

# Referral of proposed action

# What is a referral?

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) provides for the protection of the environment, especially matters of national environmental significance (NES). Under the EPBC Act, a person must not take an action that has, will have, or is likely to have a significant impact on any of the matters of NES without approval from the Australian Government Environment Minister or the Minister's delegate. (Further references to 'the Minister' in this form include references to the Minister's delegate.) To obtain approval from the Environment Minister, a proposed action should be referred. The purpose of a referral is to obtain a decision on whether your proposed action will need formal assessment and approval under the EPBC Act.

Your referral will be the principal basis for the Minister's decision as to whether approval is necessary and, if so, the type of assessment that will be undertaken. These decisions are made within 20 business days, provided sufficient information is provided in the referral.

# Who can make a referral?

Referrals may be made by or on behalf of a person proposing to take an action, the Commonwealth or a Commonwealth agency, a state or territory government, or agency, provided that the relevant government or agency has administrative responsibilities relating to the action.

# When do I need to make a referral?

A referral must be made for actions that are likely to have a significant impact on the following matters protected by Part 3 of the EPBC Act:

- World Heritage properties (sections 12 and 15A)
- National Heritage places (sections 15B and 15C)
- Wetlands of international importance (sections 16 and 17B)
- Listed threatened species and communities (sections 18 and 18A)
- Listed migratory species (sections 20 and 20A)
- Protection of the environment from nuclear actions (sections 21 and 22A)
- Commonwealth marine environment (sections 23 and 24A)
- Great Barrier Reef Marine Park (sections 24B and 24C)
- A water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E)
- The environment, if the action involves Commonwealth land (sections 26 and 27A), including:
  - o actions that are likely to have a significant impact on the environment of Commonwealth land (even if taken outside Commonwealth land);
  - o actions taken on Commonwealth land that may have a significant impact on the environment generally;
- The environment, if the action is taken by the Commonwealth (section 28)
- Commonwealth Heritage places outside the Australian jurisdiction (sections 27B and 27C)

You may still make a referral if you believe your action is not going to have a significant impact, or if you are unsure. This will provide a greater level of certainty that Commonwealth assessment requirements have been met.

To help you decide whether or not your proposed action requires approval (and therefore, if you should make a referral), the following guidance is available from the Department's website:

o the Policy Statement titled Significant Impact Guidelines 1.1 – Matters of National Environmental Significance. Additional sectoral guidelines are also available.

- o the Policy Statement titled Significant Impact Guidelines 1.2 Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies.
- o the Policy Statement titled Significant Impact Guidelines: Coal seam gas and large coal mining developments—Impacts on water resources.
- o the interactive map tool (enter a location to obtain a report on what matters of NES may occur in that location).

Can I refer part of a larger action?

In certain circumstances, the Minister may not accept a referral for an action that is a component of a larger action and may request the person proposing to take the action to refer the larger action for consideration under the EPBC Act (Section 74A, EPBC Act). If you wish to make a referral for a staged or component referral, read 'Fact Sheet 6 Staged Developments/Split Referrals' and contact the Referrals Gateway (1800 803 772).

Do I need a permit?

Some activities may also require a permit under other sections of the EPBC Act or another law of the Commonwealth. Information is available on the Department's web site.

Is your action in the Great Barrier Reef Marine Park?

If your action is in the Great Barrier Reef Marine Park it may require permission under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act). If a permission is required, referral of the action under the EPBC Act is deemed to be an application under the GBRMP Act (see section 37AB, GBRMP Act). This referral will be forwarded to the Great Barrier Reef Marine Park Authority (the Authority) for the Authority to commence its permit processes as required under the Great Barrier Reef Marine Park Regulations 1983. If a permission is not required under the GBRMP Act, no approval under the EPBC Act is required (see section 43, EPBC Act). The Authority can provide advice on relevant permission requirements applying to activities in the Marine Park.

The Authority is responsible for assessing applications for permissions under the GBRMP Act, GBRMP Regulations and Zoning Plan. Where assessment and approval is also required under the EPBC Act, a single integrated assessment for the purposes of both Acts will apply in most cases. Further information on environmental approval requirements applying to actions in the Great Barrier Reef Marine Park is available from http://www.gbrmpa.gov.au/ or by contacting GBRMPA's Environmental Assessment and Management Section on (07) 4750 0700.

The Authority may require a permit application assessment fee to be paid in relation to the assessment of applications for permissions required under the GBRMP Act, even if the permission is made as a referral under the EPBC Act. Further information on this is available from the Authority:

Great Barrier Reef Marine Park Authority

2-68 Flinders Street PO Box 1379 Townsville QLD 4810 AUSTRALIA

Phone: + 61 7 4750 0700 Fax: + 61 7 4772 6093 www.gbrmpa.gov.au

# What information do I need to provide?

Completing all parts of this form will ensure that you submit the required information and will also assist the Department to process your referral efficiently. If a section of the referral document is not applicable to your proposal enter N/A.

You can complete your referral by entering your information into this Word file.

Instructions

Instructions are provided in blue text throughout the form.

Attachments/supporting information

The referral form should contain sufficient information to provide an adequate basis for a decision on the likely impacts of the proposed action. You should also provide supporting documentation, such as environmental reports or surveys, as attachments.

Coloured maps, figures or photographs to help explain the project and its location should also be submitted with your referral. Aerial photographs, in particular, can provide a useful perspective and context. Figures

should be good quality as they may be scanned and viewed electronically as black and white documents. Maps should be of a scale that clearly shows the location of the proposed action and any environmental aspects of interest.

Please ensure any attachments are below three megabytes (3mb) as they will be published on the Department's website for public comment. To minimise file size, enclose maps and figures as separate files if necessary. If unsure, contact the Referrals Gateway (email address below) for advice. Attachments larger than three megabytes (3mb) may delay processing of your referral.

Note: the Minister may decide not to publish information that the Minister is satisfied is commercial-in-confidence.

# How do I pay for my referral?

From 1 October 2014 the Australian Government commenced cost recovery arrangements for environmental assessments and some strategic assessments under the EPBC Act. If an action is referred on or after 1 October 2014, then cost recovery will apply to both the referral and any assessment activities undertaken. Further information regarding cost recovery can be found on the <u>Department's website</u>.

Payment of the referral fee can be made using one of the following methods:

• EFT Payments can be made to:

BSB: 092-009

Bank Account No. 115859

Amount: \$7352

Account Name: Department of the Environment.

Bank: Reserve Bank of Australia

Bank Address: 20-22 London Circuit Canberra ACT 2601 Description: The reference number provided (see note below)

• Cheque - Payable to "Department of the Environment". Include the reference number provided (see note below), and if posted, address:

The Referrals Gateway
Environment Assessment Branch
Department of the Environment
GPO Box 787
Canberra ACT 2601

Credit Card

Please contact the Collector of Public Money (CPM) directly (call (02) 6274 2930 or 6274 20260 and provide the reference number (see note below).

Note: in order to receive a reference number, submit your referral and the Referrals Gateway will email you the reference number.

# How do I submit a referral?

Referrals may be submitted by mail or email.

Mail to:

Referrals Gateway Environment Assessment Branch Department of Environment GPO Box 787 CANBERRA ACT 2601

• If submitting via mail, electronic copies of documentation (on CD/DVD or by email) are required.

Email to: epbc.referrals@environment.gov.au

- Clearly mark the email as a 'Referral under the EPBC Act'.
- Attach the referral as a Microsoft Word file and, if possible, a PDF file.
- Follow up with a mailed hardcopy including copies of any attachments or supporting reports.

# What happens next?

Following receipt of a valid referral (containing all required information) you will be advised of the next steps in the process, and the referral and attachments will be published on the Department's web site for public comment.

The Department will write to you within 20 business days to advise you of the outcome of your referral and whether or not formal assessment and approval under the EPBC Act is required. There are a number of possible decisions regarding your referral:

The proposed action is NOT LIKELY to have a significant impact and does NOT NEED approval No further consideration is required under the environmental assessment provisions of the EPBC Act and the action can proceed (subject to any other Commonwealth, state or local government requirements).

The proposed action is NOT LIKELY to have a significant impact IF undertaken in a particular manner

The action can proceed if undertaken in a particular manner (subject to any other Commonwealth, state or local government requirements). The particular manner in which you must carry out the action will be identified as part of the final decision. You must report your compliance with the particular manner to the Department.

The proposed action is LIKELY to have a significant impact and does NEED approval

If the action is likely to have a significant impact a decision will be made that it is a *controlled action*. The particular matters upon which the action may have a significant impact (such as World Heritage values or threatened species) are known as the *controlling provisions*.

The controlled action is subject to a public assessment process before a final decision can be made about whether to approve it. The assessment approach will usually be decided at the same time as the controlled action decision. (Further information about the levels of assessment and basis for deciding the approach are available on the Department's web site.)

The proposed action would have UNACCEPTABLE impacts and CANNOT proceed

The Minister may decide, on the basis of the information in the referral, that a referred action would have clearly unacceptable impacts on a protected matter and cannot proceed.

# Compliance audits

If a decision is made to approve a project, the Department may audit it at any time to ensure that it is completed in accordance with the approval decision or the information provided in the referral. If the project changes, such that the likelihood of significant impacts could vary, you should write to the Department to advise of the changes. If your project is in the Great Barrier Reef Marine Park and a decision is made to approve it, the Authority may also audit it. (See "Is your action in the Great Barrier Reef Marine Park," p.2, for more details).

# For more information

- call the Department of the Environment Community Information Unit on 1800 803 772 or
- visit the web site http://www.environment.gov.au/topics/about-us/legislation/environment-protection-and-biodiversity-conservation-act-1999

All the information you need to make a referral, including documents referenced in this form, can be accessed from the above web site.

# Referral of proposed action

# Project title:

Mooloolah River Interchange Project – Areas outside of existing approvals

# 1 Summary of proposed action

NOTE: You must also attach a map/plan(s) and associated geographic information system (GIS) vector (shapefile) dataset showing the location and approximate boundaries of the area in which the project is to occur. Maps in A4 size are preferred. You must also attach a map(s)/plan(s) showing the location and boundaries of the project area in respect to any features identified in 3.1 & 3.2, as well as the extent of any freehold, leasehold or other tenure identified in 3.3(i).

# 1.1 Short description

Use 2 or 3 sentences to uniquely identify the proposed action and its location.

The Queensland Department of Transport and Main Road (DTMR) is proposing to undertake an upgrade and extension to the Mooloolah River Interchange (MRI) between the Sunshine Motorway, Kawana Way, Nicklin Way, Karawatha Drive and Brisbane Road on the Sunshine Coast of Queensland (the MRI Project).

The MRI Project is complementary to two other separate development proposals formerly referred by DTMR to the Department of the Environment (DoE) under the *Environment Protection and Biodiversity Protection Act 1999* (EPBC Act). These proposals include the former Sunshine Motorway Duplication (EPBC 2011/6001), which was deemed to be not a controlled action on 22 July 2011, and the Multi-Modal Transport Corridor (MMTC) (EPBC 2008/4361), which was granted conditional approval on 1 September 2010 (refer to Attachment C).

The MRI Project proposes to deliver components of both the MMTC and Sunshine Motorway Duplication. The MRI Project generally falls within the areas formerly referred and approved. However, three small and discrete areas of the MRI Project design lie outside the formerly referred and approved areas. This referral covers the three areas that occur outside of the existing EPBC Act approval area, referred to as sections A, B and C (the Project) (refer to Figures 1.1 and 2.1 in Attachment A).

1.2 Latitude and longitude
Latitude and longitude details
are used to accurately map the
boundary of the proposed
action. If these coordinates are
inaccurate or insufficient it may
delay the processing of your
referral.

	Latitude			Longitude		
location point	degrees	minutes	seconds	degrees	minutes	seconds

# Refer to Attachment B for GIS data file:

•	Section A: 26°41'42.53"S	153° 6'26.88"E
•	Section B: 26°42'18.53"S	153° 6'48.64"E
•	Section C: 26°41'56.19"S	153° 7'6.00"E

The Interactive Mapping Tool may provide assistance in determining the coordinates for your project area.

If the area is less than 5 hectares, provide the location as a single pair of latitude and longitude references. If the area is greater than 5 hectares, provide bounding location points.

There should be no more than 50 sets of bounding location coordinate points per proposal area.

Bounding location coordinate points should be provided sequentially in either a clockwise or anticlockwise direction.

If the proposed action is linear (eg. a road or pipeline), provide coordinates for each turning point.

Also attach the associated GIS-compliant file that delineates the proposed referral area. If the area is less than 5 hectares, please provide the location as a point layer. If greater than 5 hectares, please provide a polygon layer. If the proposed action is linear (eg. a road or pipeline) please provide a polyline layer (refer to GIS data supply guidelines at Attachment A).

Do not use AMG coordinates.

# 1.3 Locality and property description

Provide a brief physical description of the property on which the proposed action will take place and the project location (eg. proximity to major towns, or for off-shore projects, shortest distance to mainland).

The MRI Project is located on the Sunshine Coast of Queensland, within the suburbs of Mountain Creek, Mooloolaba, Minyama, Parrearra and Sippy Downs.

1.4 Size of the development footprint or work area (hectares)

The areas outside the existing EPBC Act approval that are the subject of this referral include:

- Section A: 2.5 ha
- Section B: 3.5 ha
- Section C: 0.2 ha
- 1.5 Street address of the site

Mooloolah River Interchange, between the Sunshine Motorway, Kawana Way, Nicklin Way, Karawatha Drive and Brisbane Road, Sunshine Coast, Queensland

1.6 Lot description

Describe the lot numbers and title description, if known.

The areas outside the existing EPBC Act approval area that are the subject of this referral include:

- Section A: 762/SP263648 (Freehold); 763/SP263648 (Freehold); 638/CG6390 (Reserve)
- Section B: 9027/SP245187 (Freehold); 9116/SP273993 (Freehold)
- Section C: 497/SP111652 (Reserve).
- 1.7 Local Government Area and Council contact (if known)

If the project is subject to local government planning approval, provide the name of the relevant council contact officer.

The MRI Project is located within the Sunshine Coast Council local government area. The MRI Project is not subject to local government planning approval.

1.8 Time frame

Specify the time frame in which the action will be taken including the estimated start date of construction/operation.

