

Department of Transport and Main Roads

# Bruce Highway Western Alternative Stage 4

## Alignment Options Multi-Criteria Analysis

Reference: 295294-00

2 | 7 December 2023

DRAFT  
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This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number: 295294-00

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# Executive Summary

The Bruce Highway is Queensland's major freight and passenger movement corridor, connecting Brisbane and South East Queensland (SEQ) to central and northern Queensland including 11 coastal ports, major regional cities, and key tourist destinations. The Bruce Highway is also a vital part of the National Land Transport Network (NLTN), playing a key role in supporting both the Queensland and Australian economies. The Queensland Government is meeting the transport challenges for the Bruce Highway corridor and the objectives of the North Brisbane Bruce Highway Western Alternative through a program of initiatives including:

- Initiative 1: North Brisbane Moreton Bay (NBMB) Transport Sequencing Plan
- Initiative 2: Brisbane to Sunshine Coast Rail Corridor Strategy
- Initiative 3: Bruce Highway Western Alternative (BHWA) Stage 1 (Caboolture West) Planning Study
- Initiative 4: Bruce Highway Western Alternative Stage 2 (Moorina to Narangba), Stage 3 (Narangba to Bald Hills); Stage 4 (Beerburrum to Moodlu) Planning Study

The BHWA project aims to support the high forecast population growth in the west of the Moreton Bay Region. The new motorway will improve the transport network by providing an alternative route between North Brisbane, the Moreton Bay Region and further north towards the Southern Sunshine Coast. This will in turn improve the efficiency of the network, support the movement of freight on the existing National Land Transport Network (i.e., the Bruce Highway) and directly support the future activity centres of Caboolture West, Morayfield South, and Pine Valley.

This report summarises the key constraints that were used to inform the development of a delib proc gov options for Stage 4 of the BHWA between D'Aguiar Highway at Moodlu and Steve Irwin Way near Beerburrum, and the evaluation process undertaken to assess these options against key criteria to identify short-listed options. It documents the approach to the development of draft scores, summarises the work presented to key project stakeholders at the Multi-Criteria Analysis (MCA) workshop and records the final adopted MCA scores that informed the identification of options that were progressed to community consultation.

Sch.4 Part 4 s.4 deliberative processes of gov

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# 1. Introduction

## 1.1 About the project

Arup was commissioned by the Department of Transport and Main Roads (TMR) to undertake a study to identify the corridor required to be protected for Stage 4 of the Bruce Highway Western Alternative (BHWA) between Moodlu and Beerburrum. The purpose of the study is to identify a preferred corridor alignment to support the Bruce Highway in the rapidly developing areas in the west of the Moreton Bay Region. The corridor is needed to support significant forecast growth in the region, and in particular to serve the key emerging communities of Caboolture West (Waraba), Morayfield South and Pine Valley. In supporting this forecast growth across the region, the corridor will preserve and protect the efficiency and reliability of the Bruce Highway, protecting the Bruce Highway's role in the transport network, particularly in regard to the movement of freight and regional trips.

The BHWA corridor ultimately aims to provide a connection between Beerburrum in the north and Bald Hills in the south, separated into four key stages as seen in Figure 2. This study builds on several previous planning studies such as the Moreton Bay Western Arterial Corridor Study (MBWAC) and the Strathpine East Arterial (SEA) and forms one of four stages of the larger BHWA corridor.

Early planning for Stage 1 and 2 has been completed and a corridor for a future state controlled road (FSCR) has been protected for these stages of planning.

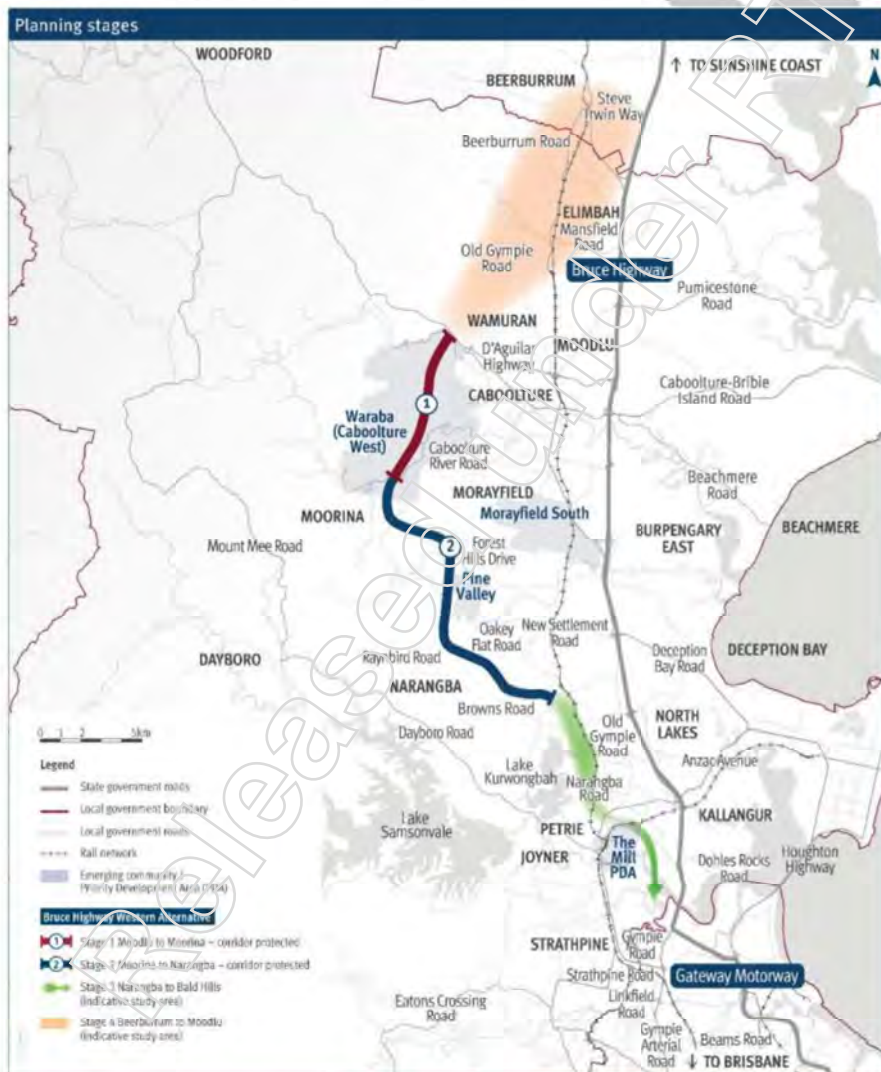


Figure 2: BHWA Project - Stages Map



## 1.2 Stage 4 Study Area

The Stage 4 study area starts from the northern end of Stage 1 (at the D'Aguiar Highway) and continues north towards Steve Irwin Way. The area is largely rural land, with some rural residential areas within the study area. These areas are concentrated around the township of Elimbah and towards Caboolture.

