The Project Area, being part of Lot 88 RP28542 is located 3km east of Harlin within the Somerset Council (refer **Attachment 1 – Site Plan**). The Disturbance Area is approximately 20ha and is zoned as 'Rural' under the *Somerset Region Planning Scheme Version 4.2*.

The Project Area has historically been used for rural activities including cattle grazing and logging. A review of historical aerial imagery suggests that the Project Area has been subjected to historical disturbance dating back to at least 1951 (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 1.2, Page 1).

Adjacent land, properly described as Lot 2 RP77219, Lot 17 RP146684, Lot 30 SP258504, Lot 5 RP134429 has been used for extractive industry purposes since 2013, with a (now surrendered) soil conditioning activity occurring on Lot 17 RP146684 prior to this date.

The Project Area is on the southern (broken) footslopes of an east west range which rises to an approximate 300 m of elevation immediately north of Lot 88 RP28542. Situated 265 m northeast of the Brisbane River, the Project Area rises from an approximate elevation of 110 m in the south to 180 m in the north, with a moderately steep slope of approximately 12%. The Project Area is located within the Brisbane River sub-basin and is situated approximately 250m to the east of the Brisbane River, approximately 27km upstream of Wivenhoe Dam. There are 4 smaller stream order 1 tributaries that originate on the hill within the Site, all of which drain into the Brisbane River (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 1.2, Page 1 and Section 3.4, Page 7).

The Project Area is located within the Southeast Queensland Bioregion (bioregion 12 in the Regional Ecosystem ('RE') framework Southeast Queensland in the Interim Biogeographic Regionalisation for Australia (IBRA) Version 7), and is mapped as either supporting quaternary alluvium (Clay, silt, sand and gravel; flood-plain alluvium) or mafite (fine-grained normal crystalline igneous rocks) (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 3.1 and Section 3.2, Page 7).

The landscape within the Project Area is highly fragmented from years of historical disturbance, and only one (1) vegetation group evident in the Project Area being:

- *Eucalyptus crebra* woodland on Mesozoic to Proterozoic igneous rocks (RE 12.11.7) (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 4.2, Page 9 and Section 6.1, Page 14).

The Flora Assessment prepared by Attexo provides the following description of vegetation in the Project Area (**Attachment 5 – MNES Impact Assessment (Flora)**, Section 4.2, Page 9):

Remnant RE 12.11.7 was confirmed within the site. These patches of vegetation were characterised by approximately 40% cover in the ecologically dominant layer (EDL), 40% cover in the subcanopy (T2) with tree heights to 17m. Weed cover with the vegetation unit was approximately 10% with the dominant weed species Lantana camara. Previous anthropogenic disturbances included localised clearing and logging.

The Proposed Action comprises a Disturbance Area of 20.1 ha of which 4.16 ha is RE 12.11.7, 9.52 ha regrowth 12.11.7 and 6.33 ha predominantly cleared area (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 6.1, Page 14).

The surrounding regrowth areas were characterised by greater levels of anthropogenic disturbance and showed low cover in the canopy (approximately 20%) and generally lower tree heights than RE 12.11.7 vegetation areas. Occasional taller relic trees were also recorded with Eucalyptus crebra the dominant tree species. Weed cover was similar at approximately 10% (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 1.2, Page 9)

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

The Project Area has historically been used for rural activities including cattle grazing and logging. The Project Area has been subject to historic disturbance dating back to at least 1951 (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 1.2, Page 1).

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

Nature reserves and the broader landscape include the Cressbrook Conservation Park approximately 5km to the southeast of the Project Area and the Deer Reserve National Park and State Forest approximately 6.5km to the east. The existing Harlin Quarry is located to the east and south of the Project Area on Lot 2 RP77219, Lot 88 RP RP28542, Lot 17 RP146684, Lot 30 SP258504, Lot 5 RP134429. No new or changed impacts to the any natural features of values are anticipated by the development of the North Pit (the Proposed Action) (refer **Attachment 1 – Site Plan**).

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 rises from an approximate elevation 110 m in the south to 180 m in the north, a moderately steep slope of approximately 12% (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 1.2, Page 1).

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.

Flora and Fauna assessments of the Project Area have been undertaken by Attexo (Flora) and Gondwana Ecology (Fauna) to establish any Matters of National or State Environmental Significance ('MNES' and 'MSES') that may occur at the Disturbance Area. These are included as **Attachment 5 – MNES Impact Assessment (Flora)** and **Attachment 4 – Terrestrial Vertebrate Fauna Report**.