The MRI Project is proposed to be delivered in stages. The timeframe for these stages will be dependent on the completion of the approvals process and State Government funding considerations.

1.9 Alternatives to proposed action  Were any feasible alternatives to taking the proposed action		<b>✓</b>	No
	(including not taking the action) considered but are not proposed?		Yes, you must also complete section 2.2
1.10	1.10 Alternative time frames etc.  Does the proposed action include alternative time frames, locations or activities?		No
			Yes, you must also complete Section 2.3. For each alternative, location, time frame, or activity identified, you must also complete details in Sections 1.2-1.9, 2.4-2.7 and 3.3 (where relevant).
1.11	State assessment Is the action subject to a state	✓	No
	or territory environmental impact assessment?		Yes, you must also complete Section 2.5

1.12	Component of larger action Is the proposed action a component of a larger action?	<b>✓</b>	No Yes, you must also complete Section 2.7
1.13	Related actions/proposals Is the proposed action related to other actions or proposals in the region (if known)?	✓	Yes, provide details:  The MRI Project is complementary to two other separate development proposals formerly referred by DTMR to the DoE under the EPBC Act. These proposals include the former Sunshine Motorway Duplication (EPBC 2011/6001), which was deemed to be not a controlled action on 22 July 2011, and the Multi-Modal Transport Corridor (MMTC) (EPBC 2008/4361), which was granted conditional approval on 1 September 2010 (refer to Attachment C).
1.14	Australian Government funding Has the person proposing to take the action received any Australian Government grant funding to undertake this project?	✓	No Yes, provide details:
1.15	Great Barrier Reef Marine Park Is the proposed action inside the Great Barrier Reef Marine Park?	✓	No Yes, you must also complete Section 3.1 (h), 3.2 (e)

# 2 Detailed description of proposed action

NOTE: It is important that the description is complete and includes all components and activities associated with the action. If certain related components are not intended to be included within the scope of the referral, this should be clearly explained in section 2.7.

# 2.1 Description of proposed action

This should be a detailed description outlining all activities and aspects of the proposed action and should reference figures and/or attachments, as appropriate.

The Queensland Department of Transport and Main Roads (DTMR) is proposing to undertake an upgrade and extension to the Mooloolah River Interchange (MRI) between the Sunshine Motorway, Kawana Way, Nicklin Way, Karawatha Drive and Brisbane Road (the MRI Project). The MRI Project is required to support the future transport needs and economic development in the Sunshine Coast region. The MRI Project is comprised of the following:

- Nicklin Way to Brisbane Road: new two lane north bound connection, including a new Prelude Drive east bound on ramp to the Sunshine Motorway.
- Mooloolah River Crossing: new two lane link between the MRI and Kawana Way on a land based alignment to an at grade intersection.
- Karawatha Drive to Brisbane Road: upgrade of east-west connection.
- Sunshine Motorway, Kawana Way Interchange to Karawatha Drive: duplication of the motorway including ramp configuration at the MRI.

The MRI Project complements two other separate development proposals formerly referred by DTMR to the Department of the Environment (DoE) under the *Environment Protection and Biodiversity Protection Act 1999* (EPBC Act). These proposals include the former Sunshine Motorway Duplication (EPBC 2011/6001), which was deemed to be not a controlled action on 22 July 2011, and the Multi-Modal Transport Corridor (MMTC) (EPBC 2008/4361), which was granted conditional approval on 1 September 2010 (refer to Attachment C).

The MRI Project proposes to deliver components of the MMTC and Sunshine Motorway Duplication. Proposed actions, as listed on the decision documentation for the former referrals, are as follows:

# **Sunshine Motorway Duplication (EPBC 2011/6001)**

Not a controlled action: 'duplication of existing carriageways from two to four lanes and upgrade of on/off ramps for Section 4 of the Multi Modal Transport Corridor'.

The MRI Project proposes the duplication of existing carriageways from two to four lanes and the upgrading of on/off ramps to facilitate general capacity increases within the interchange and nearby major road junctions. It is entirely consistent with the previously proposed action. This section of the MRI Project will take place wholly within the area previously referred and will result in similar impacts to matters of national environmental significance (MNES).

# Multi-Modal Transport Corridor (EPBC 2008/4361)

Conditional approval: 'upgrade, extension and construction of approximately 10 km of a Multi-Modal Transport Corridor up to 6 lanes...and 2 railway lines between Caloundra and Maroochydore'.

The MRI Project proposes the construction of 4 lanes of roadway for approximately 4 km between Kawana and Maroochydore, within the MMTC area. It is consistent with the proposed action and is in accordance with a staged approach to its implementation. The MRI Project is generally able to meet the existing conditions of approval and will take place almost entirely within the area previously referred.

The MRI Project generally falls within the areas formerly referred and approved. However, three discrete areas of the MRI Project design lie outside the formerly referred and approved areas. This referral covers the three areas that occur outside of the existing EPBC Act approval area, referred to as sections A, B and C (refer to Figures 1.1 and 2.1 A, B and C within Attachment A).

## 2.2 Alternatives to taking the proposed action

This should be a detailed description outlining any feasible alternatives to taking the proposed action (including not taking the action) that were considered but are not proposed (note, this is distinct from any proposed alternatives relating to location, time frames, or activities – see section 2.3).

As identified in Section 1.9 of this referral, no alternatives to taking the proposed action were considered. The areas subject to this referral were identified through necessary modifications to the original MMTC design and are required for the construction of the MRI Project.

2.3 Alternative locations, time frames or activities that form part of the referred action
If you have identified that the proposed action includes alternative time frames, locations or activities (in section 1.10) you must complete this section. Describe any alternatives related to the physical location of the action, time frames within which the action is to be taken and alternative methods or activities for undertaking the action. For each alternative location, time frame or activity identified, you must also complete (where relevant) the details in sections 1.2-1.9, 2.4-2.7, 3.3 and 4. Please note, if the action that you propose to take is determined to be a controlled action, any alternative locations, time frames or activities that are identified here may be subject to environmental assessment and a decision on whether to approve the alternative.

As identified in Section 1.10 of this referral, the proposed action does not include alternative timeframes, locations or activities. The areas subject to this referral were identified through necessary modifications to the original MMTC design and are required for the construction of the MRI Project. Timeframes associated with the construction process are entirely dependent upon funding of the project by the Queensland Government.

2.4 Context, planning framework and state/local government requirements

Explain the context in which the action is proposed, including any relevant planning framework at the state and/or local government level (e.g. within scope of a management plan, planning initiative or policy framework). Describe any Commonwealth or state legislation or policies under which approvals are required or will be considered against.

State and local government approvals/permits/notifications which are likely to be applicable to the MRI Project have been summarised in Table 1.

Table 1 State and local government approvals likely to be required to construct the MRI Project

Approval/permit	Relevant legislation	Assessment manager/ relevant agency	Approximate acquisition timeframe	Party responsible for acquisition/ resolution
State				
Operational Work (prescribed tidal works)	Sustainable Planning Act 2009	DSDIP	2-3 months	DTMR
Operational Work (waterway barrier works)	Sustainable Planning Act 2009	DSDIP	2-3 months	DTMR
Operational Work (excavation within State coastal land)	Sustainable Planning Act 2009	DSDIP	2-3 months	DTMR
Operational Work (removal or destruction of marine plants)	Sustainable Planning Act 2009	DSDIP	2-3 months	DTMR
Operational Work (taking or interfering with water	Sustainable Planning Act 2009	DSDIP	2-3 months	DTMR
Environmentally Relevant Activities – Environmental Authorities (various)	Environmental Protection Act 1994	DEHP	2-3 months	Construction contractor
Protected Plants Permit – EVNT species	Nature Conservation Act 1992	DEHP	1-2 months	DTMR

Approval/permit	Relevant legislation	Assessment manager/ relevant agency	Approximate acquisition timeframe	Party responsible for acquisition/ resolution
Species Management Program – animal breeding places of protected fauna	Nature Conservation Act 1992	DEHP	1-2 months	DTMR
Cultural Heritage Management Plan – Kabi Kabi First Nation	Aboriginal Cultural Heritage Act 2003	DATSIMA	Variable. Subject to outcomes of engagement with relevant parties.	DTMR
Native title - notification	Native Title Act 1993	Queensland South Native Title Services Limited	Not applicable	DTMR
Queensland Police Service Permit – Road closure	Transport Operations (Road Use) Management Act 1995	QPS	1 month	Construction contractor
Riverine protection permit	Water Act 2000	DNRM	1-2 months	DTMR
Water licence	Water Act 2000	DNRM	2-3 months	DTMR
Local				
None	Not applicable	Not applicable	Not applicable	Not applicable

2.5 Environmental impact assessments under Commonwealth, state or territory legislation

If you have identified that the proposed action will be or has been subject to a state or territory environmental impact statement (in section 1.11) you must complete this section. Describe any environmental assessment of the relevant impacts of the project that has been, is being, or will be carried out under state or territory legislation. Specify the type and nature of the assessment, the relevant legislation and the current status of any assessments or approvals. Where possible, provide contact details for the state/territory assessment contact officer.

Describe or summarise any public consultation undertaken, or to be undertaken, during the assessment. Attach copies of relevant assessment documentation and outcomes of public consultations (if available).

The formerly referred MMTC and Sunshine Motorway Duplication projects were subject to environmental impact assessment in accordance with DTMRs environmental assessment processes. Complementing these previous assessments, the various stages of the MRI Project will be subject to further environmental impact assessment. These assessments will not be undertaken until the staging and funding considerations have been confirmed.

# 2.6 Public consultation (including with Indigenous stakeholders)

Your referral must include a description of any public consultation that has been, or is being, undertaken. Where Indigenous stakeholders are likely to be affected by your proposed action, your referral should describe any consultations undertaken with Indigenous stakeholders. Identify the relevant stakeholders and the status of consultations at the time of the referral. Where appropriate include copies of documents recording the outcomes of any consultations.

A variety of consultation and stakeholder engagement was undertaken for the former MMTC and Sunshine Motorway Duplication projects (Parsons Brinckerhoff 2008; WorleyParsons 2010) including:

- public displays
- letter box pamphlet drops and information packs
- project enquiry and feedback mechanisms (i.e. hotlines, reply paid mail and email facilities)
- door-knocking of potentially affected properties by engagement officers.

Additional consultation will be undertaken for the MRI Project when staging and funding considerations have been confirmed.

# 2.7 A staged development or component of a larger project

If you have identified that the proposed action is a component of a larger action (in section 1.12) you must complete this section. Provide information about the larger action and details of any interdependency between the stages/components and the larger action. You may also provide justification as to why you believe it is reasonable for the referred action to be considered separately from the larger proposal (eg. the referred action is 'stand-alone' and viable in its own right, there are separate responsibilities for component actions or approvals have been split in a similar way at the state or local government levels).

The MRI Project complements two other separate development proposals formerly referred by DTMR to the DoE under the EPBC Act. These proposals include the former Sunshine Motorway Duplication (EPBC 2011/6001), which was deemed to be not a controlled action, and MMTC (EPBC 2008/4361), which was granted conditional approval (refer to Attachment C). The MRI Project proposes to deliver components of the MMTC and Sunshine Motorway Duplication and generally falls within the areas formerly referred and approved. The MRI Project is likely to be delivered in stages as part of the development of the ultimate MMTC scheme.

The areas subject to this referral were identified through the detailed design process and are considered a necessary component of the MRI Project.

# 3 Description of environment & likely impacts

# 3.1 Matters of national environmental significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The interactive map tool can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest.

Your assessment of likely impacts should refer to the following resources (available from the Department's web site):

- specific values of individual World Heritage properties and National Heritage places and the ecological character of Ramsar wetlands;
- profiles of relevant species/communities (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;
- Significant Impact Guidelines 1.1 Matters of National Environmental Significance; and
- associated sectoral and species policy statements available on the web site, as relevant.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The Minister has prepared four marine bioregional plans (MBP) in accordance with section 176. It is likely that the MBP's will be more commonly relevant where listed threatened species, listed migratory species or a Commonwealth marine area is considered.

Note that even if your proposal will not be taken in a World Heritage area, Ramsar wetland, Commonwealth marine area, the Great Barrier Reef Marine Park or on Commonwealth land, it could still impact upon these areas (for example, through downstream impacts). Consideration of likely impacts should include both direct and indirect impacts.

3.1 (a) World Heritage Properties

# Description

There are no world heritage properties within proximity to the MRI Project. The nearest is Fraser Island, located approximately 100 km north of the MRI Project.

Nature and extent of likely impact

Address any impacts on the World Heritage values of any World Heritage property.

There is unlikely to be an impact on the values of any world heritage property, given the distance between the MRI Project and the nearest world heritage property.

# 3.1 (b) National Heritage Places

## Description

There are no national heritage places within proximity to the MRI Project. The nearest national heritage place is the Wide Bay Military Reserve, located approximately 85 km north of the MRI Project.

Nature and extent of likely impact

Address any impacts on the National Heritage values of any National Heritage place.

There is unlikely to be an impact on the values of any national heritage place, given the distance between the MRI Project and the nearest national heritage place.

# 3.1 (c) Wetlands of International Importance (declared Ramsar wetlands)

# Description

There are no wetlands of international importance within close proximity to the MRI Project. The nearest wetland of international importance is the Moreton Bay Ramsar wetland, the northern extent of which is located approximately 12 km south of the MRI Project.

Nature and extent of likely impact

Address any impacts on the ecological character of any Ramsar wetlands.

There is unlikely to be an impact on the ecological character of any wetlands of international importance, given the distance and drainage of the site.

# 3.1 (d) Listed threatened species and ecological communities

Description *Threatened fauna species* 

Database searches identified 33 threatened fauna species of national significance as potentially occurring within a 10 km radius of the Project area. All 33 threatened fauna species were subjected to a likelihood-of-occurrence assessment (refer to Attachment D). Of these, four species are considered to have a moderate likelihood of occurring within the Project area and three species are known to occur within the Project area. The remaining 26 threatened fauna species are considered to have a low likelihood of occurring in the Project area, due to a lack of suitable habitat and the degraded nature of the Project area.