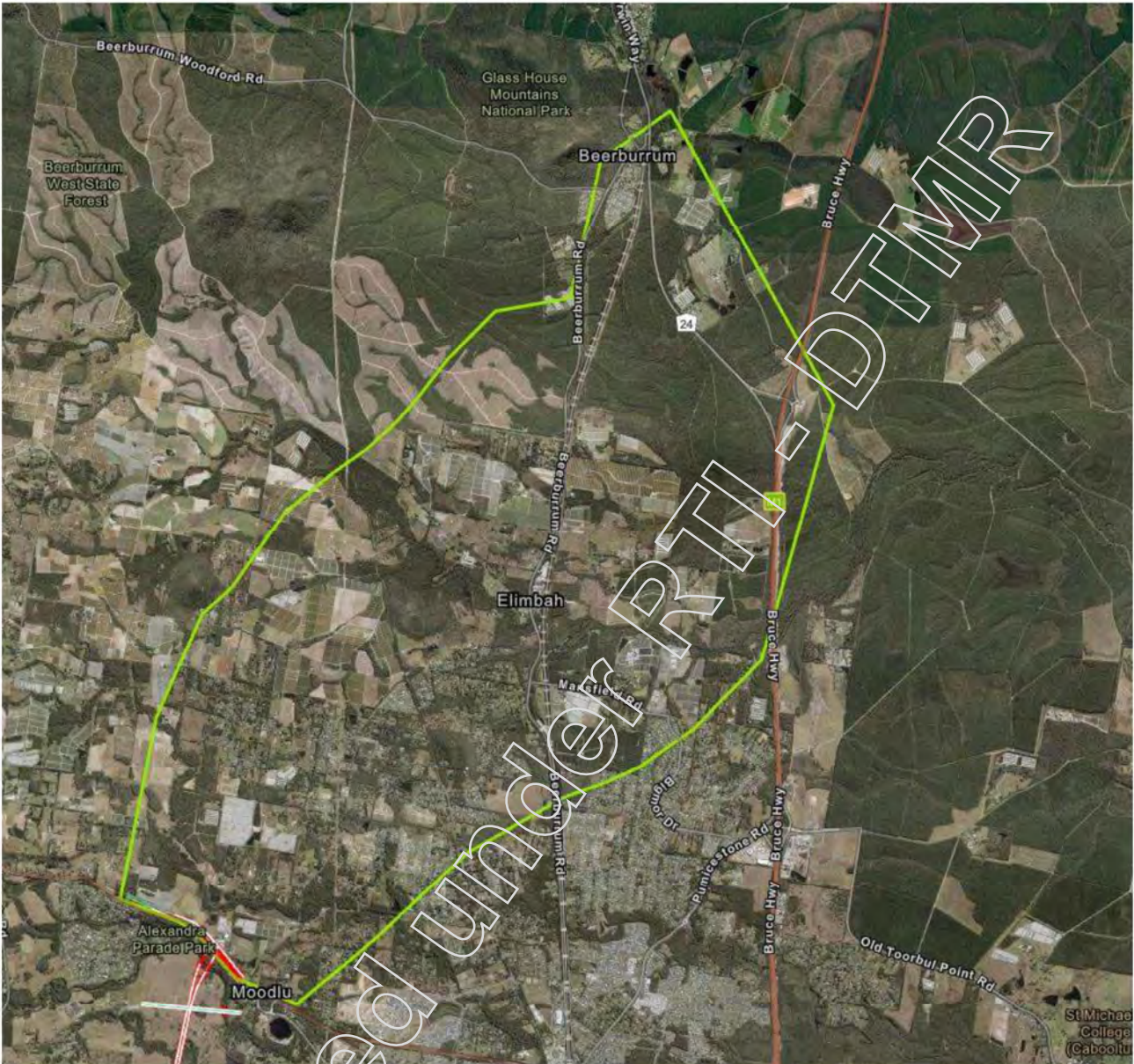


Figure 3: Stage 4 study area

## 1.3 Purpose of this report

The purpose of this report is to:

- Summarise the development of the initial options for Stage 4 between the D'Aguiar Highway and Steve Irwin Way.
- Document the assessment of these options and discussions with key stakeholders.
- Identify the preferred options for further refinement and progression to community consultation.

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## 2.2 Options development

The development of options gave consideration to several key, known constraints across the Stage 4 study area. These are summarised in the below section.

### 2.2.1 Key constraints

Several key constraints across the Stage 4 study area informed the development of the long list of options. These key constraints included the following:

Cultural Heritage - known cultural heritage sites (refer

- Figure 4)
- Environmental constraints:
  - Remnant vegetation (refer Figure 5)
  - Wetlands and waterways (Figure 6)
  - Koala Habitat (refer Figure 7)

- Protected areas (refer Figure 8)
- Draft update to ShapingSEQ – in particular the potential future Major Development Area (MDA) at Elimbah (refer Figure 9); in ShapingSEQ 2017, this area is identified as a Potential Future Growth Area (PFGA)
- The inter-urban break between the Moreton Bay and Sunshine Coast regions (refer Figure 10)
- Community constraint - potential property impacts and respective zoning (refer Figure 11)
- Flooding (refer Figure 12)
- Public Utility Plan – power transmission lines (refer Figure 13)

These key constraints are presented in the below figures.