Flora

The Project Area is located within the Southeast Queensland Bioregion (bioregion 12) which is described as:

“Metamorphic and acid to basic volcanic hills and ranges (Beenleigh, D’Aguilar, Gympie, Yarraman Blocks) sediments of the Moreton, Nambour and Maryborough Basins, extensive alluvial valleys and Quaternary coastal deposits including high dunes on the sand islands such as Fraser Island. Humid. Eucalyptus-Lophostemon-Syncarpia tall open forests, Eucalyptus open forests and woodlands, subtropical rainforests often with Araucaria cunninghamii emergents and small areas of cool temperate rainforest dominated by Nothofagus moorei and semi-evergreen vine thickets, Melaleuca quinquenervia wetlands and Banksia low woodlands, heaths and mangrove / saltmarsh communities (Cumplings & Hardy, 2000).” (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 3.1, Page 7).

The Project Area is located within a state-wide biodiversity terrestrial corridor that runs in a north-westerly to south-easterly direction (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 3.5, Page 7).

An EPBC Act Protected Matters Report (generated on 17 October 2024) identify the following MNES within 50km of the Project Area:

- 6 Ramsar Wetlands
- 11 Threatened Ecological communities
- 24 Plant Species

Assessment of flora in the Project Area comprised a field survey, undertaken in December 2022, and two desktop assessments, the most recent of which being in October 2024 (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 2.1, Page 3).

The field survey undertaken in December 2022 included the following survey methodologies:

- Quaternary Surveys – Quaternary surveys were undertaken to help verify the ground-truthed regional ecosystem (GTRE) mapping across the Site following the Methodology for surveying and mapping regional ecosystems and vegetation communities in Queensland Version 6.0 (Neldner et al. 2022).
- Transect Surveys - Two one-hundred-metre line intercept transects were conducted in each of the identified assessment units, also in accordance with Neldner et al. 2022.
- General Meander / Site Traverse - A general flora meander / Disturbance Area traverse was conducted within each of the assessment units for the purposes of compiling a flora list and potentially identify EVNT species.

The initial desktop assessment identified 55 flora species listed under the EPBC Act that could potentially occur within the Project Area, a review of likelihood of occurrence assessment indicated of these, only seven (7) of these could be considered 'Possibly Occurring', being (**Attachment 5 – MNES Impact Assessment (Flora)**, Table 2.1, Page 2):

1. *Bertya oppositifolia*
2. *Corchorus cunninghamii*
3. *Cryptostylis hunteriana*
4. *Haloragis exalata* subsp. *Velutina*
5. *Picris euae*
6. *Sophora fraseri*
7. *Thesium australe*

None of these species were identified during the field survey (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 4.3, Page 9).

Fauna

The Proposed Action will result in the clearing of 4.16 ha of RE12.11.7 which is characterised as regrowth (ironbark) vegetation, which inherently represents potential impacts to fauna due to a loss of habitat and potential fauna mortality (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 4.2, page 21).

An EPBC Act Protected Matters Report (generated on 17 October 2024) identified 101 MNES fauna species within 50km of the Project Area, of which the *Phascolarctos cinereus* (Koala) was identified as potentially occurring within the Project Area.

Assessment of fauna and fauna habitat present in the Project Area comprised a desktop assessment, using online databases and field surveys, undertaken in December 2022, January 2023, February 2023 and June 2024 over 13 days/nights (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 1.4, page 6).

Site assessment methodology consisted of an initial site inspection and assessment of habitats, followed by a systematic survey, designed for target species and collection of potentially occurring common fauna (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 3.3, page 11).

A total of 37 terrestrial vertebrate fauna were recorded on the Project Area during field survey's, comprising 1 native amphibian, 23 native birds, 10 native mammals and 3 native reptiles (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 3.4, page 13).

The only threatened (MNES) terrestrial fauna recorded as potentially occurring in the Project Area was the *Phascolarctos cinereus* (Koala), which was evidenced through old scat/faecal pellets (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 3.6, page 13). The lack of recent scat or other Koala activity suggests historical, occasional or transitory use across a minority of the Project Area (20%), with the remainder of the Project Area being inactive (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 4.3, page 25).

The river flats to the south west of the Project Area support a mature *E.tereticornis* community with evidence of “recent” and higher level of use by koala. A gully, also with preferred habitat trees occurs to the west, connecting the Brisbane River area with the more densely forested hills to the north. The primary “connection” for koalas moving between the river flats and the hills would be associated with the gully as shown in the aerial photo in Section 4.3, page 25 of **Attachment 4 – Terrestrial Vertebrate**. The few, old koala pellets recorded within the Project Area (north/west periphery) and none in any other location, is further support that the primary connection in the landscape is not associated with the Project Area (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 4.3, page 25).

The grey-headed flying fox is known to occur in a wide variety of habitats, however is not included in any local records, and was not recorded during field surveys (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 3.6, page 15).

No MNES Reptiles or Frogs are likely to occur or have any reliance on the Project Area (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 3.6, page 14).

