Direct Sunshine Coast Rail Line

Application Number: **02495** Commencement Date: **05/07/2024** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Direct Sunshine Coast Rail Line

1.1.2 Project industry type *

Transport - Land

1.1.3 Project industry sub-type

Railway

1.1.4 Estimated start date *

01/09/2026

1.1.4 Estimated end date *

01/09/2031

1.2 Proposed Action details

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

Proposed action description

The State of Queensland represented by the Department of Transport and Main Roads (TMR) is proposing the staged construction of a new 26.7km long dual track, electric, narrow gauge, passenger rail line and associated infrastructure between Beerwah and Birtinya, in the Sunshine Coast Regional local government area.

The proposed action is primarily located within a public transport corridor dedicated by the Queensland Government in 2001 following the Caboolture to Maroochydore Corridor Study (CAMCOS). In 2022 the public transport corridor was assessed by Preliminary Evaluation Assessment under the *Project Assessment Framework* (TMR, 2022a). The assessment considered alignment refinements, environmental constraints, stations and staging options. In 2023-24 further assessments were undertaken in the Business Case, which are summarised in the *Direct Sunshine Coast Rail Line Business Case* (TMR, 2024a).

The proposed action is the construction of both Stage 1 (Beerwah to Caloundra) and Stage 2 (Caloundra to Birtinya) of the Direct Sunshine Coast Rail Line. The Business Case recommended staged delivery to Birtinya by 2032, acknowledging that the delivery risks associated with achieving this timeframe will require further consideration. The Queensland and Australian governments have jointly committed $5.5 billion funding for:

- planning, design and construction of Stage 1 by 2032
- planning, design and market engagement to confirm delivery costs and timeframes for construction of Stage 2.

Future staged delivery of rail between Birtinya and Maroochydore is not part of the proposed action, and is not included in this referral.

Stage 1 includes:

- upgrade of Beerwah Station
- stabling yard south of Beerwah
- stations at Nirimba and Caloundra, with bus interchange at Caloundra Station
- straightening and track integration works along approximately 3.3km of the existing North Coast Rail Line through Beerwah
- realignment of a section of Steve Irwin Way
- a grade separated rail over road crossing from the North Coast Rail Line over Steve Irwin Way
- rail line through Beerwah State Forest and rail bridge crossing of the Bruce Highway
- approximately 5.8km of rail line on elevated, ballast-less structure west of Pelican Waters and Golden Beach.

Stage 2 includes:

- stations at Aroona and Birtinya
- stabling yard north of Birtinya
- approximately 2.2km long twin railway tunnel at Little Mountain, including 980m of mined tunnel with fire, life safety system and mechanical and electrical systems
- approximately 450m of railway on elevated structure between Caloundra Station and the southern tunnel portal, and approximately 3.8km of railway on elevated structure from the northern tunnel portal through Aroona and Birtinya

Both stages include:

- elevated structures, embankments and bridges
- rail systems including overhead lines, traction power substations, signalling infrastructure and security infrastructure
- active transport corridors and local walking and cycling paths at stations
- park ‘n’ ride and kiss ‘n’ ride at stations
- station access roads
- road realignments and intersection improvements
- noise barriers fauna movement infrastructure and fencing
- landscaping, drainage and water quality treatment areas
- rail maintenance access roads and/ or maintenance access infrastructure
- temporary construction laydown areas, compounds and access roads

- relocation of public utility plant.

Further details are provided in Att 1-Project Info, Section 1, pages 1 to 3. The project design has been developed to identify land requirements, inform environmental assessments and cost estimates. The project design will be further developed to document functional, performance and technical specifications in accordance with the *Project Assessment Framework: Supply Strategy Development Stage* (TMR, 2022a).

The project area is 402ha. This is labelled as 'disturbance footprint' in the Project Footprint map in Section 2.1. The project area consists of the project design area (permanent impact) of 320ha and construction footprint (temporary impact) of 82ha. The Stage 1 project area is 303ha, consisting of 239ha of project design area and 64ha of construction footprint. The Stage 2 project area is 99ha, consisting of 81ha of project design area and 18ha of construction footprint.

The referral area (labelled as 'project area' in Section 2.1) defines the area within which further investigations and environmental studies may be undertaken to inform the project design and construction methodology or accommodate minor changes to the project area.

The project area (labelled as disturbance footprint in Section 2.1) and referral area are shown in Att 2-MNES-Part01-REDACTED, Figure 1-2, along with the survey area adopted for ecological surveys to capture ecological values within, adjacent to, or surrounding the project area.

Purpose of proposed action

The proposed action will play a key part in the Sunshine Coast transport system and support the transport needs of the region, delivering a rail line planned for more than two decades. It will support urban renewal and strengthen transport connections, integrating with existing transport strategies and projects across the Sunshine Coast region. Journeys from the new Sunshine Coast stations to Roma Street station will take around 45 minutes less than driving in peak hour.

Stage 1 is expected to be operational in time to support transport operations for the Brisbane 2032 Olympic and Paralympic Games. Further planning, design and market engagement will confirm the Stage 2 timeframe.

Proposed action activities

The proposed action includes:

- site preparation, including vegetation clearing and grubbing, installation of erosion and sediment controls, establishment of temporary construction compounds and laydown areas
- bulk earthworks including embankment construction
- piling and installation of viaducts, bridges and culverts
- waterway realignments and scour protection
- public utility plant relocation works
- ballast placement, track construction and drainage works
- construction of stations, associated station infrastructure and stabling yards
- tunnelling and removal of spoil material (Stage 2)
- Traction power supply / substations, signalling and overhead lines
- roadworks and construction of active transport corridors and pathways at stations
- installation of environmental treatments including noise barriers, fauna infrastructure, landscaping and water quality treatment areas
- demobilisation and reinstatement of temporary impact areas.

Land Tenure arrangements

The proposed action is primarily located within a dedicated public transport corridor. Property acquisition will progress under the *Transport Planning and Coordination Act 1994* and *Acquisition of Land Act 1967* and state forest revocation under the *Nature Conservation Act 1992* for the land associated with the permanent

impact area. Property acquisition or temporary occupation arrangements under the *Transport Infrastructure Act 1994* will proceed for the temporary impact areas.

Direct and indirect impacts

The potential for direct impacts to matters of national environmental significance from the proposed action is addressed in this referral. These activities include site preparation, vegetation clearing and earthworks, waterway realignments, piling and construction of viaducts and bridges and general construction activities in the project area.

Indirect impacts will be managed by the implementation of construction environmental management plans in accordance with TMR processes. The potential for indirect impacts to matters of national environmental significance is also addressed in this referral.

Design refinements adopted to specifically avoid, minimise or manage these potential impacts are described in Att 1-Project Info, Section 2, pages 4 to 7. Further feasible refinements will be pursued as the design process progresses. Other mitigation is discussed in Att 2-MNES-Part16, Section 11.3 pages 332-335.

Additional works

The following do not form part of the proposed action, the subject of this referral under the EPBC Act.

1) surveys and investigations necessary to inform environmental assessment and project design

These include but are not limited to geotechnical surveys, installation of groundwater monitoring bores, water quality monitoring, contaminated land and acid sulfate soils investigations, ecological surveys, noise monitoring and pot-holing surveys for public utilities. These will be sited to avoid direct and indirect impacts to MNES, and documented via EPBC Act self-assessment prior to commencing. If these cannot be sited to avoid impacts to MNES and need to proceed to inform assessment or design for the referred action, a separate referral may be prepared.

2) Independent activities occurring proximate to the proposed action

The following works are independent of the proposed action and are generally beneficial to the operation of the rail and transport network regardless of whether the proposed action proceeds. These works are identified in this referral for clarity, as some of these works will occur proximate to the proposed action, however, these are not part of the proposed action:

- business as usual maintenance or works on existing Queensland Rail infrastructure
- works associated with other approved actions, for example, the Beerburrum to Nambour Rail Upgrade (EPBC no 2020/8803)
- signalling upgrading works within the existing North Coast Rail Line
- demolition of structures within the project area where required for public safety
- upgrades to footpaths.

3) Works by other entities

Some public utility plant relocation and installation may be undertaken by utility entities. Relocation of sports facilities is currently under investigation and may be delivered by the Sunshine Coast Council. Manufacturing to potentially service this and other transport projects may be established in the region by other entities.

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

Yes

1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?

Yes

1.2.5 Provide information about the staged development (or relevant larger project).

The larger action

A business case was undertaken for delivery of the rail line between Beerwah and Maroochydore. The business case recommended staged delivery over time, with sections able to open and be operationally independent of funding commitments for future stages. The business case identified that delivery to Maroochydore prior to 2032 was unachievable and recommended staged delivery with future stages subject to further planning at a later date. If operational by 2032, the rail line will be able to support the movement of large groups around South East Queensland for the Brisbane 2032 Olympic and Paralympic Games. Operation of initial stages by 2032 also enables the rail line to support the strong projected population growth within the region over the coming decades. Stage 1 (Beerwah to Caloundra) is funded for delivery prior to 2032. Market sounding is underway, which will confirm costs and delivery timeframes for Stage 2 (Caloundra to Birtinya). The rail line between Birtinya and Maroochydore is unfunded and not feasible to deliver by 2032, nor is there a timeframe committed for further planning or delivery at this time. The proposed action is therefore Stage 1 and Stage 2 of the Direct Sunshine Coast Rail Project.

The *Direct Sunshine Coast Business Case Summary* (TMR, 2024a) anticipates that construction of the full 37.8km rail line to Maroochydore would take at least a decade, and without staging, no sections of the rail corridor would be operational before this time.

A stand-alone action

The referred action (Stage 1 and Stage 2) does not require the related action (Birtinya to Maroochydore) to be taken before or after the proposed action for Stage 1 and Stage 2 to be viable, therefore it is a stand-alone action.

The referred action and related action are not co-dependent

The rail line is proposed to be staged, with Stage 1 (Beerwah to Caloundra) able to operate independently of the construction of other stages. Stage 2 (Caloundra to Birtinya) and the future delivery of the rail line from Birtinya to Maroochydore depend on Stage 1 to be constructed to enable their full operation. Stage 1 is currently funded for delivery. Activities to better understand the estimated cost and construction timeframe of Stage 2 are also funded, hence the referred action being the construction of Stage 1 and Stage 2. The future delivery of the rail line from Birtinya to Maroochydore, including any further planning to refine costs and timeframes is not funded.

As Stage 1 alone, or Stage 1 and Stage 2 combined can operate independently (indefinitely) without the construction of the rail line from Birtinya to Maroochydore, it cannot be said that the referred action and the related action (Birtinya to Maroochydore) are co-dependent. A future separate assessment of Birtinya to Maroochydore is not anticipated to influence the potential environmental impacts considered in Stage 1 and Stage 2.

The timeframe between the referred action and the related action

The timeframe between the referred action (Stages 1 and 2) and the related action (Birtinya to Maroochydore) is unknown. Planning for delivery north of Birtinya will be considered separately to the Business Case for Stages 1 and 2. Therefore there is a potential for a lengthy timeframe between the actions.

Geographic relationship between the referred action and the related action

The referred action (Stages 1 and 2) and related action would connect at Birtinya. The referred action covers Beerwah to Caloundra and Caloundra to Birtinya (Stage 1 and 2), while the related action is from Birtinya to Maroochydore. As this is a long, linear piece of infrastructure, spanning 26.7km between Beerwah and Birtinya, and another 11.1km from Birtinya to Maroochydore, the area covered by the referred action and the related action cover a variety of landforms, landscapes and land use types.

Overall plan or vision for the larger action

The rail line from Beerwah to Maroochydore is recognised in longer-term strategy planning for Queensland as Region Shaping Infrastructure within *Shaping SEQ South East Queensland Regional Plan 2023* (Department of State Development, Infrastructure, Local Government and Planning, 2023a). Connecting rail to the Sunshine Coast is key to supporting the strong projected population growth within the region and South East Queensland and is an essential first step for establishing a more sustainable, less car dependent, transport network for the region. Providing the initial rail link to Caloundra or Birtinya opens up the potential to develop an integrated bus/active transport network connecting to the rail stations as an interim step prior to delivery to Maroochydore. This integrated solution would deliver on both the transport task associated with the Brisbane 2032 Olympic and Paralympic Games and support the transport needs of a growing population.

The benefits and reasons for staged delivery of major transport infrastructure in Australia include the realisation of social benefits sooner, affordability, balancing market capacity to deliver and supporting a range of construction activities to occur concurrently (that is, appropriately manage demand for construction workers, materials and minimise cost escalation as a result of competing project resource demands).

As the timeframe of delivering from Birtinya to Maroochydore is unknown, it would be assessed and delivered in accordance with the environmental law current at that time.

Authorisation of the actions

The referred and related action are not authorised by a single local government or state permit, licence or other authorisation.

Funding source for the action

Stage 1 is jointly funded by the Queensland State Government and Australian Government. It is anticipated that a similar joint funding arrangement would be sought for construction of Stage 2 of the proposed action. Funding for the further detailed planning, design and construction of the rail line from Birtinya to Maroochydore has not been planned nor committed.

Ability to achieve the object of the EPBC Act

The protected matters encountered across the referred action and the related action vary given that they span a total of 37.8km across different land uses, habitats, landscapes and terrain. Separate referral of the referred action and the related action would not result in inadequate consideration of the staged projects' impact on protected matters.

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

Commonwealth legislation

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The proposed action has been referred given the confirmed and likely presence of MNES and outcome of significant impact assessments. Significant impact assessments were undertaken in accordance with the *EPBC Act Significant Impact Guidelines 1.1 – Matters of National Environment Significance* (DEWHA, 2013) and the *EPBC Act Policy Statement 3.21 – Industry guidelines for avoiding, assessing and mitigating*

impacts on EPBC Act listed migratory shorebird species (DoEE, 2017). Given the outcome of significant impact assessments, offsets may be required under the EPBC Act *Environmental Offsets Policy* (SEWPaC, 2012).

Native Title Act 1993

This Act recognises and protects native title providing a mechanism for the assessment or consequences of past and/or future acts that have affected or will affect native title. The proposed action is located on some land parcels for which non-exclusive native title rights and interests have been determined by the Federal Court on 17 June 2024 in *Douglas on behalf of the Kabi Kabi First Nation Traditional Owners Native Title Claim Group v State of Queensland (No 5) [2024] FCA 645.*

Queensland legislation

Transport Infrastructure Act 1994

This Act provides a regime that allows for and encourages effective integrated planning and efficient management of a system of transport infrastructure.

Planning Act 2016 and Planning Regulation 2017

The *Shaping SEQ South East Queensland Regional Plan 2023* (Shaping SEQ) is made under the Planning Act, and reflects the Queensland Government's 25-year strategic plan to guide the future growth of the SEQ region. Shaping SEQ identifies the Direct Sunshine Coast Rail Line as ‘Priority Region-shaping Infrastructure’ (Department of State Development, Infrastructure, Local Government and Planning, 2023a).

The *Sunshine Coast Planning Scheme 2014* is made under the Planning Act. The Planning Scheme identifies the 'dedicated public transport corridor (CAMCOS)' under the strategic framework (Sunshine Coast Council, 2014). It is also recognised in the Planning Scheme in regional infrastructure overlay mapping, the Caloundra South (Aura) Precinct Plan and the Kawana Waters Development Control Plan 1.

The proposed action will not require a development approval under the Sunshine Coast Planning Scheme 2014 where it is ‘government supported transport infrastructure’.

Other development approvals under the *Coastal Protection and Management Act 1995*, *Fisheries Act 1994, Water Act 2000* and *Environmental Protection Act 1994* are managed under the Planning Act and Planning Regulation. The triggers for these development approvals are discussed below.

Economic Development Act 2012

The Caloundra South priority development area (PDA) is located within the referral area. Development in a PDA is assessed under a development scheme applying to the priority development area and is not subject to separate assessment under a local government planning scheme. There are also certain exemptions where development approvals are not required under the Planning Regulation for development that is ‘PDA-related development’, being development within a PDA or PDA-associated development.

Environmental Protection Act 1994 (EP Act)

Under the EP Act all persons have a general environmental duty not to carry out an activity that causes or is likely to cause harm without taking all reasonably practicable measures to prevent or minimise the harm. Application of the TMR *Environmental Processes Manual* (TMR 2023a) could be expected to enable TMR to demonstrate that it meets the general environmental duty under the Act.

The project area includes land parcels that are listed on the Environmental Management Register. Soil disposal permit(s) under the EP Act will be required to remove contaminated soil for treatment or disposal from land listed on the Environmental Management Register.

Water Act 2000

This Act provides a framework for the planning and regulation of the use and control of water.

Works that interfere with water in a watercourse will require development approval unless an exemption applies. A water licence may be required to take or interfere with water unless the works comply with exemption requirements (Department of Regional Development, Manufacturing and Water, 2021). A riverine protection permit may be required to destroy vegetation, excavate or place fill in a watercourse, lake or spring if the activities cannot be undertaken in accordance with the *Riverine protection permit exemption requirements* (Department of Regional Development, Manufacturing and Water, 2023).

Coastal Protection and Management Act 1995

A development approval may be required for works completely or partly in a coastal management district unless the works comply with the requirements of the *Code for accepted development for tidal works or work completely or partly in a coastal management district* (Department of Environment and Heritage Protection, 2017.

Fisheries Act 1994

This Act regulates fishing, development in fisheries habitat areas, and damage to marine plants.

The proposed action includes culverts and bridges over waterways. A development approval will not be required where operational works comply with the *Accepted development requirements for operational work that is constructing or raising waterway barrier works* (Department of Agriculture and Fisheries, 2018). If temporary waterway barrier works comply with the accepted development requirements development approval will not be required.

Development approval will not be required where operational work that is the removal, damage or destruction of marine plants complies with the accepted development requirements (Department of Agriculture and Fisheries, 2017).