Figure 4: Known Cultural Heritage Sites

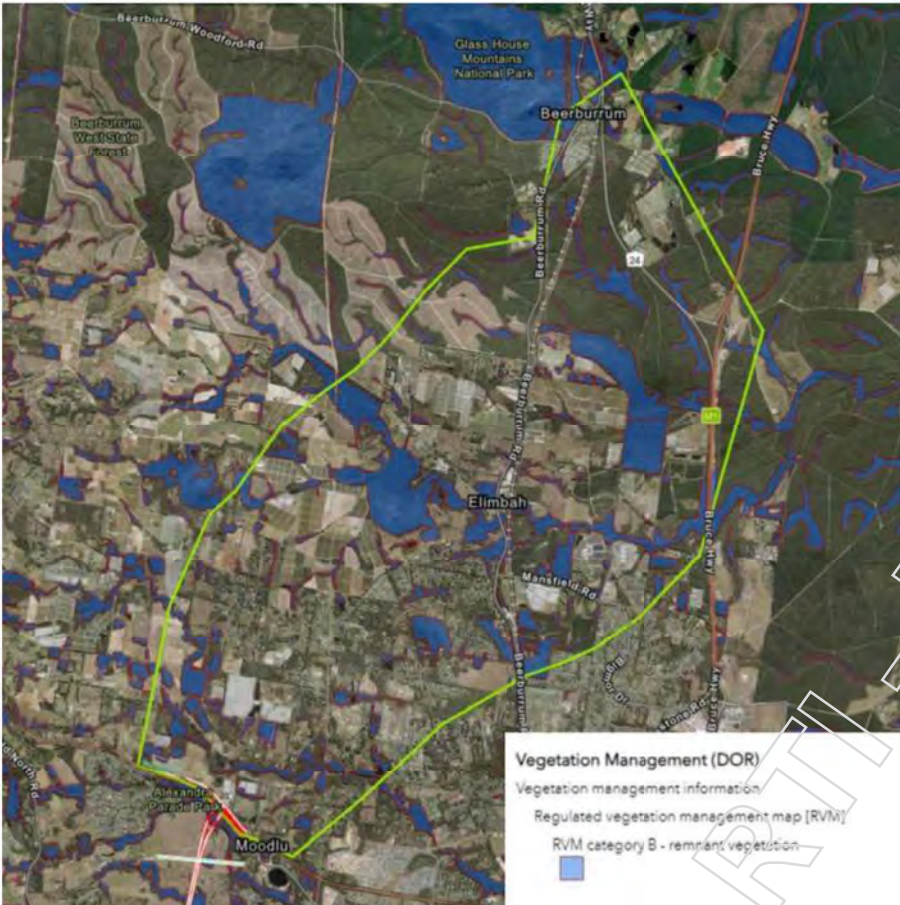


Figure 5: Remnant Vegetation



Figure 6: Wetlands and waterways

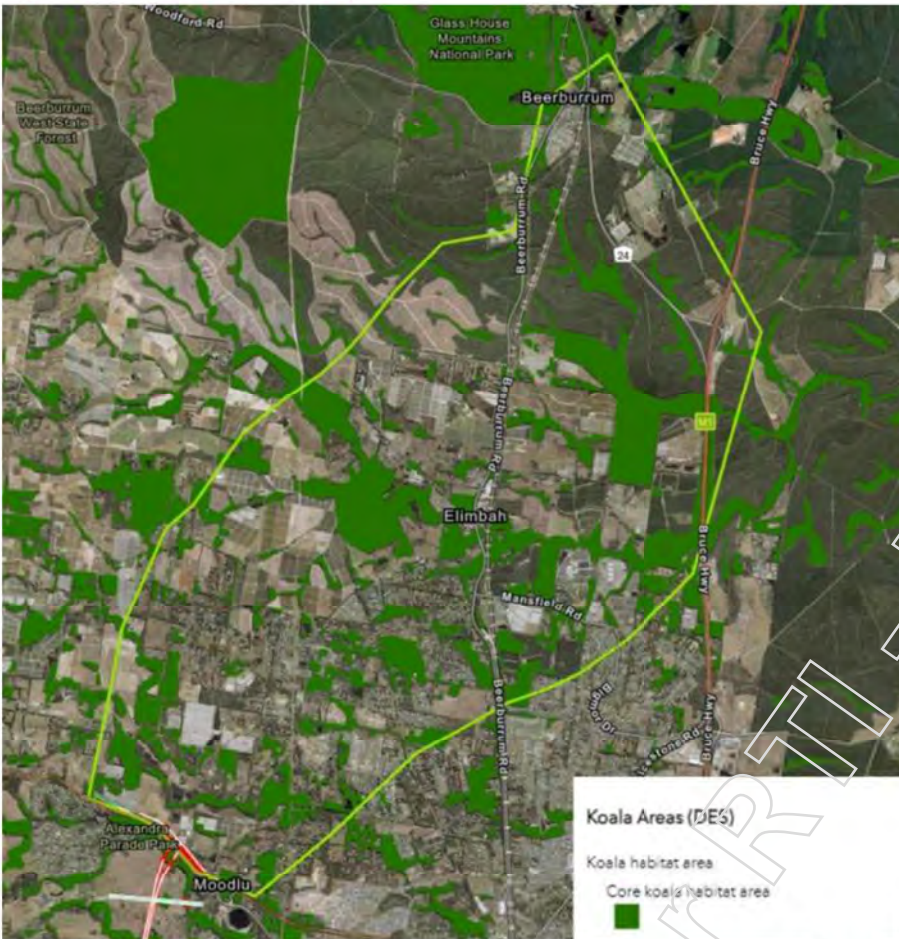


Figure 7: Core koala habitat areas