Marine or coastal and migratory birds were not included within the field survey as the Project Area has “no suitable habitat” (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 3.6, page 14). For completeness, the following is noted (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 3.6, page 13 - 15):

- Lungfish, Mary River Turtle and Platypus are known from the Brisbane River, which is located 0.5km to the southwest of the Project Area, however the Project Area is well removed from the river with existing operations on the land managing for any adverse impacts to the river.
- The only aquatic MNES species confirmed in the general locality is the Australian lungfish, observed in the Brisbane River.
- Mary River cod and silver perch are possible, because they are stocked in the Wivenhoe Dam (downstream) for recreational fishing purposes.
- Neither the Mary River or white-throated snapping turtle occur in the Brisbane Basin.
- The regent honeyeater, swift parrot and painted honeyeater can occur anywhere in Queensland, however these were not evidenced during field surveys and would not be specifically reliant on the Project Area.
- The white-throated needletail and fork-tailed swift were not recorded in or in proximity to the Project Area, however they are known to occur in eastern Australia and may feed on insects in the air across any landscape.

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

The MNES Impact Assessment (Flora) prepared by Attexo identified one vegetation community on the Project Area, being remnant Regional Ecosystem ('RE') 12.11.7 *Eucalyptus crebra* woodland on Mesozoic to Proterozoic igneous rocks (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 4.2, Page 9). The mapped area of RE 12.11.7 present on the Disturbance Area has been previously disturbed by localised clearing and logging, and is characterised by (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 4.2, Page 9):

“approximately 40% cover in the ecologically dominant layer (EDL), 40% cover in the subcanopy (T2) with tree heights to 17m. Weed cover with the vegetation unit was approximately 10% with the dominant weed species Lantana camara.”

The Disturbance Area is on the periphery of a larger patch of remnant vegetation to the north, and is located within a state-wide biodiversity terrestrial corridor that runs in a north-westerly to south-easterly direction (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 3.5, Page 7).

Under the Queensland Regional Ecosystem framework, land zones are categories that describe the major geologies and associated landforms and geomorphic processes in Queensland, which results in differences in the unction of ecosystems and their associated biodiversity. Land Zone 12 (*hills and lowlands on granitic rocks*) under the Queensland Regional Ecosystem framework has been confirmed to be present within the Project Area and is described as (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 3.2, Page 7):

“Land Zone 12 (hills and lowlands on granitic rocks) Mesozoic to Proterozoic igneous rocks, forming ranges, hills and lowlands. Acid, intermediate and basic intrusive and volcanic rocks such as granites, granodiorites, gabbros, dolerites, andesites and rhyolites, as well as minor areas of associated interbedded

sediments. Excludes serpentinites (land zone 11) and younger igneous rocks (land zone 8). Soils are mainly Tenosols on steeper slopes with Chromosols and Sodosols on lower slopes and gently undulating areas. Soils are typically of low to moderate fertility.”

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.

The Project Area is not identified as having any heritage values. No known cultural heritage sites, bodies, Management Plans, Designated Landscape Areas, Study Areas, or National Heritage Areas are recorded within the Project Area. The nearest registered heritage place is the Yimbun Railway Tunnel (Place i.d. 602637) located approximately 1.7km to the south west of the Project Area.

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

The Cultural Heritage Database and Register Search Report lists the cultural heritage party for the area as the Jinibara People. According to this search, no Cultural Heritage Sites, Bodies, Management Plans, Designated Landscape Areas, Study Areas, or National Heritage Areas are recorded within the Project Area (refer **Attachment 6 – Cultural Heritage Database and Register Search Report**).

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 Brisbane River sub-basin and is situated approximately 250m to the east of the Brisbane River, approximately 27km upstream of Wivenhoe Dam. Under Queensland Legislation, consideration of waterways is applicable under Vegetation Management Act 1999 (where clearing adjacent vegetation), the Water Act 2000 (where impacting on mapped waterways) and the *Fisheries Act 1994* (where creating a barrier on a mapped feature). A review of mapping associated with this legislation confirms that any depressions or changes in topography within the Disturbance Area provide drainage feature characteristics. These features originate on the hill within the Project Area, all of which drain into the Brisbane River (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 3.4, Page 7).

The purpose of the Proposed Action is to establish a quarry and associated activities. Quarries, by their nature capture water and are managed to collect and treat water from contaminated catchments prior to release to the environment.

The EA authorises the carrying out of ERA's and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm. In this regard, the EA includes conditions relating to the release of contaminants to the environment, including waters (refer **Attachment 3 – EA EPPR00953513**, Part 4, page 64 – 66, Condition W1 – W10).

The Project Area is not located within a catchment of the Great Barrier Reef (GBR) (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Section 3.4, Page 7).

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

EPBC Act section	Controlling provision	Impacted	Reviewed
S20	Migratory Species	No	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	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 Project Area is not located in a World Heritage Area.

The nearest World Heritage Area is the Gondwana Rainforests of Australia (Place ID: 105135). Specifically, the Main Range National Park, which forms a part of the Main Range group of the Gondwana Rainforests of Australia. The Main Range National Park is located approximately 100 km south of the Project Area.