Nature Conservation Act 1992

This Act provides for the creation and management of protected areas, the protection of native wildlife and regulates the clearing of native plants. Protected Plant clearing permits and Species Management Programs (low risk and high risk) will be required to protect and manage animal breeding places in the project area (Department of Environment and Science, 2020).

The proposed action will require revocation (in part) of Beerwah State Forest under the *Land Act 1994* and *Forestry Act 1959*.

Nature Conservation (Koala) Conservation Plan 2017

The project area is located within koala district A, and contains some areas of mapped core koala habitat. Vegetation clearing will be undertaken in a controlled manner using sequential clearing processes and practices set out in in the *Nature Conservation (Koala) Conservation Plan 2017*.

Environmental Offsets Act 2014

This Act prescribes conditions and processes for offsets for impacts to prescribed environmental matters which include matters of national, state and local environmental significance. Offsets under this Act may be required where development approvals for waterway barrier works, removal of marine plants or State listed threatened plants and/or their habitat are required. Provisions exist under the Offsets Act to avoid the duplication of offset conditions between Commonwealth and Queensland requirements.

Vegetation Management Act 1999

Where the proposed action is ‘government supported transport infrastructure’, the clearing of vegetation for the infrastructure is exempt from requiring a development approval under Schedule 21, Part 1, Item 14(b) of the *Planning Regulation 2017*.

Aboriginal Cultural Heritage Act 2003

Under the *Aboriginal Cultural Heritage Act* all persons have a duty of care to take all reasonable and practical measures not to harm Aboriginal cultural heritage.

An initial Cultural Heritage Risk Assessment has been undertaken. This assessed the potential for the project area to contain tangible and intangible unknown or unlisted features, items or places of cultural heritage significance in accordance with the *Duty of Care Guidelines* (Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships, 2023).

Consultation with the Kabi Kabi First Nations People commenced in 2023. This will continue, to inform assessments, design and agreements, such as a Cultural Heritage Management Agreement.

TMR implements it's technical specification MRTS51 Environmental Management (TMR 2024b) for project activities. This technical specification sets out a process for the discovery of potential cultural heritage finds which are suspected to constitute Aboriginal Cultural Heritage or Historical Cultural Heritage.

Native Title (Queensland) Act 1993

A native title assessment will be conducted for the project and where an interest is required on land where native title has not been extinguished, the requirements of the *Native Title Act* and the *Native Title (Queensland) Act 1993* must be met before tenure or other project approvals can be granted.

Land Act 1994, Transport Planning and Coordination Act 1994 and *Acquisition of Land Act 1967*

The *Land Act 1994* allows the State to administer and manage non-freehold land and deeds of grant in trust, while allowing the State to create freehold land, and/or land area for other related purposes (e.g., reserves, land granted in trust, trustee leases, etc). The *Transport Planning and Co-ordination Act 1994* allows the Department of Transport and Main Roads to acquire land, and the *Acquisition of Land Act 1967* sets out the process for acquisition.

The proposed action is located within freehold land, road reserve, land leased under the *Land Act 1994*, reserve land, and unallocated state land. Land resumptions will be required for the proposed action.

Biosecurity Act 2014

The Act provides biosecurity measures for the management of restricted and invasive plants or animals. The project area is partially located within the Fire Ant Biosecurity Zone 2. A biosecurity instrument permit will be required for the movement of fire ant carrier materials to an area outside of the Fire Ant Biosecurity Zone 2.

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. *

Community consultation and engagement was undertaken in July–August 2023 and November–December 2023, (with some targeted stakeholder engagement between and after these dates via stakeholder interest groups) to align the planning and delivery of the project with community needs and ensure that any potential negative impacts are identified early and appropriately managed.

Consultation was targeted towards:

- Adding value to decision making processes, including to environmental and social issues, traffic operations, access, resumption impacts, potential impacts on business operations, local residents and road safety.
- Reducing risk by identifying constraints to the successful implementation of the project as early as possible and recommending appropriate courses of action.
- Raising awareness of the project and its current status, gauging opinion and seeking comment on all issues relevant to the project.

- Reaching diverse audiences by using multiple engagement tools including media statements and announcements, project phone hotline, email address, one on one briefings, newsletters, public displays and information sessions and online engagement.

Communication materials incorporated clear accessible maps and graphics to help the community easily understand the project's location, benefits and impacts and visualise its significance within the broader transport infrastructure plan for the region.

Three main themes underpinned the project team's approach to business case consultation. These were:

- corridor/ rail alignment
- station locations
- active transport.

The first phase of business case consultation was run in parallel with consultation activities for the Sunshine Coast Public Transport project, the Mooloolah River Interchange upgrade and the Kawana Motorway, with information also provided about the Beerburrum to Nambour Rail upgrade and the Southern Sunshine Coast Public Transport Strategy. The consultation period occurred between 24 July and 20 August 2023.

Feedback was received via email and phone hotline, online survey and targeted meetings with key stakeholders. This included meetings with environmental and community groups, Indigenous groups, and other stakeholders. The project team also held several information sessions to provide an opportunity for community members to ask questions and raise matters of importance to them. Briefings were also provided to various organisations across the Sunshine Coast.

The most common themes raised during this phase of consultation are summarised below:

- general support for the corridor alignment as it largely followed the CAMCOS alignment (the previously protected public transport corridor alignment)
- environmental impacts in sensitive areas
- vegetation loss
- noise, noise mitigation and visual amenity
- station accessibility and amenity, including shade and weather protection
- interconnectivity with the local public transport network
- bicycle access and storage at stations
- improvements to active transport network
- safety and security at stations
- architectural design at stations
- connectivity to other areas of importance
- lifestyle impacts
- retention of environmental reserves
- benefits of increasing public transport and reducing vehicle emissions overall.

The majority of survey respondents conveyed support for the project, with 'general support' identified as a theme for 75% of free text responses during the first phase of business case phase consultation. Factoring in feedback received via all communication and engagement methods, more than 80% of feedback showed support for the Direct Sunshine Coast Rail Line project.

The project also undertook a second phase of community engagement in conjunction with Sunshine Coast Public Transport project and the Northern Sunshine Coast Public Transport Strategy.

The second phase which occurred between 1 November and 10 December 2023, provided a project update for the community including proposed corridor refinements (and the technical reasoning for these) and updated station layouts. Details were provided about how community feedback received in the first phase of consultation were addressed in the business case.

Community and stakeholder feedback received has been, and continues to be, carefully considered by TMR and incorporated where possible into design and/or project planning.

TMR has continued to liaise with key stakeholders, including local environmental and Indigenous groups, after completion of the business case.

Consultation will continue with all landowners impacted by a land requirement or where access is required to landowners' property for environmental, geotechnical or other field surveys and investigations.

The *Sunshine Coast Major Projects Consultation and engagement insights Summary October 2023* (TMR, 2023c) provides a summary of consultation for the first phase. The second phase of consultation is summarised in the *Sunshine Coast Rail and Public Transport Consultation and engagements insights summary May 2024* (TMR, 2024c).

More information about the project, including project newsletters and general project information is available from the project's website (TMR, 2024d).

Consultation and engagement with First Nations People

The project area is located on Kabi Kabi Country. The Kabi Kabi Native Title Determination Part A was recently made, recognising

the Kabi Kabi people's pre-existing rights and ongoing connection to country across 3450km2 of land and 202km2 of waters including areas within Gympie, the Mary River, Nambour, Buderim, Maroochydore and Caloundra. (Department of Resources, 2024)**.**

Consultation with the Kabi Kabi First Nations People commenced in 2023. Detailed cultural heritage surveys and further engagement with the Kabi Kabi Peoples Aboriginal Corporation will be undertaken to further inform assessments, design and agreements.

Consultation and engagement with representatives of environmental groups

Three briefings have been held with the project's Environment Stakeholder Interest Group, which consists of representatives from several Sunshine Coast environmental groups. The briefings covered the proposed action, the Sunshine Coast Public Transport project and the Beerburrum to Nambour Rail upgrade.

Feedback and areas of interest discussed in these briefings to date include:

- avoiding sensitive ecosystems
- fauna connectivity
- preserving sensitive areas and maintaining amenity
- light emissions and consideration of light pollution in design
- noise and vibration mitigation
- consideration of the effects of run-off into creeks and waterways
- considering net benefit and contribution to net-zero.

Next steps

A Communication and Engagement Plan has been prepared for the project outlining the consultation objectives to be implemented throughout planning and delivery. This plan will be regularly updated to support environmental assessments, design and construction, through to practical completion of the project. Consultation and engagement will occur with impacted landowners, adjacent landowners and the wider community, government agencies, First Nation people and other relevant and interested stakeholders and community members.

1.3.1 Identity: Referring party

Privacy Notice:

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

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

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

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

See our Privacy Policy to learn more about accessing or correcting personal information or making a complaint.

Alternatively, email us at privacy@awe.gov.au.

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

1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	39407690291
Organisation name	Department of Transport and Main Roads
Organisation address	4000 QLD

Referring party details

Name	Rachel Brazier

Job title	Environment Specialist - contractor
Phone	0733384706
Email	rachel.brazier@translink.com.au
Address	140 Creek St Brisbane Q 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	39407690291
Organisation name	Department of Transport and Main Roads
Organisation address	4000 QLD

Person proposing to take the action details

Name	Jane Brander
Job title	General Manager (Strategic Rail)
Phone	(07) 3066 7115
Email	jane.brander@translink.com.au
Address	140 Creek Street Brisbane

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. *

TMR, as the project proponent, is highly experienced in the planning, delivery and operation of major transport infrastructure projects and has an excellent track record in co-ordinating environmental assessments and delivery of environmentally sensitive transport solutions.

TMR has not been as at the date of this referral subject to any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources, and therefore, the applicant has a satisfactory record of responsible environment management. TMR is committed to transparent and meaningful engagement with planning and environmental authorities with respect to its projects.

Further information about TMR's environmental management is available on the TMR website under *Environmental Management* (TMR, 2024e).

TMR has been responsible for multiple referrals for a variety of actions from across Queensland, including but not limited to:

- 2024/09821 Bruce Highway (Gateway Motorway to Dohles Rocks Road) Upgrade
- 2024/09800 Gateway Motorway (Bracken Ridge to Pine River) Upgrade
- 2022/09439 Logan and Gold Coast Faster Rail
- 2020/8803 Beerburrum to Nambour Rail Upgrade
- 2020/8646 Stage 1 Coomera Connector

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

TMR is not a corporation or company for the purposes of the Commonwealth *Corporations Act 2001.*

TMR operates under the guiding principles of its *Environmental Sustainability Policy* (TMR, 2021) and Environmental Management System. Under the policy TMR is committed to:

- Managing our environmental interactions and incorporating sustainable and innovative solutions to minimise our environmental footprint as an integral part of our business activities.
- Continuous improvement in environmentally sustainable practices, and partnering with our stakeholders to ensure a resilient and adaptable transport system.
- Meeting the needs of the current generation while minimising environmental impacts on future generations.

- Contributing to the sustainability of the natural environment, while delivering a single integrated transport network accessible to everyone.

TMR undertakes works in accordance with the *Environmental Process Manual* (TMR, 2023a). The manual provides the governance for environmental assessment and management of transport infrastructure projects by TMR. The process supports Transport and Main Roads' general environmental duty to the environment under the Queensland *Environmental Protection Act 1994*, managing the performance of its functions and operations in accordance with TMR's corporate governance framework.

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	39407690291
Organisation name	Department of Transport and Main Roads
Organisation address	4000 QLD

Proposed designated proponent details

Name	Jane Brander
Job title	General Manager (Strategic Rail)
Phone	(07) 3066 7115
Email	jane.brander@translink.com.au
Address	140 Creek Street Brisbane

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	39407690291
Organisation name	Department of Transport and Main Roads
Organisation address	4000 QLD
Representative's name	Rachel Brazier
Representative's job title	Environment Specialist - contractor
Phone	0733384706
Email	rachel.brazier@translink.com.au
Address	140 Creek St Brisbane Q 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	39407690291
Organisation name	Department of Transport and Main Roads
Organisation address	4000 QLD
Representative's name	Jane Brander
Representative's job title	General Manager (Strategic Rail)
Phone	(07) 3066 7115
Email	jane.brander@translink.com.au
Address	140 Creek Street Brisbane

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

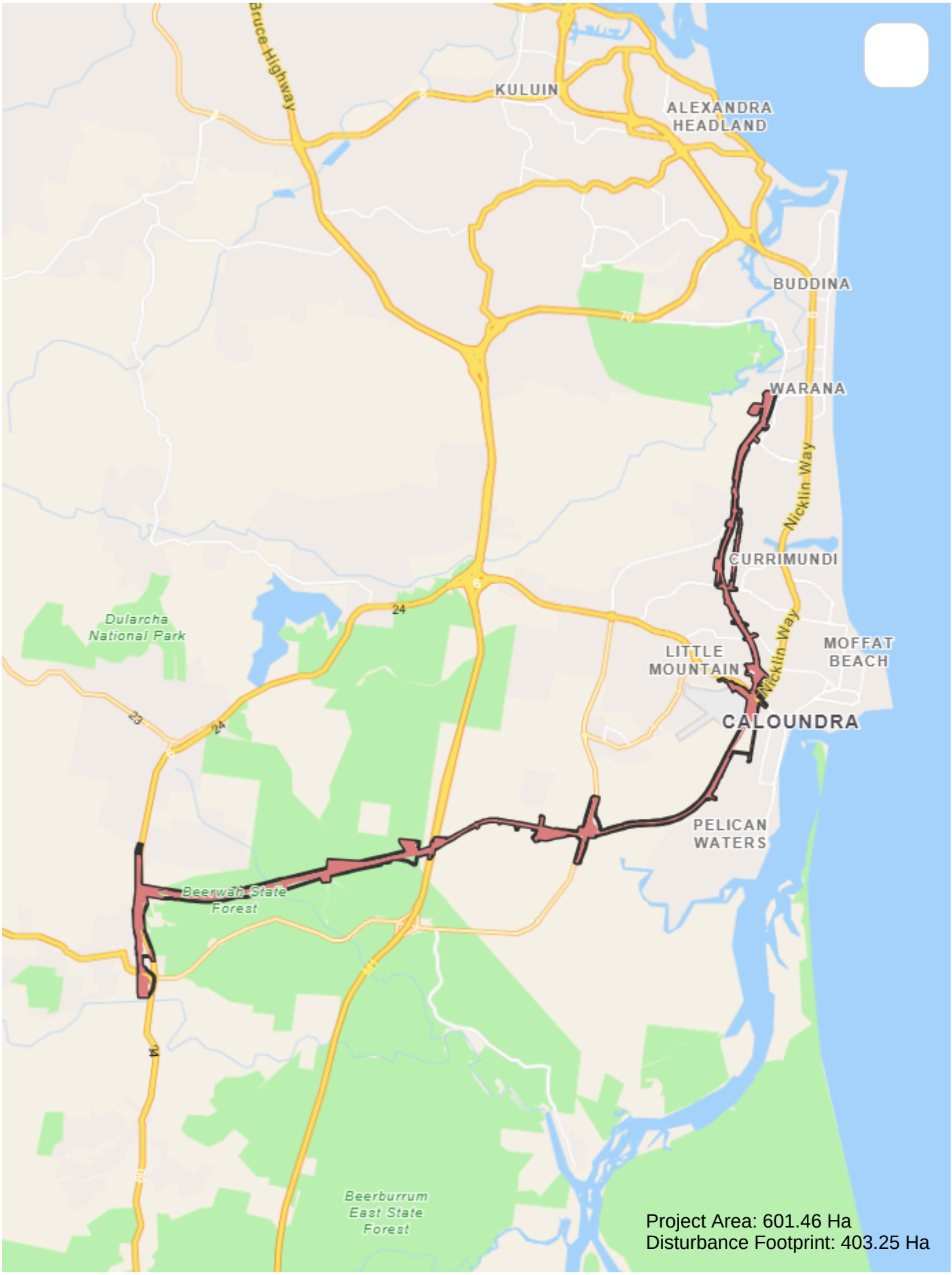
1.4 Payment details: Payment allocation

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

Referring party

2. Location

2.1 Project footprint



Maptaskr © 2024 -26.912916, 152.926924

Powered By Esri - Sources: Esri, TomTom, Garmin, F…

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Stage 1- Beerwah to Caloundra. Stage 2 - Caloundra to Birtinya.

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 proposed action is predominantly located within a public transport corridor dedicated by the Queensland Government in 2001 following completion of the Caboolture to Maroochydore Corridor Study (CAMCOS).

Other land tenures within the project area include freehold title, State land, unallocated State land, road reserve (State-controlled and local road), State Forest and reserve.

- freehold
- state land
- unallocated state land
- State-controlled and local road reserve
- state forest
- reserve

3. Existing environment

3.1 Physical description

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

Current Condition and land use

The proposed action is located within the South East Queensland region within the Sunshine Coast local government area, approximately 110km north of Brisbane. The project area for the proposed action passes through the suburbs of Beerwah, Landsborough, Banya, Nirimba, Bells Creek, Pelican Waters, Caloundra West, Little Mountain, Meridan Plains and Birtinya. The project area extends 26.7km from the existing Queensland Rail (QR) North Coast Line, spurring off approximately 400m north of Beerwah Station before branching east through Beerwah State Forest and crossing over the Bruce Highway into the Aura (Caloundra South Masterplan Area) Priority Development Area. The alignment then crosses over Bells Creek Arterial Road, passing through the Aura future conservation area, through Lamerough Creek West Environmental Reserve, adjacent to Pelican Waters then continuing north through Caloundra West, Little Mountain, Meridan Plains, past the Sunshine Coast University Hospital to Main Drive at Birtinya.