Table 2 Threatened fauna species with a moderate or higher likelihood of occurring within the Project area

Scientific name	Common name	EPBC Act status <sup>1</sup>	Likelihood-of- occurrence in the Project area	Habitat resources
Calidris ferruginea	curlew sandpiper	CE, M	Moderate	May occur outside of the Project footprint, foraging along the water's edge. It may be a rare occurrence within the Project area.
Numenius madagascariensis	eastern curlew	CE, M	Moderate	May rarely occur outside of the Project footprint, foraging along the water's edge. It may be a rare occurrence within the Project area.
Rostratula australis (syn. R. benghalensis)	painted snipe (painted snipe)	V, M	Moderate	May feed on mudflats within coastal saltmarsh habitat of Section B.
Phascolarctos cinereus	koala (Southeast Queensland Bioregion)	V	Moderate	Habitat is provided within the dry Eucalypt habitats of sections A and B, where primary and secondary food species occur.
Pteropus poliocephalus	grey-headed flying-fox	V	Known. Observed within Section B, flying over the site.	Foraging habitat within paperbark forest, dry Eucalypt forest, as well as the paperbark and swamp oak forests within sections A and B.
Xeromys myoides	water mouse	V	Known. Occupied nest occurs approximately 50 m from the southern portion of Section B.	Habitat is associated with the estuarine mangrove shrubland and coastal saltmarsh habitats of Section B. Foraging within the Project area for crustaceans is highly likely, and breeding is possible with Section B.
Litoria olongburensis	Olongburra frog, wallum sedge frog	V	Known. Recorded within closed heath community of Section A	Occurs in creeks and in marshy or swampy lowland habitats amongst emergent vegetation and reeds. This is associated with the closed heath habitat within Section A.

<sup>(1)</sup> Status under the EPBC Act. CE= Critically Endangered, E = Endangered, V = Vulnerable, M = Migratory

# Threatened flora species

Database searches identified 18 threatened flora species of national significance as potentially occurring within a 10 km radius of the Project area. All 18 threatened flora species were subjected to a likelihood-of-occurrence assessment (refer to Attachment D). Of these, one species (*Acacia attenuata*) was recorded within the Project area and a further four species are considered to have a moderate likelihood of occurring within the Project area. The remaining 13 threatened flora species are considered to have a low likelihood of occurring in the Project area, due to a lack of suitable habitat or proximate records to the Project area.

Table 3 Threatened flora species with a moderate or higher likelihood of occurring within the Project area

Scientific name	Family	EPBC Act status	Likelihood-of-occurrence in the Project area
Acacia attenuata	Mimosaceae	V	Known
Allocasuarina emuina	Casuarinaceae	Е	Moderate
Cryptostylis hunteriana	Orchidaceae	V	Moderate
Eucalyptus conglomerata	Myrtaceae	Е	Moderate
Phaius australis	Orchidaceae	E	Moderate

<sup>(1)</sup> Status under the EPBC Act. CE= Critically Endangered, E = Endangered, V = Vulnerable

## Acacia attenuata

Targeted field surveys identified eight individual *Acacia attenuata* within Section A (refer to Attachment D). The *A. attenuata* were recorded within a 0.2 ha patch of vegetation supporting non-remnant mixed shrubby Eucalypt forest on coastal sand plains with *Syncarpia glomulifera*, *E. resinifera*, *Melaleuca quinquenervia*, *Allocasuarina littoralis*, *Acacia* sp. *Gahnia sieberi* and *Xanthorrhoea fulva*.

Despite targeted surveys no *A. attenuata* were recorded within any other vegetation communities in the Project area. Of the eight individual *A. attenuata* found, seven were juveniles, as depicted by their low height (<1 m) and the presence of only juvenile bipinnate leaves. One individual that was >1 m was considered mature, with both phyllodes and bipinnate leaves.

Results of Queensland Herbarium desktop searches (Herbrecs 2015) and previous surveys conducted for MMTC (SKM 2009) have identified additional localities containing *A. attenuata* within and surrounding the Project area.

# Allocasuarina emuina and Eucalyptus conglomerata

Allocasuarina emuina and Eucalyptus conglomerata are both obvious woody species. Given the degree of survey effort within each of the vegetation communities during field survey their presence in the Project area is considered unlikely.

# Phaius australis

Phaius australis is a terrestrial (ground dwelling) orchid and produces the largest flowers of any Australian orchid, with each plant having 4–8 large, pleated leaves and 1–2 flower stalks (TSSC, 2014cb). P. australis is identified as having a peak flowering period of September to November. The survey was conducted in mid-August. Given the survey was outside the peak flowering period, field efforts focused on identifying any terrestrial orchids with pleated leaves.

Despite targeted field surveys no terrestrial orchids with pleated leaves were located. In addition, this species is associated with coastal wet heath/ sedgeland wetlands, swampy grassland or swampy forest and often where broad-leaved paperbark (*Melaleuca leucadendra*) or swamp mahogany (*Eucalyptus robusta*) are found (TSSC,

2014cb). It is less commonly found in drier forest near the coast. The vegetation in the Project area is not associated with wet/ swampy heath/ sedge lands or forests and is therefore considered too dry for *P. australis*.

Given the lack of records returned from desktop searches in proximity to the Project area, and the degree of survey effort conducted, the presence of *P. australis* in the Project area is considered unlikely.

# Cryptostylis hunteriana

The last known record of *Cryptostylis hunteriana* in the broader Sunshine Coast region is from Mount Coolum, well outside the Project area. Despite the lack of records, there is a moderate chance that the vegetation in the Project area may support habitat for *C. hunteriana*. However, given the small fragmented size of the Project area and degree of survey effort conducted, the presence of *C. hunteriana* in the Project area is considered unlikely.

Threatened ecological communities

Initial desktop searches indicated the following threatened ecological communities (TEC), listed under the EPBC Act, were likely to occur within a 10 km radius of the Project area:

- Lowland Rainforest of Subtropical Australia Critically Endangered Community
- Subtropical and Temperate Coastal Saltmarsh Vulnerable Community.

Field surveys confirmed the presence of the Subtropical and Temperate Coastal Saltmarsh (coastal saltmarsh) Vulnerable TEC in Section B (refer to Attachment D). The coastal saltmarsh TEC occurs in association with the remnant *Sporobolus virginicus*, *Baumea rubiginosa*, *Juncus kraussii* grass/ sedge lands on tidal salt marsh (RE 12.1.2). Approximately 0.5 ha of coastal saltmarsh TEC occurs within Section B. An initial assessment of the area of mapped coastal saltmarsh TEC (DEHP mapped remnant RE 12.1.2) within 1 km of Section B indicated that the Project area contains <10% of the total area of coastal saltmarsh (6.45 ha) within 1 km of the Project area.

Nature and extent of likely impact

Address any impacts on the members of any listened threatened species (except a conservation dependent species) or any threatened ecological community, or their habitat.

Threatened fauna species

Of 33 threatened fauna returned from desktop searches with the potential to occur in proximity to the Project area, 3 species were recorded on site (refer to Attachment D). These include the water mouse (*Xeromys myoides*; Vulnerable), wallum sedge frog (*Litoria olongburensis*; Vulnerable) and grey-headed flying-fox (*Pteropus poliocephalus*; Vulnerable). Four species were considered to have a moderate or greater likelihood of occurring within proximity to the Project area. These include the curlew sandpiper (*Calidris ferruginea*; Critically Endangered), eastern curlew (*Numenius madagascariensis*; Critically Endangered), painted snipe (*Rostratula australis*; Vulnerable) and koala (*Phascolarctos cinereus*; Vulnerable).

Assessment of the water mouse, wallum sedge frog and grey-headed flying-fox concluded that, although small areas of occupied habitat occur within or adjacent to the Project area, onsite habitats were not of sufficient size or quality to be significant to the maintenance of local populations. This is primarily due to the abundance of large areas of higher quality habitat in proximity to the Project, including the nearby Mooloolah River National Park.

Based on the results of the desktop assessment and field survey, significant impact assessments were conducted for the following fauna MNES that were recorded, or considered likely to occur, within the Project area (refer to Attachment D):

- water mouse (Xeromys myoides)
- grey-headed flying-fox (Pteropus poliocephalus)
- painted snipe (Rostratula australis)
- wallum sedge frog (Litoria olongburensis)
- koala (Phascolarctos cinereus)
- migratory species.

The water mouse, although confirmed at the edges of Section B, is unlikely to be significantly affected in the locality. Potential habitats in Section B are degraded by adjacent development impacts and extant individuals are expected to retain existing linkages to higher quality habitats along the Mooloolah River.

The grey-headed flying-fox has well known and distant (up to 50 km) foraging movements; potential foraging habitat areas onsite are considered insignificant in comparison to foraging resources in the wider area.

Although wallum sedge frogs were recorded in Section A and there is potential breeding habitats for this species within the Project area, similar habitats exist outside of the Project. Additionally, there is an abundance of higher quality habitat for this species in the nearby Mooloolah River National Park.

Assessment of the four species that were initially considered to have a moderate or greater likelihood of occurrence determined that potential habitats are unlikely to be utilised by the species. The habitat is considered too fragmented within the Project area to be accessed by koalas. The three shorebird species are unlikely to use potential habitats in Section A due to the proximity of urban environments and the poor quality of substrates for foraging purposes. Additionally, the proximity of mangroves along shorebird habitat at the river's edge makes these species vulnerable to attack from predators, such as the white-bellied sea-eagle and dogs.

Impacts within the Project area are unlikely to significantly affect the viability of threatened fauna species populations occurring on the site or in its wider locality, provided mitigation measures are incorporated into all Project phases to prevent both direct and indirect impacts from occurring outside of the Project boundary (refer to Attachment D and Section 5 of this referral).

# Threatened flora species

Of the 18 threatened flora species returned from desktop searches with potential to occur within proximity to the Project area, 1 species (*Acacia attenuata*; Vulnerable) was recorded within the Project area during field surveys. Four species, including three Endangered and one Vulnerable, are considered to have a moderate likelihood of occurring within the Project area. Given the level of survey effort and small area of suitable habitat within the Project area, significant impacts to species with a moderate potential to occur are considered unlikely.

Based on the results of the desktop assessment and field survey, a significant impact assessment (SIA) was undertaken for *Acacia attenuata* (refer to Attachment D). The SIA concluded that it is unlikely that the Project will have a significant impact on the population size and viability and/or important habitat for the species. However, a number of mitigation measures have been proposed in accordance with the recovery plan for the species (refer to Attachment D and Section 5 of this referral).

# Threatened ecological communities

The field survey confirmed the presence of the 'subtropical and temperate coastal saltmarsh threatened ecological community' within the Project area (refer to Attachment D). This community is listed as Vulnerable under the EPBC Act, and therefore is not considered an MNES for the purposes of Part 3 of the EPBC Act (requirements for environmental approvals). As such, no significant impact assessment was prepared.

# 3.1 (e) Listed migratory species

# Description

Database searches identified 70 migratory species as potentially occurring within a 10 km radius of the Project area. Of these, 20 are considered to have a moderate likelihood of occurring in habitats associated with the Project (refer to Attachment D).

While some migratory bird species may use habitat within and adjacent to the Project area, the habitat within the Project area cannot be classed as 'important habitat' as defined by the EPBC Act Policy Statement 1.1 Significant Impact Guidelines (Australian Government, 2013a), as the site did not contain the following:

- habitat utilised by a migratory species occasionally or periodically within a region that supports an
  ecologically significant proportion of the population of the species
- habitat that is of critical importance to the species at particular life-cycle stages
- habitat utilised by a migratory species which is at the limit of the species range
- habitat within an area where the species is declining.

Nature and extent of likely impact

Address any impacts on the members of any listed migratory species, or their habitat.

Approximately 1.6 ha of migratory species habitat is expected to be impacted by the Project (refer to Attachment D). This will occur within the coastal saltmarsh, rocky tidal estuary inlet and the estuary mangrove shrubland communities.

Although the resources provided in these habitats broadly fit the requirements for migratory shorebird species in the form of foraging habitat, only a proportionately small area of habitat is expected to be impacted by the Project. The removal of this habitat is unlikely to have significant consequences to the conservation of these migratory species, mostly due to the marginal quality of the habitat and that the Project area does not support known important populations. Furthermore, these species do not breed within Australia. Therefore, the Project is unlikely to have a significant impact on migratory species.

# 3.1 (f) Commonwealth marine area

(If the action is  $\underline{in}$  the Commonwealth marine area, complete 3.2(c) instead. This section is for actions taken outside the Commonwealth marine area that may have impacts on that area.)

Description

Commonwealth Marine Areas include marine waters from the boundary of state coastal waters (3 nautical miles from the coast) to 200 nautical miles from the coast. The Mooloolah River does not drain directly to the Commonwealth Marine Area.

Nature and extent of likely impact

Address any impacts on any part of the environment in the Commonwealth marine area.

Given the distance between the Project and the Commonwealth marine area, and the low likelihood of surface water quality impacts from the Project, the Project is unlikely to have an impact on this MNES.

## 3.1 (g) Commonwealth land

(If the action is on Commonwealth land, complete 3.2(d) instead. This section is for actions taken outside Commonwealth land that may have impacts on that land.)

# Description

If the action will affect Commonwealth land also describe the more general environment. The Policy Statement titled Significant Impact Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies provides further details on the type of information needed. If applicable, identify any potential impacts from actions taken outside the Australian jurisdiction on the environment in a Commonwealth Heritage Place overseas.

The MRI Project is not located on Commonwealth land.

# Nature and extent of likely impact

Address any impacts on any part of the environment in the Commonwealth land. Your assessment of impacts should refer to the *Significant Impact Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies* and specifically address impacts on:

- ecosystems and their constituent parts, including people and communities;
- natural and physical resources;
- the qualities and characteristics of locations, places and areas;
- the heritage values of places; and
- the social, economic and cultural aspects of the above things.

No Commonwealth land will be impacted by the MRI Project.

# 3.1 (h) The Great Barrier Reef Marine Park

# Description

The Great Barrier Reef Marine Park is located over 250 km north of the MRI Project.

Nature and extent of likely impact

Address any impacts on any part of the environment of the Great Barrier Reef Marine Park.