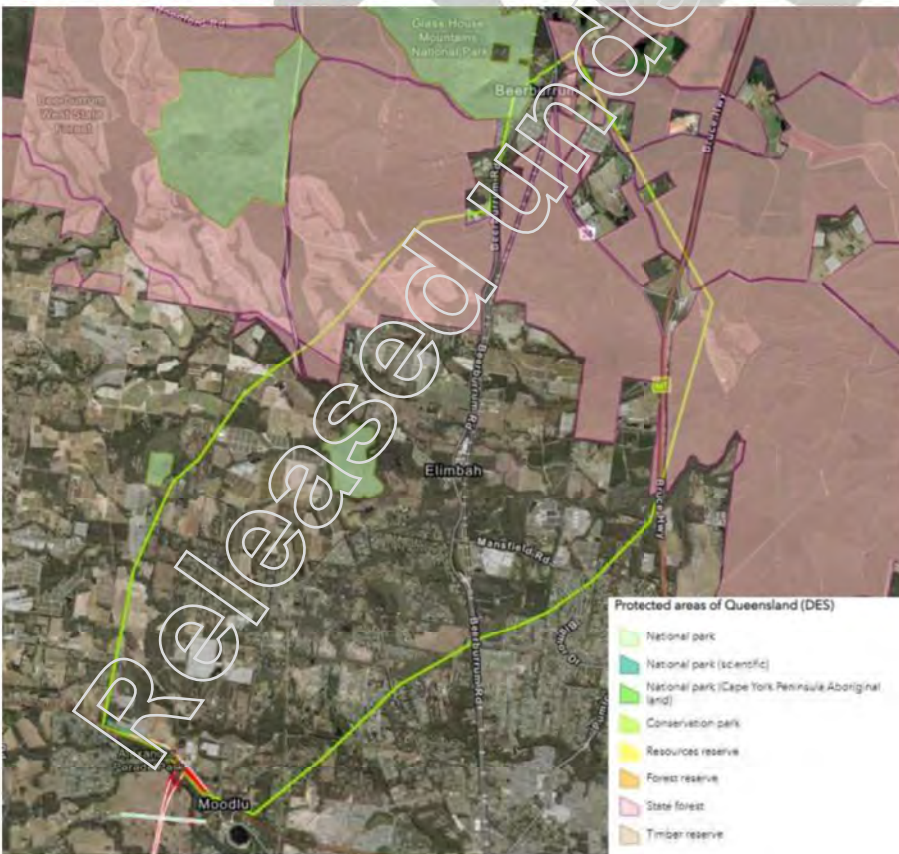


Figure 8: Protected areas of Queensland

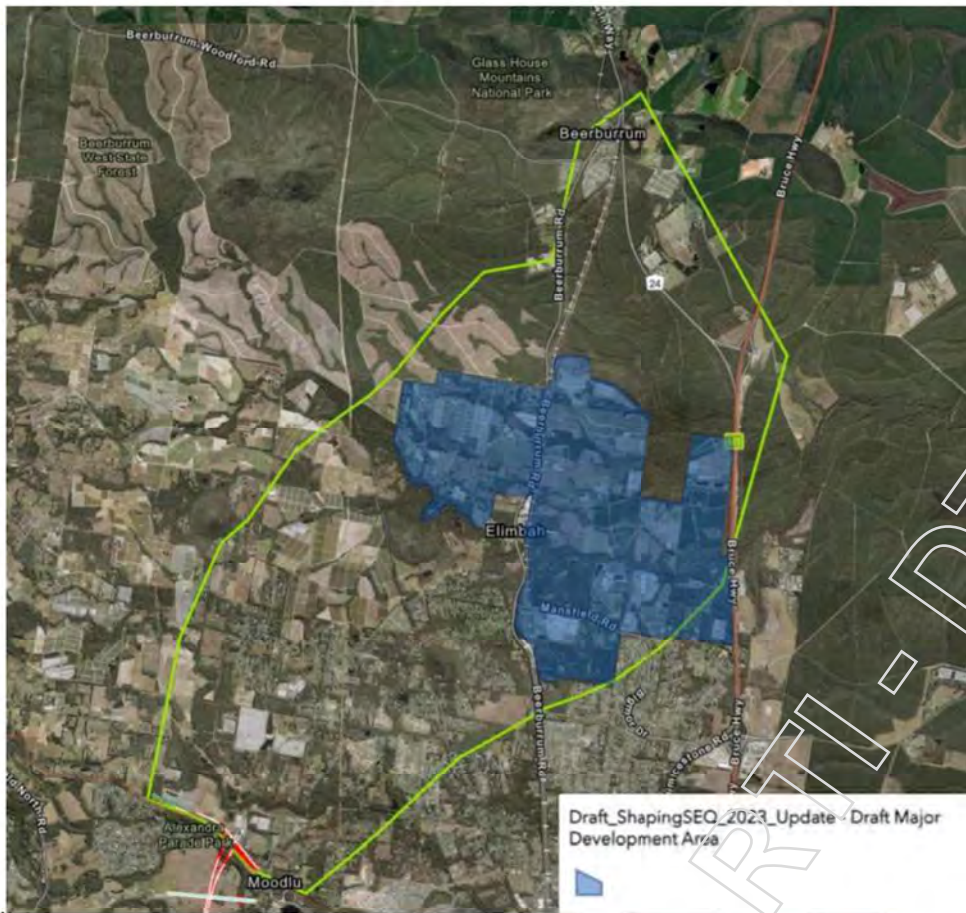


Figure 9: Draft ShapingSEQ Update – potential future Major Development Area (MDA) at Elimbah