The project area traverses both slightly disturbed and highly disturbed environments, consistent with varying land use intensities associated with regional townships, state forest, urban and commercial developments, emerging masterplan areas, state-controlled and local transport networks and an existing rail corridor (the North Coast Line). The project area is located close to high value natural environments including a portion of the Glass House Mountains National Park, Glasshouse Mountains Conservation Park, and the Moreton Bay Ramsar Wetland. The project area also intersects Bluegum Creek, Mellum Creek, Bells Creek (North Branch) and Lamerough Creek which flow to the Moreton Bay Ramsar Wetland and Pumicestone Passage.

Other significant vegetated areas located in or near the project area include:

- Beerwah State Forest, which is predominately pine plantation with areas of remnant vegetation along waterway riparian corridors
- Future conservation area identified in the Aura Masterplan
- Lamerough Creek West and Lamerough Creek Environmental Reserves
- Caloundra Town Reserve
- Sharyn Bonney Bushland Reserve
- Leacys Bushland Conservation Reserve
- Kawana Environmental Reserve.

Weeds were observed to be present in moderate to high densities in the cleared areas or exotic grasslands, pine plantation, pine dominated regrowth, and regrowth vegetation communities. Typically, these were located around Beerwah State Forest and developed areas.

The dedicated public transport corridor

The project area primarily aligns to the public transport corridor dedicated by the Queensland Government in 2001 following completion of the Caboolture to Maroochydore Corridor Study (CAMCOS). The dedicated public transport corridor is identified in the *Sunshine Coast Planning Scheme 2014*, under the strategic framework (SCC, 2014). It is also recognised in the Planning Scheme in the following mapping, and is generally consistent with the CAMCOS area dedicated by the Queensland Government in 2001:

- Regional Infrastructure overlay mapping as ‘dedicated transit corridor and buffer’
- Caloundra South (Aura) precinct plan as ‘proposed CAMCOS rail corridor’
- Development Control Plan 1 Kawana Waters as part of the ‘Multi-modal Transportation Corridor’.

Design refinements have resulted in some changes to corridor land requirements, extending outside of the dedicated public transport corridor in some areas in response to:

- contemporary rail design and operational standards
- design development
- stakeholder feedback
- avoid or minimise environmental impacts where feasible.

Zoning

The project area traverses multiple land use zones mapped in the *Sunshine Coast Planning Scheme 2014*, which include:

- principal, local and specialised centres
- emerging communities
- low and medium impact industry
- low and medium density residential
- rural agricultural and residential
- limited development (landscape residential)
- community facilities includes parklands and reserve land
- open spaces
- environmental management and conservation
- sport and recreation
- tourism (Precinct TOU1 – Australia Zoo).

It is anticipated that changes to the local government zoning classification will be required for the proposed action to 'community facilities' zone code. Under Section 6.2.16 community facilities zone code of the Sunshine Coast Planning Scheme 2014, the purpose of a community facility zone code caters for the development of specified uses, facilities and works which includes land used, owned or operated by federal, state or local government for purposes such as transport networks.

Population centres and infrastructure

The population centres of Beerwah, Nirimba, Pelican Waters, Caloundra West, Little Mountain, Meridan Plains and Birtinya are located along the project area.

The project area also passes close to the Caloundra Aerodrome in Caloundra West and the Sunshine Coast University Hospital in Birtinya.

Road access

The project area will be accessed from existing main roads such as Steve Irwin Way, Forestry Road, existing road access within Beerwah State Forest, Bells Creek Arterial Road, Ford Avenue, Jose Way, Pelican Waters Boulevard, Caloundra Road, Nicklin Way, Sugar Bag Road, Kawana Way, and other suitable local roads.

New station access roads will be provided, refer to Att 1-Project Info, Section 1, pages 1 and 2.

Dedicated rail maintenance access roads or rail maintenance access infrastructure will be provided, refer Att 1-Project Info, Section 1, pages 1 to 3 for further detail.

Weather events

Weather events such as bushfires and floods have occurred both within and surrounding the project area. Most recently a bushfire was recorded north of the referral area in the vicinity of Landsborough in August 2023. Due to the bushfire's recorded location it is unlikely to have had an influence on the results of any ecological surveys conducted either during or after August 2023.

No impacts from bushfire or flood were observed in the survey area during field surveys.

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

At Beerwah, the project area intersects or is adjacent to existing land uses including specialised centre, community facilities, open space, low impact industry, and tourism. From Beerwah to the Bruce Highway, land use is rural, including Beerwah State Forest, before intersecting the priority development area for Aura.

Continuing east, the project area intersects the environmental/conservation zone associated with Lamerough Creek, and then the community facilities zone associated with Caloundra Aerodrome to the north. Small sections of the referral area traverse through residential land use which are mostly low density dwellings near Caloundra, Little Mountain and Aroona. Going north to Main Drive in Birtinya, the project intersects land zoned open space, medium impact industry, local centre and limited development (landscape residential).

Major commercial uses within the referral area are forestry (State land, State forest) near Beerwah, and low-medium mixed industrial activities (freehold) near Caloundra.

The original planning undertaken for the CAMCOS study purposefully defined the alignment of the dedicated public transport corridor to support the transport needs of the Sunshine Coast population. Since that time, the Caloundra South Masterplan Area Development (Stockland's Aura residential estate) has been approved and is under development, and the Kawana Waters Master Planned Development Area has also significantly progressed. The project area passes through or adjacent to these areas. It is also located adjacent to the Beerwah East South East Queensland Development Area, which is identified in *Shaping SEQ South East Queensland Regional Plan 2023*, Map 23 and page 177 (DSDILGP, 2023b) and detailed under the *South East Queensland Regulatory Provisions* (DSDILGP, 2023c).

The proposed land use is for an extension to the existing rail network for passenger use from Beerwah to Birtinya.

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

Protected areas and reserves

The project area traverses Beerwah State Forest. The forest area comprises exotic pine plantations, open eucalypt forest and rainforest patches provide camping and day-use area, walking tracks, lookouts, scenic drives and grassy camp sites to the public.

Other reserves in the project area include Lamerough Creek West Environmental Reserve, Lamerough Creek Environmental Reserve, Town Reserve, Sharyn Bonney Bushland Reserve, Kawana Environmental Reserve, and Leacys Bushland Conservation Reserve. The dedicated public transport corridor also passes through an area identified as future conservation area as part of the Aura master-planned development, which allowed for the CAMCOS corridor alignment.

The project area passes to the north of the Glass House Mountains Conservation Park (formerly known as the Beerwah Forest Reserve).

The proposed action is also located in the vicinity of some portions of the Glass House Mountains National Park.

Wetlands

The Moreton Bay Marine Park (Pumicestone Channel/Passage Conservation Park Zone) extends into Bells Creek North and South branches approximately 10m downstream of the referral area (approximately 25m downstream of the project area). Moreton Bay Marine Park is an internationally important Ramsar wetland containing extensive intertidal areas that are valuable for supporting waterbirds and fauna of conservation significance, as well as providing important nursery conditions for fish and crustaceans.

Wetlands located within and near to the referral area are described in further detail in Att 2-MNES-Part11-REDACTED, Section 7.1, Figure 7-2.

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 topography of the referral area is generally flat to gently undulating inland and coastal plains, with the surface terrain profile varying from 1m Australian Height Datum (AHD) to 54m AHD.

The areas with the lowest elevation ranges between 0-2m AHD, primarily occur where the project intersects with Pelican Waters floodplain, waterways and drainage features in that area. These waterways drain into Moreton Bay. The highest elevation ranges between 45-54m AHD at Sugar Bag Road (Aroona). The proposed action is in tunnel at this location to a depth of up to 15m below ground level.

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.

Comprehensive desktop and field investigations including over 2000 hours of preliminary and targeted flora and fauna surveys have been undertaken. Details of the methods adopted are described in the following attachments (This document is split into several parts due to file size limits):

Att 2-MNES-Part01-REDACTED, Section 3 pages 18 to 26

Att 2-MNES-Part02, Section 3 pages 27 to 40

Att 2-MNES-Part03, Section 3 pages 41 to 47

Att 2-MNES-Part04, Section 3 pages 48 to 54.

Att 2-MNES-AppAtoE, Appendix B

MNES flora

The following threatened flora species are known to occur in the referral area and project area. These are:

- Whipstick wattle (*Acacia attenuata*) (EPBC Act and *Nature Conservation Act 1992* (NC Act))
- Swamp stringybark (*Eucalyptus conglomerata*) (EPBC Act and NC Act)
- Scrub turpentine (*Rhodamnia rubescens*) (EPBC Act and NC Act)
- Native guava (*Rhodomyrtus psidioides)* (EPBC Act and NC Act)
- Slender Milkvine (*Leichhardtia coronata)* (NC Act)
- Richmond birdwing butterfly vine (*Pararistolochia praevenosa*) (NC Act)
- Scaly myrtle (*Gossia hillii*) (NC Act)

Two Davidson's plum (*Davidsonia jerseyana)* (EPBC Act) were observed amongst fruit trees, outside their natural habitat during the November 2023 surveys. As these individuals are likely to have been planted, they are unlikely to be an MNES.

Whilst targeted flora surveys were undertaken in suitable habitat during the flowering period of the target MNES orchid species, and the survey effort is considered suitable to detect the target orchid species, none of the target orchid species were identified during the field surveys. The following nine flora species from the family Orchidaceae (orchids) were observed during the targeted flora surveys:

- Tiny Bulbophyllum/ grain of wheat orchid (*Bulbophyllum minutissimum*)
- Bonnet orchid (*Cryptostylis erecta*)
- Large tongue orchid (*Cryptostylis subulata*)
- Giant boat-lip orchid (*Cymbidium madidum*)
- Scented orchid (*Cymbidium suave*)
- Hyacinth orchid (*Dipodium variegatum*)
- Climbing orchid (*Erythrorchis cassythoides*)
- Pink nodding orchid (*Geodorum densiflorum*)
- Austral lady's tresses (*Spiranthes australis*).

Four additional flora species listed under the EPBC Act were assessed as likely to occur in the referral area and project area, as discussed in Att 2-MNES-Part06-REDACTED, Section 5.2.3, pages 114 to 115. These were:

- Mt. Emu she-oak (*Allocasuarina emuina*)
- Macadamia nut (*Macadamia integrifolia*)
- Rough-shelled bush nut (*Macadamia tetraphylla*)
- Banished stink bush (*Zieria exsul*)

Weeds were observed throughout all vegetation community types surveyed. A total of 17 category 3 restricted invasive plants listed under the Queensland *Biosecurity Act 2014* were observed.

Further information on the results of the terrestrial flora surveys undertaken for the project is provided in Att 2-MNES-Part06-REDACTED, Section 5.2, pages 105 to 116.

Aquatic flora

Preliminary surveys and targeted aquatic ecology surveys were undertaken, the survey methods adopted are described in Att 2-MNES-Part01-REDACTED, Section 3.4, page 22 to 23, and Att 2-MNES-Part02,Section 3.5, pages 30 to 36. Field results are discussed in Att 2-MNES-Part11-REDACTED, Section 7.2, pages 226 to 231. There was a relatively high diversity of freshwater aquatic flora observed throughout the survey area, including 17 native species, one introduced species, and the following three restricted invasive plants under the Queensland *Biosecurity Act 2014: Salvinia molesta (*salvinia*), Cabomba caroliniana (*Cabomba*), and Sagittaria platyphylla (*Sagittaria*).* In addition to freshwater aquatic plants, two marine plants were also present, being *Avicennia marina* (grey mangrove) and *Juncus kraussii* (sea rush). No MNES aquatic flora species were identified or assessed as likely to occur.

Terrestrial fauna

Extensive field surveys have been undertaken for terrestrial fauna. Preliminary field surveys between 25-29 July 2022 and 7-11 August 2023 confirmed habitat for threatened fauna species, documented fauna observations and scoped requirements for targeted surveys, which were then conducted for the following fauna species:

- Australasian bittern (*Botaurus poiciloptilus*) (EPBC Act and NC Act)
- Giant barred frog (*Mixophyes iteratus*) (EPBC Act and NC Act)
- Glossy black-cockatoo (*Calyptorhynchus lathami lathami*) (EPBC Act and NC Act)
- Greater glider (*Petauroides volans*) (EPBC Act and NC Act)

- Grey-headed flying-fox (*Pteropus poliocephalus*) (EPBC Act and NC Act)
- Koala (*Phascolarctos cinereus*) (EPBC Act and NC Act)
- Wallum sedgefrog (*Litoria olongburensis*) (EPBC Act and NC Act)
- Water mouse (*Xeromys myoides*) (EPBC Act and NC Act)
- White-throated needletail (*Hirundapus caudacutus*) (EPBC Act and NC Act)

The targeted survey methods and dates undertaken are summarised in Att 2-MNES-Part02, Section 3.5, page 32 to 36.

The following fauna species were directly and/or indirectly observed during the terrestrial fauna surveys:

- Giant barred-frog (*Mixophyes iteratus*) (EPBC Act and NC Act)
- Glossy black-cockatoo (south-eastern) (*Calyptorhynchus lathami lathami) (EPBC Act and NC Act)*
- Grey-headed flying-fox (*Pteropus poliocephalus*) (EPBC Act and NC Act)
- Wallum sedgefrog (*Litoria olongburensis*) *(EPBC Act and NC Act)*
- Short-beaked echidna *(Tachyglossus aculeatus)* (NC Act)
- Tusked frog (*Adelotus brevis*) (NC Act)
- Wallum froglet (*Crinia tinnula*) (NC Act)

Camera trap surveys for Water mouse also recorded the presence of Australian brush turkey (*Alectura lathami*), Eastern grey kangaroo (*Macropus giganteus*), Swamp wallaby (*Wallabia bicolor*), Common water rat (rakali) (*Hydromys chrysogaster*), and melomys and Muridae species.

Koala (*Phascolarctos cinereus*) and Water mouse (*Xeromys myoides*) were not observed during targeted field surveys but were assessed as having a high likelihood to occur in the referral area and project area, as discussed in Att 2-MNES-Part10, Section 6.2.3 page 184 and Section 6.2.4 page 184. Att 2-MNES-Part10, Table 6.8, pages 185 to 191 shows the suitability of each vegetation community (mapped in in Att 2-MNES-Part05, Figure 4-2, pages 65 to 67) as habitat for threatened fauna species. All other targeted MNES fauna species were not observed, and assessed as having moderate or lower likelihood of occurrence. The Richmond birdwing butterfly (*Ornithoptera richmondia*) (NC Act) was also assessed as having a high likelihood of occurrence in the referral area and project area.

Aquatic fauna

A total of 33 species were recorded across the aquatic survey sites in August 2023 and February 2024; comprising 29 native species and four exotic species. This included 25 native fish species, six crustacean species, one frog species (Stony creek frog (*litora wilcoxii*)) and one reptile species (Saw-shelled turtle (*Myuchelys latisternum*)). No threatened aquatic fauna was observed during field surveys. Four invasive fish species were caught; with two species, eastern gambusia (*Gambusia holbrooki)* and tilapia (*Oreochromis mossambicus*) listed as restricted noxious fish under the Queensland *Biosecurity Act 2014*.

Details of the aquatic surveys undertaken are provided in Att 2-MNES-Part02, Section 3.5, page 32 to 36.

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

Vegetation

During the flora surveys undertaken for the project, quaternary surveys identified 21 unique regional ecosystems (RE) and high value regrowth (HVR) present within the survey area. This includes two endangered regional ecosystems under the Queensland *Vegetation Management Act 1999*. The majority of the mapped HVR polygons were visually assessed as being likely to meet remnant status in that they are likely to have achieved 50% of the RE undisturbed canopy coverage and 70% of the RE undisturbed height. Details on these are available in Att 2-MNES-Part05, Section 4.2.1, pp 62.

The vegetation observed during the field surveys within the survey area was categorised into the following field validated vegetation communities:

- *Casuarina glauca* open forest
- Cleared areas / exotic grasslands
- Closed heathland
- Coastal saltmarsh
- Low closed mangrove forest
- *Melaleuca* dominated open forest
- Mixed eucalypt open forest with a grassy understorey
- Mixed eucalypt open forest with a heath understorey
- Mixed eucalypt open forest with a shrubby understorey
- Pine plantation
- Pine dominated mixed regrowth
- Rainforest
- Regrowth vegetation
- Scribbly gum (*Eucalyptus racemosa*) open forest to woodland
- Wet sclerophyll open forest.
- Wetlands.

These are shown in Att 2-MNES-Part05, Figure 4-2, pages 65 to 67.

During the field surveys, portions of vegetation within the survey area were identified as having the potential to conform to threatened ecological communities (TECs). Further targeted surveys were completed, and certain vegetation were identified as conforming to the key diagnostic characteristics of the following TECs, confirming their presence in the project area:

- The ‘endangered’ Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions
- The ‘endangered’ Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland ecological community
- The ‘endangered’ Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland
- The ‘vulnerable’ Subtropical and Temperate Coastal Saltmarsh.

Further information on the survey methodology and results for these TECs can be found in Att 2-MNES-Part02, Section 3.5 page 31-36, Att 2-MNES-Part02, Figure 3-4, page 37 to 39 and split across Att 2-MNES-Part05 Section 4.2, pp 62 to 81 and Att 2-MNES-Part06-REDACTED Section 4.2, page 82 to 94. The extent of all TECs identified, and their buffer zones, is shown in Att 2-MNES-Part06-REDACTED, Figure 4-3, pp 88 to 90.

Soil

A review of the Queensland Geology Database Australian Soil Classification (ASC) soil order layer indicates that the dominant soil type within the Referral area consists of Hydrosols, Podosols, Kurosols, and Dermosols.