Due to the geographical separation to the World Heritage Area, impacts are not anticipated

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 Project Area is not located in a National Heritage Area.

The nearest National Heritage area is the Gondwana Rainforests of Australia (Place ID: 105704). Specifically, the Main Range National Park, which forms a part of the Main Range group of the Gondwana Rainforests of Australia. The Main Range National Park is located over 100 km south of the Project Area.

Due to the geographical separation to the National Heritage Area, significant impacts are not anticipated.

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.

Direct impact	Indirect impact	Ramsar wetland
No	No	Moreton Bay

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 nearest Ramsar wetland is Moreton Bay, which is situated approximately 100 km downstream of the Project Area. The Project Area has historically been used for rural activities including cattle grazing and logging.

The Proposed Action will be included within the existing Erosion and Sediment Control Plan ('ESCP') in place over the Harlin Quarry operation to ensure that no uncontrolled runoff enters the Brisbane River (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Table 5.1, Page 12).

Due to the geographical separation to the wetland, preexisting disturbance of the Project Area, and additional management measures that will be implemented by the proponent, impacts to the Moreton Bay RAMSAR Wetland are not anticipated.

4.1.4 Threatened Species and Ecological Communities

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

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

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

Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	<i>Anthochaera phrygia</i>	Regent Honeyeater
No	No	<i>Arthraxon hispidus</i>	Hairy-joint Grass
No	No	<i>Bosistoa transversa</i>	Three-leaved Bosistoa, Yellow Satinheart
No	No	<i>Botaurus poiciloptilus</i>	Australasian Bittern
No	No	<i>Cadellia pentastylis</i>	Ooline
No	No	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
No	No	<i>Calidris ferruginea</i>	Curlew Sandpiper
No	No	<i>Calyptorhynchus lathami lathami</i>	South-eastern Glossy Black-Cockatoo
No	No	<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat, Large Pied Bat
No	No	<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (south-eastern)

Direct impact	Indirect impact	Species	Common name
No	No	<i>Coleus omissus</i>	
No	No	<i>Cupaniopsis shirleyana</i>	Wedge-leaf Tuckeroo
No	No	<i>Cyclopsitta diophthalma coxeni</i>	Coxen's Fig-Parrot
No	No	<i>Dasyurus hallucatus</i>	Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu]
No	No	<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
No	No	<i>Delma torquata</i>	Adorned Delma, Collared Delma
No	No	<i>Dichanthium setosum</i>	bluegrass
No	No	<i>Erythrotriorchis radiatus</i>	Red Goshawk
No	No	<i>Falco hypoleucos</i>	Grey Falcon
No	No	<i>Fontainea venosa</i>	
No	No	<i>Furina dunmalli</i>	Dunmall's Snake
No	No	<i>Gallinago hardwickii</i>	Latham's Snipe, Japanese Snipe
No	No	<i>Geophaps scripta scripta</i>	Squatter Pigeon (southern)
No	No	<i>Grantiella picta</i>	Painted Honeyeater
No	No	<i>Hemiaspis damelii</i>	Grey Snake
No	No	<i>Hirundapus caudacutus</i>	White-throated Needletail
No	No	<i>Lathamus discolor</i>	Swift Parrot
No	No	<i>Leuzea australis</i>	Austral Cornflower, Native Thistle
No	No	<i>Macadamia integrifolia</i>	Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak
No	No	<i>Macroderma gigas</i>	Ghost Bat
No	No	<i>Neoceratodus forsteri</i>	Australian Lungfish, Queensland Lungfish
No	No	<i>Notelaea lloydii</i>	Lloyd's Olive
No	No	<i>Petauroides volans</i>	Greater Glider (southern and central)
No	No	<i>Petaurus australis australis</i>	Yellow-bellied Glider (south-eastern)

Direct impact	Indirect impact	Species	Common name
No	Yes	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)
No	No	Phebalium distans	Mt Berryman Phebalium
No	No	Planchonella eerwah	Shiny-leaved Condoo, Black Plum, Wild Apple
No	No	Polianthion minutiflorum	
No	No	Pteropus poliocephalus	Grey-headed Flying-fox
No	No	Rhodamnia rubescens	Scrub Turpentine, Brown Malletwood
No	No	Rhodomyrtus psidioides	Native Guava
No	No	Rostratula australis	Australian Painted Snipe
No	No	Samadera bidwillii	Quassia
No	No	Sarcochilus weinthalii	Blotched Sarcochilus, Weinthals Sarcanth
No	No	Stagonopleura guttata	Diamond Firetail
No	No	Thesium australe	Austral Toadflax, Toadflax
No	No	Turnix melanogaster	Black-breasted Button-quail

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland
No	No	Lowland Rainforest of Subtropical Australia
No	No	Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions

