

Response to Information Request

EPBC Reference 2012/6562



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Client: Department of Transport and Main Roads

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Quality Information

Document Response to Information Request

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Glossary

Acronym	Expansion
BoM	Bureau of Meteorology
BTF	Black-throated Finch
C2C	Creek to Coral program
DoE	Commonwealth Department of the Environment
EMP	Environmental Management Plan
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
ESD	Ecologically Sustainable Principles
FSCR	Future State-controlled Road
Km	Kilometres
Ha	Hectares
Kph	Kilometres per hour
LGA	Local government area
MNES	Matters of National Environmental Significance
NC Act	<i>Nature Conservation Act 1992</i>
POTL	Port of Townsville Ltd
RE	Regional Ecosystems
SEWPaC	Department of Sustainability, Environment, Water, Population and Communities now Department of the Environment (DoE)
TMR	Department of Transport and Main Roads (Queensland)
TRR4	Townsville Ring Road Section 4
VM Act	<i>Vegetation Management Act 1999</i>

1.0 Overview

The Department of Transport and Main Roads (TMR) propose to develop an 8.7 km, two way, four lane road between Shaw Road and the Bruce Highway, Bohle Plains, Townsville. This infrastructure will be the fourth and final section of the Townsville Ring Road, connecting the existing sections of the Ring Road to the Bruce Highway (Figure 1).

The corridor for the Townsville Ring Road link was identified in the early 1990s and its alignment was agreed, in liaison with Commonwealth and local governments, at that time. Sections 1 to 3 have since been constructed. The alignment corridor for Section 4 is fixed and the land has been acquired, including footprints for intersections. It was gazetted as a Future State-controlled Road (FSCR) in late 2010. The strategic importance of the project to the region in terms of its social and economic benefits is outlined in Section 6.5.

Townsville Ring Road Section 4 (TRR4) is defined by its northern and southern connections as outlined below.

- Southern Connection – including a grade-separated interchange with Kalynda Parade overpassing TRR4, Dalrymple Interchange, Kalynda Parade extension, and interchange loop roads.
- Northern Connection – an at-grade connection of TRR4 to the existing Bruce Highway to the north, slightly west of Mt Low Parkway.

TRR4 will become the National Network route, replacing:

- The existing National Network route – the Bruce Highway (Shaw Road – Mt Low Parkway); and
- The interim National Network – Shaw Road (Dalrymple Road – Bruce Highway).

The TRR4 project outcomes include:

- To provide a National Network route that meets contemporary safety and design standards and that addresses transport issues arising from Townsville's continuing strong economic and population growth over the next 20 years and beyond;
- To deliver a whole link solution to optimise the operation of Townsville Ring Road sections 1-4;
- To deliver a whole of network solution, which takes account of the function of key arterial and local roads in the surrounding strategic network and which attempts to influence those functions, where appropriate, to ensure they complement and support the Townsville Ring Road's agreed appropriate functions; and
- Improved freight efficiency for through and Port freight and to maximise the economic life of the overall Townsville Ring Road link.

The TRR4 corridor is designated over land that is presently predominantly utilised for grazing of cattle. The land is largely undeveloped land being vegetated by stands of native flora, various grasses and weed species. There are several ephemeral waterways that flow across the Bohle Plains and through the TRR4 corridor, providing seasonal waterholes for fauna species. The presence of these factors contribute to actual or potential suitable habitat for several species protected under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act), including the Endangered Black-throated Finch (confirmed during TRR4 site surveys) and the Critically Endangered Bare-rumped Sheathtail Bat (highly probable recording obtained).

AECOM (on behalf of TMR) submitted an application to then Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) (now the Commonwealth Government Department of the Environment (DoE)) regarding the proposed TRR4 on 27 September 2012. SEWPaC determined that the TRR4 proposal is a controlled action under the EPBC Act (EPBC Ref: 2012/6562), and is to be assessed by Preliminary Documentation. The TRR4 project is now required to go through a public assessment process before DoE will make a decision on whether the project can proceed or not.

The DoE are seeking further information on the TRR4 project regarding the likely presence, and impacts on, Matters of National Environmental Significance (MNES). In particular, the Department has requested:

- further detailed studies be undertaken to determine the presence of and impacts on the Black-throated Finch (southern) (*Poephila cincta cincta*) which has required dry and wet season surveys to understand habitat use in the BTF 'resource bottleneck', and in the breeding season;

- targeted surveys and observations of potential Bare-rumped Shearwater (*Saccolaimus saccolaimus nudicluniatus*) tree roosts,
- a detailed Environmental Management Plan (EMP) which includes field survey information, identifies important habitat on site and applies targeted mitigation and management measures,
- Identify suitable offsets to compensate for any residual significant impacts to MNES after all avoidance and mitigation measures have been implemented ,
- social and economic benefits and impacts of the project, and
- Ecologically Sustainable Principles (ESD) (refer to Appendix A for the Request for Information).