Note: If your action occurs in the Great Barrier Reef Marine Park you may also require permission under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act). If so, section 37AB of the GBRMP Act provides that your referral under the EPBC Act is deemed to be an application under the GBRMP Act and Regulations for necessary permissions and a single integrated process will generally apply. Further information is available at www.gbrmpa.gov.au

The MRI Project is unlikely to have an impact on the Great Barrier Reef Marine Park given the distance between the Project and the Marine Park. Additionally, the Marine Park is not located downstream of the Project.

3.1 (i) A water resource, in relation to coal seam gas development and large coal mining development

# Description

If the action is a coal seam gas development or large coal mining development that has, or is likely to have, a significant impact on water resources, the draft *Policy Statement Significant Impact Guidelines: Coal seam gas and large coal mining developments—Impacts on water resources* provides further details on the type of information needed.

The MRI Project is not a coal seam gas development or a large coal mining development.

Nature and extent of likely impact

Address any impacts on water resources. Your assessment of impacts should refer to the draft *Significant Impact Guidelines:* Coal seam gas and large coal mining developments—Impacts on water resources.

Not applicable.

# 3.2 Nuclear actions, actions taken by the Commonwealth (or Commonwealth agency), actions taken in a Commonwealth marine area, actions taken on Commonwealth land, or actions taken in the Great Barrier Reef Marine Park

You must describe the nature and extent of likely impacts (both direct & indirect) on the whole environment if your project:

- is a nuclear action;
- will be taken by the Commonwealth or a Commonwealth agency;
- will be taken in a Commonwealth marine area;
- will be taken on Commonwealth land; or
- will be taken in the Great Barrier Reef marine Park.

Your assessment of impacts should refer to the Significant Impact Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies and specifically address impacts on:

- ecosystems and their constituent parts, including people and communities;
- natural and physical resources;
- the qualities and characteristics of locations, places and areas;
- the heritage values of places; and
- the social, economic and cultural aspects of the above things.

# 3.3 Other important features of the environment

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed above). If at Section 2.3 you identified any alternative locations, time frames or activities for your proposed action, you must complete each of the details below (where relevant) for each alternative identified.

# 3.3 (a) Flora and fauna

A Wildlife Online search identified nine State threatened fauna species that have been recorded within proximity to the MRI Project area. An EPBC Act Protected Matters search identified 33 nationally threatened fauna species as potentially occurring within close proximity to the MRI Project area, based on predictive habitat modelling.

A Wildlife Online search identified eight State threatened flora species that have been recorded in close proximity to the MRI Project area. An EPBC Act Protected Matters search identified 18 nationally threatened flora species as potentially occurring in close proximity to the MRI Project area based on predictive habitat modelling.

An assessment of State listed flora and fauna is not covered by this referral, but will be addressed through the DTMR environmental assessment process separate to this referral. An assessment of the nationally threatened flora and fauna species is provided in Section 3.1(d) of this referral and detailed in Attachment D.

# 3.3 (b) Hydrology, including water flows

The MRI Project is situated within the Mooloolah River catchment. The Mooloolah River catchment and estuary covers an area of 223 km² and discharges to the ocean northeast of the Project, between Mooloolaba and Point Cartwright (Healthy Waterways 2014). The Mooloolah River has perennial flow, regulated to an extent by the Ewen Maddock Dam. Seasonal inundation occurs in adjacent lowlands and areas of impeded flow during peak rainfall periods of summer and autumn. In periods of continuous rainfall and seepage, swamps, island formations and shallow 'lakes' remain waterlogged and inundated for long periods (DoE 2010).

Much of the lower Mooloolah River, where the MRI Project is located, is a tidal waterway (DSDIP 2014a). This lower Mooloolah River has been extensively modified for urban development and canal estates and can be susceptible to rapid flooding (Healthy Waterways 2014).

Discharge from the Mooloolah River catchment is released via the river entrance, which is approximately 100 m wide and has an average depth of 5 m. Sub-tidal reefs are located immediately west of the Mooloolah River mouth, and are influenced by sediment discharge from the catchment. Also offshore from the river mouth are two significant marine areas that support temperate reefs; those being the ex-HMAS Brisbane Conservation Park (7.5 km north-northeast) and the Gneering Shoals (5.5 km east-northeast) (SKM 2009b).

The MRI Project traverses the Mooloolah River in a number of locations (to the southwest, south and southeast of the existing interchange). The MRI Project also traverses the downstream extent of Mountain Creek, which is a tributary that flows into the Mooloolah River just south of the existing Sunshine Motorway traffic bridge (southwest of the existing interchange). This section of Mountain Creek is considered estuarine.

The area of the MRI Project that encapsulates the existing interchange, as well as the Sunshine Motorway north of the interchange, do not traverse waterways. This area has been highly urbanised and consequently, the natural drainage has been modified significantly. In this section of the MRI Project area, cross drainage facilities such as concrete lined channels, culverts and storage have been installed under and as part of the existing roadway to facilitate water flow and mitigate flooding impacts (SKM 2009b).

Although situated outside of the MRI Project area, Brightwater Lake, a recent 12 ha manmade lake built as part of the Brightwater residential development, is separated from the River by a weir but remains hydraulically connected. Water is exchanged from the river to lake at high tide, where Section B of this referral is located.

# 3.3 (c) Soil and Vegetation characteristics

The Geological Survey of Queensland 1:100,000 map for the MRI Project area indicates that the site is located where three geological formations converge; the Landsborough Sandstone formation (containing sandstone, shale, siltstone and conglomerate), Quaternary age estuarine and lagoonal deposits (comprising of mud clay, minor sand and floodplain alluvium) and Holocene deposits within estuarine channels and banks (comprising of mud sands and minor gravel).

The dominant soil types within the MRI Project area include (CSIRO 2014a):

MF4 Massive Earths: Flat to very gently undulating coastal plain, less than 8 m above sea level with a
few low sandy rises (planed off sandstone hills). Soils of this unit are comprised of acid grey friable
massive earths with occurrences of friable grey duplex soils and yellow-grey duplex soils in some
localities.

Cb36 Sands: Flat to very gently undulating coastal plain, less than 8 m above sea level. The dominant soil is leached sands on heath plains. Marginal to the heath plains, grey duplex soils may occur. Other soils include sandy acidic yellow mottled duplex over clay D horizons on low sandy banks; grey acid structured earths along local creek flats; and white loose siliceous sands on beach dunes.

The dominant soil type (acid grey friable earths) of the MF4 Massive Earths unit is ranked as low on the erodibility class for soils. However, these soils are prone to compaction (leading to greater runoff and erosion) and the surface soil is prone to crusting and hard-setting. As such, the soils of the MF4 Massive Earths unit are considered to be vulnerable to wind and water erosion following clearing.

The Cb36 Sands unit comprises soils that generally have a low to moderate erosion potential with the leached sands and grey acidic soils of this unit being the most susceptible to wind erosion if vegetative cover is removed. The sandy acidic yellow soils present on low sandy banks are susceptible to surface slaking and hard-setting and therefore a moderate erosion potential exists if appropriate erosion and sediment control measures are not implemented during construction. The grey acid structured earths that occur along local creek flats are prone to compaction which may lead to greater runoff and erosion particularly when vegetation cover is minimal.

The majority of the land directly adjacent to the Mooloolah River is mapped as a Coastal Hazard – Erosion Prone Area (DSDIP 2014a). Therefore, the potential exists for erosion to occur within the MRI Project area if appropriate erosion and sediment control measures are not implemented during construction.

The Atlas of Australian Acid Sulfate Soils indicates that a large part of the MRI Project area has a High probability of acid sulfate soil occurrence (CSIRO 2014b). Previous geotechnical investigations for the planning and design of the Mooloolah River Bridge indicated that potential acid sulfate soils exist in the MRI Project area (SKM 2001). The remainder of the MRI Project area, primarily the higher elevations, is Low to Extremely Low probability of occurrence.

Although contaminated land is present within the MRI Project area, none occurs on the land that is subject to this referral.

3.3 (d) Outstanding natural features

As discussed in Section 3.3(b) of this referral, the MRI Project is located adjacent to the Mooloolah River, one of the outstanding natural features of the area.

# Section A

Land in Section A is highly disturbed, adjacent to urban development and contains an existing fire trail. Part of Lot 763 on SP26364 has been cleared and fenced for a Queensland Health facility. The majority of Lot 762 on Plan SP263648 within the Project area is undeveloped. A narrow fire trail extends along the southern edge of Section A (refer to Attachment A, Figures 1.1 and 2.1A).

## Section B

Section B is undeveloped land bordering the western side of the Mooloolah River, south of the existing interchange (refer to Attachment A, Figures 1.1 and 2.1B). The adjacent land is comprised of small lot residential development.

## Section C

Section C is, bound by Nicklin Way to the north and residential development to the south (refer to Attachment A, Figures 1.1 and 2.1C). The landform within Section C has been developed into a broad swale drain and includes a concrete footpath and street tree planting.

### Section A

A large portion of Lot 763 on Plan SP26364 within Section A has been cleared and fenced for a Queensland Health facility. The majority of Lot 762 on Plan SP263648 within the Project area contains remnant regional ecosystems (REs). The following vegetation communities and REs were verified and mapped in detail within Section A (refer to Attachment D):

- remnant low closed heath on coastal sands with Banksia robur, Xanthorrhoea fulva, Boronia filicifolia, Baeckea frutescens, Leucopogon leptospermoides, Empodisma minus, Baumea rubiginosa and Schoenus calostachyus (RE 12.2.12)
- remnant Melaleuca quinquenervia open forest on vegetated swales with Elaeocarpus reticulatus Schoenus brevifolius, Juncus sp. and Blechnum indicum (RE 12.2.7)
- non-remnant mixed shrubby Eucalypt forest coastal sand plains with Syncarpia glomulifera, E. resinifera, Melaleuca quinquenervia, Allocasuarina littoralis, Acacia sp., Gahnia sieberi and Xanthorrhoea fulva.

# Section B

The dominant vegetation communities within Section B includes mangroves communities and saltpan grass/ sedge land vegetation on tidal flats. There is also a thin (20-30 m) strip of disturbed Melaleuca forest along the western edge of Section B. The following vegetation communities and REs were verified and mapped within Section B (refer to Attachment D):

- remnant Avicennia marina and Bruquiera gymnorhiza closed to open shrubland (RE 12.1.3) on tidal
- remnant Sporobolus virginicus, Baumea rubiginosa, Juncus kraussii grass/ sedge lands on tidal salt marsh (RE 12.1.2)
- non-remnant Melaleuca quinquenervia open forest with Casuarina glauca, Lophostemon suaveolens, Melastoma malabathricum, Acacia melanoxylon, Blechnum indicum, Imperata cylindrica and Phragmites australis on coastal alluvium.

# Section C

The vegetation community in Section C has been highly modified by development. The vegetation includes planted landscape trees and shrubs and cleared parkland (refer to Attachment D).

3.3 (f) Gradient (or depth range if action is to be taken in a marine area)

Topography within the MRI Project area consists of a low, generally flat floodplain associated with the Mooloolah River. The maximum elevation is approximately 10 m Australian Height Datum (AHD) at the intersection of Kawana Way and the Sunshine Motorway and at the MRI-Sunshine Motorway overpass. The lowest elevation is approximately 2 m AHD, located at the intersection of the Sunshine Motorway and Nicklin Way.

3.3 (g) Current state of the environment Include information about the extent of erosion, whether the area is infested with weeds or feral animals and whether the area is covered by native vegetation or crops.

Four declared pest plants and/or environmental weeds were recorded within the Project area (refer to Attachment D). Of the pest plant species recorded, Asparagus aethiopicus was the most abundant (up to 20% of ground cover) in the understory.

Desktop assessment indicates that 34 introduced pest fauna species are likely to occur in a 10 km radius of the Project area. Six of these species, including the black rat, spotted turtle dove, Indian myna, fox, cat and dog were recorded within the Project area during field surveys.

## Section A

A large portion of Lot 763 on Plan SP26364 within Section A has been cleared and fenced for a Queensland Health facility. The majority of Lot 762 on Plan SP263648 within the Project area contains remnant REs.

# Section B

The dominant vegetation communities within Section B includes mangroves communities and saltpan grass/ sedge land vegetation on tidal flats. There is also a thin (20-30 m) strip of disturbed Melaleuca forest along the western edge.

# Section C

The vegetation community in Section C has been highly modified by development. The vegetation includes planted landscape trees and shrubs and cleared parkland.

3.3 (h) Commonwealth Heritage Places or other places recognised as having heritage values

There are no world or national heritage places within a 10 km radius of the Project. The nearest world heritage property is Fraser Island, located approximately 100 km north of the Project. The nearest national heritage place is the Wide Bay Military Reserve, located approximately 85 km north of the Project.

3.3 (i) Indigenous heritage values

DTMR is committed to meeting its statutory Cultural Heritage, 'Duty of Care' and other responsibilities by working in partnership with Indigenous people and the wider community to maintain and protect the Indigenous and Historical Cultural Heritage values of specific places as well as objects significant to Indigenous cultural tradition.

Searches of the Cultural Heritage Database and Register by the Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP, formerly DATSIMA) were undertaken to identify the recorded Indigenous cultural sites within and adjacent to the MRI Project. The searches indicated that 15 recorded sites are located within the MRI Project, and an additional 5 are within 150 m of the boundary of the MRI Project.

It cannot be the assumed that the recorded sites are a conclusive representation of all archaeological materials and sites within the MRI Project area. First, not all of the MRI Project area has been surveyed. Second, where surveys have been conducted and sites identified, ground surface visibility and access commonly limit the rigour of the survey, as was the case in the MMTC Caloundra to Mooloolaba Road project cultural heritage surveys in 2007 (Davies Heritage Consultants). Therefore, previously recorded cultural heritage sites provide an indication only of the cultural sensitivity of areas within the MRI Project area. The prominence of identified sites suggests that additional undetected sites of cultural significance may exist within undisturbed areas of the Project.

DTMR has been working with the Traditional Owners to ensure cultural heritage values of the area are managed and protected.

3.3 (j) Other important or unique values of the environment Describe any other key features of the environment affected by, or in proximity to the proposed action (for example, any national parks, conservation reserves, wetlands of national significance etc.).

The Lower Mooloolah River, together with the Mooloolah River National Park, is listed as a Directory of Important Wetlands in Australia 'Nationally Important Wetland'. Reflecting this national significance, the section of the Lower Mooloolah River that the MRI Project traverses is mapped as a 'high ecological significance wetland' on Queensland Government's SPP mapping (DSDIP 2014b).