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. *

The flora and fauna assessments have considered the matters of national environmental significance likely to be present in the Project Area. These assessments concluded that no direct or indirect impacts to the following MNES was to occur as a result of the Proposed Action (refer **Attachment 5 – MNES Impact Assessment (Flora)**, Table 2.1, Page 2 and **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 3.6, page 13):

- Flora
- *Berta opponens*
- *Corchorus cunninghamii*
- *Cryptostylis hunteriana*
- *Haloragis exalata* subsp. *Velutina*
- *Picris evae*
- *Sophora fraseri*
- *Thesium australe*
- Fauna
- *Pteropus poliocephalus*

The Disturbance Area is comprised of farmlands consistent with grassy paddocks, regrowth vegetation and isolated trees. The 4.16 ha patch of regrowth vegetation on the upper drier slopes of the Disturbance Area, is by definition habitat for the Koala (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 4.3, page 33). The targeted fauna survey identified evidence of Koala (*Phascolarctos cinereus*) in the form of old scats suggesting historical, occasional or transitory use across a minority of the Project Area (20%), with the remainder of the Project Area being inactive (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 4.3, page 25).

The Proposed Action includes the clearing of 4.16 ha RE12.11.7 which is characterised as regrowth (ironbark) vegetation. The clearing of vegetation inherently represents potential direct impacts to fauna due to with loss of habitat and potential fauna mortality. Potential indirect impacts to the Koala and their habitats include (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 3.6, page 13):

- Inadvertent clearing of vegetation to be retained.
- Inadvertent mortality (mortality during clearing operations).
- Loss of habitat features (removal of tree-bearing hollow and ground logs).
- Noise during Disturbance Area establishment and operations (increase in noise levels).
- Increase in roadkill (mortalities associated with quarry and haul road).
- Dust impact on fauna (excessive dust settlement).

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. *

The Proposed Action, being the establishment of a second extraction area referred to as the “North Pit”, is to be located to the west of land which is already partly used for extractive industry purposes. The existing operation was approved in 2012, and commenced in 2013, and has not further extended since the listing of the Koala as endangered on 12 February 2022.

The Proposed Action will not result in any intensification of use, require novel quarrying methods, change to quarry-related traffic nor increase in production above that which is currently authorised under local and State authorities. The North Pit will develop progressively overtime, commencing in the south-east adjacent to the existing operational area, advancing the pit in an overall north-west direction working behind the topographic rim. Progressive rehabilitation of the North Pit, and existing quarry operations, will also occur over time, as terminal faces are reached.

An assessment of whether the impact to koalas, due to loss of 4.16 ha of low value koala habitat, would be a significant impact was undertaken by Gondwana Ecology Group in **Attachment 4 – Terrestrial Vertebrate Fauna Report** (section 4.3, page 23 – 31) using the Commonwealth significant impact guidelines (DoE 2013).

While the vegetation within the project area gains a conservative score of +5 for koala habitat value, Gondwana Ecology Group conclude the Proposed Action is not considered to cause significant impact to the Koala, its foraging habitat or connective opportunities (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, Section 4.3, Page 28 and Page 31).

The reasons for this conclusion are provided in Section 4.3, Page 30-31 of **Attachment 4 – Terrestrial Vertebrate Fauna Report**, and is reprinted below for ease of reference:

The Guidelines also provide the following summary:

- *The loss of 20 hectares or more of high quality habitat critical to the survival (habitat score of ≥ 8) is highly likely to have a significant impact for the purposes of the EPBC Act.*
- *Loss of habitat that is not habitat critical to the survival of the species is highly unlikely to have a significant impact on the koala for the purposes of the EPBC Act.*
- *The loss of two hectares or less of marginal quality habitat critical to the survival (habitat score of 5) is highly unlikely to have a significant impact on the koala for the purposes of the EPBC Act.*

Consideration of the proposed development and on ground subject land values:

- *is not 20ha and is not high quality habitat critical to the survival (habitat score of ≥ 8).*
- *conservatively one would say that some habitat will be lost but it is not habitat critical to the survival of the species and therefore is highly unlikely to have a significant impact on the koala for the purposes of the EPBC Act.*
- *given the areas with koala feed trees may occupy 4ha - the loss of 4ha of “marginal” quality habitat critical to the survival (habitat score of 5) is highly unlikely to have a significant impact on the koala for the purposes of the EPBC Act.*

While it is considered, on-ground and in context, that there would not be a significant impact to koalas, it is recognised that the Commonwealth guidelines and assessment framework for this species is broad and conservative.