This report has been structured to respond to and address the information request as follows:

- *Section 2.0 The Referral Process and Information Request.* This section outlines the additional information requested by SEWPaC.
- *Section 3.0 Current Design for TRR4.* This section details the design variation since the lodgement of the original EPBC Referral in September 2012.
- *Section 4.0 Local Environmental Factors.* This section provides a background of environmental factors within the context of the local area. This section addresses topographical features, geology and soils, climate, surface and groundwater, native vegetation characteristics, riparian zones and wildlife corridors.
- *Section 5.0 Summary of Field Efforts to Address MNES.* This section outlines the field efforts undertaken to understand MNES in the context of TRR4.
- *Section 6.0 Response to Information Request.* This section addresses each of the DOE's information requirements as well as providing a response to the impacts on MNES as an integrated statement. This section builds on matters addressed in the original referral; provides environmental management and mitigation measures; addresses offset requirements; social and economic matters; and the principles of Ecological Sustainable Development.

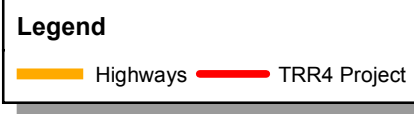
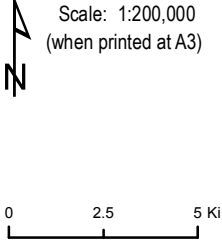


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TOWNSVILLE RING ROAD SECTION 4

Location of the Townsville Ring Road Section 4 Corridor in the Broader Townsville Region

Figure 1

2.0 The Referral Process and Information Request

In a letter dated 8 November 2012, SEWPaC advised that the following additional information is required prior to public consultation and a full assessment being undertaken. For reference purposes a copy of the EPBC referral submitted to SEWPaC (now DoE), and to which this request for further information relates to, is available on DoE's website.

1. Matters of National Environmental Significance

Provide detailed information on the likely presence, distribution, ecology and habitat of listed threatened species, communities or other matters of National Environmental Significance (MNES) likely to and/or potentially occurring at the project site and adjacent areas. Information should be obtained from previous records, fauna databases, scientific literature and other reports. Provide a discussion on all potential direct and indirect impacts of the proposal on the listed threatened species or communities. Types of indirect impacts may include, but are not limited to: changes to water quality, introduction of pathogens and edge effects either during or post construction.

2. Black-throated Finch (Southern) – *Poephila cincta cincta*

Conduct targeted field surveys of the subject site and surrounding areas to determine the presence, numbers and location of the Black-throated Finch (Southern). The surveys must include both dry and wet season surveys for the species and the survey methodology must be developed in accordance with the "Survey Guidelines" within the *Background paper to the EPBC Act policy statement 3.13*, available at <http://www.environment.gov.au/epbc/publications/black-throated-finch.html>.

3. Bare-rumped Sheathail Bat - *Saccolaimus saccolaimus nudicluniatu*s

Conduct further surveys to quantify the impact of the proposed action on the Bare-rumped Sheathail Bat. It is suggested that targeted tree roost surveys and observations be carried out on trees that are likely to provide roosting habitat for the species. These surveys must be conducted in accordance with the *Survey guidelines for Australia's threatened bats*, available at <http://www.environment.gov.au/epbc/publications/pubs/survey-guidelines-bats.pdf>.

4. Environmental Management Plan

Provide a detailed Environmental Management Plan (EMP) for all MNES impacted by the proposed action. The EMP must incorporate the results of all surveys and information collected and should identify the important habitat on site. The EMP should fully discuss all potential impacts of the proposed action on MNES and outline in detail all proposed avoidance and mitigation measures.

5. Offsets

Identify suitable offsets to compensate for any residual significant impacts to MNES after all avoidance and mitigation measures have been implemented. Any proposed offsets must be consistent with the department's offset policy statement at: <http://www.environment.gov.au/epbc/publications/environmental-offsets-policy.html>.

6. Social and Economic Matters

Provide a brief discussion on the social and economic benefits and adverse impacts of the proposal. The social and economic impact section of your response should briefly cover the broad benefits and adverse impacts to the community associated with the proposed action. This provides contextual understanding of the social and economic implications of the project outside of the matters of National Environmental Significance that are being assessed.

7. Ecologically Sustainable Development Principles

Provide a brief discussion of how the proposal will conform to the five principles of Ecologically Sustainable Development. To assist you, the National Strategy for Ecologically Sustainable Development (1992) is available on the following web site: <http://www.environment.gov.au/about/esd/index.html>.

Once DoE is in receipt of the requested information the approval process will move into the next phase, being public consultation. In this phase the original referral and the additional information will be publically notified and submissions requested. The public comments will be taken into account and the referral documentation amended, as required. The amended referral will then be resubmitted to DoE for a decision on whether the TRR4 project may proceed or not."

3.0 Current Design for TRR4

3.1 Design Development

Design development for the TRR4 has continued since the lodgement of the referral in September 2012. Detailed design commenced in February 2013 and as part of the design development TMR have identified the need for design changes which change the footprint of the road which were not anticipated at the time of submitting the referral (see Section 3.2). A variation approval for this change was sought from DoE under section 156A (1) (b) of the EPBC Act and was subsequently granted on 23 October 2013.