The MRI Project is located approximately 12 km north of the Moreton Bay Ramsar wetland. As the MRI Project is not located within a catchment that drains into this internationally significant wetland, it is unlikely that the wetland will be impacted by works associated with the MRI Project (WorleyParsons 2011).

The MRI Project is not within the Great Barrier Reef declared area.

3.3 (k) Tenure of the action area (eg freehold, leasehold)

The following tenures are present in the Project area:

- Site A: 762/SP263648 (Freehold); 763/SP263648 (Freehold); 638/CG6390 (Reserve)
- Site B: 9027/SP245187 (Freehold); 9116/SP273993 (Freehold)
- Site C: 497/SP111652 (Reserve).
- 3.3 (I) Existing land/marine uses of area

## Section A

Land in Section A is highly disturbed, adjacent to urban development and contains an existing fire trail. Part of Lot 763 on SP26364 has been cleared and fenced for a Queensland Health facility (refer to Attachment A, Figures 1.1 and 2.1A).

# Section B

Section B is undeveloped land bordering the western side of the Mooloolah River, south of the existing MRI. The adjacent land is comprised of small lot residential development (refer to Attachment A, Figures 1.1 and 2.1B).

## Section C

Section C is highly disturbed. It is bound by Nicklin Way to the north and residential development to the south. The landform within Section C has been developed into a broad swale drain and includes a concrete footpath and street tree planting (refer to Attachment A, Figures 1.1 and 2.1C).

3.3 (m) Any proposed land/marine uses of area

No known land uses are proposed for the Project area, outside of the current proposed development.

# 4 Environmental outcomes

Provide descriptions of the proposed environmental outcomes that will be achieved for matters of national environmental significance as a result of the proposed action. Include details of the baseline data upon which the outcomes are based, and the confidence about the likely achievement of the proposed outcomes. Where outcomes cannot be identified or committed to, provide explanatory details including any commitments to identify outcomes through an assessment process.

If a proposed action is determined to be a controlled action, the Department may request further details to enable application of the draft *Outcomes-based Conditions Policy 2015* and *Outcomes-based Conditions Guidance 2015* (http://www.environment.gov.au/epbc/consultation/policy-guidance-outcomes-based-conditions), including about environmental outcomes to be achieved, details of baseline data, milestones, performance criteria, and monitoring and adaptive management to ensure the achievement of outcomes. If this information is available at the time of referral it should be included.

General commitments to achieving environmental outcomes, particularly relating to beneficial impacts of the proposed action, CANNOT be taken into account in making the initial decision about whether the proposal is likely to have a significant impact on a matter protected under the EPBC Act. (But those commitments may be relevant at the later assessment and approval stages, including the appropriate level of assessment, and conditions of approval, if your proposal proceeds to these stages).

The current referral, for the development of areas outside of the approved MMTC and Sunshine Motorway Duplication areas, concludes that the proposed action is unlikely to have significant impacts on a matter protected under the EPBC Act and is therefore not a controlled action (refer to Attachment D). However, mitigation measures to avoid or reduce impacts are provided in Section 5 of this referral.

Additionally, the existing approval for MMTC (2008/4361) is subject to conditions set by the DoE, as specified in the decision notice dated 1 September 2010 (refer to Attachment C). These conditions seek to achieve positive environmental outcomes for impacts to MNES identified from the area, including *Acacia attenuata* and the wallum sedge frog (*Litoria olongburensis*). As per the approval conditions, commitments to achieving environmental outcomes include the preparation of a Biodiversity Offsets Strategy, pre-construction surveys and ongoing habitat and population monitoring.

# 5 Measures to avoid or reduce impacts

Note: If you have identified alternatives in relation to location, time frames or activities for the proposed action at Section 2.3 you will need to complete this section in relation to each of the alternatives identified.

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

For any measures intended to avoid or mitigate significant impacts on matters protected under the EPBC Act, specify:

- what the measure is,
- how the measure is expected to be effective, and
- the time frame or workplan for the measure.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

Provide information about the level of commitment by the person proposing to take the action to achieve the proposed environmental outcomes and implement the proposed mitigation measures. For example, if the measures are preliminary suggestions only that have not been fully researched, or are dependent on a third party's agreement (e.g. council or landowner), you should state that, that is the case.

Note, the Australian Government Environment Minister may decide that a proposed action is not likely to have significant impacts on a protected matter, as long as the action is taken in a particular manner (section 77A of the EPBC Act). The particular manner of taking the action may avoid or reduce certain impacts, in such a way that those impacts will not be 'significant'. More detail is provided on the Department's web site.

For the Minister to make such a decision (under section 77A), the proposed measures to avoid or reduce impacts must:

- clearly form part of the referred action (eg be identified in the referral and fall within the responsibility of the person proposing to take the action),
- be must be clear, unambiguous, and provide certainty in relation to reducing or avoiding impacts on the matters protected, and

must be realistic and practical in terms of reporting, auditing and enforcement.

More general commitments (eg preparation of management plans or monitoring) and measures aimed at providing environmental offsets, compensation or off-site benefits CANNOT be taken into account in making the initial decision about whether the proposal is likely to have a significant impact on a matter protected under the EPBC Act. (But those commitments may be relevant at the later assessment and approval stages, including the appropriate level of assessment, if your proposal proceeds to these stages).

Outlined below are the general and species specific measures proposed to mitigate impacts to MNES (refer to Attachment D).

#### 5.1 General flora and fauna mitigation measures

# 5.1.1 Pre-construction phase

For the Project to progress from a State perspective, it will need to pass through both business case and detailed design phases. As per DTMR's Environmental Processes Manual (2013), an environmental assessment process runs complementary to these phases in which environmental attributes are identified, impacts assessed and mitigation strategies formulated and applied. Subsequent studies and reports associated with these project phases are therefore likely to identify and recommend strategies that minimise environmental impacts (including MNES listed species and/or communities).

General mitigation measures to be implemented during the pre-construction phase of the Project include infrastructure design and work area layout. Where practical, the detailed design of the Project should minimise impacts to habitat for MNES listed flora and fauna species and/or communities.

More specific mitigation that will be applied for this project is as follows:

# 5.1.1.1 Fauna sensitive design

The interchange upgrade will be required to be designed in accordance with the Fauna Sensitive Road Design Manual (Department of Transport and Mail Roads, 2010) to mitigate the potential impacts of fragmentation and fauna mortality. Where appropriate and practicable, the design should incorporate the use of fauna crossing structures, barrier fencing and habitat enrichment areas to ensure impacts to fauna populations and movement are minimised.

By use of infrastructure including exclusion fencing and retrofitted fauna friendly culverts, the ability for animals to move through the landscape may be improved.

# 5.1.1.2 Flora and fauna management plan

As part of the detailed design, and prior to commencement of construction, detailed mitigation measures for MNES listed flora and fauna should be developed and presented in the Environmental Management Plan (EMP) (Construction). The EMP (Construction) should be developed to ensure that the Project complies with the principles outlined in the approved Species Management Program for least concern wildlife granted to DTMR by the Queensland Department of Environment and Heritage Protection (formerly DERM) in December 2009 and should include, where appropriate, procedures for:

- staff and contractor inductions to define their role and responsibilities for the protection and/or minimisation of impacts to all native biodiversity
- pre-clearing surveys and development of vegetation clearing protocols, including:
  - o measures to retain animal breeding places associated with the Project area if they pose a low risk to the safe use of the infrastructure
  - o the use of a suitably qualified koala specified fauna spotter/catcher during clearing activities
  - o ensuring vegetation clearing is conducted in a staged manner to ensure that any native fauna living near the clearance zone have time to move out of the areas of disturbance
  - o sequential vegetation clearance which is to be directed away from any existing road and towards any retained vegetation or habitat linkages
  - identification and retention of significant habitat trees within the road reserve, where practical.
- timing of maintenance activities to avoid breeding seasons, where practical

- rehabilitation and restitution of adjoining habitat, where possible
- a flora and fauna monitoring program for the Project to better understand and manage impacts and rehabilitation actions to flora and fauna.

The EMP (Construction) should include clear objectives and actions for the Project to minimise human interferences to flora and fauna and minimise impact to threatened species and their habitat.

# 5.1.1.3 Delineation of vegetation clearing

The boundaries of areas to be cleared should be clearly defined on-ground and 'no go zones' clearly signposted and fenced to prevent unauthorised clearing and vehicle and/or pedestrian traffic. Relevant construction plans are to be clearly labelled with the intent and exclusion conditions of these zones. Exclusion conditions may include (but are not limited to):

- grading of the sides of trenches/ditches for structure foundations to allow any trapped animals to escape
- no dumping of soil, organic or inorganic matter into surrounding vegetated areas (the creation of microhabitat (discussed below) would represent an exception to the dumping of organic matter)
- no refuelling of machinery and equipment in the vicinity of waterways and sensitive vegetation
- no unrestricted use of herbicide, particularly foliar application.

#### 5.1.2 Construction phase

General mitigation measures to be implemented during the construction phase of the Project include engaging suitably qualified koala specified fauna spotter catcher services, implementation of weed protocols, creation of micro-habitat features and monitoring.

# 5.1.2.1 Fauna spotter catcher

A registered fauna spotter catcher/ecologist should be employed for the construction phase of the Project, to implement a protocol of best management practices. Significant habitat features should be flagged prior to clearing events and these areas supervised by an appropriately experienced ecologist. Identification within the clearing supervision protocol should be the flagging of hollow bearing trees followed by the removal of vegetation surrounding them. After 24 to 72 hours, these trees should then be removed. The objective of this process is to enable hollow dependent fauna an opportunity to move of their own accord as many species utilise multiple den/roost sites within a given home range.

Certain areas would be identified and flagged as significant such as old-growth trees with hollow resources and on site identification to construction personnel will help reduce/avoid clearing. Where required, native fauna situated within areas to be cleared would then be relocated to a secure area of similar habitat prior to the commencement of vegetation clearance works by a registered fauna spotter/catcher. Should any removal and relocation of nests be required, it is to be undertaken by suitably qualified and experienced persons and advice sought where necessary.

With respect to koala habitat, all vegetation clearing will be required to be undertaken in accordance with the relevant policies of the koala plan and in the presence of a koala specific fauna catcher.

# 5.1.2.2 Weed control protocol

The construction contractor should develop and implement a weed control protocol to be implemented during the construction phase for the entire Project area. This would aim to stop the spread of declared pest plants and other significant environmental weeds. This protocol would include sourcing fill materials free of weed seeds/fire ants and implementing wash down procedures during construction. In addition, the contractor shall survey and mark occurrences of Class 1 and 2 declared plants within the construction footprint and arrange for declared plants to be removed and disposed of to landfill prior to clearing and grubbing.

# 5.1.2.3 Creation of microhabitat

The registered fauna spotter catcher engaged for the construction process will guide construction workers and ensure the creation of microhabitats along the Project area, as well as within neighbouring vegetation communities. Large woody debris and rocks should be strategically placed to create suitable microhabitat habitat for ground–dwelling fauna.

# 5.1.2.4 Monitoring

Monitoring the design and implementation of mitigation measures is important to ensure their effectiveness. Details of mitigation measures undertaken must be recorded along with any subsequent outcomes in the EMP (Construction).

# 5.1.3 Operation phase

General mitigation measures to be implemented during the operation phase of the Project include rehabilitation and species specific mitigation measures.

# 5.1.3.1 Rehabilitation

A bushland regeneration approach to landscaping and revegetation should be employed in accordance with the Road Landscape Manual 2<sup>nd</sup> Edition (DTMR 2013). The natural regeneration and landscaping will aim to achieve a self–sustaining endemic plant community which includes equivalent species to those impacted by the Project, where practical. Due to the degraded condition and presence of weeds within and adjacent to the Project area, this poses an opportunity for the Project to improve the habitat values of nearby vegetation such as:

- vegetation containing habitat for MNES listed threatened flora and or fauna species (i.e. wallum sedge frog, water mouse and *Acacia attenuata*)
- vegetation associated with the Vulnerable listed 'coastal saltmarsh'

Bushland regeneration sites should receive appropriate care and maintenance to enable the establishment and continuation of re–established native vegetation. The landscape plan should also incorporate the use of locally sourced seed/tube stock for use in planting/regeneration activities.

# 5.2 Species specific mitigation measures

# 5.2.1 Acacia attenuata

Whilst the Project is unlikely to result in significant impacts to an important population of *A. attenuata*, to minimise impacts and to support recovery objectives for the species, the following mitigation measures have been proposed:

- seed collection (where possible) and propagation to maintain genetic diversity of the sub-population
- replanting of propagated individuals in to areas of habitat protected in longevity (i.e. offsets areas or nature refuges)
- weed and exotic/ invasive grass control on road verges and adjacent known A. attenuata habitat
- prevention of too frequent slashing (1-6 months) and promoting longer term control (>5 years) in areas of known *A. attenuata* habitat on road verges and adjacent known *A. attenuata* habitat
- preparation of a monitoring plan for impacted A. attenuata populations on the road verges and replanted areas.

# 5.2.2 Water mouse (Xeromys myoides)

The following mitigation measures have been proposed for the water mouse:

• vehicles and machinery should not be parked or driven in habitat adjacent to the Project area

- the status of the possible water mouse nests located within the Project area will need to be checked to ensure that no individuals are located within the nest prior to disturbance. This will need to be undertaken by a suitably qualified spotter catcher.
- 5.2.3 Grey-headed flying-fox (*Pteropus poliocephalus*)

No specific mitigation measures have been proposed for the grey-headed flying-fox, refer to the generic flora and fauna mitigation measures.

5.2.4 Painted snipe (Rostratula australis)

No specific mitigation measures have been proposed for the painted snipe, refer to the generic flora and fauna mitigation measures.

5.2.5 Wallum sedge frog (Litoria olongburensis)

Specific mitigation measures developed to minimise impacts to the wallum sedge frog should include, as a minimum:

- exposed soils should be revegetated with appropriate species to prevent infestation by weeds and the impact that this will have on microhabitats
- mitigation measures for the design and construction of the Project to ensure impacts on water quality through contamination and/or sedimentation are avoided
- timing of construction adjacent to habitat areas outside of the breeding season (late winter) to minimise impacts of noise and vibration on any potential populations
- implementation of hygiene protocols to prevent the spread of amphibian chytrid fungus disease to frog populations.