It is important to appreciate the context of the landscape, small size (and quality) of the impact area and realistic potential for any impact, noting the following:

- *the proposed North Pit is not located in an area that is considered environmentally significant and is an area adjacent to the existing quarry into regrowth ironbark and farmland;*
- *targeted surveys and observations over many years reveals that there are very low activity levels within the North Pit area. While the vegetation in the location of the North Pit is, by definition, koala habitat, the preferred habitat (ground-truthed by targeted surveys and observations) is along the river where higher activity levels have been recorded and there is a good availability of mature forest red gums. This preferred habitat along the river will not be disturbed;*
- *the proposed North Pit will not fragment any corridor for koala and benches will be progressively rehabilitated (if an animal finds its way into the rehabilitated pit area). The proposed extraction area does not form part of an area between “highly connected” patches. The vegetated ridgelines and gullies to the north/northwest (to be retained) provide better, more suitable connected habitat; and*
- *the location of the proposed North Pit is not considered significant for koalas, with high levels of activity found elsewhere in the locality and in areas to be retained and better connected with dense bushland. Safe koala passage through the landscape will be maintained because the corridor areas are not proposed to be disturbed. Noting the above, it is not realistically suggested that the proposed clearing of 4ha of regrowth (with limited (very low) usage, in a farming landscape, immediately adjacent to an existing quarry will cause a significant impact that will:*
 - *lead to the long-term decrease in the size of a population*
 - *reduce the area of occupancy of the species*
 - *fragment an existing population into two or more populations*
 - *adversely affect habitat critical to the survival of a species*
 - *disrupt the breeding cycle of a population*
 - *modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline*
 - *result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species’ habitat*
 - *introduce disease that may cause the species to decline or interfere with the recovery of the species.*

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.

*

As provided in the response to 4.1.4.6, the Proposed Action will not result in any intensification of use, require novel quarrying methods, change to quarry-related traffic nor increase in production above that which is currently authorised under local and State authorities.

Comprehensive field surveys over several years and seasons identified several pest/introduced species and a suite of common native fauna. Evidence (faecal pellets) of koala was identified in parts of the land, with more frequent occurrence along the more fertile river flats (outside the North Pit area). Consideration of the koala guidelines under the EPBC Act 1999 suggests that, given the marginal habitat, small area of habitat (4ha) and lack of high usage, as per the guidelines, and in reality - no significant impact is likely (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, Section 5, Page 32).

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

The Proponent is seeking to extend the extraction area associated with Harlin Quarry. Essential construction materials, by their nature, are fixed in location and finite. As such, the clearing required for the quarry cannot be avoided as this is the confirmed location of material, which is identified as a state significant resource.

The ultimate extent of the Proposed Action was however guided by consideration of the environmental values of the Project Area (i.e., the location results in the clearing of the lower value regrowth vegetation, which is not provided high connectivity for fauna between the Brisbane River and northern remnant vegetation areas), volume of construction material able to be procured from the Disturbance Area over the life of the quarry, and proximity to infrastructure which forms part of the existing operation.

The likely indirect impacts as a result of the vegetation clearing will be minimised through continued implementation of the existing Site Based management Plan ('SBMP') (refer **Attachment 7 – Site Based Management Plan**).

The SBMP includes management measures relating to Vegetation Management, Vegetation Clearing and Fauna Management (refer **Attachment 7 – Site Based Management Plan**, Section 2.6, page 33 - 35). These are summarised in **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 4.4, page 31 – 32) and reprinted below for ease of reference:

- Requiring that vegetation not be interfered with, damaged or destroyed without the permission of the Quarry Manager.
- Requiring vegetation to be cleared in stages and each stage of clearing to be guided by a Vegetation Clearing Plan.
- Requiring all vehicles and equipment (other than vehicles and equipment carrying out works authorised by the Quarry Manager) to remain on defined roads, hardstands and workings.
- Requiring all plant and equipment, including trucks, bulldozers, backhoes etc to be cleaned and be free of soil and weed seeds prior to entering the site.
- Avoiding pushing cleared vegetation into gullies, drainage lines and standing vegetation destroying declared plant as soon as possible after their presence has been identified and reported.
- Banning the lighting of fires unless expressly permitted by the Quarry Manager and DEHP.
- Consulting adjacent land holders on fire management strategies.
- Minimising the use of herbicides and fertilisers.
- Planting remaining bushland edges to reduce edge effects of clearing.
- Banning the collection of firewood and timber from areas to be protected.
- Limiting land disturbances to that absolutely essential for extraction.
- Protecting vegetation communities in buffer land and flag areas to be cleared.
- Using indigenous plant species in the rehabilitation of the workings.
- Planting species which support local fauna.
- Salvaging topsoil for use in rehabilitation activities.
- Maintaining vegetation cover on topsoil stockpiles to enhance the survival of soil flora/microbes.
- Training staff on environmental awareness, endangered species, control of weeds, pests and pathogens
- Flagging of buffer areas to prevent the intrusion of mobile equipment.
- Implementing Water Quality Management Plan to prevent erosion and sedimentation of gullies and other undisturbed areas.