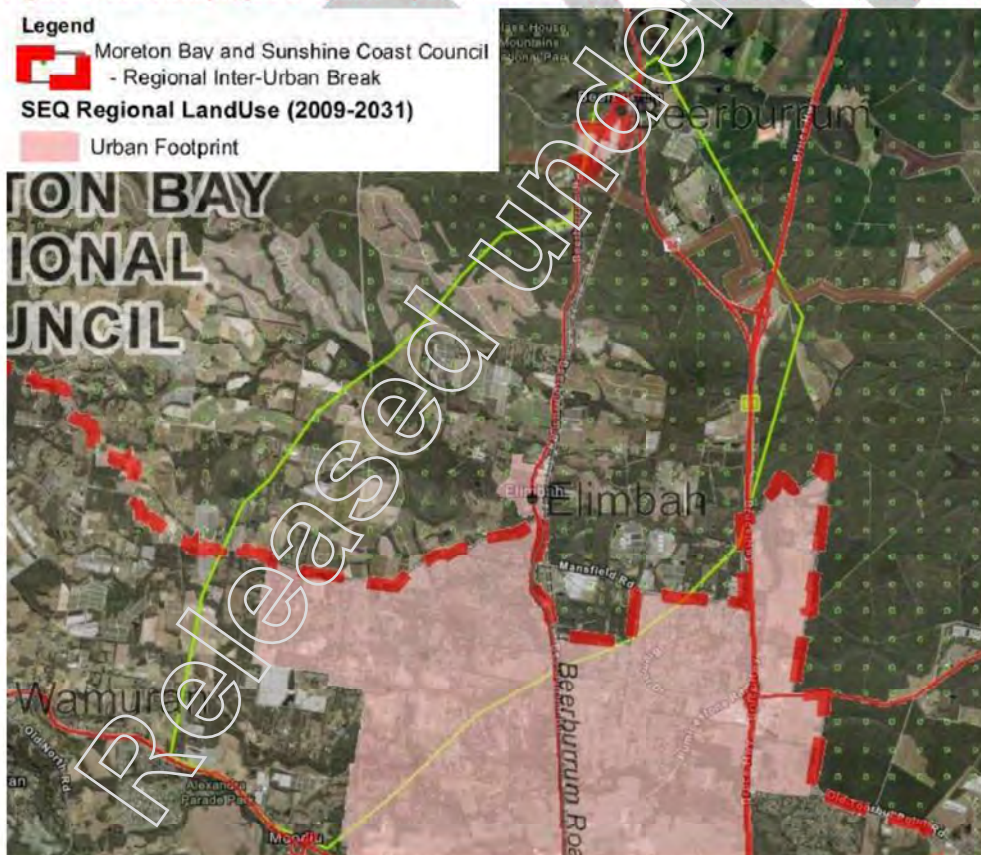


Figure 10: Inter-urban break boundary

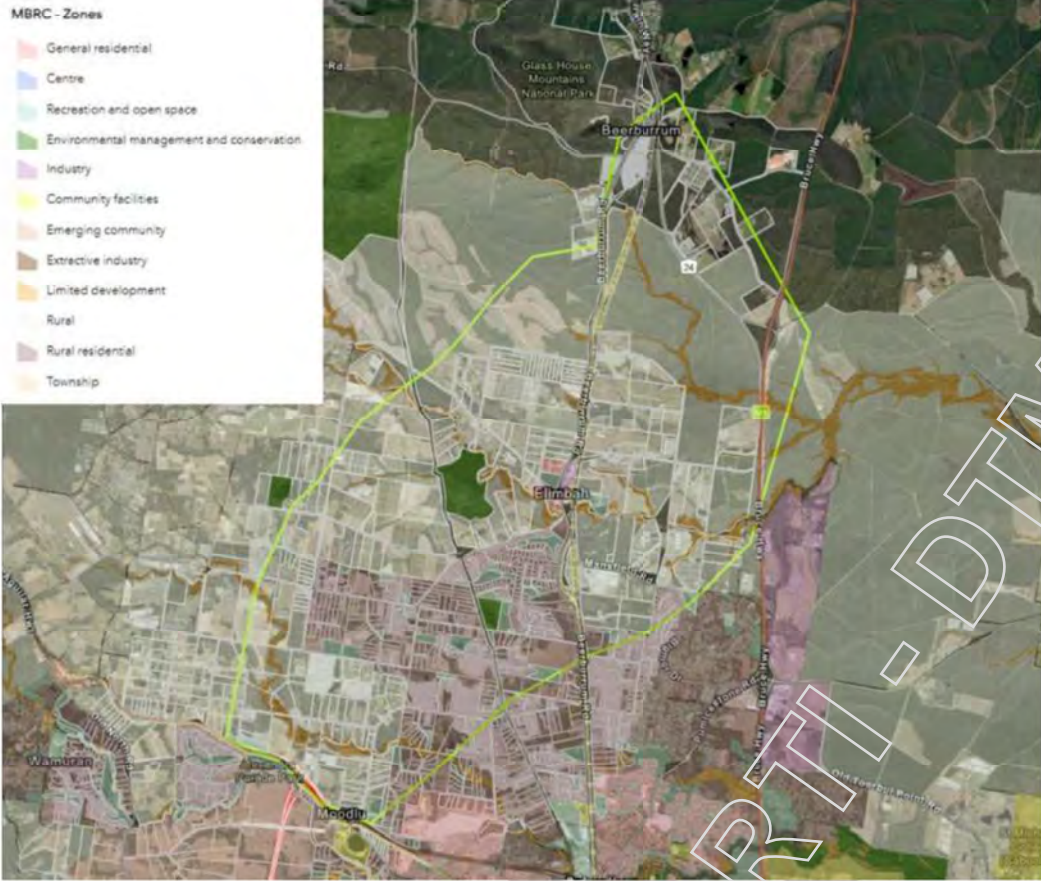


Figure 11: Land Use Zoning and Property Impacts



Figure 12: Flooding



Network Energex - 110kV Sub-Transmission Line  
Powerlink Transmission Easement

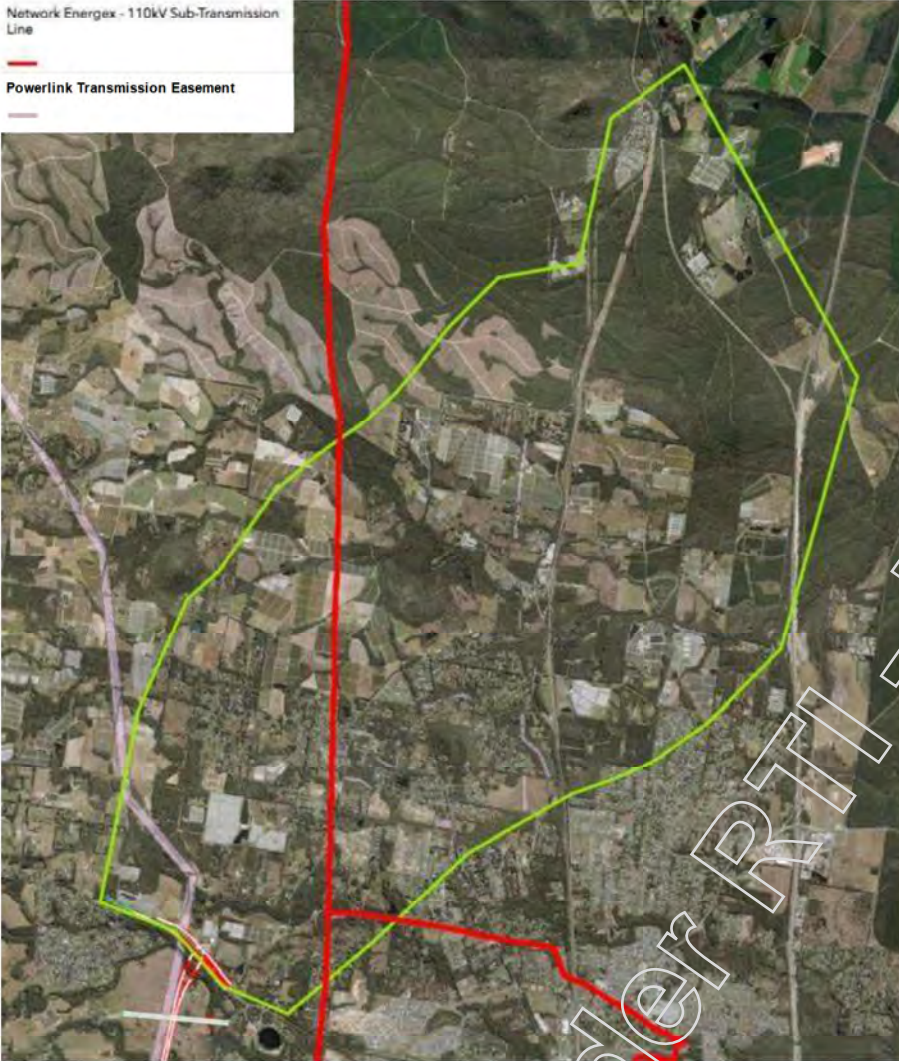


Figure 13: Energex 110kV Sub-Transmission Line and PowerLink Transmission Corridor

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## 2.4 Multi-criteria analysis workshop

A multi-criteria analysis workshop was held with key stakeholders in August 2023 to assess the long list of options and to help refine and select a preferred option for BHWA Stage 4. The slide pack from the workshop have been provided in Appendix A and the workshop minutes are provided in Appendix C. The attendees of the workshop included those shown below.

- PI [redacted] (TMR)
- PI [redacted] (TMR)
- PI [redacted] (TMR)
- PI [redacted] (TMR)
- PI [redacted] (TMR)
- PI [redacted] (TMR)
- PI [redacted] (TMR)
- PI [redacted] (TMR)
- PI [redacted] (TMR)
- PI [redacted] (TMR)
- PI [redacted] (CMB)
- PI [redacted] (CMB)
- PI [redacted] (CMB)
- [redacted] (Arup)
- PI [redacted] (Arup)
- PI [redacted] (Arup)
- PI [redacted] (Arup)
- PI [redacted] (Arup)
- PI [redacted] (Arup)

## 2.5 Weightings and sensitivity testing

The unweighted assessment from the multi-criteria analysis workshop comprised averaging the scores for each objective to provide an overall score for each option. To represent relative importance of each objective, weightings were assigned to the objectives. This was done using a Pairwise assessment. The completed pairwise table and associated weightings is shown below in Table 2.