TMR is currently undertaking an Early Tenderer Involvement (ETI) procurement process with the aim of selecting a construction contractor by early 2014. Whilst some aspects of the design are likely to continue to develop through the ETI process, the design footprint presented in Figure 2 is identified as the maximum extent for the design of the proposed road infrastructure.

During the detailed design process further refinement of the hydraulic models have also been undertaken to include topographical survey information of areas around all major crossings. A finer resolution mesh has also been developed for the northern section of the road and a HEC-RAS model for the southern section to complement the understanding gained from the large scale models covering the whole road.

Further investigation on the height of the road embankment has also occurred based on revised grade lines, vertical clearances, structure depths for the preferred bridge deck units and approach grades over Geaneys Lane. The height of the road embankment is now nominally 1.2m to 1.5m above the natural ground surface. This allows the road to be constructed above the Q50 flood line and the width of the batters to be reduced (and therefore the project footprint) resulting in cost savings from the original design which has been re-invested into the project.

A number of other changes have been made within the alignment, including:

- Dense graded asphalt pavement surface is proposed for the length of TRR4 instead of bituminous seal (chip seal) surface which was originally planned for the rural section of the alignment. This will result in a reduction in the potential for noise impacts on BTF, and
- Bridge design has significantly matured as a consequence of the detailed design process to address potential scour, design and cost elements.

3.2 Footprint Variation since the Original EPBC Referral

The design changes which vary the footprint of the project which required approval from DOE are discussed below and presented as Figure 2.

Design Changes since the Original Referral

Dalrymple Interchange (Dalrymple Rd/Shaw Rd intersection to chainage 21000 -notation 1 on Figure 2)

- This interchange forms part of the ultimate road network and includes a westerly extension of Dalrymple Road, which will overpass the Ring Road. The purpose of this connection is to provide for northbound traffic flow onto the Ring Road direct from Dalrymple Road and Shaw Road. Approximate details on the road configuration are as follows:
 - (a) Formation width – 28 m (includes toe of batter extents with 3 m construction zones either side)
 - (b) Length of 1.5 km (including tapers)
 - (c) Four span bridge.
- A new off ramp for south bound traffic on the Ring Road to exit on to Dalrymple Road. Road formation width will be 28m and about 500m long.
- Internal interchange loops. Within this area will also be the laydown sites for the construction. In total the disturbed area is estimated as 60,916 m².
- Part of the above infrastructure footprint is outside the current road boundary on State owned land. Road reserve boundaries will be altered to accommodate the interchange by a land swap of state owned land.

Changed Access Conditions for Kalynda Parade Overpass (chainage 19000-19750 – notation 2 on Figure 2)

Design for northern access from the Kalynda Chase residential subdivision has been simplified as follows:

- Removal of the proposed loop roads for access / egress from TRR4 onto Kalynda Chase overpass. These loops were originally proposed as temporary connections to the Ring Road but are now unnecessary due to the incorporation of the Dalrymple Interchange.
- Incorporation of the proposed Kalynda Parade Extension (a two lane one way road) which enables south bound Shaw Road traffic to exit the Ring Road without going through the Dalrymple Interchange. Project footprint is estimated at 31,920 m².

TRR4 Main Carriageway Duplication (chainage 19250 -25750 – notation 3 on Figure 2)

Construction of four lanes, from chainage 19250 to 25550 as follows.

- Two x 10.4m wide lanes (shoulder to shoulder width) with two lanes in each direction with a grass medium strip (compared to the original two lane width of 1 x of 11.4m wide road formation width with a concrete barrier in the original referral). The provision of four lanes is to provide overtaking opportunities for north and south bound traffic.
- The length of duplication would commence under the Kalynda Parade Interchange and extend to a point approximately 300 m south of Stony Creek Bridge. The length of this duplication including tapers each end is 6.1 km.
- Saunders Creek Bridge will be duplicated to accommodate the four lanes (near chainage 23500).
- TRR4 is designed to provide Q50 flood immunity to meet local road network immunity standards.
- The concrete path shown in the original concept plan will not be constructed.
- Provision for several small laydown areas within the road reserve is estimated to not exceed 2 ha in total with the largest one likely to be positioned near the Dalrymple Road connections into the Ring Road, on the eastern side, or in the centre of the larger worked area.
- Construction clearing and grubbing quantities in Saunders and Stony Creeks for the bridges will be no more than the original referral indicated.

Noise Barriers

- Location of noise barriers have changed in one location from the road reserve boundary to the shoulder between chainage 24500 to Stony Creek Bridge. This does not have any effect on the construction footprint.

Bruce Highway Ring Road 4 Connections

While these changes below do not affected MNES, for completeness they are outlined below.

- An extended through lane will be constructed in the Bruce Highway road reserve from chainage 27500 to Veales Road)
- A new slip lane would be created to Mount Low Parkway
- A new signalised intersection and roadway to meet Bruce Highway opposite Mt Low Parkway, and
- New traffic signals at Veales Road/Bruce Highway.