# 5.2.6 Koala (Phascolarctos cinereus)

No specific mitigation measures have been proposed for the koala, refer to the generic flora and fauna mitigation measures.

# 5.2.7 Migratory species

No specific mitigation measures have been proposed for migratory species, refer to the generic flora and fauna mitigation measures.

# 6 Conclusion on the likelihood of significant impacts

Identify whether or not you believe the action is a controlled action (i.e. whether you think that significant impacts on the matters protected under Part 3 of the EPBC Act are likely) and the reasons why.

6.1	Do you THINK your proposed action is a controlled action?
✓	No, complete section 6.2
	Yes, complete section 6.3

# 6.2 Proposed action IS NOT a controlled action.

Specify the key reasons why you think the proposed action is NOT LIKELY to have significant impacts on a matter protected under the EPBC Act.

As detailed in the attached MNES Assessment Report (refer to Attachment D), the proposal action is not likely to have significant impacts on MNES.

# Threatened ecological communities

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The field survey confirmed the presence of the 'subtropical and temperate coastal saltmarsh threatened ecological community' within the Project area. However, given the coastal saltmarsh TEC is listed as Vulnerable, it was is not considered an MNES for the purposes of Part 3 of the EPBC Act (requirements for environmental approvals). Therefore, no significant impact assessment was prepared.

# Threatened flora species

Of the 18 threatened flora species returned from desktop searches with potential to occur within proximity to the Project area, 1 species (Acacia attenuata; Vulnerable) was recorded within the Project area during field surveys. Four species, including three Endangered and one Vulnerable, are considered to have a moderate likelihood of occurring within the Project area. Given the level of survey effort and small area of suitable habitat within the Project area, significant impacts to species with a moderate potential to occur are considered unlikely.

Based on the results of the desktop assessment and field survey, a significant impact assessment (SIA) was undertaken for Acacia attenuata. The SIA concluded it is unlikely that the Project will have a significant impact on the population size and viability and/or important habitat for the species. However, a number of mitigation measures have been proposed in accordance with the recovery plan for the species (Section 5).

# Threatened fauna species

Of 33 threatened fauna species returned from desktop searches with the potential to occur within proximity to the Project area, 3 species were recorded on site. These include the water mouse (Xeromys myoides: Vulnerable), wallum sedge frog (Litoria olongburensis; Vulnerable) and grey-headed flying-fox (Pteropus poliocephalus; Vulnerable). Four species were considered to have a moderate or greater likelihood of occurring within proximity to the Project area. These include the curlew sandpiper (Calidris ferruginea; Critically Endangered), eastern curlew (Numenius madagascariensis; Critically Endangered), painted snipe (Rostratula australis; Vulnerable) and koala (Phascolarctos cinereus; Vulnerable).

Assessment of the water mouse, wallum sedge frog and grey-headed flying-fox concluded that, although small areas of occupied habitat occur within or adjacent to the Project area, onsite habitats were not of sufficient size or quality to be significant to the maintenance of local populations. This is primarily due to the abundance of large areas of higher quality habitat in proximity to the Project area, including the nearby Mooloolah River National Park.

Based on the results of the desktop assessment and field survey, significant impact assessments were conducted for the following MNES fauna species that were recorded, or considered likely to occur, within the Project area:

- water mouse (Xeromys myoides)
- grey-headed flying-fox (Pteropus poliocephalus)
- painted snipe (Rostratula australis)
- wallum sedge frog (Litoria olongburensis)
- koala (Phascolarctos cinereus)
- migratory species.

The grey-headed flying-fox has well known and distant (up to 50 km) foraging movements; potential foraging habitat areas onsite are considered insignificant in comparison to foraging resources in the wider area.

The water mouse, although confirmed at the edges of Section B, is unlikely to be significantly affected in the locality. Potential habitats in Section B are degraded by adjacent development impacts and extant individuals are expected to retain existing linkages to higher quality habitats along the Mooloolah River.

Although wallum sedge frogs were recorded in Section A and there are potential breeding habitats for this species within the Project area, similar habitats exist outside of the Project area. Additionally, there is an abundance of higher quality habitat for this species in the nearby Mooloolah River National Park.

Assessment of the four species (curlew sandpiper, eastern curlew, painted snipe and koala) that were initially considered to have a moderate or greater likelihood of occurrence determined that potential habitats are unlikely to be utilised by the species. The habitat is considered too fragmented within the Project area to be accessed by koalas. The three shorebird species are unlikely to use potential habitats in Section A due to the proximity of urban environments and the poor quality of substrates for foraging purposes. Additionally, the proximity of mangroves along shorebird habitat at the river's edge makes these species vulnerable to attack from predators, such as the white-bellied sea-eagle and dogs.

Impacts within the Project area are unlikely to significantly affect the viability of threatened species populations occurring on the site or in its wider locality, provided mitigation measures are incorporated into all Project phases to prevent both direct and indirect impacts from occurring outside of the Project boundary.

# 6.3 Proposed action IS a controlled action

Type 'x' in the box for the matter(s) protected under the EPBC Act that you think are likely to be significantly impacted. (The 'sections' identified below are the relevant sections of the EPBC Act.)

Matters likely to be impacted
World Heritage values (sections 12 and 15A)
National Heritage places (sections 15B and 15C)
Wetlands of international importance (sections 16 and 17B)
Listed threatened species and communities (sections 18 and 18A)
Listed migratory species (sections 20 and 20A)
Protection of the environment from nuclear actions (sections 21 and 22A)
Commonwealth marine environment (sections 23 and 24A)
Great Barrier Reef Marine Park (sections 24B and 24C)
A water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E)
Protection of the environment from actions involving Commonwealth land (sections 26 and 27A)
Protection of the environment from Commonwealth actions (section 28)

Commonwealth Heritage places overseas (sections 27B and 27C)
Specify the key reasons why you think the proposed action is likely to have a significant adverse impact on the matters identified above.

7 Environmental record of the responsible party

NOTE: If a decision is made that a proposal needs approval under the EPBC Act, the Environment Minister will also decide the assessment approach. The EPBC Regulations provide for the environmental history of the party proposing to take the action to be taken into account when deciding the assessment approach.

		Yes	No
7.1	Does the party taking the action have a satisfactory record of responsible environmental management?  Provide details	✓	
	To date, DTMR has successfully met its 'Duty of Care' to the environment, as per Section 319 of the Queensland <i>Environmental Protection Act 1994</i> . Environmental impact minimisation and mitigation measures are implemented for all projects and these requirements are communicated to relevant parties through a number of processes and documents. These include Environmental Management Plans, contract documentation and toolbox talks on site. Such documents are also utilised during audits to ensure documented processes are implemented on the ground.		
	It is also in DTMR's best interest, as a good corporate citizen, to rectify any breaches in environmental processes within short timeframes. In addition, if unforeseen circumstances arise and unexpected environmental impacts are experienced, DTMR and its Contractors have and are willing to rectify such situations to ensure minimal damage is done, as well as restoration of the environment in accordance with DTMR procedural instructions or direction given by the responsible environmental agency.		
7.2	Has either (a) the party proposing to take the action, or (b) if a permit has been applied for in relation to the action, the person making the application - ever been 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?  If yes, provide details		✓
	Not applicable.		
7.3	If the party taking the action is a corporation, will the action be taken in accordance with the corporation's environmental policy and planning framework?  If yes, provide details of environmental policy and planning framework  DTMR has recognised a need for environmental compliance as part of its core business and has an established Environmental Management System. DTMR's environmental policy and planning framework forms a functional role in the environmental assessment of their projects and business. This framework flows down from DTMR's Strategic Plan which requires DTMR to undertake 'environmental management to support environmental conservation' through to corporate policies, strategies and documents.	<b>√</b>	
	The overall strategic environmental outcome is implemented through the DTMR Environmental Processes Manual (August 2013). The environmental assessment processes undertaken in accordance with the manual are then implemented during construction through DTMR Technical Specification MRTS51 Environmental Management and MRTS52 Erosion and Sediment Control, which forms part of all construction tender documentation. There are a variety of other environmental policies and documents which DTMR has developed to address some of the more specific environmental issues such as cultural heritage and noise, with all of these specialist		

policies providing support to the broader environmental assessment process
undertaken by DTMR.

7.4 Has the party taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act? Provide name of proposal and EPBC reference number (if known)

# DTMR have referred the following actions:

Reference	Title of referral	Date received
2015/7552	Department of Transport and Main Roads/Transport - land/Mackay/QLD/Eton Range Realignment, Peak Downs Hwy, QLD	02 Sep 2015
2015/7464	Department of Transport and Main Roads/Transport - land/Glenview/QLD/Bruce Highway upgrade Caloundra to Sunshine Motorway Project no: 280/10A/1	21 Apr 2015
2015/7444	Department of Transport and Main Roads/Transport - land/South West Region /Darling Downs/Toowoomba /QLD/Warrego Highway Passing Lanes-Oakey to Dalby, QLD	11 Mar 2015
2014/7394	Department of Transport and Main Roads/Transport - land/Gympie/QLD/Bruce Highway upgrade and realignment- Cooroy to Curra Section, QLD	03 Dec 2014
2013/7106	The Department of Transport and Main Roads/Transport - land/Brisbane/QLD/Underground Bus and Train Project	24 Dec 2013
2013/7066	Queensland Department of Transport and Main Roads/Transport - land/Nudgee Road to Bracken Ridge/QLD/Gateway Upgrade North (GUN) Project	25 Nov 2013
2013/6912	Department of Transport and Main Roads/Transport - land/West of Bruce Hwy between Yeppen Roundabout and Egan's Hill/QLD/Yeppen South Roadworks Project	24 Jun 2013
2013/6877	Department of Transport and Main Roads /Transport - land/Maleny- Kenilworth Road, Conondale/QLD/Grigor Bridge Replacement Project	24 May 2013
2013/6815	Department of Transport and Main Roads/Transport - land/between Cabbage Tree Ck & Carman Rd, nth of Gin Gin/QLD/Bruce Highway Realignment	08 Apr 2013
2012/6668	Department of Transport and Main Roads /Transport - land/Maleny- Kenilworth Road, Conondale/QLD/Grigor Bridge Replacement Project	04 Dec 2012
2012/6628	Department of Transport and Main Roads/Transport - land/Southeast Queensland/QLD/Roma to Taroom Road Repair and Reconstruction	16 Nov 2012
2012/6562	Department of Transport and Main Roads (QLD)/Transport - land/15km north west of Townsville/QLD/Townsville Ring Road, Section 4, QLD	27 Sep 2012
2012/6485	Department of Transport and Main Roads/Transport - land/Central Highlands Regional Council, Central Queensland/QLD/Repair, reconstruction & rehabilitation of Carnarvon & Dawson Highways, QLD	27 Jul 2012

2012/6457	Department of Transport and Main Roads (QLD)/Transport -	10 Jul
2012/0437	land/Victoria Street Cardwell/QLD/Cardwell Foreshore	2012
	Reconstruction Project	2012
2012/6444	Department of Transport and Main Roads (QLD)/Transport -	02 Jul
2012/0444	land/Central Queensland/QLD/Repair, Reconstruction and	2012
	Rehabilitation of Leichhardt Highway, QLD	2012
2012/6423	Department of Transport and Main Roads/Transport -	12 Jun
	land/Parkwood, Gold Coast/QLD/Upgrade of the Smith Street	2012
	Motorway eastbound lanes and interchange with Labrador-Carrara	
	Rd	
2012/6297	Department of Transport and Main Roads/Transport - land/Adjacent	29 Feb
	to Tuan and Toolara State Forests/QLD/Restoration & rehabilitation	2012
	of sections of the Maryborough to Cooloola Road	
2011/6157	Queensland Government Department of Transport and Main	25 Oct
	Roads/Transport - land/Clayton's Gully/QLD/Realignment of the	2011
	Cunningham Highway	
2011/6024	Department of Transport and Main Roads/Transport - land/Between	05 Jul
	Cooroy and Federal/QLD/Bruce Highway Upgrade - Section A	2011
2011/6001	Department of Transport and Main Roads/Transport - land/Kawana	21 Jun
	Way Interchange to Mooloolah Interchange/QLD/Sunshine	2011
	Motorway Duplication	
2011/5997	Department of Transport and Main Roads/Transport - land/Approx	17 Jun
	4.5km west of Oakey to approx 18km before	2011
	Dalby/QLD/Construction of overtaking lanes at four locations along	
	the Warrego Hwy	
2010/5771	Department of Transport and Main Roads/Transport -	08 Dec
	land/Maryborough to Cooloola Road, Chainages 33.62-33.87 km	2010
	QLD/QLD/Widening and Rehabilitation of Maryborough to Cooloola	
	Road, Fraser Coast, QLD	
2010/5724	Department of Transport and Main Roads/Transport - land/Between	05 Nov
	Cooroy to Sankeys Road at Federal /QLD/14 km upgrade of the	2010
	Bruce Highway	
2010/5699	Department of Transport and Main Roads/Transport - land/21km	21 Oct
	east of Gympie and 54km north-west of Noosa/QLD/Upgrade to the	2010
	existing unsealed section of the Kin Kin Road, Noonan Range	
2010/5673	Department of Transport and Main Roads/Transport - land/Lower	06 Oct
	Beechmont, Gold Coast City/QLD/Beechmont Road Upgrade	2010
2010/5639	QLD Department of Transport and Main Roads/Transport -	10 Sep
	land/Warrego Highway, Darling Downs /QLD/Improvement of a	2010
	section of the Warrego Highway	
2010/5600	Queensland Department of Transport and Main Roads/Transport -	02 Aug
	land/Port of Brisbane Motorway, Lytton Rd, Port Dr/QLD/Upgrade	2010
	into four lane, 90km/hr, 9.6km long motorway	
2010/5585	QLD Department of Transport and Main Roads/Transport -	21 Jul
	land/Approx 55km nth est of Dalby, Bunya	2010
	Highway/QLD/Construction of a truck stopping facility	
2010/5556	Department of Transport and Main Roads/Transport - land/Located	01 Jul
	between Amamoor and Traveston/QLD/Bruce Highway Northern	2010
	Interchange Connection	
2010/5480	Department of Transport and Main Roads/Transport - land/25km	11 May
	south west of Biggenden/QLD/Isis Highway Upgrade between	2010
	Coalstoun Lakes and Ban Ban Springs	1