- Enhancing and/or planting of buffer land with local provenance plant species (native tree which occur in the locality) to improve habitat potential of buffer land.
- Implementing progressive rehabilitation.
- Pre-clearing fauna survey and relocation exercise (and other measures) into a fauna management plan.

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

The Proposed Action will not have a significant residual impact on MNES and therefore offsets are not warranted.

4.1.5 Migratory Species

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

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

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

Direct impact	Indirect impact	Species	Common name
No	No	<i>Actitis hypoleucos</i>	Common Sandpiper
No	No	<i>Apus pacificus</i>	Fork-tailed Swift
No	No	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
No	No	<i>Calidris ferruginea</i>	Curlew Sandpiper
No	No	<i>Calidris melanotos</i>	Pectoral Sandpiper
No	No	<i>Cuculus optatus</i>	Oriental Cuckoo, Horsfield's Cuckoo
No	No	<i>Gallinago hardwickii</i>	Latham's Snipe, Japanese Snipe
No	No	<i>Hirundapus caudacutus</i>	White-throated Needletail
No	No	<i>Motacilla flava</i>	Yellow Wagtail

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

No

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

*

Noting the extensive “search” area, several species (e.g. migratory shorebird/wader species and marine/pelagic species) have been discounted from further discussion due to lack of suitable habitat (for the species) within or near the subject land, project location and scale with no potential for direct or indirect impacts to these features (refer **Attachment 4 – Terrestrial Vertebrate Fauna Report**, section 2.1, page 9).

4.1.6 Nuclear

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

No

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

*

The Proposed Action does not constitute a Nuclear Action as defined by Section 22 (1) of the *EPBC Act 1999*.

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 Project Area is approximately 100km from the nearest Commonwealth Marine Area. Due to the geographical separation to the Commonwealth Marine Area, impacts are not anticipated.

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 Project Area is situated more than 270 km from the Great Barrier Reef Marine Park Authority area. Due to the geographical separation from the Great Barrier Reef, impacts are not anticipated.

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.

*

The Proposed Action relates to vegetation clearing for the extension of the existing Harlin Quarry and activities associated with the procurement of essential construction materials on land previously used for rural activities including cattle grazing and logging.

The Proposed Action does not include a coal mining development or coal seam gas.

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 Proposed Action will take place on freehold land, and is not in close proximity of known Commonwealth Land. Due to the geographical separation to Commonwealth Land, impacts are not anticipated.

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 Project Area is not identified as having any heritage values. No known cultural heritage sites, Bodies, Management Plans, Designated Landscape Areas, Study Areas, or National Heritage Areas are recorded within the Project Area (refer **Attachment 6 – Cultural Heritage Database and Register Search Report**).

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. *

Extractive resources are site specific, limited in occurrence by geological conditions and are finite. The supply of extractive resources, such as sand, gravel, rock, clay and soil is essential to support development and construction activities and the delivery of infrastructure. Due to the high-volume, low-value nature of extractive resource products, it is generally necessary to obtain extractive resources from locations that are close to markets. Extractive industry activities serve communities for a number of decades, supporting continued growth.

The Proposed Action, being the establishment of a new extraction area referred to as the “North Pit”, is to be located to the west of land which is already partly used for extractive industry purposes. The existing operation was approved in 2012, and commenced in 2013, and has not further extended since the listing of the Koala as endangered on 12 February 2022.

The Proposed Action will not result in any intensification of use, require novel quarrying methods, change to quarry-related traffic nor increase in production above that which is currently authorised under local and State authorities. The North Pit will develop progressively overtime, commencing in the south-east adjacent to the existing operational area, advancing the pit in an overall north-west direction working behind the topographic rim. Progressive rehabilitation of the North Pit, and existing quarry operations, will also occur over time, as terminal faces are reached.

Ecological assessments were undertaken of the Project Area, which in conjunction with resource investigations, led to the “North Pit” design and location. The Disturbance Area has been limited to that reasonably practicable to continue to supply the local and regional market until 2080 whilst also avoiding higher value areas of vegetation to the north, which provide greater connectivity for fauna (particularly the Koala).

The Ecological assessments completed to assess any potential environmental impacts of the Proposed Action, confirmed the Disturbance Area (i.e., the North Pit) would not have a significant impact on MNES. However, due to the Proposed Action being undertaken over an extended period of time (being influenced by quarry development practices, capital investment, and market demand for essential construction materials), the Proponent has chosen to refer the Proposed Action to the Minister under the EPBC Act. This is being done for completeness and to ensure the long-term security of access to a State-significant construction material over the next 60 years.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

Type	Name	Date	Sensitivity	Confidence
#1.	Document Attachment 1 – Site Plans.pdf Site Plans		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 Attachment 1 – Site Plans.pdf Site Plans		No	High
#2.	Document Attachment 2 – Development Approval.pdf Development Approval		No	High
#3.	Document Attachment 3 – EA EPPR00953513.pdf EA EPPR00953513	23/09/2024	No	High
#4.	Document Attachment 4 - Terrestrial Vertebrate Fauna Report.pdf Terrestrial Vertebrate Fauna Report		No	High