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**Table 2: Pairwise comparison**

PAIRWISE ANALYSIS		Road Transport Benefits and Opportunities	Public and Active Transport	Expansion of the Urban Footprint	Existing Urban Footprint	Amenity Impacts	Impacts on Community Facilities and Open Space	Property Impacts	Cultural Heritage Impacts	Environment Impacts	Environmental Opportunities	Capital Cost and Constructability	Occurrence +1	WEIGHTING
		A	B	C	D	E	F	G	H	I	J	K		
Road Transport Benefits and Opportunities	A	Sch.4 Part 4 s.4 deliberative processes of gov												
Public and Active Transport	B													
Expansion of the Urban Footprint	C													
Existing Urban Footprint	D													
Amenity Impacts	E													
Impacts on Community Facilities and Open Space	F													
Property Impacts	G													
Cultural Heritage Impacts	H													
Environment Impacts	I													
Environmental Opportunities	J													
Capital Cost and Constructability	K													

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## 4. Multi-criteria analysis (MCA)

A workshop was held on 30<sup>th</sup> August 2023 to present the findings of the draft MCA assessment for Stage 4 to key project stakeholders. The workshop involved staff from TMR North Coast, City of Moreton Bay, TMR Rail Planning Team, TMR Transport Strategy and Planning and members of the Arup project team.

A brief summary on the project background and history of the project was presented to the workshop participants. All options included were also presented to the workshop participants. A high-level summary of the findings was presented to the workshop attendees.

### 4.1 Pre-MCA Workshop scores

Based on the information presented in Section 3, the below scores were developed for each option. These scores were presented and discussed in the MCA workshop.



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**Table 20: Updated Pairwise Assessment**

PAIRWISE ANALYSIS		Road Transport Benefits and Opportunities	Public and Active Transport	Expansion of the Urban Footprint	Existing Urban Footprint	Economic Impacts	Amenity Impacts	Impacts on Community Facilities and Open Space	Property Impacts	Cultural Heritage Impacts	Environment Impacts	Environmental Opportunities	Capital Cost and Constructability	Occurrence +1	WEIGHTING
		A	B	C	D	E	F	G	H	I	J	K	L		
Road Transport Benefits and Opportunities	A	Sch.4 Part 4 s.4 deliberative processes of gov													
Public and Active Transport	B														
Expansion of the Urban Footprint	C														
Existing Urban Footprint	D														
Economic Impacts	E														
Amenity Impacts	F														
Impacts on Community Facilities and Open Space	G														
Property Impacts	H														
Cultural Heritage Impacts	I														
Environment Impacts	J														
Environmental Opportunities	K														
Capital Cost and Constructability	L														

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# Appendix A

## MCA Workshop Slide Pack

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# Bruce Highway Western Alternative

NR

and Stage 4

30<sup>th</sup> August 2023

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# Today's workshop

## Outcomes sought

- Not Relevant
- Stage 4 – *main focus for today*
  - Present long list of alignment options for Stage 4
  - Summarise the draft multi-criteria assessment (MCA) process
  - Sense check MCA process and the draft outcomes
  - Agree those options which should be discarded and those that should be progressed for further refinement and consultation
  - Understand from attendees any opportunities for refinement or sub-option development

# Agenda

Item	Start	End	Duration
Welcome and introductions	1:00pm	1:05pm	5mins
Aim of today's workshop	1:05pm	1:10pm	5mins
Intent of the BHWA Project	1:10pm	1:15pm	5mins
Not Relevant			
<b>Stage 4</b>			
Key constraints	2:00pm	2:10pm	10mins
Long list of surface options	2:10pm	2:15pm	5mins
Key draft findings and assessment framework	2:15pm	2:30pm	15mins
Summary of draft assessment findings	2:30pm	3:45pm	75mins
Discussion	3:45pm	3:55pm	10mins
Next steps	3:55pm	4:00pm	5mins

# Bruce Highway Western Alternative

## Project Intent

The Bruce Highway Western Alternative (BHWA) is a new transport corridor between Beerburrum and North Brisbane, aiming to provide an alternative route to the west of the Bruce Highway to help alleviate congestion and accommodate future growth in the Moreton Bay Region. The BHWA:

- Improves access, connectivity, and travel options for existing and emerging communities.
- Supports major expansion areas identified in SEQ Regional Plan, including Caboolture West, Morayfield South, Pine Valley and The Mill at Moreton Bay Priority Development Area in Petrie.
- Improves safety.
- Increases transport capacity.
- Supports future economic growth and development in the region.
- Preserves and supports the existing function and efficiency of the Bruce Highway.
- Improves travel time and reliability.

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Not Relevant

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*Slides deleted for the Stage 4 MCA Report*