- Acid sulfate soils (ASS) occur naturally over extensive low-lying areas in coastal or near coastal land. This is consistent for the ASS and potentially acid sulphate soils (PASS) mapping for the Project, where inland areas (Beerwah to Banya) have a low probability of ASS. Coastal areas, or areas near waterways in the referral area, such as at Bells Creek to Caloundra, generally have a higher probability of ASS.

The referral area and surrounding land contains several lots listed on the Environmental Management Register (EMR) maintained by the Queensland Department of Environment Science and Innovation, pursuant to the Queensland *Environmental Protection Act 1994.* Land is listed on the EMR if certain types

of activities, known as notifiable activities, have been, or are being carried out on the lot. Land is also listed on the EMR if it is known or suspected to be contaminated.

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.

Searches of the following historical heritage databases have been undertaken:

- UNESCO World Heritage List
- National Heritage List
- Register of the National Estate
- Commonwealth Heritage List
- Australasian Underwater Cultural Heritage Database
- National Trust of Australia (Queensland)
- Queensland Heritage Register
- Queensland WWII Historic Places
- Frontier Conflict and the Native Mounted Police in Queensland Database
- Sunshine Coast Council Planning Scheme.

National (Australian) heritage

There are no national heritage places located in or adjacent to the project area.

The proposed action is located in the vicinity of the Glass House Mountains National Park. The Glass House Mountains National Park is a patchwork of national parks, extending from Elimbah in the south to Crohamhurst in the north and Beerwah East. Some portions of the Glass House Mountains National Park are subject to listing as a National Heritage Place, as the Glass House Mountains National Landscape (Australian Government, 2006). The closest of these is the Coochin Hills, located approximately 1.9km west of the proposed action.

The National Landscape listing and National Park protect the nationally iconic volcanic plugs of the Glass House Mountains, remnant vegetation communities of rainforests located on the Blackall Range, eucalypt forest on the slopes and ridges and heath communities on the coastal plain (Queensland Parks & Wildlife Service (QPWS), Department of Environment, Science, and Innovation, 2024).

Other portions of the Glass House Mountains National Park listed as part of the Glass House Mountains National Landscape include:

- Beerwah, located approximately 7km south west of the proposed action
- Coonowrin (Crookneck) located approximately 5km south west of the proposed action;
- Tibrogargan located approximately 6.5km south of the proposed action
- Cooee 5.5km located approximately south of the proposed action, and adjacent to the existing North Coast Rail Line
- Ngungun located approximately 3.5km south west of the proposed action
- Miketeebumulgrai located approximately 17km south of the proposed action
- Elimbah (Saddleback) located approximately 15.5km south of the proposed action
- Beerburrum located approximately 8.5km south of the proposed action, also adjacent to the existing North Coast Rail Line
- Tunbubudla (the Twins) located approximately 10km of the proposed action
- Tibberoowuccum located approximately 7km south of the proposed action

All other portions of the Glass House Mountains National Park are protected under the Queensland *Nature Conservation Act 1992*, and are not included in the National Heritage listing area. Att 2-MNES-Part16, Section 10, Figure 10-1, page 329 shows the location of the Glass House Mountains National Landscape and the Glass House Mountains National Park areas in relation to the project area.

Pumicestone Passage – Bribie Island is a registered place on the Register of the National Estate (a non-statutory archive) and features sand dunes, heaths, paperbark and estuarine wetlands, open forests, woodlands, freshwater and tidal creeks and lagoons. The Pumicestone Passage forms part of the Moreton Bay Marine Park which is an Australian Ramsar wetland with its closest boundary approximately 25m downstream of the project area, in Bells Creek South. Att 2-MNES-Part16, Section 9-5, Figure 9-1, page 327 shows the location of the project area in relation to the Ramsar boundary.

Queensland (State) heritage

A review of the Queensland (State) heritage registers identified one place listed on the Queensland Heritage Register, a portion of the Glass House Mountains National Park adjacent to the project area near Beerwah. It is not part of the National Heritage listing described above.

Local (Sunshine Coast Council) heritage

A review of the *Sunshine Coast Council Planning Scheme 2014* identified three local heritage sites within 100m of, and adjacent to the referral area, which includes:

- Beerwah Butchery (former) (SCC ID 192420); is important in demonstrating the evolution of the Sunshine Coast Council area's history. It is one of only two commercial and/or public buildings dating from the early twentieth century still in existence in the town of Beerwah.
- Beerwah School of Arts (former) (SCC ID: 0); is important in demonstrating the evolution of the Sunshine Coast Council area's history. It is one of only two commercial and/or public buildings dating from the early twentieth century still in existence in the town of Beerwah.
- Beerwah Hotel (SCC ID: 187604); was the first hotel and building of any substance constructed along the length of the Bruce Highway. The Beerwah Hotel is important because of its aesthetic significance, exhibiting Art Deco influenced architectural elements.

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

The project area is located on Kabi Kabi Country. The Kabi Kabi Native Title Determination Part A was recently made, recognising

the Kabi Kabi people's pre-existing rights and ongoing connection to country across 3450km2 of land and 202km2 of waters including areas within Gympie, the Mary River, Nambour, Buderim, Maroochydore and Caloundra. (Department of Resources, 2024).

The Kabi Kabi People are recognised as a key stakeholder. Initial engagement has commenced and will continue with the Kabi Kabi Peoples Aboriginal Corporation.

The Queensland *Aboriginal Cultural Heritage Act 2003* provides for the recognition, protection, and conservation of Aboriginal cultural heritage in the state. The Duty of Care Guidelines made under this *Act* establish the requirements for anyone undertaking an activity to take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage.

A Cultural Heritage Risk Assessment (CHRA) was undertaken for the proposed action to identify and assess the Duty of Care categories, defined under the *Duty of Care Guidelines* (Queensland Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and the Arts (DTATSIPCA, 2016)) . These included Category 3 (low risk), Category 4 (low risk), Category 4 (high risk) and Category 5 (high risk).

A search of the DTATSIPCA Cultural Heritage Database and Register was undertaken in May 2024 to inform the Cultural Heritage Risk Assessment.

The Category 4 and Category 5 areas were assessed due to the presence of either high-risk landscape features including remnant and regrowth vegetation, waterbodies, wetlands and waterways with adjacent areas at elevation, and/or the presence of registered DTATSIPCA sites.

No Indigenous Land Use Agreements (ILUAs), designated landscape area or registered cultural heritage study area or National Heritage area (Indigenous values) were identified in, or adjacent, to the referral area.

As the project has been identified to have the potential to impact on areas that contain Aboriginal heritage values, the following is proposed, subject to consultation with the Kabi Kabi Peoples Aboriginal Corporation to:

- undertake site investigation works (e.g., cultural heritage field surveys)
- confirm cultural heritage sites, items, places and values with any necessary cultural heritage management requirements. (e.g., agreements, on-site monitoring, etc)
- explore mitigation and design treatments to recognise the cultural values of the project area
- agree protocols for the sharing of culturally sensitive information.

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. *

Water plan

The project area is located within the Pumicestone Creeks sub-catchment identified in the *Water Plan (Moreton) 2007* (Queensland Government, 2020) and the Mooloolah and Maroochy River sub-catchments identified in the *Water Plan (Mary Basin) 2024* (Queensland Government, 2024a). These plans set out requirements and frameworks for water availability, water entitlements including take, priorities and mechanisms for future water requirements. The Mary Basin water plan also establishes economic, social, cultural and environmental outcomes, with the Moreton water plan currently under review.

The Pumicestone Creeks sub-catchment is dominated by Mellum Creek, Bells Creek, and Lamerough Creek. The water types in relation to the referral area consist of coastal freshwaters, lowland freshwaters, wallum freshwaters, middle estuaries, and tidal canals.

The Mooloolah River sub-catchment includes the Mooloolah River, Mountain Creek, and Currimundi Creek. The Maroochy River sub-catchment includes Cornmeal Creek and Maroochy River. The water types for both catchments in relation to the referral area consist of wallum freshwaters, coastal freshwaters, tidal canals, and middle estuaries.

Surface water

The following main waterways and/or watercourses present in the referral area are shown in Att 2-MNES-Part01-REDACTED, Figure 1-1, pp 9:

- Bluegum Creek
- Bellbird Creek
- Mellum Creek
- Bells Creek (north and south branch)

- Lamerough Creek
- Currimundi Creek.

Numerous additional waterways and/or drainage features that flow to the above-mentioned main waterways and/or watercourses, are located in the referral area. This includes a manmade channel and off-stream wetland in the Lamerough Creek Environmental Reserve, located between Lamerough Creek and Pelican Waters Lake.

Aquatic habitat assessments were completed to assess bank condition, channel habitat, hydrology, riparian vegetation and ecological condition of the main waterways and/or watercourses in the project area. Overall, the water features are characteristic of urbanised waterbodies of South East Queensland. These were observed to typically include moderate to highly disturbed environments with some form of anthropogenic influence. Common disturbances included cleared riparian vegetation, forestry, weed intrusion, stormwater drains, rubbish, concrete banks, access tracks and developments. Overall, no threatened aquatic species were observed during aquatic field surveys.

A baseline water quality sampling program was undertaken, once every two months over a 12 month duration, for a total of six sampling events. Sampling sites were located upstream and downstream of the project area and included sites within each of the named waterways present in that area. Surface water quality monitoring completed to date included visual observations, in-situ measurements and laboratory analysis sampling. Water quality sampling results were compared against the water quality objectives (WQOs) stated in the Queensland *Environmental Protection (Water and Wetland Biodiversity) Policy 2019* for moderately disturbed freshwater and estuary environments depending on the waterways location. Key results of the surface water quality monitoring program indicate:

- pH values were typically reported outside of WQO range for all sites. In all cases, the exceedance was reported to be more acidic than the WQO
- Dissolved oxygen was predominately outside (less than) of the WQO range at all sites except for Currimundi Creek, which is a tidally influenced estuarine site
- Electrical conductivity was within WQO range for all freshwater sites
- Turbidity exceeded the WQO range at a majority of sites, except for the unnamed tributary of Bluegum Creek and Lamerough Creek.

Coastal Management Districts

Banya, Bells Creek, Pelican Waters, Meridan Plains and Birtinya are mapped as being within a coastal management district, declared under the Queensland *Coastal Protection and Management Act 1995*. These are areas that have the potential to be influenced by coastal hazards such as erosion, storm tide inundation and sea level rise.

The main waterways in the referral area of Bells Creek (North Branch) in Pelican Waters and Currimundi Creek in Meridan Plains are tidally influenced with high levels of inundation and connectivity to downstream areas such as Moreton Bay.

Flooding

A hydraulic assessment has been undertaken of the reference design to assess the existing flood regime and flood immunity associated with varying Annual Exceedance Probability (AEP) flooding events plus climate change (CC) using a representative concentration pathway (RCP) scenario of 8.5 to the future year 2090. The hydraulic assessment undertook modelling in TUFLOW and was adapted from existing models associated with the referral area which had undergone validation. The modelling of the varying AEP flooding events assessed the existing flood regime and potential changes to previous flooding afflux both upstream and downstream of the major traverse drainage networks.

The hydraulic assessment identified areas of sensitivity to various AEP flooding events in the referral area, along with two floodplain areas which are exacerbated in climate change scenarios with higher inflows (due to predicted increases in rainfall intensities) and sea level rise. The hydraulic modelling has been used to

inform the design and further flooding modelling is planned as part of assessment and design development for the project.

Groundwater

The groundwater assessment is based on desktop review of publicly available resources. Geotechnical investigations and groundwater monitoring and assessment will be undertaken to collect baseline groundwater monitoring data to confirm seasonal variations and inform design. These activities are not part of the proposed action, as detailed in Section 1.2.1 of this referral.

A review of the registered groundwater bores data layer in Queensland Globe (Queensland Government, 2024b) identified 24 groundwater bores within 500m of the referral area, all of which are sub-artesian bores. For the ten groundwater bore reports available, all recorded a shallow standing water level (SWL) at 1 to 6 meters below ground level (mbgl) predominately associated with low-lying areas of Beerwah, Banya and Meridan Plains.

Aquifers

The project area traverses areas containing geology consistent of late Triassic to quaternary age including alluvium, sand, arenite, colluvium, mud and unconsolidated sediment dominant rock types. The geological data indicates that two broad potential aquifer types (from oldest/deepest to youngest/shallowest) underlying the project area:

- fractured rock (low porosity) aquifer systems comprising the Landsborough Sandstone
- alluvial (high porosity) aquifer systems overlying bedrock aquifers.

Whilst deeper aquifers are anticipated to exist beneath the referral area, it is predominantly the shallower groundwater aquifers that are of interest due to their hydraulic connectivity to the surrounding network (e.g., waterways and wetlands) and potential to be impacted by the proposed action. Within the Pumicestone Creeks catchment, there is a large portion of wetlands both within, and adjacent the referral area, mapped as lacustrine and palustrine wetlands containing groundwater dependent ecosystems which rely on groundwater flow. Studies and monitoring undertaken by surrounding developments for the Banya and Pelican Waters area indicate the groundwater is relatively shallow in nature with a groundwater flow path occurring from north-west to south-east, from the upper reaches of Bells Creek (North Branch) in Nirimba toward Bells Creek (North Branch) and Bells Creek (South Branch) in Pelican Waters.

Groundwater dependent ecosystems

Groundwater dependent ecosystems (GDE) are ecosystems that require access to groundwater on a permanent or intermittent basis in order to maintain their communities of plants, animals, ecological processes and ecological services. The mapped GDEs types described as the following:

- Surface ecosystems: reliant on the surface expression of groundwater and includes surface water systems (freshwater), which may have a groundwater component (rivers, springs and wetlands)
- Terrestrial ecosystems: reliant on the subsurface presence of groundwater and includes all vegetation ecosystems
- Subterranean ecosystems: Includes case and aquifer ecosystems.

The main mapped GDEs associated with the referral area are:

- Beerwah: moderate confidence of surface GDE areas on alluvia
- Landsborough: moderate confidence of terrestrial GDE area on alluvia; with a low confidence of surface GDE area on low lying coastal swamps
- Bells Creek: moderate confidence of terrestrial GDE area on coastal sand masses; with a low confidence of surface GDE area on low lying coastal swamps
- Pelican Waters: high confidence of surface GDE areas on coastal sand masses; with a moderate confidence of terrestrial GDE areas on coastal sand masses and low confidence of surface GDE areas on low lying coastal swamps

- Caloundra West: potential consolidated sedimentary GDE aquifers on sedimentary rocks with near-permanent flow; with a moderate confidence of surface GDE area on low-lying coastal swamps; and a low confidence of surface GDE area on low-lying coastal swamps
- Little Mountain: moderate confidence of terrestrial GDE area on alluvial aquifer with near-permanent flow
- Meridan Plains: potential fractured and consolidated sedimentary GDE aquifers on sedimentary rocks with near-permanent flow; and a high confidence of surface GDE area on low-lying coastal swamp, and a potential for unconsolidated sedimentary aquifers GDE aquifer on near-permanent low-lying coastal swamp
- Birtinya: potential unconsolidated sedimentary GDE aquifers on near-permanent low-lying coastal swamp; with a high confidence of surface GDE area on low-lying coastal swamps.

These mapped GDEs have the potential to be associated with vegetation communities or threatened species which rely upon permanent or intermittent groundwater connectivity.

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	Yes	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

EPBC Act section	Controlling provision	Impacted	Reviewed
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 proposed action is unlikely to have a direct or indirect impact as there are no World Heritage sites located in the referral area or a 2km buffer. The nearest World Heritage site is K’Gari (Fraser Island), approximately 100km north of the proposed action.

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 proposed action does not encroach on the Glass House Mountains National Landscape, with the closest portion of this protected area 1.9km from the proposed action. Refer Att 2-MNES-Part16, Section 10.2, page 328-329 and Figure 10.1. Direct or indirect impacts are not anticipated. The proposed action will not impact any of the values of the National Landscape place including geology, landscape, biological, or cultural values due to the distance from the proposed action.

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	Yes	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? *

Yes

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

The Moreton Bay Ramsar wetland occurs adjacent to the referral area along Bells Creek (North Branch) and Bells Creek (South Branch) within the Bells Creek subcatchment shown in Att 2-MNES-Part16, page 327, Figure 9-1. The project area and referral area have been defined to avoid encroachment into the

Ramsar wetland boundary which is mapped approximately 25m downstream of the project area and approximately 5m downstream of the referral area.

The Moreton Bay Ramsar wetland is notable for its large size; it is approximately 110km long and 35km wide, with an area of 120,639 ha (Ramsar Site Information Service (RSIS), 2023). The site is also notable for its diverse wetland habitats and connectivity between wetland types which support threatened species and ecological communities and meets all nine criteria for the designation of wetlands of international importance (RSIS 2023).

The project area is completely outside the Moreton Bay Ramsar wetland boundary and no direct impacts are expected as a result of the proposed action. The proposed action will include construction activities adjacent to the Ramsar wetland, in the Bells Creek area.

In this location the proposed action has been designed to be on elevated viaduct to minimise the project footprint and the environmental and hydrological impacts associated with its construction and operation. However indirect impacts may occur, in particular during the construction period due to the large-scale ground disturbing activities within the project area that is upstream of, and in some cases in close proximity to the Ramsar wetland boundary.

Possible indirect impacts include:

- alterations to surface and/or groundwater hydrology, which has the potential to impact the amount and frequency of water entering the wetland and impact vegetation and groundwater dependent ecosystems.
- alterations of the quality of water entering the wetland via increased sedimentation of waterways, and changes to pH via exposure of acid sulphate soils.
- habitat degradation/loss of native species (including invertebrate fauna and fish species) as a result of changes to water quality
- a temporary and permanent increase in light, noise, and vibration levels during construction and operation
- the potential introduction of weeds and pest fauna.