1.2.7 Public consultation regarding the project area

Type	Name	Date	Sensitivity	Confidence
#1.	Document Sensitive Attachment 1 – 2024 DA Public Notification Submission.pdf 2024 DA Public Notification Submission	23/09/2024	Yes	Low or uncertain

3.1.1 Current condition of the project area's environment

Type	Name	Date	Sensitivity	Confidence
#1.	Document Attachment 1 – Site Plans.pdf Site Plans		No	High
#2.	Document Attachment 5 – MNES Impact Assessment (Flora).pdf MNES Impact Assessment (Flora)		No	High

3.1.2 Existing or proposed uses for the project area

Type	Name	Date	Sensitivity	Confidence
#1.	Document Attachment 5 – MNES Impact Assessment (Flora).pdf MNES Impact Assessment (Flora)		No	High

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

Type	Name	Date	Sensitivity	Confidence
#1.	Document Attachment 1 – Site Plans.pdf Site Plans		No	High

3.1.4 Gradient relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 5 – MNES Impact Assessment (Flora).pdf MNES Impact Assessment (Flora)		No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 4 - Terrestrial Vertebrate Fauna Report.pdf Terrestrial Vertebrate Fauna Report		No	High
#2.	Document	Attachment 5 – MNES Impact Assessment (Flora).pdf MNES Impact Assessment (Flora)		No	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 5 – MNES Impact Assessment (Flora).pdf MNES Impact Assessment (Flora)		No	High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 6 – Cultural Heritage Database and Register Search Report.pdf Cultural Heritage Database and Register Search Report		No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 3 – EA EPPR00953513.pdf EA EPPR00953513		No	High
#2.	Document	Attachment 5 – MNES Impact Assessment (Flora).pdf MNES Impact Assessment (Flora)		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	Attachment 5 – MNES Impact Assessment (Flora).pdf MNES Impact Assessment (Flora)		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	Attachment 4 - Terrestrial Vertebrate Fauna Report.pdf Terrestrial Vertebrate Fauna Report		No	High

#2.	Document Attachment 5 – MNES Impact Assessment (Flora).pdf MNES Impact Assessment (Flora)	No	High
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4.1.4.6 (Threatened Species and Ecological Communities) Why you do not consider the direct and/or indirect impact to be a Significant Impact

Type	Name	Date	Sensitivity	Confidence
#1.	Document Attachment 4 - Terrestrial Vertebrate Fauna Report.pdf Terrestrial Vertebrate Fauna Report		No	High

4.1.4.9 (Threatened Species and Ecological Communities) Why you do not think your proposed action is a controlled action

Type	Name	Date	Sensitivity	Confidence
#1.	Document Attachment 4 - Terrestrial Vertebrate Fauna Report.pdf Terrestrial Vertebrate Fauna Report		No	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 Attachment 4 - Terrestrial Vertebrate Fauna Report.pdf Terrestrial Vertebrate Fauna Report		No	High
#2.	Document Attachment 7 – Site Based Management Plan.pdf Site Based Management Plan		No	High

4.1.5.3 (Migratory Species) Why your action is unlikely to have a direct and/or indirect impact

Type	Name	Date	Sensitivity	Confidence
#1.	Document Attachment 4 - Terrestrial Vertebrate Fauna Report.pdf Terrestrial Vertebrate Fauna Report		No	High

4.1.11.3 (Commonwealth heritage places overseas) Why your action is unlikely to have a direct and/or indirect impact

Type	Name	Date	Sensitivity	Confidence
#1.	Document Attachment 6 – Cultural Heritage Database and Register Search Report.pdf Cultural Heritage Database and Register Search Report		No	High

5.2 Declarations

☒ Completed Referring party's declaration

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

ABN/ACN	87123783157
Organisation name	SLR Consulting Pty Ltd
Organisation address	6 Mayneview Street, Milton QLD 4064
Representative's name	Megan Benham
Representative's job title	Project Director
Phone	38710411
Email	planning@groundwork.com.au
Address	6 Mayneview Street

☒ 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, **Megan Benham of SLR Consulting Pty Ltd**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

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

✔ Completed Person proposing to take the action's declaration

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

ABN/ACN	60010168742
Organisation name	KARREMAN QUARRIES PTY LTD
Organisation address	616 – 632 West Mount Cotton Road, Sheldon QLD 4157
Representative's name	Dirk Karreman
Representative's job title	Director
Phone	0428 711 118
Email	dick@karreman.com.au

Address

616 – 632 West Mount Cotton Road, Sheldon QLD 4157

- ☒ 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, **Dirk Karreman of KARREMAN QUARRIES 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, **Dirk Karreman of KARREMAN QUARRIES 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. *