2010/5427	Department of Transport and Main Roads /Transport -	07 Apr
-	land/Brisbane/QLD/Cross River Rail	2010
2009/5199	Department of Transport and Main Roads/Transport -	17 Nov
	land/Southport, Surfers Paradise and Broadbeach/QLD/Gold Coast	2009
	Rapid Transit Project - Griffith University to Broadbeach	
2009/5163	Department of Transport and Main Roads/Transport -	27 Oct
2000/0100	land/Tanduringie Creek, 13km north of Cooyar/QLD/Clearing of	2009
	Vegetation on Kingaroy-Cooyar Road	2000
2007/3312	Department of Transport and Regional Services/Tourism and	27 Feb
2001/0012	recreation/Settlement/Christmas Island/Swimming Pool modification	2007
2007/3295	Department of Transport and Regional Services/Residential	16 Feb
2001/3233	development/Coconut Grove/Christmas Island/Residential upgrade,	2007
	2 Coconut Grove	2007
2006/2728	Department of Transport and Regional Services/Urban and	31 Mar
	commercial redevelopment/Settlement/Christmas Island/Upgrade of	2006
	Residence, Coconut Grove	
2006/2632	Department of Transport and Regional Services/Urban and	27 Feb
	commercial redevelopment/Settlement/Christmas Island/96-108	2006
	Gaze Road - Residential upgrade	
2004/1887	Department of Transport and Regional Services/Urban and	24 Nov
	commercial new development/West Island/Cocos Keeling	2004
	Island/Buffett Close Residential Development	
2004/1837	Department of Transport and Regional Services/Urban and	21 Oct
	commercial redevelopment/Drumsite/Christmas Island/Dwelling	2004
	demolition, maintenance and carpark/carport/storage shed works	
2004/1745	Department of Transport and Regional Services/Sale or lease of	26 Aug
	Commonwealth property/Norfolk Island/Transfer of Existing Crown	2004
	Leases to Freehold Title	
2004/1534	Department of Transport and Regional Services/Tourism,	24 May
	recreation and conservation management/Jervis Bay/Jervis Bay	2004
	Territory/Clearance of native vegetation to create fire breaks	
2004/1487	Department of Transport and Regional Services/Urban and	28 Apr
	commercial redevelopment/Settlement and Drumsite/Christmas	2004
	Island/Housing and Garden Maintenance Works	
2003/1279	Department of Transport and Regional Services/Tourism,	12 Nov
	recreation and conservation management/Christmas	2003
	Island/Christmas Island/Community Recreation Centre	
2003/1177	Department of Transport and Regional Services/Energy generation	09 Sep
	and supply/Home Island/Cocos Keeling Island/Construction of a	2003
	Power Station	
	Department of Transport and Regional Services/Aviation	10 Sep
2001/434	Department of Transport and Regional Services/Aviation	10 360
2001/434	facilities/Christmas Island/Christmas Island/Christmas Island Airport	2001

# 8 Information sources and attachments

(For the information provided above)

# 8.1 References

- List the references used in preparing the referral.
- Highlight documents that are available to the public, including web references if relevant.
- Bureau of Meteorology (BOM) 2014, Flood warning system for the Mooloolah River, viewed 11 August 2014. http://www.bom.gov.au/gld/flood/brochures/mooloolah/mooloolah.shtml.
- Brightwater Community Association n.d., Photo gallery: Brightwater Lake, viewed 12 August 2014, http://www.brightwater.org.au/imagedetail.aspx?src=/\_photopages/125/Brightwater1.jpg&name=Brightwater
- CSIRO 2014a, Australian Soil Resource Information System Atlas of Australian Soils, viewed 22 August 2014, http://www.asris.csiro.au/themes/Atlas.html.
- CSIRO 2014b, Australian Soil Resource Information System Atlas of Australian Acid Sulfate Soils, viewed 8 August 2014, http://www.asris.csiro.au/themes/AcidSulfateSoils.html.
- Davies Heritage Consultants 2007, Cultural Heritage Assessment of the Proposed Route of the Multi Modal Transport Corridor Between Caloundra and Mooloolaba Road Sunshine Coast, Southeast Queensland, for Department of Main Roads, Brisbane.
- Department of Aboriginal and Torres Strait Islander and Multicultural Affairs (DATSIMA) 2014, Cultural Heritage Database and Register: Cultural heritage search request, viewed 8 August 2014 http://www.datsima.qld.gov.au/datsima/aboriginal-torres-strait-islander/aboriginal-torres-strait-islanderpeoples/aboriginal-and-torres-strait-islander-cultural-heritage/cultural-heritage-search-request.
- Department of the Environment (DoE) 2010, Directory of Important Wetlands in Australia Information sheet: Lower Mooloolah River - QLD187, Australian Government, viewed 12 August 2014, http://www.environment.gov.au/cgi-bin/wetlands/report.pl?smode=DOIW;doiw\_refcodelist=QLD187.
- Department of the Environment (DoE) 2014a, Protected Matters Search Tool, viewed 25 August 2014, http://www.environment.gov.au/topics/about-us/legislation/environment-protection-and-biodiversityconservation-act-1999/protected
- Department of the Environment (DoE) 2014b, SPRAT Species Profile and Threats Database, viewed 25 August 2014, http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.
- Department of the Environment (DoE) 2014c, Search the Australian Heritage Database, Australian Government, viewed 11 August 2014, http://www.environment.gov.au/cgibin/ahdb/search.pl?mode=search\_form;list\_code=RNE.
- Department of the Environment (DoE) 2014d, Interactive Flying Fox Web Viewer, viewed 25 August 2014, http://www.environment.gov.au/biodiversity/threatened/species/flying-fox-monitoring.
- Department of Environment and Resource Management (DERM) 2010, Environmental Protection (Water) Policy 2009: Mooloolah River environmental values and water quality objectives, viewed 19 August 2014, https://www.ehp.gld.gov.au/water/policy/pdf/documents/mooloolah-ev-2010.pdf.
- Department of Environment and Heritage Protection (DEHP) 2013, Registers and inventories: view places in the Queensland Heritage Register, viewed 6 August 2014, https://heritageregister.ehp.gld.gov.au/basicSearch.html.
- Department of Environment and Heritage Protection (DEHP) 2014, Wildlife Online: Request a species list, viewed 25 August 2014, https://environment.ehp.gld.gov.au/report-request/species-list/.
- Department of Natural Resources and Mines (DNRM) 2014, Queensland Globe, viewed 12 August 2014, http://www.dnrm.qld.gov.au/mapping-data/queensland-globe.
- Department of State Development, Infrastructure and Planning (DSDIP) 2014a, SARA mapping online system, viewed 12 August 2014, http://www.dsdip.gld.gov.au/about-planning/sara-mapping-onlinesystem.html.
- Department of State Development, Infrastructure and Planning (DSDIP) 2014b, SPP interactive mapping system, viewed 12 August 2014, http://www.dsdip.qld.gov.au/about-planning/spp-mapping-online-
- Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) 2010, Approval: Multi-Modal Transport Corridor (MMTC), Sunshine Coast, Qld (EPBC 2008/4361), Environmental Assessment Branch.

- Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) 2011, Notification of Referral Decision: not controlled action (Sunshine Motorway Duplication) (EPBC 2011/6001), Environmental Assessment Branch.
- Ecofund Queensland 2010 Environmental Offset Strategy Sunshine Coast Multi-Modal Transport Corridor, Environment Protection Biodiversity conservation Act 1999, for Department of Main Roads, Brisbane.
- Ecofund Queensland 2011, Environmental Offset Strategy Multi-Modal Transport Corridor, Environment Protection Biodiversity conservation Act 1999 Approval, for Department of Main Roads, Brisbane.
- Glen Ingram and Associates & Austecology 2010, Wallum Sedgefrog Litoria Olongburensis Surveys and Habitat Assessments for the Proposed Sunshine Motorway Duplication (Kawana Way to Mooloolah River Interchange) and Multi-modal Transport Corridor (Main Drive to Maroochy Boulevard), for Department of Transport and Main Roads, Brisbane.
- Health Waterways 2014, Ecosystem Health Monitoring Program: Mooloolah River Catchment and Estuary, viewed 12 August 2014, http://www.healthywaterways.org/EcosystemHealthMonitoringProgram/2012ReportCardResults/2012Report CardResults/NorthernCatchments/MooloolahCatchment.aspx.
- Hood 2014, A step in the right direction Queensland's Environmental Offsets Framework 2014, Minter Ellison Presentation for PIA 14 July 2014.
- Parsons Brinckerhoff 2008. Multi-Modal Transport Corridor Main Drive to Creekside Boulevard: Flora and Fauna Surveys, for Department of Main Roads, Brisbane.
- Parsons Brinckerhoff 2009, Multi-Modal Transport Corridor Environmental Approval Report, for Department of Main Roads, Brisbane.
- Parsons Brinckerhoff 2010. Multi-Modal Transport Corridor Supplementary Response to Information Request (Referral reference number: 2008-4361), for Department of Main Roads, Brisbane.
- Queensland Government 2014, Nature Conservation (Wildlife) Regulation 2006 (9 May 2014 print), viewed 8 August 2014, https://www.legislation.gld.gov.au/LEGISLTN/CURRENT/N/NatureConWiR06.pdf
- Sinclair Knight Merz (SKM) 2001, Multi Modal Transport Corridor: Nicklin Way-Sunshine Motorway Link Planning and Preliminary Design, for Department of Main Roads, Brisbane.
- Sinclair Knight Merz (SKM) 2007, Multi-Modal Transport Corridor Environmental Management Plan Geotechnical Drilling - Buderim Landfill, for Department of Transport and Main Roads, Brisbane.
- Sinclair Knight Merz (SKM) 2008a, Multi-Modal Transport Corridor, Main Drive-Maroochy Boulevard: Interim report on environmental conditions (Draft), for Department of Transport and Main Roads, Brisbane.
- Sinclair Knight Merz (SKM) 2008b. Referral under the Environment Protection and Biodiversity Conservation Act1999 for the Multi-Modal Transport Corridor Project, for Department of Transport and Main Roads, Brisbane.
- Sinclair Knight Merz (SKM) 2008c, Multi-Modal Transport Corridor: Marine environment report (Draft), for Department of Transport and Main Roads, Brisbane.
- Sinclair Knight Merz (SKM) 2009a. Multi-Modal Transport Corridor Response to request for further information from the Department of Environment, Water, heritage and Arts, for Department of Transport and Main Roads, Brisbane,
- Sinclair Knight Merz (SKM) 2009b, Multi-Modal Transport Corridor Environmental Approval Report, for Department of Transport and Main Roads, Brisbane.
- Sunshine Coast Council (SCC) 2014, Sunshine Coast Culture and Heritage Map, viewed 6 August 2014, http://www.sunshinecoast.gld.gov.au/sitePage.cfm?code=cultural-map
- Threatened Species Scientific Committee (TSSC) 2011, Commonwealth Listing Advice on Lowland Rainforest of Subtropical Australia, viewed 8 August 2014, http://www.environment.gov.au/biodiversity/threatened/communities/pubs/101-listing-advice.pdf.
- Threatened Species Scientific Committee (TSSC) 2013, Commonwealth Conservation Advice for Subtropical and Temperate Coastal Saltmarsh, viewed 8 August 2014, http://www.environment.gov.au/biodiversity/threatened/communities/pubs/118-conservation-advice.pdf
- WorleyParsons 2010, Environmental Approval Report: Sunshine Motorway Duplication (Kawana Way Interchange to Mooloolah River Interchange), for Department of Transport and Main Roads, Brisbane.
- WorleyParsons 2011, Environment Protection and Biodiversity Conservation Act 1999 Referral: Sunshine Motorway Duplication (Kawana Way Interchange to the Mooloolah River Interchange), for Department of Transport and Main Roads, Brisbane.

- Accad, A., Neldner, V., Wilson, B., and Niehus. (2008). Remnant Vegetation in Queensland. Analysis of Remnant Vegetation 1997-1999-2000-2001-2003-2005, including regional ecosystem information. Brisbane: Queensland Herbarium.
- Angelstam, P. (1986). Predation on ground-nesting birds' nests in relation to predator densities and habitat edge. OIKOS, 47: 365 - 373.
- Atlas of Living Australia. (2015, May 6). Species Portal.
- Australian Government. (2009). Significant impact guidelines for 36 migratory shorebird species EPBC Act policy statement 3.2.1. Canberra: Australian Government,
- Australian Government. (2009). Significant impact guidelines for the vulnerable water mouse. Australian Government.
- Australian Government. (2009). Significant Impact Guidelines for the vulnerable water mouse (Xeromys myoides) nationally threatened species and ecological communities background paper to EPBC Act policy statement 3.20. Canberra: Department of Environment Water Heritage and the Arts.
- Australian Government. (2010). Survey guidelines for Australia's threatened frogs; guidelines for detecting frogs listed as threatened under the Environment Protection and Conservation Act 1999. Canberra: Australian Government.
- Australian Government. (2010). Survey Guidelines for Australian threatened birds; guidelines for detecting birds listed as threatened under the Environment Protection and Biodiversity Conservation Act 1999. Canberra: Australian Government.
- Australian Government. (2011). Survey guidelines for Australia's threatened mammals; guidelines for detecting mammals listed as threatened under the Environment Protection and Biodiversity Conservation Act 1999, Canberra: Australia Government.
- Australian Government. (2012). Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy. Retrieved May 25, 2015.
- Australian Government. (2013a). Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999. Canberra: Department of the Environment.
- Australian Government. (2013a). Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999. Canberra: Commonwealth of Australia.
- Australian Government. (2015, August 3). Interactive Flying-fox Web Viewer. Retrieved from Monitoring Flying fox Populations: http://www.environment.gov.au/webgis-framework/apps/ffc-wide/ffc-wide.jsf
- Australian Government. (2015). Protected Matters Search Tool. Retrieved June 3, 2015, from Interactive Map Tool: http://www.environment.gov.au/epbc/pmst/
- Australian Government. (2015). Species Profile and Threats Database. Retrieved May 13, 2015, from Species Profile and Threats Database: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl
- Australian Government. (2015). SPRAT Profile. Retrieved May 6, 2015, from Sprat Profile: http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon\_id=77037
- Australian Government. (2015a). EPBC Act Protected Matters Report. Canberra: Australian Government.
- Australian Government. (2015b). A Directory of Important Wetlands in Australia. Retrieved May 5, 2015, from A Directory of Important Wetlands in Australia: http://www.environment.gov.au/resource/directoryimportant-wetlands-australia-third-edition
- Australian Government. (2015d). SPRAT Profile. Retrieved May 6, 2015, from SPRAT Database: http://www.environment.gov.au/cqi-bin/sprat/public/publicspecies.pl?taxon id=77037
- Australian Koala Foundation. (2012). National Koala Tree Protection List.
- Australian Koala Foundation. (2015). Koala Map. Retrieved July 24, 2015, from https://www.savethekoala.com/koala-map.
- Australian Koala Foundation. (2015). Welcome to Koala Map. Retrieved from https://www.savethekoala.com/koala-map.
- Brownlie, H. (2007). National Recovery Plan for Acacia attenuata Report to Department of the Environment and Water Resources. Canberra. Brisbane: Queensland Parks and Wildlife Service.
- Chapman, T. F. (2007). Foods of the Glossy Black Cockatoo Calyptorhynchus lathami. Australian Field Ornithology, 24: 30 - 36.
- Cogger, H. G. (2000). Reptiles and amphibians of Australia. Sydney: Reed New Holland.
- Couchman, C. a. (2007). Management and protection of marine plants and other tidal habitats. Brisbane: Queensland Government.