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

No

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

The Moreton Bay Ramsar wetland is immediately downstream of the referral area. Although the project will not have direct impacts on the site, a significant impact assessment was undertaken in accordance with the Commonwealth's *Significant Impact Guidelines 1.1* to determine if the project is likely to have a significant impact on the ecological character of the Moreton Bay Ramsar wetland and concluded that a significant impact is unlikely. The outcomes of the significant impact assessment are provided in Att 2-MNES-Part16, Section 9.4, Table 9-1, pages 324 to 326 and summarised here.

- The proposed action will not result in areas of the wetland being destroyed or substantially modified as the project area does not extend into the boundary of the wetland site, and indirect impacts in particular during construction will be managed to avoid and minimise downstream impact.
- It is unlikely that the proposed action will result in a substantial and measurable change in the hydrological regime of the wetland, as the project has been designed to be on elevated structure through sensitive areas adjacent to the boundary of the Ramsar wetland site at Bells Creek, which will minimise disruption to surface water and groundwater flows. There will be temporary disturbance to adjacent wetland areas during the construction period as a result of vegetation clearing and

ground disturbance, however hydrological modelling will be conducted to assess potential impacts and inform the design and mitigation to avoid a significant impact in downstream areas including the Ramsar wetland.

- It is unlikely that the proposed action will seriously affect the habitat or lifecycle of native species, including invertebrate fauna and fish species dependant on the wetland. The proposed action does not encroach into the boundary of the Ramsar wetland and will not result in direct impacts such as vegetation clearing within the site. Aquatic surveys have not identified any aquatic MNES species as being present in the project area, and the design of the project to be on elevated structure avoids direct impacts to waterways such as Bells Creek and Lamerough Creek which flow to the wetland.
- It is unlikely that the proposed action will result in a substantial and measurable change in the water quality of the wetland. Construction will occur in close proximity to the Ramsar wetland at Bells Creek, which has the potential to result in temporary changes to water quality through erosion and sedimentation or pollutants entering surface or groundwater and flowing to the Ramsar wetland. Any changes to water quality parameters are likely to be concentrated at the upper reaches of Bells Creek (North Branch) and Bells Creek (South Branch) and dissipate as Bells Creek enters Pumicestone Passage. This will be managed through construction methodology (i.e. minimising clearing and dewatering) to minimise hydrological impacts and implementation of mitigation measures including erosion and sediment control and water quality monitoring within, upstream and downstream of the project area.
- It is unlikely that the proposed action will result in invasive species that are harmful to the ecological character of the wetland being established or spread in the wetland, as works will not occur directly within the wetland and standard biosecurity measures (including vehicle hygiene practices and weed control) will be implemented as part of the construction phase to minimise the introduction and/or spread of biosecurity matters.

In summary, and based on the assessment against the significant impact criteria in *Significant Impact Guideline 1.1*, the proposed action is not likely to result in a significant impact to the Ramsar wetland.

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

No

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

The proposed action has been assessed against Significant Impact Guidelines 1.1 which identified that the proposed action is unlikely to have a significant impact on the Ramsar wetland. Refer Att 2-MNES-Part16, Section 9.4, page 324 to 326.

There will be no direct impacts to the wetland due to the project area being outside the wetland boundary, and indirect impacts that may arise due to changes in hydrology or water quality will be managed through design and construction planning and the implementation of construction mitigation measures.

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

The project area has been defined to avoid the Ramsar wetland boundary, therefore there will be no direct impacts to the site. This includes consideration of space-proofing within the project area for construction phase erosion and sediment control measures.

The project design has been developed to avoid and minimise indirect impacts to the wetland and will be on an elevated structure between Bells Creek and Caloundra. This project area definition allows for a narrower footprint (less vegetation clearing and ground disturbance), avoids hydrological impacts that would have been associated with rail on embankment and avoids diverting or realigning existing watercourses and tidal waterways in this area.

Indirect impacts to the Ramsar wetland will be further avoided, minimised or mitigated through the following measures:

- Undertake surface water hydrology modelling to inform the design and construction of the project to avoid and minimise hydrological impacts to wetlands within and adjacent to the project area.
- Undertake groundwater modelling to inform the design and construction of the project to avoid and minimise groundwater impacts and inform mitigation measures to be implemented in construction planning.
- Excavations below the water table within nearby wetland areas to be minimised. Where excavations below the water table within wetland areas are required, mitigation measures to be implemented to minimise groundwater drawdown, displacement and/or movement.
- Refine/reassess the drainage design following surface water and groundwater modelling, and wetland recharge modelling, to minimise impacts to hydrology.
- Ongoing design and construction planning to minimise vegetation clearing within environmentally sensitive areas including wetlands and watercourses that are adjacent to the Ramsar wetland. Design outcomes to date such as the proposed action on viaduct through the Bells Creek area results in reduced vegetation clearing, hydrological impacts and fauna movement barriers when compared to rail on embankment.
- Design waterway and wetland crossing infrastructure (e.g. bridges and viaducts) to maintain natural stream, surface water and/or groundwater flow or tidal movements.
- Development an overarching Environmental Management Plan containing project specific management plans for the avoidance, minimisation and mitigation of indirect impacts to wetlands of international importance, to inform the subsequent development and implementation of construction management plans.

Mitigation measures are discussed further in Att 2-MNES-Part16, Section 9.5, page 326.

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

No offset is proposed as the significant impact assessment concluded that the proposed action is unlikely to have a significant residual impact on the Moreton Bay Ramsar wetland.

4.1.4 Threatened Species and Ecological Communities

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

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

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

Threatened species

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Acacia attenuata	
No	No	Acronychia littoralis	Scented Acronychia
Yes	Yes	Allocasuarina emuina	Emu Mountain Sheoak, Mt Emu She-oak
No	No	Allocasuarina thalassoscopica	
No	No	Anthochaera phrygia	Regent Honeyeater
No	No	Ardenna grisea	Sooty Shearwater
No	No	Arenaria interpres	Ruddy Turnstone
No	No	Argynnis hyperbius inconstans	Australian Fritillary
No	No	Arthraxon hispidus	Hairy-joint Grass
No	No	Bosistoa transversa	Three-leaved Bosistoa, Yellow Satinheart
No	No	Botaurus poiciloptilus	Australasian Bittern
Yes	Yes	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris canutus	Red Knot, Knot
Yes	Yes	Calidris ferruginea	Curlew Sandpiper
Yes	Yes	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo
No	No	Caretta caretta	Loggerhead Turtle
No	No	Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat
No	No	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover

Direct impact	Indirect impact	Species	Common name
No	No	Charadrius mongolus	Lesser Sand Plover, Mongolian Plover
No	No	Chelonia mydas	Green Turtle
Yes	Yes	Cherax robustus	Sand Yabby
No	No	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
No	No	Coeranoscincus reticulatus	Three-toed Snake-tooth Skink
No	No	Coleus omissus	
No	No	Cryptocarya foetida	Stinking Cryptocarya, Stinking Laurel
No	No	Cryptostylis hunteriana	Leafless Tongue-orchid
No	No	Cupaniopsis shirleyana	Wedge-leaf Tuckeroo
No	No	Cyclopsitta diophthalma coxeni	Coxen's Fig-Parrot
No	No	Dasyurus hallucatus	Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu]
No	No	Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
No	No	Delma torquata	Adorned Delma, Collared Delma
No	No	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
No	No	Diomedea antipodensis	Antipodean Albatross
No	No	Diomedea antipodensis gibsoni	Gibson's Albatross
No	No	Diomedea exulans	Wandering Albatross
No	No	Diploglottis campbellii	Small-leaved Tamarind
No	No	Epinephelus daemelii	Black Rockcod, Black Cod, Saddled Rockcod
No	No	Eretmochelys imbricata	Hawksbill Turtle
No	No	Erythrotriorchis radiatus	Red Goshawk
Yes	Yes	Eucalyptus conglomerata	Swamp Stringybark
No	No	Falco hypoleucos	Grey Falcon
No	No	Floydia praealta	Ball Nut, Possum Nut, Big Nut, Beefwood
No	No	Furina dunmalli	Dunmall's Snake

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Hemiaspis damelii	Grey Snake
No	No	Hippocampus whitei	White's Seahorse, Crowned Seahorse, Sydney Seahorse
Yes	Yes	Hirundapus caudacutus	White-throated Needletail
No	No	Lathamus discolor	Swift Parrot
No	No	Lepidochelys olivacea	Olive Ridley Turtle, Pacific Ridley Turtle
No	No	Limnodromus semipalmatus	Asian Dowitcher
No	No	Limosa lapponica baueri	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit
Yes	Yes	Litoria olongburensis	Wallum Sedge Frog
Yes	Yes	Macadamia integrifolia	Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak
No	No	Macadamia ternifolia	Small-fruited Queensland Nut, Gympie Nut
Yes	Yes	Macadamia tetraphylla	Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut
No	No	Macroderma gigas	Ghost Bat
No	No	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
No	No	Macronectes halli	Northern Giant Petrel
No	No	Mixophyes fleayi	Fleay's Frog
Yes	Yes	Mixophyes iteratus	Giant Barred Frog, Southern Barred Frog
No	No	Mordacia praecox	Non-parasitic Lamprey, Precocious Lamprey
Yes	Yes	Nannoperca oxleyana	Oxleyan Pygmy Perch
No	No	Natator depressus	Flatback Turtle
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Pachyptila turtur subantarctica	Fairy Prion (southern)

Direct impact	Indirect impact	Species	Common name
No	No	Petauroides volans	Greater Glider (southern and central)
No	No	Petaurus australis australis	Yellow-bellied Glider (south-eastern)
No	No	Phaius australis	Lesser Swamp-orchid
Yes	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	Planchonella eerwah	Shiny-leaved Condoo, Black Plum, Wild Apple
No	No	Potorous tridactylus tridactylus	Long-nosed Potoroo (northern)
No	No	Prasophyllum wallum	Wallum Leek-orchid
No	No	Pristis zijsron	Green Sawfish, Dindagubba, Narrowsnout Sawfish
Yes	Yes	Pseudomugil mellis	Honey Blue Eye, Honey Blue-eye
Yes	Yes	Pteropus poliocephalus	Grey-headed Flying-fox
Yes	Yes	Rhodamnia rubescens	Scrub Turpentine, Brown Malletwood
Yes	Yes	Rhodomyrtus psidioides	Native Guava
No	No	Romnalda strobilacea	
No	No	Rostratula australis	Australian Painted Snipe
No	No	Samadera bidwillii	Quassia
No	No	Sarcochilus fitzgeraldii	Ravine Orchid
No	No	Sophora fraseri	
No	No	Sphyrna lewini	Scalloped Hammerhead
No	No	Stagonopleura guttata	Diamond Firetail
No	No	Sternula nereis nereis	Australian Fairy Tern
No	No	Syzygium hodgkinsoniae	Smooth-bark Rose Apple, Red Lilly Pilly
No	No	Thalassarche cauta	Shy Albatross
No	No	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	No	Thalassarche melanophris	Black-browed Albatross

Direct impact	Indirect impact	Species	Common name
No	No	Thalassarche salvini	Salvin's Albatross
No	No	Thalassarche steadi	White-capped Albatross
No	No	Thesium australe	Austral Toadflax, Toadflax
Yes	Yes	Tringa nebularia	Common Greenshank, Greenshank
No	No	Triunia robusta	Glossy Spice Bush
No	No	Turnix melanogaster	Black-breasted Button-quail
No	No	Xenus cinereus	Terek Sandpiper
Yes	Yes	Xeromys myoides	Water Mouse, False Water Rat, Yirrkoo
Yes	Yes	Zieria exsul	Banished Stink Bush

Ecological communities

Direct impact	Indirect impact	Ecological community
Yes	Yes	Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community
Yes	Yes	Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland
No	No	Lowland Rainforest of Subtropical Australia
Yes	Yes	Subtropical and Temperate Coastal Saltmarsh
Yes	Yes	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 proposed action involves activities that have the potential to directly or indirectly impact on EPBC Act listed threatened species and threatened ecological communities (TEC).These activities include the following:

- Site preparation including clearing and grubbing

- Excavation or loading which have the potential to expose acid sulfate soils and/or contaminated soils
- General earthworks
- Installation of permanent infrastructure
- Impacts associated with construction activities.

An overview of project activities is included in Att 2-MNES-Part01-REDACTED, Section 1.1, pages 7 to 8.

Potential direct and indirect impacts to each listed threatened species and TEC are outlined below.

Direct impacts

Clearing or loss of the following threatened ecological communities:

- 1.2ha of Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland Endangered TEC
- 41.9ha of Coastal Swamp Sclerophyll Forest of New South Wales And South East Queensland Endangered TEC
- 19.1ha of Subtropical Eucalypt Floodplain Forest and Woodland of the New South Wales North Coast and South East Queensland Bioregions Endangered TEC
- less than 0.1ha of Subtropical and Temperate Coastal Saltmarsh Vulnerable TEC.

Clearing or loss of the following threatened flora species (individuals and supporting habitat):

- 59 individuals and 5.7ha of supporting habitat for the vulnerable Whipstick wattle (*Acacia attenuata*)
- 15 individuals, 3.8ha of supporting habitat for the endangered Swamp stringybark (*Eucalyptus conglomerata*)
- 2 individuals, 1.4ha of supporting habitat for the critically endangered Scrub turpentine (*Rhodamnia rubescens*)
- 471 individuals, 9.4ha of supporting habitat for the critically endangered Native guava (*Rhodomyrtus psidioides*).

Clearing or loss of suitable habitat (not supporting habitat) for the following threatened flora species considered to have a high likelihood of occurrence, but not identified during survey efforts to date:

- 1.3ha of suitable habitat for the endangered Mt Emu Sheoak (*Allocasuarina emuina*)
- 15.5ha of suitable habitat for the vulnerable Macadamia nut (*Macadamia integrifolia*)
- 15.5ha of suitable habitat for the vulnerable Rough-shelled bush nut (*Macadamia tetraphylla*)
- 9.1ha of suitable habitat for the critically endangered Banished stink bush (*Ziera exsul*)

Clearing or loss of suitable habitat for the following threatened fauna species:

- 0.1ha of suitable habitat for the vulnerable Giant barred frog (*Mixophyes iteratus*)
- 0.3ha of breeding habitat and 1.2ha of potential supporting habitat for the vulnerable Wallum sedgefrog (*Litoria olongburensis*)
- 112.9ha of suitable habitat for the vulnerable Grey-headed flying-fox (*Pteropus poliocephalus*)
- 41.9ha of suitable habitat for the vulnerable Glossy black-cockatoo (south-eastern) (*Calyptorhynchus lathami lathami*)
- 11.9ha of suitable habitat for the endangered Koala (*Phascolarctos cinereus*)
- less than 0.1ha of suitable habitat for the vulnerable Water mouse (*Xeromys myoides*)
- less than 0.1ha of suitable habitat for the vulnerable Latham's snipe (*Gallinago hardwickii)* (also migratory and marine)
- 15.5ha of suitable habitat for the vulnerable White-throated needletail (*Hirundapus caudacutus*) (also migratory and marine).

Clearing or loss of habitat for the following threatened fauna species (also listed as migratory) considered to possibly occur in the project area:

- 1.3ha of suitable habitat for the vulnerable Sharp-tailed sandpiper (*Calidris acuminata*)
- 1.3ha of suitable habitat for the critically endangered Curlew sandpiper (*Calidris ferruginea*)
- 1.3ha of suitable habitat for the endangered Common Greenshank (*Tringa nebularia*)

Other potential direct impacts to threatened fauna species listed above include:

- Direct injury or mortality of individual fauna species from construction machinery.
- The temporary loss of suitable breeding, foraging, and dispersal habitat as a result of temporary construction related infrastructure (including haul routes and construction laydown areas).
- Displacement of fauna species from areas of suitable habitat during construction works in and around suitable habitat.
- Increased noise, light, dust, and vibration during construction which reduces habitat quality and/or renders areas of habitat unsuitable and has the potential to disrupt breeding success.
- Alterations of hydrology and water quality including increased sedimentation of waterways.
- Habitat loss and/or degradation from fragmentation including reduced dispersal opportunities and reduced patch size.

The following threatened aquatic fauna species were not identified during survey efforts to date but are considered to have a high likelihood of occurrence:

- Oxleyan pygmy perch (*Nannoperca oxleana*)
- Honey blue eye (*Pseudomugil mellis*)
- Sand yabby (*Cherax robustus*).

Potential direct impacts to these threatened aquatic fauna species include:

- Direct injury or mortality as a result of dewatering activities and works within waterways and wetland areas.
- Displacement of aquatic species from areas of suitable habitat as a result of construction activities.
- A reduction in prey abundance as prey species avoid areas subject to construction activities.
- Temporary barriers to fish movement upstream and/or downstream as a result of in-stream infrastructure (i.e. culverts).
- Permanent barriers to fish movement upstream and/or downstream as a result of in-stream infrastructure.

For further details regarding the direct impacts to threatened species and TECs, refer to Att 2-MNES-Part06-REDACTED, Section 4.3, pages 94 to 95 (TEC), Att 2-MNES-Part06-REDACTED, Section 5.3, pages 116 to 117 (threatened flora species), Att 2-MNES-Part11-REDACTED, Section 6.3, pages 194 to 199, (threatened fauna), Att 2-MNES-Part11-REDACTED, Section 7.3, page 232 (threatened aquatic species).

Indirect impacts

Indirect impacts to threatened ecological communities may include:

- Clearing of TEC buffer zone vegetation which has the potential to alter microclimatic conditions along the edge of the TEC and floristic composition of the TEC.
- Clearing of TEC buffer zone vegetation which has the potential to increase the TEC to susceptibility in weed encroachment into the TEC from the surrounding area.
- Alteration to local surface hydrology which may result in a change of inundation patterns which has the potential of leading to a change of canopy and groundcover species composition of TECs.
- Localised alteration of groundwater levels which has the potential to change species composition in the canopy and groundcover of the TEC.
- Sedimentation or changed nutrient loads in the TEC which may result in a change of species composition of TECs.
- Weed spread into TEC areas, affecting the vegetation quality and ecological values.

