

# Appendix A Environmental Scoping Report

## APPENDIX A ENVIRONMENTAL SCOPING REVIEW

### 1.1. Introduction

The purpose of the Environmental Scoping Review is to make an early assessment of potential environmental impacts and opportunities associated with the proposed project. The purpose of this review is to determine an overall environmental risk rating for the project and identify whether further environmental assessments are warranted as part of the pre-construction process, which then informs the survey and assessment methodologies adopted for the REF.

The overall environmental risk rating for the project is based on:

- existing environmental values
- the scope of works and potential impacts from the works
- legislative triggers likely associated with the works.

A risk rating of low, medium or high has been determined. Where a medium or high risk is identified, further environmental investigation and assessment is likely to be warranted.

### 1.2. Methodology

The scoping review was completed in April 2016 and involved desktop environmental assessment primarily drawing on information detailed in previous investigations. Information sources included:

- Beerburum to Landsborough Track Duplication Environmental and Planning Study, Trackstar Alliance 2007
- Landsborough to Nambour Rail Corridor Study Environmental Impact Statement, Arup 2009
- Beerburum to Nambour Rail Project Environmental Approvals Summary, SMEC 2014
- Queensland Globe dataset, Version 2.0, DNRM 2016
- MinesOnlineMaps Info 3.2.1 dataset, updated February 2016, DNRM 2016
- Aerial imagery supplied by Building Queensland

### 1.3. Scoping Assessments

Water	Risk Rating – Medium
<b>Factors Identification</b> - Factors present, or potentially present, within / near to the project footprint	
<input checked="" type="checkbox"/> Freshwater (Water Quality, Drainage, Groundwater, Sourcing Water, Interfering with Water)	
<input type="checkbox"/> Marine and Coastal (Coastal, marine environment and waters and all non-freshwater)	
No significant factors are present within the Project Area. The project footprint is not located within:	
<ul style="list-style-type: none"><li>• A Wetland management / trigger area;</li><li>• Tidal waters;</li><li>• A Coastal Management District (CMD);</li><li>• A Fish Habitat Area (FHA); or</li><li>• A Ramsar Wetland.</li></ul>	
The proposed footprint crosses more than 50 waterways, many of which are permanent in nature. The project crosses six catchments including Pumicestone Passage, Mooloolah River, Maroochy River, Caboolture River, Elimbah Creek and Mellum Creek. Water within the catchments generally flows from the D'Aguilar Range in the west towards the eastern coastline.	
Many of these catchments are significant from an ecological, recreational and visual perspective. Of particular significance, the Pumicestone Passage is listed under the Ramsar Convention, being an important feeding and roosting site for migratory birds, and the mouth of the Maroochy River is a fish habitat area. Whilst in the Pumicestone Passage catchment, the Project Area is located approximately 12km inland from the Ramsar Area boundary.	

The Project Area also crosses the Ewen Maddock Dam Water Resource Catchment Area. The presence of groundwater bores in the Project Area indicates the importance of the groundwater resources to the local community. Areas of groundwater are also important from a biological diversity perspective.

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#### **Impacts, Opportunities and Mitigation Measures**

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Most potential impacts are generally applicable throughout the Project Area and primarily include impacts to riparian and stream integrity, as well as to water quality. Potential impacting processes to surface water and groundwater resources primarily result from the construction of the project and the decommissioning of the existing railway, as follows:

- Vegetation clearing and channel disturbance
- Surface water quality modifications
- Groundwater quality modifications
- Reduction in groundwater resources
- Alteration in surface water flows

#### Planning and Design

- Design bridges and culverts to allow continued water movement.
- Minimise use of in-stream barriers during construction.
- Minimise riparian vegetation removal and works in riparian, bank or in-stream areas.
- Drainage should consider soil type including potential for dispersivity. Where dispersive soils are present, drainage channels should be armoured to minimise contact between water and soil.

#### Construction

- Implement erosion and sediment control measures.
- Stabilise exposed/disturbed soils.
- Manage fuel and chemical handling, storage, distribution and spill response.
- Use bunded areas to store harmful substances.
- Rehabilitate disturbed areas post construction.
- Maintain (or imitate) stream flow patterns as closely as possible.
- Ensure water released from site is of similar quality to the receiving waters.
- Carry out regular water quality monitoring (surface and ground water).

#### Operation

- Undertake routine maintenance of drainage structures to ensure continued performance.

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#### **Relevant Legislation – identify any applicable permits, codes or other regulatory requirements**

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☒ Applicable legislation	<i>Water Act 2000</i> <i>Environmental Protection Act 1994</i> - compliance with General Environmental Duty requirements <i>Environment Protection (Water) Policy 2009</i> <i>Fisheries Act 1994</i> for constructing or raising waterway barrier works
☒ Identified permits, codes or other requirements	Riverine Protection Permit if creek realignments are determined to be necessary Water Licence for a watercourse diversion All other works exempt in accordance with the Riverine Protection Permit exemption guideline.