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*Break*

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# Stage 4

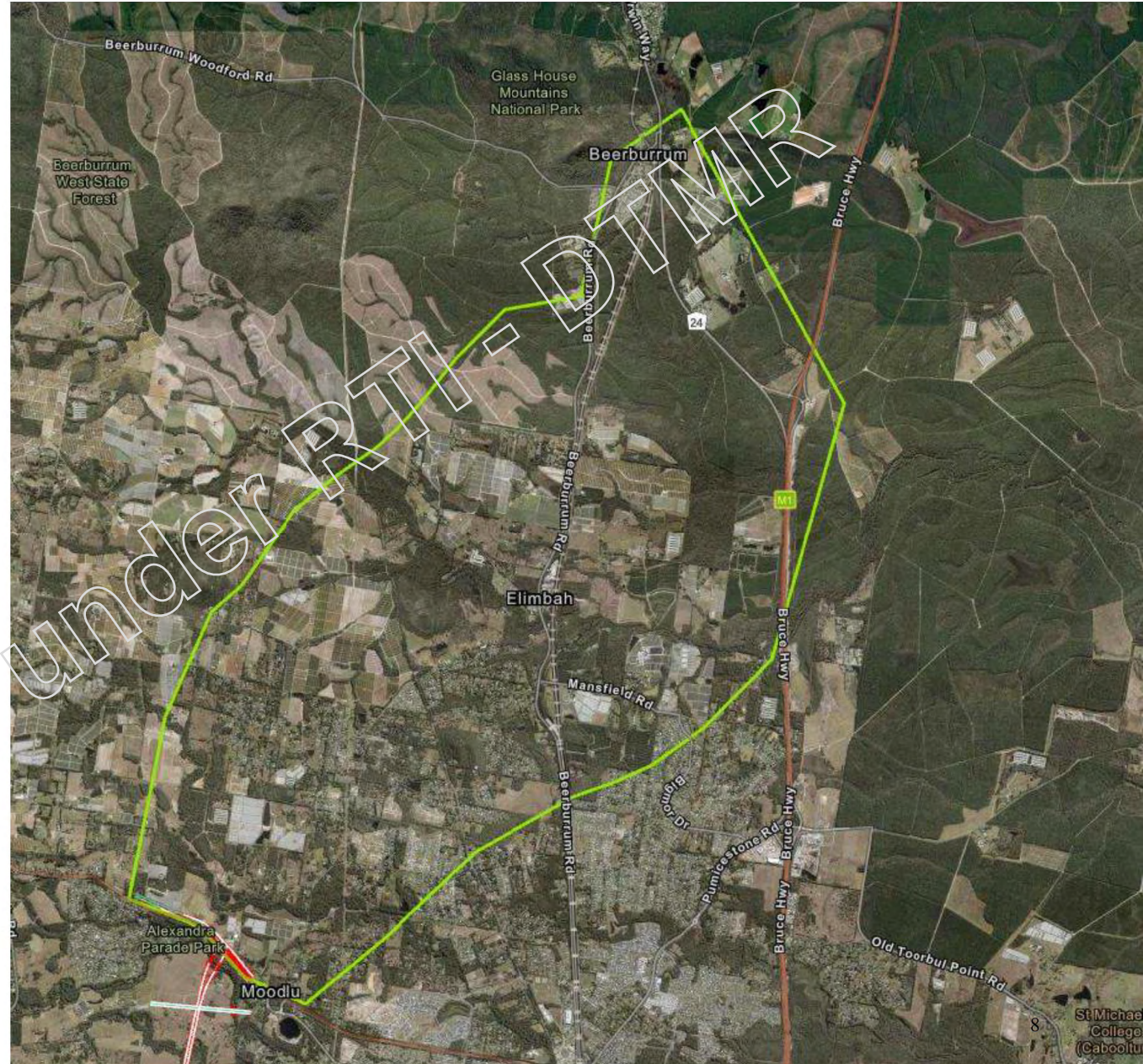
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BHWA Stage 4

# Study Area



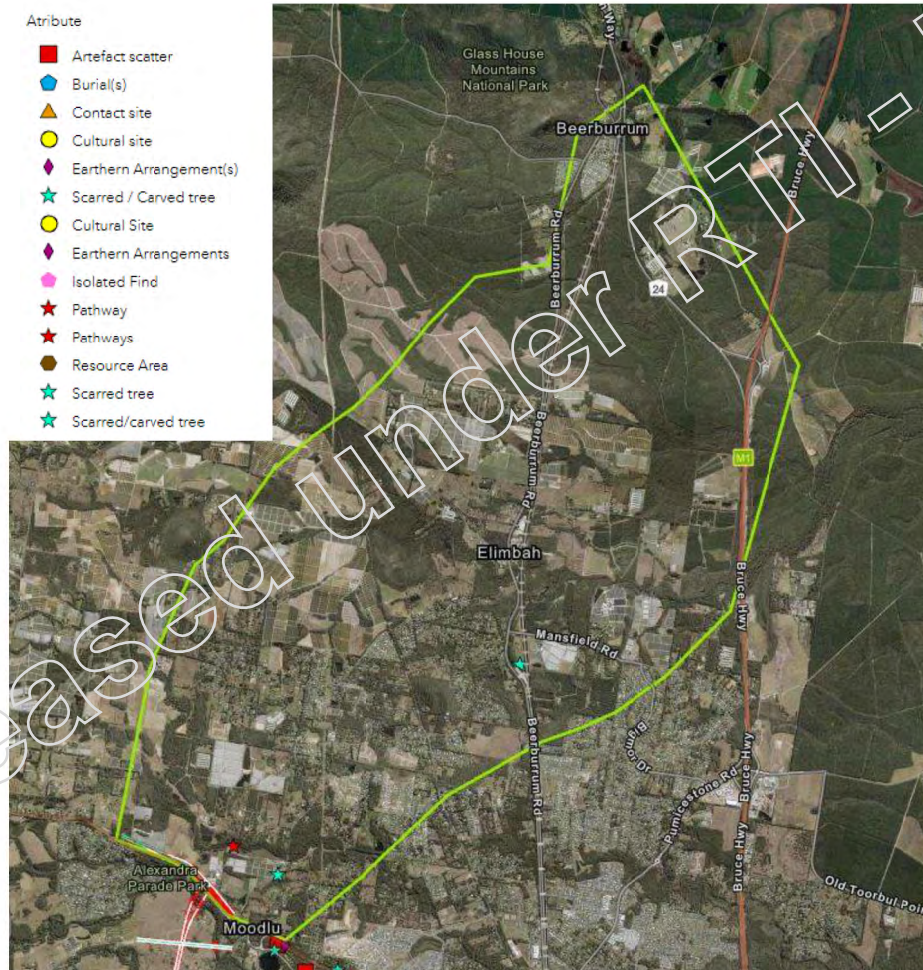
# Key constraints

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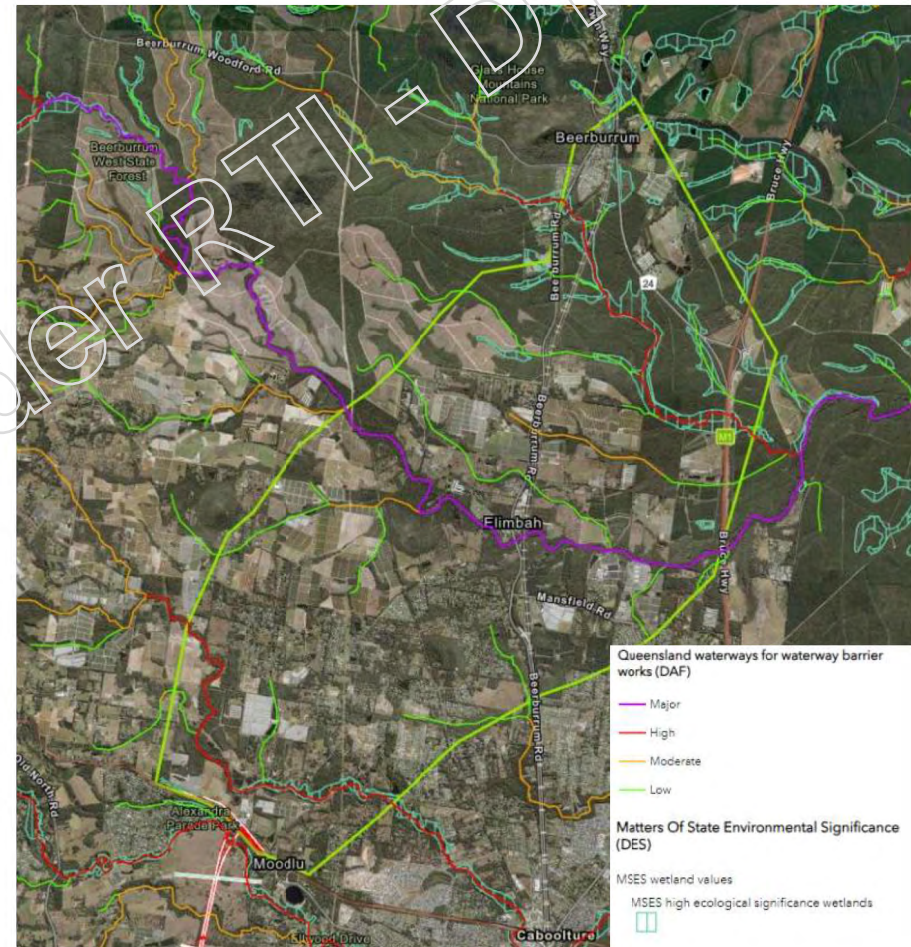
# Key constraints