- Fragmentation of intact vegetation communities which has the potential to reduce vegetation quality and ecological values.

Indirect impacts to threatened flora species listed above may include:

- Alteration to local surface and groundwater hydrology which may render current habitat areas unsuitable for species which rely on the existing surface and groundwater hydrological regime.
- Increased sedimentation of the ground layer which may cause direct mortality of seedlings as well as suppress seedling growth and germination of seeds.
- Mortality of flora species as a result of exposure of acid sulphate soils.
- Alterations to nutrient loads discharged into waterways/drainage lines which lead into the TEC may result in a proliferation of weed species which has the potential to out compete threatened flora species.
- Fragmentation of intact vegetation communities which can increase edge effects and reduce habitat suitability for threatened species which rely on specific microhabitat conditions.

Indirect impacts to threatened fauna species listed above may include:

- Habitat loss and/or degradation from indirect impacts relating to altered surface hydrology and/or ground water hydrology, which is a particular consideration for the Wallum sedgefrog.
- Habitat loss and/or degradation via weed intrusion including from edge effects.
- Reduced foraging and breeding success from increased competition from invasive species.
- Increased competition and predation from introduced species.
- Habitat loss as a result of a permanent increase in light, noise, and vibration levels during operation.

Indirect impacts to threatened aquatic fauna species Oxleyan pygmy perch (*Nannoperca oxleana*), Honey blue eye (*Pseudomugil mellis*) and Sand yabby (*Cherax robustus*) may include:

- A reduction in habitat quality as a result of alterations to water quality parameters including increased sedimentation of waterways.
- A reduction in breeding success from sedimentation of waterways.
- A reduction in breeding and foraging success as a result of increased competition from generalist aquatic species.
- A reduction in breeding and foraging success as a result of increased competition from introduced/pest species.

For further details regarding indirect impacts to threatened species and TECs, refer to Att 2-MNES-Part06-REDACTED, Section 4.3, pages 94 to 95 (TEC), Att 2-MNES-Part06-REDACTED, Section 5.3, pages 116 to 117 (threatened flora species), Att 2-MNES-Part11-REDACTED, Section 6.3, pages 194 to 199, (threatened fauna), Att 2-MNES-Part11-REDACTED, Section 7.3, page 232 (threatened aquatic species).

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

Yes

4.1.4.5 Describe why you consider this to be a Significant Impact. *

Significant impact assessments (SIAs) were undertaken for each of the threatened species and TECs known to occur or likely to occur in the project area. The SIAs were undertaken in accordance with the *Significant Impact Guidelines 1.1 - Matters of National Environmental Significance* (DoE, 2013). SIAs for TECs are included in Att 2-MNES-Part06-REDACTED, Section 4.4, pages 96 to 103. SIAs for all threatened flora species assessed are included in Att 2-MNES-Part06-REDACTED, Section 5.4, pages 118 to 134.

SIAs for Threatened terrestrial fauna are included in Att 2-MNES-Part11-REDACTED, Section 6.4, pages 200 to 218, and Threatened aquatic fauna are included in Att 2-MNES-Part11-REDACTED, Section 7.4, page 233 to 239.

The SIA undertaken for the Coastal swamp oak (*Casuarina glauca*) forest of New South Wales and South East Queensland TEC identified the direct impact to 1.2ha of the TEC is likely to result in a significant impact due to the proposed action being likely to result in the following impacts:

- reduce the extent of an ecological community
- fragment or increase fragmentation of an ecological community
- adversely affect habitat critical to the survival of an ecological community
- interfere with the recovery of an ecological community.

Refer to Att 2-MNES-Part06-REDACTED, Section 4.4.3, pages 96 to 98 for the SIA for Coastal swamp oak (Casuarina glauca) forest TEC.

The SIA undertaken for the Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland TEC identified the direct impact to 41.9ha of the TEC is likely to result in a significant impact due to the proposed action being likely to result in the following impacts:

- reduce the extent of an ecological community
- fragment or increase fragmentation of an ecological community
- interfere with the recovery of an ecological community.

Refer to Att 2-MNES-Part06-REDACTED, Section 4.4.3, pages 98 to 100 for the SIA for Coastal Swamp Sclerophyll Forest TEC.

The SIA undertaken for the Subtropical Eucalypt Floodplain Forest and Woodland of the New South Wales North Coast and South East Queensland bioregions TEC identified the direct impact to 19.1ha of the TEC is likely to result in a significant impact due to the proposed action being likely to result in the following impacts:

- reduce the extent of an ecological community
- fragment or increase fragmentation of an ecological community
- adversely affect habitat critical to the survival of an ecological community
- interfere with the recovery of an ecological community.

Refer to Att 2-MNES-Part06-REDACTED, Section 4.4.3, pages 100 to 103 for the SIA for Subtropical Eucalypt Floodplain Forest and Woodland TEC.

The SIA undertaken for Whipstick wattle (*Acacia attenuata*) identified the direct impact to 59 individuals is likely to result in a significant impact due to the proposed action being likely to result in the following impacts:

- Lead to a long-term decrease in the size of an important population of a species
- Reduce the area of occupancy of an important population
- Adversely affect habitat critical to the survival of a species
- Modify, destroy, remove, isolate, or decrease the availability or quality of habitat to the extent that the species is likely to decline
- Interfere substantially with the recovery of the species.

Refer to Att 2-MNES-Part06-REDACTED, Section 5.4.2, pages 118 to 120 for the SIA for Whipstick wattle (*Acacia attenuata*).

The SIA undertaken for Swamp stringybark (*Eucalyptus conglomerata*) identified the direct impact to 15 individuals is likely to result in a significant impact due to the proposed action being likely to result in the following impacts:

- lead to a long-term decrease in the size of a population

- reduce the area of occupancy of the species
- adversely affect habitat critical to the survival of a species
- modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
- interfere substantially with the recovery of the species.

Refer to Att 2-MNES-Part06-REDACTED, Section 5.4.4, pages 122 to 124 for the SIA for Swamp stringybark (*Eucalyptus conglomerata*).

The SIA undertaken for Native guava (*Rhodomyrtus psidioides*) identified the direct impact to 471 individuals is likely to result in a significant impact due to the proposed action being likely to result in the following impacts:

- Lead to a long-term decrease in the size of a population
- Reduce the area of occupancy of the species
- Adversely affect habitat critical to the survival of a species
- Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
- Interfere substantially with the recovery of the species.

Refer to Att 2-MNES-Part06-REDACTED, Section 5.4.8, pages 130 to 132 for the SIA for Native guava (*Rhodomyrtus psidioides*).

The SIA undertaken for Glossy black-cockatoo (south-eastern) (*Calyptorhynchus lathami lathami*) identified the direct impact to 41.9ha of suitable habitat is likely to result in a significant impact due to the proposed action being likely to result in the following impacts:

- Adversely affect habitat critical to the survival of a species
- Modify, destroy, remove, isolate, or decrease the availability or quality of habitat to the extent that the species is likely to decline
- Interfere substantially with the recovery of the species.

Refer to Att 2-MNES-Part11-REDACTED, Section 6.4.3, pages 203 to 206 for the SIA for Glossy black-cockatoos (south-eastern) (*Calyptorhynchus lathami lathami*).

The SIA undertaken for Grey-headed flying-foxes (*Pteropus poliocephalus*) identified the direct impact to 112.9ha of suitable habitat is likely to result in a significant impact due to the proposed action being likely to result in the following impacts:

- Lead to a long-term decrease in the size of an important population of a species
- Reduce the area of occupancy of an important population
- Adversely affect habitat critical to the survival of a species
- Modify, destroy, remove, isolate, or decrease the availability or quality of habitat to the extent that the species is likely to decline
- Interfere substantially with the recovery of the species.

Refer to Att 2-MNES-Part11-REDACTED, Section 6.4.4, pages 206 to 208 for the SIA for grey-headed flying-foxes (*Pteropus poliocephalus*).

The SIA undertaken for koalas (*Phascolarctos cinereus*) identified the direct impact to 11.9ha of suitable habitat is likely to result in a significant impact due to the proposed action being likely to result in the following impacts:

- Reduce the area of occupancy of the species
- Adversely affect habitat critical to the survival of a species
- Disrupt the breeding cycle of a population
- Interfere substantially with the recovery of the species.

Refer to Att 2-MNES-Part11-REDACTED, Section 6.4.5, pages 208 to 212 for the SIA for koalas (*Phascolarctos cinereus*).

The SIA undertaken for wallum sedgefrog (*Litoria olongburensis*) identified the direct impact to 1.5ha of suitable habitat is likely to result in a significant impact due to the proposed action being likely to result in the following impacts:

- Lead to a long-term decrease in the size of an important population of a species
- Reduce the area of occupancy of an important population
- Adversely affect habitat critical to the survival of a species
- Disrupt the breeding cycle of an important population
- Modify, destroy, remove, isolate, or decrease the availability or quality of habitat to the extent that the species is likely to decline
- Interfere substantially with the recovery of the species.

Refer to Att 2-MNES-Part11-REDACTED, Section 6.4.6, pages 212 to 215 for the SIA for wallum sedgefrogs (*Litoria olongburensis*).

The project is not considered likely to have a significant impact on the following MNES:

- Mt. Emu she-oak (*Allocasuarina emuina*) - refer to Att 2-MNES-Part06-REDACTED, Section 5.4.3, pages 120 to 122 for the SIA.
- Macadamia nut (*Macadamia integrifolia*) - refer to Att 2-MNES-Part06-REDACTED, Section 5.4.5, pages 124 to 126 for the SIA.
- Rough-shelled bush nut (*Macadamia tetraphylla*) - refer to Att 2-MNES-Part06-REDACTED, Section 5.4.6, pages 126 to 128 for the SIA.
- Scrub turpentine (*Rhodamnia rubescens*) - refer to Att 2-MNES-Part06-REDACTED, Section 5.4.7, pages 128 to 130 for the SIA.
- Banished stink bush (*Zieria exsul*) - refer to Att 2-MNES-Part06-REDACTED, Section 5.4.3, pages 132 to 134 for the SIA.
- Giant-barred frog (*Mixophyes iteratus*) - refer to Att 2-MNES-Part11-REDACTED, Section 6.4.2, pages 200 to 203 for the SIA.
- Water mouse (*Xeromys myoides*) - refer to Att 2-MNES-Part11-REDACTED, Section 6.4.7, pages 216 to 218 for the SIA.
- Honey blue eye (*Pseudomugil mellis*) - refer to Att 2-MNES-Part11-REDACTED, Section 7.4.2, pages 233 to 235 for the SIA.
- Oxleyan pygmy perch (*Nannoperca oxleyana*) - refer to Att 2-MNES-Part11-REDACTED, Section 7.4.3, pages 235 to 237 for the SIA.
- Sand yabby (*Cherax robustus*) - refer to Att 2-MNES-Part11-REDACTED, Section 7.4.4, pages 237 to 239 for the SIA.

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

Yes

4.1.4.8 Please elaborate why you think your proposed action is a controlled action. *

The proposed action is considered likely to have a significant impact on the following TECs and threatened species based on the SIAs and therefore is thought to be a controlled action:

- Coastal swamp oak (*Casuarina glauca*) forest of New South Wales and South East Queensland TEC
- Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland TEC
- Subtropical Eucalypt Floodplain Forest and Woodland of the New South Wales North Coast and South East Queensland bioregions TEC

- Whipstick wattle (*Acacia attenuata*)
- Swamp stringybark (*Eucalyptus conglomerata*)
- Native guava (*Rhodomyrtus psidioides*)
- Glossy black-cockatoos (south-eastern) (*Calyptorhynchus lathami lathami*)
- Grey-headed flying-foxes (*Pteropus poliocephalus*)
- Koalas (*Phascolarctos cinereus*)
- Wallum sedgefrog (*Litoria olongburensis*).

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 proposed action has been designed to avoid, and where avoidance is not possible, minimise impacts to MNES. Measures to avoid, minimise and mitigate impacts to MNES will be further investigated and developed to address the potential impacts of the proposed action as the design and environmental assessment process progresses.

Key avoidance measures adopted in the project design include:

- realignment to avoid impacts to Glass House Mountains Conservation Park (formerly known as the Beerwah Forest Reserve)
- relocation of stabling yard to land adjacent to the North Coast Line to the south of Beerwah Station
- realignment resulting in the avoidance of field-verified Lowland Rainforest of Subtropical Australia TEC and migratory bird habitat associated with a large farm dam outside of the project area near Mellum Creek (refer Att 2-MNES-Part11-REDACTED, Section 8.2.2.1, page 246 for further detail)

The following mitigation measures have been incorporated into the project design and construction planning to minimise potential impacts to MNES:

- project on viaduct from Bells Creek through to Caloundra, to minimise the footprint, with the design height raised to allow greater fauna permeability under the structure
- longer tunnel beneath Caloundra Town reserve, rather than short tunnel and cutting
- project on viaduct structure north of the tunnel, through Aroona, with the majority of parking located under the structure.
- Refinement of the design footprint and construction areas, and construction methodology requirements to minimise the extent of vegetation clearing within environmentally sensitive areas to the greatest extent possible.

Design refinements have minimised impacts to the following:

- Coastal swamp sclerophyll forest TEC present surrounding unnamed tributaries of Bluegum Creek.
- Threatened flora species: Native guava (*Rhodomyrtus psidioides*), reduced number of individuals directly or indirect impacted.
- Threatened fauna species: Wallum sedgefrog (*Litoria olongburensis*), reduced impacts to known breeding and supporting habitat.

Further details of avoidance and mitigation measures adopted in the design are provided in Att 1, Section 2, pages 4 to 7 and Att 2-MNES-Part16, Section 11.1, pages 331 to 332.

A range of management measures, management plans and further surveys, investigations and/or assessments are proposed to further minimise, mitigate or manage potential impacts. The key mitigation and management measures, management plans and further surveys, investigations and/or assessments include:

- Surveys, investigations and/or assessments proposed as part of assessment and design of the project include:
    - continued baseline surface water quality monitoring

    - groundwater monitoring program
    - surface water and groundwater hydrological modelling and assessments
    - acid sulfate soils investigation and assessment
    - design lighting modelling and assessments
    - noise and vibration investigations, modelling and assessments
    - additional flora and/or fauna targeted surveys.
- Continued refinement of the project's design footprint, structural types and alignment, construction areas size, and construction methodology to minimise the extent of impacts within environmentally sensitive areas.
- Design waterway and wetland crossing infrastructure (e.g., bridges and viaducts) to maintain natural stream, surface water and/or groundwater flow or tidal movements.
- Progress the recommended actions identified in the *Fauna connectivity and movement strategy* (Arup, 2024) provided in Att 3-Fauna Strategy, including location specific treatments for the target fauna species or groups into the project design. Details of key movement locations and potential treatments are provided in the Direct Sunshine Coast Rail Line Fauna Movement and Connectivity Strategy Report at Att 3-Fauna Strategy, Section 8, pages 31 to 38.
- Develop an overarching environmental management plan containing project specific management plans for the avoidance, minimisation or management of impacts to migratory bird habitat, to inform the subsequent development and implementation of construction environmental management plans.

Further details of mitigation and management measures are provided in Att 2-MNES-Part16, Section 11.3, pages 332 to 335. Other opportunities that will be considered as part of future design and assessment processes are outlined in Att 2-MNES-Part16, Section 11.4, page 335.

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

Offsets are proposed to be provided where significant residual impacts to MNES have been identified in accordance with the *EPBC Act Environmental Offsets Policy 2012*.

A Preliminary Offset Strategy for Matters of National Environmental Significance has been prepared for the project. It provides a high-level assessment of the project's offset requirements and intended approach for offset delivery under the EPBC Act. See Att 4-Prelim Offset Strategy, Section 5 and 6, pages 14 to 20 for further detail. The Preliminary Offset Strategy provides background information regarding applicable legislation, MNES present, impacts on the MNES, offset obligations, and relevant strategies for the project to meet Commonwealth offset obligations. The strategy is intended inform future offset planning and management and will be further developed as the project progresses.

The MNES for which offsets are proposed in the Preliminary Offset Strategy are:

TECS

- Coastal swamp oak (*Casuarina glauca*) forest of New South Wales and South East Queensland ecological community
- Coastal swamp sclerophyll forest of New South Wales and South East Queensland TEC
- Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions TEC

Flora

- Whipstick wattle (*Acacia attenuata*)
- Swamp stringybark (*Eucalyptus conglomerata*)
- Native guava (*Rhodomyrtus psidioides*)

Fauna

- Glossy black-cockatoo (south-eastern) (*Calyptorhynchus lathami lathami*)
- Grey-headed flying-fox (*Pteropus poliocephalus*)
- Koala (*Phascolarctos cinereus*)
- Wallum sedgefrog (*Litoria olongburensis*)

To offset the impacts to the identified TECs, a direct on-ground offset of vegetation which conforms to the key diagnostic criteria and achieves the same (or higher) condition class threshold is proposed. The extent of offset will be determined based on the EPBC Act Offsets Assessment Guide.

To offset the impacts to threatened flora species, a combination of translocation of impacted individuals (where suitable to the species) and propagation and planting of impacted individuals is proposed. There is also potential for existing threatened flora species to be present within proposed offset sites, which could contribute towards an offset.

Direct land-based offsets are proposed to offset the impacts to threatened fauna species. Preference will be given to a single offset site which satisfies multiple offset obligations; however, this may comprise multiple offset sites. Preference will also be given to offset sites which currently support the threatened fauna species for which an offset is required, as these sites are considered to have a lower risk rating (i.e. risk of failure) than sites which currently do not support the threatened fauna species.