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SOIL / LAND MANAGEMENT		Risk Rating - LOW
<b>Factors Identification</b> - Factors present, or potentially present, within / near to the project footprint		
<input checked="" type="checkbox"/> Contaminated Land	<input checked="" type="checkbox"/> Soil	
<input checked="" type="checkbox"/> Erosion and Sediment Control	<input type="checkbox"/> Landscape Architecture	
<p>The Project Area is underlain by a combination of Triassic and Jurassic Landsborough Sandstone. Some areas of Quaternary alluvium and colluvium area shown where drainage channels occur. The alluvium is typically associated with low lying, low relief wetlands, while the sandstone is typically associated with moderate relief terrain with some higher relief ridges. There are also</p> <p>Topographical constraints in the Study Area include creeks and dams, hills and gullies and mountains. There are more than 50 creek / drainage line crossings within the Project Area which will require culvert or bridge structures. Some dams on agricultural land also fall within the Project Area and will require bridging. The topography within the Project Area involves significant variations in natural grades, with many hills and gullies. The volcanic intrusions of Mount Beerwah and Mount Tibrogargan also lie within the Project Area.</p> <p>Acid sulfate soils are associated with low lying areas below 5m AHD such as the alluvium plains where groundwater is generally close to the surface. As such, the main risk zones are likely to be associated with the drainage features and in the vicinity of wetlands, should be they be disturbed. No risk zones were identified in the DERM mapping, however, the alluvial plains associated with Petrie Creek and Paytner Creed are designated acid sulfate soil risk zones.</p>		
<b>Impacts, Opportunities and Mitigation Measures</b>		
<u>Planning and Design</u>		
<ul style="list-style-type: none"><li>Conduct detailed acid sulfate soil sampling and prepare management plans as part of the detailed design phase.</li><li>Conduct geotechnical investigations to inform the detailed design process (especially in relation to tunnels).</li><li>Update searches of the EMR and CLR for any lots to be acquired for the corridor.</li></ul>		
<u>Construction</u>		
<ul style="list-style-type: none"><li>Implement erosion and sediment control measures during construction.</li><li>Avoid carrying out earthworks after heavy rain.</li><li>Use slope stabilisation measures on slopes that re susceptible as required.</li><li>Use tunnel linings if required, depending on ground water conditions.</li><li>Stockpile top-soil during construction activities for re-use.</li><li>Re-use fill gained from construction activities along the project if possible.</li><li>Source appropriate ballast material and investigate the potential for re-using ballast material from the existing railway.</li><li>Install drainage channels at the top of the batter crests to prevent face erosion.</li><li>Test soils in the vicinity of the existing railway for contamination and determine if these need to be removed.</li><li>Carry out soil sampling to determine levels of contamination where the existing railway will be decommissioned for other uses.</li></ul>		
<b>Legislation</b> – identify any applicable permits, codes or other regulatory requirements		
<input checked="" type="checkbox"/> Applicable legislation	<i>Environmental Protection Act 1994</i> – disposal of contaminated soil	
<input type="checkbox"/> Identified permits, codes or other requirements		

BIODIVERSITY		RISK RATING: HIGH
<b>Factors Identification</b> - Factors present, or potentially present, within / near to the project footprint		
<input checked="" type="checkbox"/> Protected fauna	<input checked="" type="checkbox"/> Ecosystems and Habitats	
<input checked="" type="checkbox"/> Protected flora	<input checked="" type="checkbox"/> Pest flora and fauna	
<b>Impacts, Opportunities and Mitigation Measures</b>		
Identify the potential of the project to impact on the identified factors. Suggest mitigation measures to be considered as part of planning and design, construction and for operation.		
<b>Legislation</b> – identify any applicable permits, codes or other regulatory requirements		
<input checked="" type="checkbox"/> Applicable legislation	<i>Environment Protection and Biodiversity Conservation Act 1999</i> <i>Nature Conservation Act 1992</i> <i>Environmental Offsets Act 2014</i> and Environmental Offsets Policy <i>Fisheries Act 1994</i> <i>Vegetation Management Act 1999</i> Plant protection	
<input checked="" type="checkbox"/> Identified permits, codes or other requirements	EPBC Act Referral Protected Plants clearing permit Species Management Programs/ Fauna Management Plans Waterway Barrier works development permit	