- Cropper, S. (1993). Management of Endangered Plants. Melbourne: CSIRO Publications.
- Department of Environment and Heritage. (2006). Infection of amphibians with chytrid fungus resulting in chytridiomycosis. Canberra: Department of Environment and Heritage.
- Department of Environment and Heritage Protection. (2015). Protected Plants Flora Survey Trigger Map. Retrieved Mach 2015, from http://www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/map-request.php
- Department of Environment and Resource Management. (2009). National recovery plan for the water mouse (false water rat) Xeromys myoides. Brisbane: Queensland Government.
- Department of Environment and Resource Management. (2010). National recovery plan for the water mouse (false water rat) Xeromys myoides. Brisbane.
- Department of Natural Resources and Mines. (2015). Regulated Vegetation Management Map. Queensland Government.
- Department of Sustainability, E. W. (2015). Chytridiomycosis (amphibian chytrid fungus disease). Retrieved April 29, 2015, from Chytridiomycosis (amphibian chytrid fungus disease): http://www.environment.gov.au/system/files/resources/279bf387-09e0-433f-8973-3e18158febb6/files/c-disease\_1.pdf
- Department of the Environment. (2013). Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999. Australian Government.
- Department of the Environment. (2014). EPBC Act referral guidelines for the vulnerable koala (combined populations of Queensland, New South Wales and the Australian Capital Territory). Canberra: Commonwealth of Australia.
- Department of the Environment. (2015b). Rostratula australis in Species Profile and Threats Database.
   Retrieved April 29, 2015, from Species Profile and Threats Database: http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon\_id=77037#habitat
- DTMR. (2013). Environmental Processes Manual. Queensland Government.
- Ingram and Agnew. (2010). Wallum Sedgefrog Litoria Olongburensis Surveys and Habitat Assessments for the Proposed Sunshine Motorway Duplication (Kawana Way to Mooloolah River Interchange) and Multimodal Transport Corridor (Main Drive to Maroochy Boulevard).
- Meyer et al. (2006). National recovery plan for the wallum sedgefrog and other wallum-dependent frog species. Canberra: Department of Environment and Water Resources.
- Murray et al. (2009). Impact and Dynamics of Disease in Species threatened by Amphibian Chytrid Fungus, Batrachochytrium dendrobatidis. Conservation Biology, 1 11.
- Neldner, V., Wilson, B., Thompson, E., & Dillewaard, H. (2012). Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland. Version 3.2. Brisbane: Queensland Herbarium.
- Phillips, S., & Callaghan, J. (2011). The Spot Assessment Technique: a tool for determining localised levels of habitat use by Koalas (Phascolarctos cinereus). Brisbane: Australian Koala Foundation.
- Queensland Government. (2006). National Recovery Plan for the wallum sedgefrog and other wallumdependent frog species. Brisbane: Queensland Government.
- Queensland Government. (2015). Vegetation Map Request. Retrieved May 27, 2015, from Vegetation Map Request: https://www.dnrm.qld.gov.au/forms/land-property/vegetation-map-request
- Queensland Government. (2015a). Species Lists. Retrieved June 3, 2015, from Wildlife Online: https://www.qld.gov.au/environment/plants-animals/species-list/
- Queensland Government. (2015b). Map of Referable Wetlands. Brisbane: Queensland Government.
- Queensland Government. (2015d, May6). Assessable Development and Koala Habitat Values.
- Queensland Government. (2015d). Queensland Statewide Corridors. Retrieved May 5, 2015, from Queensland Government Data: https://data.qld.gov.au/dataset/queensland-statewide-corridors
- Queensland Herbarium. (2015). Regional Ecosystem Description Database. Brisbane: Department of Science, Information Technology and Innovation.
- Sinclair Knight Merz. (2009). Multi-Modal Transport Corridor Environmental Approval Report.
- Straw, P. (2004). Status and Conservation of Shorebirds in the East Asian-Australian Flyway. Proceedings
  of the Australasian Shorebirds Conference 13-15 December 2003. Canberra, Australia: Australasian Wader
  Studies Group and Wetlands International Oceania.
- Thackway, R. a. (1995). An Interim Biogeographic Regionalisation of Australia. Canberra: Australian Nature Conservation Agency.

- TSSC. (2013dd). EPBC Act (s266B) Conservation Advice for Subtropical and Temperate Coastal Saltmarsh. Canberra: Department of the Environment.
- TSSC. (2014cb). Commonwealth Conservation Advice for Phaius australis (Lesser Swamp-orchid). Canberra: Department of Environment.
- Van Dyck, S. (1996). Xeromys myoides in mangrove communities of North Stradbroke Island. Memoires of the Queensland Museum, 337 366.
- Vredenburg and Rachowicz. (2004). Transmission of Batrachochytrium dendrobatidis within and between amphibian life stages. Diseases of Aquatic Organisms, Vol 61: 75-83.
- Watkins. (1993). A National Plan for Shorebird Conservation in Australia. Victoria: Royal Australasian Ornithologists Union.
- Wetland Care Australia. (2008). River Water Mouse habitat. Retrieved from Wetland Care Australia: http://www.wetlandcare.com.au/index.php/our-work/successful-projects/wetland-restoration-and-rehabilitation/coastal-20-wetlands-project/coastal-20-wetlands-site-profiles/maroochy-river-coastal-20-site-profile/maroochy-river-water-mouse-habitat/
- Wetlands Australia. (2015). Coastal wetlands in south-east Queensland are home to the mighty water mouse. Wetlands Australia National wetlands update August 2015—Issue No 27, 61- 62.
- Wilson, P., & Taylor, P. (2012). Land Zones of Queensland. Brisbane: Queensland Herbarium, DSITIA.

# 8.2 Reliability and date of information

For information in section 3 specify:

- source of the information:
- how recent the information is:
- how the reliability of the information was tested; and
- any uncertainties in the information.

Information presented in Section 3 of this referral has been obtained from the sources noted in Section 8.1. Updated searches of the DoE Protected Matters Search database and Queensland Government Wildlife Online database were undertaken in August 2015 (refer to Attachment D).

The information from desktop and reference sources were validated by site inspections conducted for the project. Environmental studies were undertaken by reputable and experienced ecologists in accordance with recognised survey and reporting methods (refer to Attachment D).

# 8.3 Attachments

Indicate the documents you have attached. All attachments must be less than three megabytes (3mb) so they can be published on the Department's website. Attachments larger than three megabytes (3mb) may delay the processing of your referral.

		✓ attached	Title of attachment(s)
You must attach	figures, maps or aerial photographs showing the project locality (section 1)	✓	Attachment A – Figures
	GIS file delineating the boundary of the referral area (section 1)	<b>✓</b>	Attachment B – GIS files
	figures, maps or aerial photographs showing the location of the project in respect to any matters of national environmental significance or important features of the environments (section 3)	<b>~</b>	Attachment A – Figures
If relevant, attach	copies of any state or local government approvals and consent conditions (section 2.5)	<b>√</b>	Attachment C – MMTC and Sunshine Motorway Duplication Decision Notices
	copies of any completed assessments to meet state or local government approvals	N/A	N/A

and outcomes of public consultations, if available (section 2.6)		
copies of any flora and fauna investigations and surveys (section 3)	✓	Attachment D - Mooloolah River Interchange Project Matters of National Environmental Significance Assessment Report - An assessment of additional areas outside existing approvals
technical reports relevant to the assessment of impacts on protected matters that support the arguments and conclusions in the referral (section 3 and 4)	<b>√</b>	Attachment D - Mooloolah River Interchange Project Matters of National Environmental Significance Assessment Report - An assessment of additional areas outside existing approvals
report(s) on any public consultations undertaken, including with Indigenous stakeholders (section 3)	N/A	N/A

# 9 Contacts, signatures and declarations

**NOTE:** Providing false or misleading information is an offence punishable on conviction by imprisonment and fine (s 489, EPBC Act).

Under the EPBC Act a referral can only be made by:

• the person proposing to take the action (which can include a person acting on their behalf); or

 a Commonwealth, state or territory government, or agency that is aware of a proposal by a person to take an action, and that has administrative responsibilities relating to the action<sup>1</sup>.

# Project title:

Mooloolah River Interchange Project - Areas outside of existing approvals

# 9.1 Person proposing to take action

This is the individual, government agency or company that will be principally responsible for, or who will carry out, the proposed action.

If the proposed action will be taken under a contract or other arrangement, this is:

• the person for whose benefit the action will be taken; or

• the person who procured the contract or other arrangement and who will have principal control and responsibility for the taking of the proposed action.

If the proposed action requires a permit under the Great Barrier Reef Marine Park Act<sup>2</sup>, this is the person requiring the grant of a GBRMP permission.

The Minister may also request relevant additional information from this person.

If further assessment and approval for the action is required, any approval which may be granted will be issued to the person proposing to take the action. This person will be responsible for complying with any conditions attached to the approval.

If the Minister decides that further assessment and approval is required, the Minister must designate a person as a proponent of the action. The proponent is responsible for meeting the requirements of the EPBC Act during the assessment process. The proponent will generally be the person proposing to take the action<sup>3</sup>.

1. Name and Title:

-Mark Bachels - Yeter Se Project Manager | North Coast District

Program Delivery & Operations

2. Organisation (if

applicable):

Queensland Department of Transport and Main Roads

3. EPBC Referral Number

(if known):

Unknown

4: ACN / ABN (if

applicable): Al

ABN 39 407 690 291

Postal address

PO Box 1600 | Sunshine Plaza Post Shop, Maroochydore QLD 4558

6. Telephone:

(07) 5451 7098 7015

7. Email:

mark.a.bachels@tmr.qld.gov.au-

Peter.g. bell @tmr.gld.gov, au

8. Name of designated proponent (if not the same person at item 1

N/A

above and if applicable):

<sup>&</sup>lt;sup>1</sup> If the proposed action is to be taken by a Commonwealth, state or territory government or agency, section 8.1 of this form should be completed. However, if the government or agency is aware of, and has administrative responsibilities relating to, a proposed action that is to be taken by another person which has not otherwise been referred, please contact the Referrals Gateway (1800 803 772) to obtain an alternative contacts, signatures and declarations page.

<sup>&</sup>lt;sup>2</sup> If your referred action, or a component of it, is to be taken in the Great Barrier Reef Marine Park the Minister is required to provide a copy of your referral to the Great Barrier Reef Marine Park Authority (GBRMPA) (see section 73A, EPBC Act). For information about how the GBRMPA may use your information, see http://www.gbrmpa.gov.au/privacy/privacy\_notice\_for\_permits.

<sup>&</sup>lt;sup>3</sup> If a person other than the person proposing to take action is to be nominated as the proponent, please contact the Referrals Gateway(1800 803 772) to obtain an alternative contacts, signatures and declarations page.

9. ACN/ABN of designated proponent (if not the same person named at item 1 above):

N/A

# COMPLETE THIS SECTION ONLY IF YOU QUALIFY FOR EXEMPTION FROM THE FEE(S) THAT WOULD OTHERWISE BE PAYABLE

I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:

an individual; OR

not applicable.

a small business entity (within the meaning given by section 328-110 (other than subsection 328-119(4)) of the Income Tax Assessment Act 1997); OR

N/A

If you are small business entity you must provide the Date/Income Year that you became a small business entity:

Note: You must advise the Department within 10 business days if you cease to be a small business entity. Failure to notify the Secretary of this is an offence

punishable on conviction by a fine (regulation 5.23B(3) Environment Protection and Biodiversity Conservation Regulations 2000 (Cth)).

## COMPLETE THIS SECTION ONLY IF YOU WOULD LIKE TO APPLY FOR A WAIVER

I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations. Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made: Declaration

not applicable.

I declare that to the best of my knowledge the information I have given on, or attached to this form is complete, current and correct.

I understand that giving false or misleading information is a serious offence.

I agree to be the proponent for this action.

I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature

Date 24/4/15

#### 9.2 Person preparing the referral information (if different from 8.1)

Individual or organisation who has prepared the information contained in this referral form.

Brad McDonald Name

Principal Environmental Planner Title

WSP Parsons Brinckerhoff

Organisation

ACN: 078 004 798 ACN / ABN (if applicable) ABN: 80 078 004 798

Level 2, 2 Emporio Place Maroochydore QLD 4558

0 7 3854 6783 Telephone

> brmcdonald@pb.com.au **Email**

Declaration I declare that to the best of my knowledge the information I have given on, or attached

to this form is complete, current and correct. I understand that giving false or misleading information is a serious offence.

16/09/2015

Date

Signature

Postal address