The vegetation to be offset for each MNES will seek to provide the same field validated vegetation communities as those impacted; however, there may be potential to provide higher quality habitat or similar habitat which does not strictly align with the field validated vegetation communities. In these instances, preference will be given to providing higher quality habitat over strict adherence to providing the same suite of field validated vegetation communities.

Once a suitable offset site(s) has been secured for the intended MNES, a range of management actions are likely to be required to improve the habitat quality and/or make the offset site suitable for the MNES. All management measures will be detailed in an Offset Site Management Plan (or similar) to be developed at a later stage and in consultation with relevant stakeholders, and will detail the proposed management actions, reporting requirements, performance objectives, completion criteria, and monitoring program.

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	Actitis hypoleucos	Common Sandpiper
No	No	Anous stolidus	Common Noddy
No	No	Apus pacificus	Fork-tailed Swift
No	No	Ardenna carneipes	Flesh-footed Shearwater, Fleshy-footed Shearwater

Direct impact	Indirect impact	Species	Common name
No	No	Ardenna grisea	Sooty Shearwater
No	No	Arenaria interpres	Ruddy Turnstone
Yes	Yes	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris canutus	Red Knot, Knot
Yes	Yes	Calidris ferruginea	Curlew Sandpiper
No	No	Calidris melanotos	Pectoral Sandpiper
No	No	Calonectris leucomelas	Streaked Shearwater
No	No	Caretta caretta	Loggerhead Turtle
No	No	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
No	No	Charadrius mongolus	Lesser Sand Plover, Mongolian Plover
No	No	Chelonia mydas	Green Turtle
No	No	Cuculus optatus	Oriental Cuckoo, Horsfield's Cuckoo
No	No	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
No	No	Diomedea antipodensis	Antipodean Albatross
No	No	Diomedea exulans	Wandering Albatross
No	No	Eretmochelys imbricata	Hawksbill Turtle
No	No	Fregata ariel	Lesser Frigatebird, Least Frigatebird
No	No	Fregata minor	Great Frigatebird, Greater Frigatebird
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
Yes	Yes	Hirundapus caudacutus	White-throated Needletail
No	No	Lamna nasus	Porbeagle, Mackerel Shark
No	No	Lepidochelys olivacea	Olive Ridley Turtle, Pacific Ridley Turtle
No	No	Limnodromus semipalmatus	Asian Dowitcher
No	No	Limosa lapponica	Bar-tailed Godwit
No	No	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
No	No	Macronectes halli	Northern Giant Petrel

Direct impact	Indirect impact	Species	Common name
No	No	Mobula alfredi	Reef Manta Ray, Coastal Manta Ray
No	No	Mobula birostris	Giant Manta Ray
Yes	Yes	Monarcha melanopsis	Black-faced Monarch
Yes	Yes	Myiagra cyanoleuca	Satin Flycatcher
No	No	Natator depressus	Flatback Turtle
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Numenius phaeopus	Whimbrel
No	No	Orcaella heinsohni	Australian Snubfin Dolphin
Yes	Yes	Pandion haliaetus	Osprey
No	No	Phaethon lepturus	White-tailed Tropicbird
No	No	Pluvialis fulva	Pacific Golden Plover
No	No	Pristis zijsron	Green Sawfish, Dindagubba, Narrowsnout Sawfish
Yes	Yes	Rhipidura rufifrons	Rufous Fantail
No	No	Sousa sahulensis	Australian Humpback Dolphin
No	No	Sternula albifrons	Little Tern
Yes	Yes	Symposiachrus trivirgatus	Spectacled Monarch
No	No	Thalassarche cauta	Shy Albatross
No	No	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	No	Thalassarche melanophris	Black-browed Albatross
No	No	Thalassarche salvini	Salvin's Albatross
No	No	Thalassarche steadi	White-capped Albatross
No	No	Tringa brevipes	Grey-tailed Tattler
Yes	Yes	Tringa nebularia	Common Greenshank, Greenshank
No	No	Xenus cinereus	Terek Sandpiper

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. *

The proposed action involves activities that have the potential to directly or indirectly impact on EPBC Act listed migratory species. These include the following:

- The permanent and temporary impact to vegetation identified as suitable habitat for migratory birds as a result of clearing
- Grubbing/topsoil removal
- Excavation or loading which have the potential to expose acid sulfate soils and/or contaminated soils
- General earthworks
- Installation of permanent infrastructure
- Impacts associated with construction activities.

An overview of project activities is included in Att 2-MNES-Part01-REDACTED, Section 1.1, pages 7 to 8.

Potential direct and indirect impacts to each listed migratory species are summarised below, with further detail regarding the assessment of direct and indirect impacts to migratory species habitat provided in Att 2-MNES-Part16, Section 8.3, pages 294 to 298.

Direct impacts

The impact to suitable habitat for migratory species is as follows:

- Black-faced monarch (*Monarcha melanopsis*) – Migratory, Marine - 29.5ha
- Latham's snipe (*Gallinago hardwickii*) – Vulnerable, Migratory, Marine - 1.3ha
- Osprey (*Pandion haliaetus*) – Migratory - 6.3ha
- Rufous fantail (*Rhipidura rufifrons*) – Migratory - 74.3ha
- Satin flycatcher (*Myiagra cyanoleuca*) – Migratory, Marine - 23.3ha
- Spectacled monarch (*Symposiachrus trivirgatus*) – Migratory, Marine - 22.3ha
- White-throated needletail (*Hirundapus caudacutus*) – Vulnerable, Migratory, Marine - 97.3ha.

In addition to the above, potential direct impacts to migratory species include the following:

- Direct injury or mortality of individual birds from construction machinery
- The temporary loss of suitable breeding, foraging, and dispersal habitat as a result of temporary construction related infrastructure (including haul routes and construction laydown areas)
- Increased noise, light, dust, and vibration which reduces habitat quality and/or renders areas of habitat unsuitable and has the potential to disrupt breeding and foraging success
- Habitat loss and/or degradation from fragmentation including reduced patch size
- Loss of foraging and breeding opportunities as a result of vegetation clearing.

Indirect Impacts

Indirect impacts to suitable habitat for migratory species may include:

- Habitat loss and/or degradation from indirect impacts relating to altered surface hydrology and/or ground water hydrology.
- Habitat loss and/or degradation via weed intrusion including from edge effects.
- Reduced foraging and breeding success from increased competition from invasive species.
- Increased competition and predation from introduced species.
- Habitat loss as a result of a permanent increase in light, noise, and vibration levels during operation.

- Displacement and discouragement of birds from areas of suitable foraging and breeding habitat during construction works.

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 (SIAs) were undertaken for each of the migratory species known to occur or likely to occur in the project area. The SIAs were undertaken in accordance with the *Significant Impact Guidelines 1.1 - Matters of National Environmental Significance* (DoE, 2013) where migratory species were also listed as 'critically endangered', 'endangered', or 'vulnerable' under the EPBC Act. Migratory species not also listed as 'critically endangered', 'endangered', or 'vulnerable' under the EPBC Act were assessed against the *Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species* (DEE 2015). Birds listed as 'migratory' under the EPBC Act and included in the *Draft referral guideline for 14 birds listed as migratory species under the EPBC Act* (DoE, 2015) were assessed against the *Draft referral guideline for 14 birds listed as migratory species under the EPBC Act* (DoE, 2015).

Migratory bird species

Significant impact assessments concluded that significant impacts were unlikely for the following migratory species:

- black-faced monarch (*Monarcha melanopsis*)
- osprey (*Pandion haliaetus*)
- rufous fantail (*Rhipidura rufifrons*)
- satin flycatcher (*Myiagra cyanoleuca*)
- spectacled monarch (*Symposiachrus trivirgatus*)

The SIAs for these migratory species concluded that the project was unlikely to result in substantial modification, destruction or isolation of an area of important habitat for a migratory species; or result in an invasive species in an area of important habitat for migratory species, or seriously disrupt the lifecycle of an ecologically significant proportion of the population of a migratory species.

The SIA conducted for the white-throated needletail *(Hirundapus caudacutus)* concluded that it was possible that the project could substantially modify, destroy, or isolate an area of important habitat for this migratory species.

Whilst there is uncertainty in regard to the extent to which the project is likely to substantially modify, destroy, or isolate an area of important habitat for this migratory species as there are no minimum area thresholds of significance identified in the draft referral guidelines, the project is unlikely to result in the following:

- result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species
- seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.

On balance, the project is considered unlikely to have a significant impact on the white-throated needletail (*Hirandapus caudacutus*).

Refer to Att 2-MNES-Part16, Section 8.4.3.1, pages 312 to 313 for the SIA for black-faced monarch (*Monarcha melanopsis*).

Refer to Att 2-MNES-Part16, Section 8.4.3.2, pages 313 to 315 for the SIA for osprey (*Pandion haliaetus*).

Refer to Att 2-MNES-Part16, Section 8.4.3.3, pages 315 to 316 for the SIA for rufous fantail (*Rhipidura rufifrons*).

Refer to Att 2-MNES-Part16, Section 8.4.3.4, pages 316 to 318 for the SIA for satin flycatcher (*Myiagra cyanoleuca*).

Refer to Att 2-MNES-Part16, Section 8.4.3.5, pages 318 to 319 for the SIA for spectacled monarch (*Symposiachrus trivirgatus*).

Refer to Att 2-MNES-Part16, Section 8.4.3.6, pages 319 to 321 for the SIA for white-throated needletail (*Hirundapus caudacutus*).

Migratory Shorebirds

No threatened migratory shorebird species were recorded in surveys undertaken for the project. Reviews of previous reports and fauna records did not return records of migratory shorebird species within or adjacent to the project area. Although the project area is close, the project area does not traverse a Ramsar wetland of international importance or an Important Birding Area.

There are no described or mapped ‘populations’ or ‘important populations’ for the species relevant to this assessment associated within or adjacent to the project area. The Likelihood of Occurrence assessment indicates that for several species, the potential for occurrence within the project area was assessed as ‘possible'.

Whilst potentially suitable habitat is contained within the project area, it occurs as very small patches, within larger areas of mostly unsuitable vegetated (e.g. well-treed wetlands with dense tall ground cover), and are unlikely to be consistent with ‘habitat critical to the survival’ of any of the species whose potential for occurrence within the project area was assessed as ‘possible’. These habitat patches are separated from comparatively higher value and preferred habitats by broad areas of urban development (e.g. Birtinya, Wurtulla, Currimundi, Golden Beach, and Pelican Waters). The significant impact assessment concluded that the project is unlikely to have a significant impact on the following migratory shorebird species:

- Common greenshank (*Tringa nebularia*)
- Curlew sandpiper (*Calidris ferruginea*)
- Latham’s snipe (*Gallinago hardwickii*)
- Sharp-tailed sandpiper (*Calidris acuminata*)
- Common sandpiper (*Actitis hypoleucos*)
- Marsh sandpiper (*Tringa stagnatilis*)
- Red-necked stint (*Calidris ruficollis*)

Refer to Att 2-MNES-Part16, Section 8.4.2.2, pages 301 to 305 for the SIA for Migratory shorebird species listed as ‘critically endangered’ or ‘endangered’ under the EPBC Act (Common greenshank (*Tringa nebularia*) and Curlew sandpiper (*Calidris ferruginea*)).

Refer to Att 2-MNES-Part16, Section 8.4.2.3, pages 305 to 309 for the SIA for Migratory shorebird species also listed as ‘vulnerable’ under the EPBC Act (Latham’s snipe (*Gallinago hardwickii*) and sharp-tailed sandpiper (Calidris acuminata)).

Refer to Att 2-MNES-Part16, Section 8.4.2.4, pages 309 to 311 for the SIA for Migratory shorebird species not listed as ‘critically endangered’, ‘endangered’, or ‘vulnerable’ under the EPBC Act (Common sandpiper (*Actitis hypoleucos*), Marsh sandpiper (*Tringa stagnatilis*) and Red-necked stint (*Calidris ruficollis*)).

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. *

The proposed action is considered not a controlled action as it is not likely to have a significant impact on migratory species. Refer to Att 2-MNES-Part16, Section 8.5, page 321.

The referral area is unlikely to support important populations for migratory bird species observed or considered likely to be present within the referral area. No ecologically significant proportion of the populations of migratory birds are present or considered likely to occur within the referral area. In addition, due to the relatively small amount of potential migratory terrestrial bird foraging habitat being impacted by the proposed action, and the large extent of higher quality suitable foraging habitat in the broader landscape, the proposed action is unlikely to have a significant impact on migratory bird species.

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. *

The proposed action has included avoidance and mitigation measures to avoid and minimise impacts to migratory species. Refer to Att 2-MNES-Part16, Section 11, pp 331 to 335 for discussion of the implemented or proposed avoidance and mitigation measures to be progressed as part of the project design for the the proposed action.

The alignment within Beerwah State Forest has been shifted significantly to the south, minimising the potential for indirect impacts to known migratory bird habitat associated with a large farm dam, as well as minimising the number of waterway crossings, as discussed in Att 2-MNES-Part11-REDACTED, Section 8.2.2.1, page 246.

Design outcomes to date such as the proposed action on viaduct through the Bells Creek area results in reduced vegetation clearing, hydrological impacts and fauna movement barriers when compared to rail on embankment.

Further details of avoidance and mitigation measures adopted in the design are provided in Att 1 Section 2, pages 4 to 7 and Att 2-MNES-Part16, Section 11.1 pages 331 to 335.

A range of management measures, management plans and further surveys, investigations and/or assessments are proposed to further minimise, mitigate or manage potential impacts. The key mitigation and management measures, management plans and further surveys, investigations and/or assessments include:

- Surveys, investigations and/or assessments proposed as part of assessment and design of the project include:
    - continued baseline surface water quality monitoring
    - groundwater monitoring program
    - surface water and groundwater hydrological modelling and assessments
    - acid sulfate soils investigation and assessment
    - design lighting modelling and assessments

- Continued refinement of the project's design footprint, structural types and alignment, construction areas size, and construction methodology to minimise the extent of impacts within environmentally sensitive areas.
- Design waterway and wetland crossing infrastructure (e.g., bridges and viaducts) to maintain natural stream, surface water and/or groundwater flow or tidal movements.
- Develop an overarching environmental management plan containing management project specific plans for the avoidance, minimisation or management of impacts to migratory bird habitat, to inform the subsequent development and implementation of construction environmental management plans.

Further details of investigation, mitigation and management measures are provided in Att 2-MNES-Part16, Section 11.3, pages 332 to 335. Other opportunities to be considered in design and assessments are outlined in Att 2-MNES-Part16, Section 11.4 page 335.

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

Offsets specific to migratory birds are not proposed as the project has been assessed as not having a significant impact on migratory species.

4.1.6 Nuclear

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

No

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

The proposed action involves the construction of a new dual track passenger rail and does not involve any nuclear actions or impacts to nuclear actions.

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 proposed action is unlikely to have a direct or indirect impact as there are no Commonwealth Marine Areas located in the referral area or a 2km buffer. The closest Commonwealth Marine Area is approximately 7km away from the project.

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 does not occur within the Great Barrier Reef Marine Park (GBR) or any of the waterways associated with the Great Barrier Reef catchment. The Project is located approximately 250km south of the Great Barrier Reef Marine Park, and therefore will not have any direct or indirect impacts.

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 is not within or in proximity to any water resources in relation to large 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 is unlikely to have a direct or indirect impact as there is no Commonwealth Land located in the referral area or a 2km buffer.

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 is located in Queensland, Australia and not within or in proximity to Commonwealth Heritage Places Overseas.

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:

- Threatened Species and Ecological Communities (S18)

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)
- 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 Sunshine Coast region is at a significant crossroad. It is the largest urban area in Australia without a direct rail connection to its nearest capital city, and as a result, the region has the second highest car ownership rate in Australia. The urban centre of the Sunshine Coast is expanding, with locals and visitors often travelling long distances within the region and between Brisbane, Moreton Bay and the Sunshine Coast for work, education and social services. The region is supported by a bus network, which operates in general traffic and travels over these long distances, often via circuitous routes through communities to offer greater service coverage. Speed and reliability of public transport is impacted, with regional journeys between Brisbane and the Sunshine Coast taking longer than 2.5 hours (in one direction) if made solely via public transport. To meaningfully reduce car dependence and improve accessibility to, from and within the region, a separated, fast, high-quality, reliable public transport option is required. High quality public transport will also assist to accelerate new and planned housing in the region, with opportunities to unlock social and affordable homes around new stations, particularly those within existing major development areas and communities. Other options explored in the planning stages such as roads and bus infrastructure do not unlock the same social benefits. This is an important consideration given Queensland’s current housing challenges.

The Direct Sunshine Coast Rail Line project has a long planning history, with an Impact Assessment Study and Land Use Transport Strategy for the Caboolture to Maroochydore Corridor Study (CAMCOS) undertaken in 1998-2001 which included extensive corridor options analysis and analysis of transport modes. Completion of this study led to the protection (from development) of a corridor between Beerwah and Marcoola (CAMCOS corridor) for a future rail line in 2001. Studies between 2001 and 2023, have further refined this corridor. The Strategic Assessment of Service Requirements (SASR) undertaken in 2010 found that the rail line was not likely to be required until 2031. Since corridor protection, development within the Sunshine Coast region has unfolded around this corridor and proposed future station sites, with state planning documents such as publicly available state mapping and Shaping SEQ recognising the Direct Sunshine Coast Rail Line (previously CAMCOS) as a future rail link within the Sunshine Coast region. As a corridor was previously protected from development, following extensive optioneering at the time, the business case for this project looked to refine the alignment rather than reassess new alignment options. New alignments would now have significant impact on local homes, businesses and significant environmental areas such as the Mooloolah River National Park.