CULTURAL HERITAGE		RISK RATING: HIGH
Factors Identification - Factors present, or potentially present, within / near to the project footprint		
<input checked="" type="checkbox"/> Indigenous heritage	<input checked="" type="checkbox"/> Natural Heritage	
<input checked="" type="checkbox"/> Historical heritage		
Areas likely to be classified as Category 5 under the CH duty of care in Study Area		
Impacts, Opportunities and Mitigation Measures		
CHRA Required to determine impacts and opportunities.		
Historic Heritage study to identify non-indigenous heritage impacts and issues		
Legislation – identify any applicable permits, codes or other regulatory requirements		
<input checked="" type="checkbox"/> Applicable legislation	Aboriginal Cultural Heritage Act 2003 Aboriginal Cultural Heritage Duty of Care Guidelines Environment Protection and Biodiversity Conservation Act 1999 QR Heritage register	
<input checked="" type="checkbox"/> Identified permits, codes or other requirements	Cultural Heritage Survey/s Cultural Heritage Management Plans and/or Agreement	

PUBLIC AMENITY / HEALTH		RISK RATING: LOW to MED
Factors Identification - Factors present, or potentially present, within / near to the project footprint or associated with the project		
<input checked="" type="checkbox"/> Air	<input checked="" type="checkbox"/> Vibration	
<input checked="" type="checkbox"/> Noise	<input type="checkbox"/> Fire and Burning	
Railway noise and operations to be considered		
Air quality assessed as low risk		
Noise assessed as medium due to existing operations		
Impacts, Opportunities and Mitigation Measures		
noise monitoring being undertaken		
Legislation – identify any applicable permits, codes or other regulatory requirements		
<input checked="" type="checkbox"/> Applicable legislation	EPP Noise	
<input checked="" type="checkbox"/> Identified permits, codes or other requirements	QR Rail Planning Levels	

**RESOURCE USE AND MANAGEMENT****Risk Rating: Low****Resources Identification** – *Resources potentially used or impacted upon by the project*

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Waste                                     | <input type="checkbox"/> Material Extraction and Use |
| <input checked="" type="checkbox"/> Chemicals, Dangerous Goods and Explosives |  |

Dangerous goods and chemicals, and even potentially explosives depending on adopted construction techniques, will be stored on the project site during the construction of the Project, and potentially chemicals may be stored on the site during operational activities. The main source of chemical spill during construction would be oil or diesel from plant or machinery or from small quantities stored at construction sites.

**Impacts, Opportunities and Mitigation Measures**

Storage of chemicals, dangerous goods and explosives would be of the minimum practicable volume, and transport and handling would be in accordance with the relevant standards. Chemicals would be stored in a suitable bunded area with appropriate spill equipment made available on site.

Explosives are classified as Class 1 dangerous goods in the Australian Code for the Transport of Dangerous Goods by Road and Rail and would be managed in accordance with the Code.

Procedures would be developed in the EMP (Construction) to ensure the correct handling of the materials, and also adopt specific refuelling procedures and locations to assist in managing the risk of spillages.

**Legislation** – *identify any applicable permits, codes or other regulatory requirements*

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Applicable legislation                          | <i>Workplace health and Safety Act 1995 (Qld)</i><br><i>Dangerous Goods Safety Management Act 2001</i><br><i>Explosives Act 1999</i><br><i>Transport Infrastructure Dangerous Goods by Rail Regulation 2002</i> |
| <input checked="" type="checkbox"/> Identified permits, codes or other requirements | Australian Code for the Transport of Dangerous Goods by Road and Rail<br>AS/NZS 2187 Explosives – Storage, Transport and Use<br>AS/NZS 1940 2004 The Storage and Handling of Flammable and Combustible Liquids  |

**SPECIAL AREAS AND LAND TENURES****Risk Rating: Medium****Resources Identification** – *Special areas and land tenures potentially impacted upon by the project*

- |  |   |
|--|---|
| <input type="checkbox"/> Indigenous Land Tenures | <input checked="" type="checkbox"/> Forestry Land |
| <input type="checkbox"/> Commonwealth Land       |   |

The project will impact on State Forest.

**Impacts, Opportunities and Mitigation Measures**

*Acquisition of land will be required. This includes properties identified during previous investigations and new impacts as a result of new infrastructure elements (eg grade separation)*

**Legislation** – *identify any applicable permits, codes or other regulatory requirements*

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Applicable legislation                          | Forestry Act<br>Acquisition of Land Act |
| <input checked="" type="checkbox"/> Identified permits, codes or other requirements |   |

**POSSIBLE ENVIRONMENTAL OFFSETS****Commonwealth Environmental Offsets**

- ☒ There are EPBC Protected Matter/s potentially or likely to be impacted
- Could there be a significant impact on the matter? ☐ Unlikely ☒ Possible ☐ Likely
- Further survey to be undertaken to determine*

**Queensland Environmental Offsets**

- ☐ Prescribed Activity - no
- ☐ Matter of State Environmental Significance impacted by Prescribed Activity – to be determined
- Could there be a significant residual impact on the matter? ☐ Unlikely ☒ Possible ☐ Likely
- Further work to determine requirements required*

#### **1.4. Summary and Recommendations**

The project is considered a medium to high level, requiring further investigation particularly for cultural heritage and biodiversity.

## Appendix B Flora and Fauna Field Investigation – Ecological Findings Report