Refinement of the previously protected alignment included designing to current rail standards (impacting radius and grades of the corridor) and opportunities to minimise environmental, cultural heritage and community impacts through localised design amendments. Notably, three stations are now removed (compared with previous planning) due to engineering, access and environmental challenges. The removal of Pelican Waters Station and Creekside Station at Meridan Plains has also reduced the area of impact to TECs. Alternative transport modes were once again considered in the business case, with road and a bus way options also analysed. These options were found to have significantly lower benefits and higher impacts than the rail option.

Rather than re-evaluate wholesale alignment options, the Direct Sunshine Coast Business Case explored corridor refinements to minimise impacts where possible. The project team set about challenging the design wherever possible to ensure impacts were minimised and these refinements were then incorporated in the reference design. Att 1, Section 2, pages 4 to 7 includes a list of the design refinements incorporated in the project reference design to date which attempt to mitigate impacts (environment, heritage and community).

The proposed action is the only option considered in this referral, given the significant work completed and documented to date in the identification, protection and refinement of the corridor. The land for the proposed action has been protected from urban development for over 20 years. Consideration of alternative alignments at this stage would impact on a range of private and public land owners, and be contrary to decades of land use and transport network planning by both the Queensland Government and Sunshine Coast Council.

The Direct Sunshine Coast Business Case Summary Document confirms that construction of the full 37.8km rail line to Maroochydore would take at least a decade. It also shows that unless the line was built in stages, none of the stations would open to passengers prior to 2032. Construction of the railway from Birtinya to Maroochydore is not possible at this time because no funds are committed for rail from Birtinya to Maroochydore. Alternatives including new alignments and alternate modes are not proposed as these were explored extensively during the planning phases of the project and were found to have greater impacts and lower benefits than the proposed action.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1-Project Info.pdf Additional project information	05/08/2024	No	High
#2.	Document	Att 2-AppAtoE.pdf Environmental Assessment of Matters of National Environmental Significance, Appendix A to E	29/07/2024		High
#3.	Document	Att 2-AppFtoP.pdf Environmental Assessment of Matters of National Environmental Significance, Appendix F to P	29/07/2024	No	High
#4.	Document	Att 2-MNES-Part01-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 01 pages 1 to 26, location information redacted for species on the Queensland Confidential Species List.	29/07/2024	No	High
#5.	Document	Att 2-MNES-Part01-SENSITIVE.pdf Environmental Assessment of Matters of National Environmental Significance, Part 01 pages 1 to 26,	29/07/2024	Yes	High

		contains location information for species on the Queensland Confidential Species List.			
#6.	Document	Att 2-MNES-Part02.pdf Environmental Assessment of Matters of National Environmental Significance, Part 02 pages 27 to 40	29/07/2024	No	High
#7.	Document	Att 2-MNES-Part03.pdf Environmental Assessment of Matters of National Environmental Significance, Part 03 pages 41 to 47	29/07/2024	No	High
#8.	Document	Att 2-MNES-Part04.pdf Environmental Assessment of Matters of National Environmental Significance, Part 04 pages 48 to 59	29/07/2024	No	High
#9.	Document	Att 2-MNES-Part05.pdf Environmental Assessment of Matters of National Environmental Significance, Part 05 pages 60 to 81	29/07/2024	No	High
#10.	Document	Att 2-MNES-Part06-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 06 pages 82 to 138, location information redacted for species on the Queensland Confidential Species List.	29/07/2024	No	High
#11.	Document	Att 2-MNES-Part07-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 07 pages 139 to 149, location information redacted for species on the Queensland Confidential Species List.	29/07/2024	No	High
#12.	Document	Att 2-MNES-Part07-SENSITIVE.pdf Environmental Assessment of Matters of National Environmental Significance, Part 07 pages 139 to 149, contains location information for species on the Queensland Confidential Species List.	29/07/2024	Yes	High
#13.	Document	Att 2-MNES-Part08.pdf Environmental Assessment of Matters of National Environmental Significance, Part 08 pages 150 to 159	29/07/2024	No	High
#14.	Document	Att 2-MNES-Part09.pdf Environmental Assessment of Matters of National Environmental Significance, Part 09 pages 160 to 171	29/07/2024	No	High
#15.	Document	Att 2-MNES-Part10.pdf Environmental Assessment of Matters of National Environmental Significance, Part 10 pages 172 to 192	29/07/2024	No	High
#16.	Document	Att 2-MNES-Part11-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 11 pages 193 to 248, location information redacted for species on the Queensland Confidential Species List.	29/07/2024	No	High
#17.	Document	Att 2-MNES-Part11-SENSITIVE.pdf Environmental Assessment of Matters of National	29/07/2024	Yes	High

		Environmental Significance, Part 11 pages 193 to 248, contains location information for species on the Queensland Confidential Species List.			
#18.	Document	Att 2-MNES-Part12.pdf Environmental Assessment of Matters of National Environmental Significance, Part 12 pages 249 to 260	29/07/2024	No	High
#19.	Document	Att 2-MNES-Part13.pdf Environmental Assessment of Matters of National Environmental Significance, Part 13 pages 261 to 268	29/07/2024	No	High
#20.	Document	Att 2-MNES-Part14.pdf Environmental Assessment of Matters of National Environmental Significance, Part 014 pages 269 to 279	29/07/2024	No	High
#21.	Document	Att 2-MNES-Part15.pdf Environmental Assessment of Matters of National Environmental Significance, Part 15 pages 280 to 287	29/07/2024	No	High
#22.	Document	Att 2-MNES-Part16.pdf Environmental Assessment of Matters of National Environmental Significance, Part 16 pages 288 to 345	29/07/2024	No	High
#23.	Link	Direct Sunshine Coast Rail Line Business Case Summary https://www.yoursay-projects.tmr.qld.gov.au/down..			High
#24.	Link	Project Assessment Framework https://www.tmr.qld.gov.au/business-industry/bus..			High

1.2.5 Information about the staged development

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Direct Sunshine Coast Business Case Summary https://www.yoursay-projects.tmr.qld.gov.au/down..			High
#2.	Link	Shaping SEQ 2023 https://dsdmipprd.blob.core.windows.net/general/..			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.	Link	Accepted development requirements for operational work that is constructing or raising waterway barr https://www.publications.qld.gov.au/ckan-publica..			High
#2.	Link				

		Accepted development requirements for operational work that is the removal, destruction or damage of https://www.publications.qld.gov.au/ckan-publica..	High
#3.	Link	Code for accepted development For tidal works, or work completely or partly in a coastal management https://www.des.qld.gov.au/policies?a=272936:pol..	High
#4.	Link	Duty of Care Guidelines https://www.qld.gov.au/__data/assets/word_doc/00..	High
#5.	Link	Environmental Process Manual https://www.tmr.qld.gov.au/business-industry/Tec..	High
#6.	Link	EPBC Act environmental offsets policy https://www.dcceew.gov.au/sites/default/files/do..	High
#7.	Link	EPBC Act Policy Statement 3.21 Industry guidelines for avoiding, assessing and mitigating impacts https://www.agriculture.gov.au/sites/default/fil..	High
#8.	Link	OSW/2020/5467 Exemption requirements for constructing authorities for the take of water without a wa https://www.resources.qld.gov.au/?a=109113%3Apol..	High
#9.	Link	Riverine protection permit exemption requirements https://www.rdmw.qld.gov.au/?a=109113:policy_reg..	High
#10.	Link	Shaping SEQ South East Queensland Regional Plan 2023 https://dsdmipprd.blob.core.windows.net/general/..	High
#11.	Link	Significant Impact Guidelines 1.1 - Matters of National Environmental Significance https://www.dcceew.gov.au/environment/epbc/publi..	High
#12.	Link	Species Management Program Requirements https://environment.des.qld.gov.au/__data/assets..	High
#13.	Link		

		Sunshine Coast Planning Scheme 2014 - Version 27 (23 January 2024) - Text - Part 3 Section 3_5 https://publicdocs.scc.qld.gov.au/hpecmwebdrawer..			High
#14.	Link	Transport and Main Roads Specifications MRTS51 Environmental Management July 2024 https://www.tmr.qld.gov.au/_/media/busind/techst..			High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	About the Kabi Kabi native title determination https://www.resources.qld.gov.au/land-property/i..			High
#2.	Link	Direct Sunshine Coast Rail Line https://www.yoursay-projects.tmr.qld.gov.au/dire..			High
#3.	Link	Sunshine Coast Major Projects Consultation and engagement insights Summary October 2023 https://hdp-au-prod-app-qldtmr-yoursay-files.s3...			High
#4.	Link	Sunshine Coast Rail and Public Transport Consultation and engagements insights summary May 2024 https://hdp-au-prod-app-qldtmr-yoursay-files.s3...			High

1.3.2.17 (Person proposing to take the action) Proposer's history of responsible environmental management

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Environmental management https://www.tmr.qld.gov.au/community-and-environ..			High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Environmental Processes Manual https://www.tmr.qld.gov.au/business-industry/Tec..			High
#2.	Link	Environmental Sustainability Policy https://www.tmr.qld.gov.au/community-and-environ..			High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1-Project Info.pdf Additional project information	04/08/2024		High
#2.	Link	Sunshine Coast Planning Scheme 2014 Part 3 Section 3.5 https://publicdocs.scc.qld.gov.au/hpecmwebdrawer..			High

3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	SEQ Regulatory Map 2 SEQ Development Area https://planning.statedevelopment.qld.gov.au/__d..			High
#2.	Link	Shaping SEQ South East Queensland Regional Plan 2023 Map 23 and page 177 https://dsdmipprd.blob.core.windows.net/general/..			High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2-MNES-Part11-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 11 pages 193 to 248, location information redacted for species on the Queensland Confidential Species List.	28/07/2024	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2-AppAtoE.pdf Environmental Assessment of MNES: App A:Desktop searches; App B: Survey methods; App C: Likelihood of Occurrence assessments; App D: Quaternary Data Sheets; App E: TEC Data Sheets	28/07/2024		High
#2.	Document	Att 2-MNES-Part01-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 01 pages 1 to 26, location information redacted for species on the Queensland Confidential Species List.	28/07/2024	No	High
#3.	Document	Att 2-MNES-Part02.pdf Environmental Assessment of MNES, Part 2, part Section 3, pages 27 to 40	28/07/2024		High
#4.	Document				

Att 2-MNES-Part03.pdf Environmental Assessment of MNES, Part 3, part Section 3, pages 41 to 47			28/07/2024	High
#5.	Document	Att 2-MNES-Part04.pdf Environmental Assessment of MNES, Part 4, part Section 3 and part Section 4, pages 48 to 59	28/07/2024	High
#6.	Document	Att 2-MNES-Part05.pdf Environmental Assessment of MNES, Part 5, part Section 4, pages 61 to 81	28/07/2024	High
#7.	Document	Att 2-MNES-Part06-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 06 pages 82 to 138, location information redacted for species on the Queensland Confidential Species List.	28/07/2024	High
#8.	Document	Att 2-MNES-Part07-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 07 pages 139 to 149, location information redacted for species on the Queensland Confidential Species List.	28/07/2024	High
#9.	Document	Att 2-MNES-Part10.pdf Environmental Assessment of MNES, Part 10, part Section 6, pages 172 to 192	28/07/2024	High
#10.	Document	Att 2-MNES-Part11-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 11 pages 193 to 248, location information redacted for species on the Queensland Confidential Species List.	28/07/2024	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2-MNES-Part02.pdf Environmental Assessment of MNES, Part 2, part Section 3, pages 27 to 40	28/07/2024		High
#2.	Document	Att 2-MNES-Part05.pdf Environmental Assessment of MNES, Part 5, part Section 4, pages 61 to 81	28/07/2024		High
#3.	Document	Att 2-MNES-Part06-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 06 pages 82 to 138, location information redacted for species on the Queensland Confidential Species List.	28/07/2024		High

3.3.1 Commonwealth heritage places overseas or other places that apply to the project area

	Type	Name	Date	Sensitivity	Confidence

#1.	Document	Att 2-MNES-Part16.pdf Environmental Assessment of Matters of National Environmental Significance, Part 16 pages 288 to 345	28/07/2024	High
#2.	Link	Australian Heritage Database, Place Details, Glass House Mountains National Landscape https://www.environment.gov.au/cgi-bin/ahdb/sear..		High
#3.	Link	Glass House Mountains National Park Management Statement https://parks.desi.qld.gov.au/__data/assets/pdf_..		High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	About the Kabi Kabi Native Title Determination https://www.resources.qld.gov.au/land-property/i..			High
#2.	Link	Cultural Heritage Duty of Care Guidelines https://www.qld.gov.au/__data/assets/word_doc/00..			High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2-MNES-Part01-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 01 pages 1 to 26, location information redacted for species on the Queensland Confidential Species List.	28/07/2024	No	High
#2.	Link	Registered Water Bores https://qldglobe.information.qld.gov.au/?topic=w..			Medium
#3.	Link	Water Plan (Mary Basin) 2024 https://www.legislation.qld.gov.au/view/html/asm..			High
#4.	Link	Water Plan (Moreton) 2007 https://www.legislation.qld.gov.au/view/html/inf..			Medium

4.1.3.2 (Ramsar Wetland) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2-MNES-Part16.pdf Environmental Assessment of MNES, Part 16, part Section 8 to Section 14 (References), pages 288 to 345	28/07/2024		High
#2.	Link				

Ramsar Information Sheet Australia Moreton Bay https://rsis.ramsar.org/RISapp/files/RISrep/AU63..				High

4.1.3.6 (Ramsar Wetland) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2-MNES-Part16.pdf Environmental Assessment of MNES, Part 16, part Section 8 to Section 14 (References), pages 288 to 345	28/07/2024		High

4.1.3.9 (Ramsar Wetland) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2-MNES-Part16.pdf Environmental Assessment of MNES, Part 16, part Section 8 to Section 14 (References), pages 288 to 345	28/07/2024		High

4.1.3.10 (Ramsar Wetland) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2-MNES-Part16.pdf Environmental Assessment of MNES, Part 16, part Section 8 to Section 14 (References), pages 288 to 345	28/07/2024		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	Att 2-MNES-Part01-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 01 pages 1 to 26, location information redacted for species on the Queensland Confidential Species List.	28/07/2024	Lo	High
#2.	Document	Att 2-MNES-Part06-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 06 pages 82 to 138, location information redacted for species on the Queensland Confidential Species List.	28/07/2024	Lo	High
#3.	Document	Att 2-MNES-Part11-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 11 pages 193 to 248, location information redacted for species on the Queensland Confidential Species List.	28/07/2024	Lo	High

4.1.4.5 (Threatened Species and Ecological Communities) Why you consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2-MNES-Part06-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 06 pages 82 to 138, location information redacted for species on the Queensland Confidential Species List.	28/07/2024		High
#2.	Document	Att 2-MNES-Part11-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 11 pages 193 to 248, location information redacted for species on the Queensland Confidential Species List.	28/07/2024		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	Att 1.pdf Additional information including proposed action detailed description, design refinements and options assessment history	04/08/2024		High
#2.	Document	Att 2-MNES-Part11-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 11 pages 193 to 248, location information redacted for species on the Queensland Confidential Species List.	28/07/2024		High
#3.	Document	Att 2-MNES-Part16.pdf Environmental Assessment of MNES, Part 16, part Section 8 to Section 14 (References), pages 288 to 345	28/07/2024		High
#4.	Document	Att 3-Fauna Strategy.pdf Direct Sunshine Coast Rail Line project Fauna connectivity and movement strategy	29/07/2024	No	High

4.1.4.11 (Threatened Species and Ecological Communities) Proposed offsets relevant to avoidance or mitigation measures

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 4-Prelim Offset Strategy.pdf Preliminary Offset Strategy for the Direct Sunshine Coast Rail Line project	29/07/2024	No	High

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	Att 2-MNES-Part01-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 01 pages 1 to 26, location information redacted for species on the Queensland Confidential Species List.	28/07/2024	No	High

#2.	Document	Att 2-MNES-Part16.pdf Environmental Assessment of MNES, Part 16, part Section 8 to Section 14 (References), pages 288 to 345	28/07/2024		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	Att 2-MNES-Part16.pdf Environmental Assessment of Matters of National Environmental Significance, Part 16 pages 288 to 345	28/07/2024	No	High

4.1.5.9 (Migratory Species) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2-MNES-Part16.pdf Environmental Assessment of MNES, Part 16, part Section 8 to Section 14 (References), pages 288 to 345	28/07/2024		High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1.pdf Additional information including proposed action detailed description, design refinements and options assessment history	04/08/2024		High
#2.	Document	Att 2-MNES-Part11-REDACTED.pdf Environmental Assessment of Matters of National Environmental Significance, Part 11 pages 193 to 248, location information redacted for species on the Queensland Confidential Species List.	28/07/2024	No	High
#3.	Document	Att 2-MNES-Part16.pdf Environmental Assessment of MNES, Part 16, part Section 8 to Section 14 (References), pages 288 to 345	28/07/2024		High

4.3.8 Why alternatives for your proposed action were not possible

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1.pdf Additional information including proposed action detailed description, design refinements and options assessment history	04/08/2024		High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	39407690291
Organisation name	Department of Transport and Main Roads
Organisation address	4000 QLD
Representative's name	Rachel Brazier
Representative's job title	Environment Specialist - contractor
Phone	0733384706
Email	rachel.brazier@translink.com.au
Address	140 Creek St Brisbane Q 4000

☑ 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, **Rachel Brazier of Department of Transport and Main Roads**, 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	39407690291
Organisation name	Department of Transport and Main Roads
Organisation address	4000 QLD
Representative's name	Jane Brander
Representative's job title	General Manager (Strategic Rail)

Phone	(07) 3066 7115
Email	jane.brander@translink.com.au
Address	140 Creek Street Brisbane

☑ 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, **Jane Brander of Department of Transport and Main Roads**, 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, **Jane Brander of Department of Transport and Main Roads**, 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. *