## Cultural Heritage



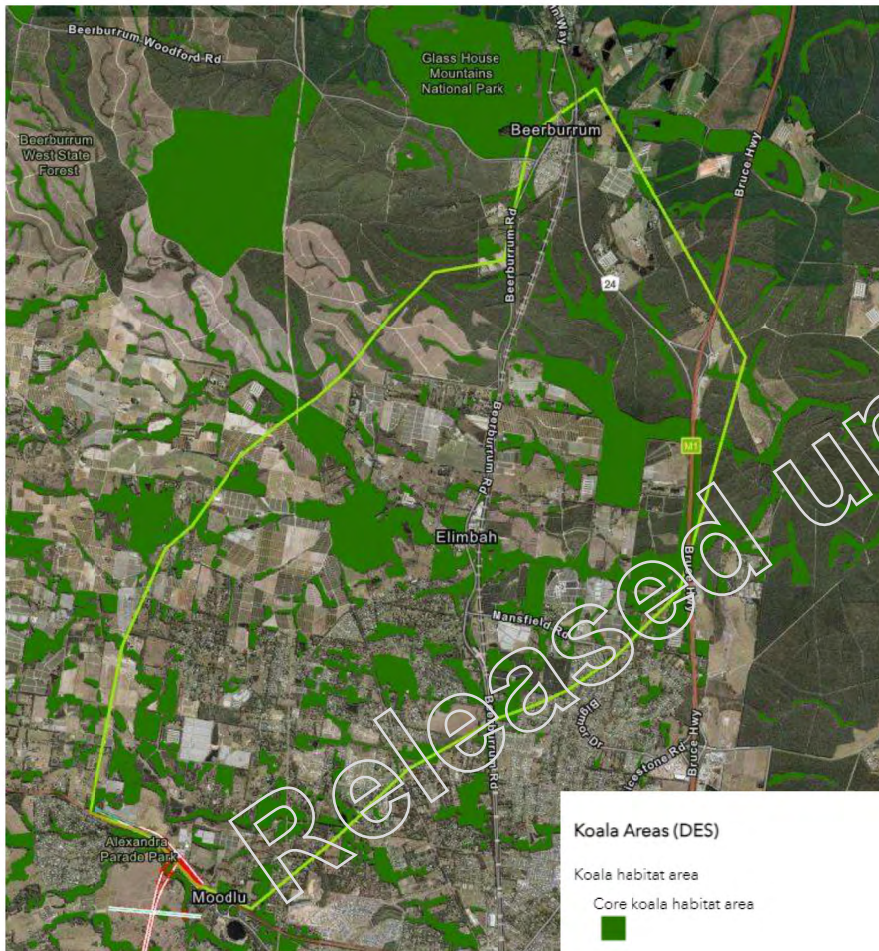
# Key constraints

Environment – remnant vegetation, wetlands and waterways



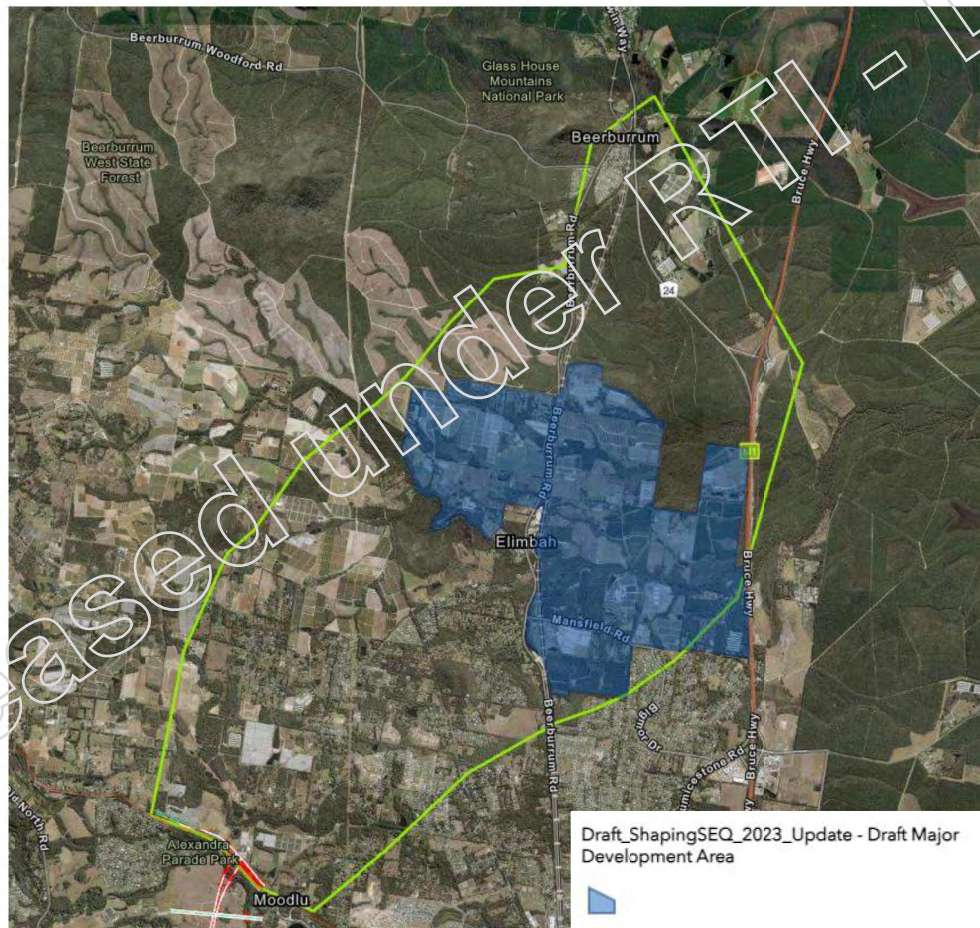
# Key constraints

## Environment – koala habitat and protected areas



# Key constraints

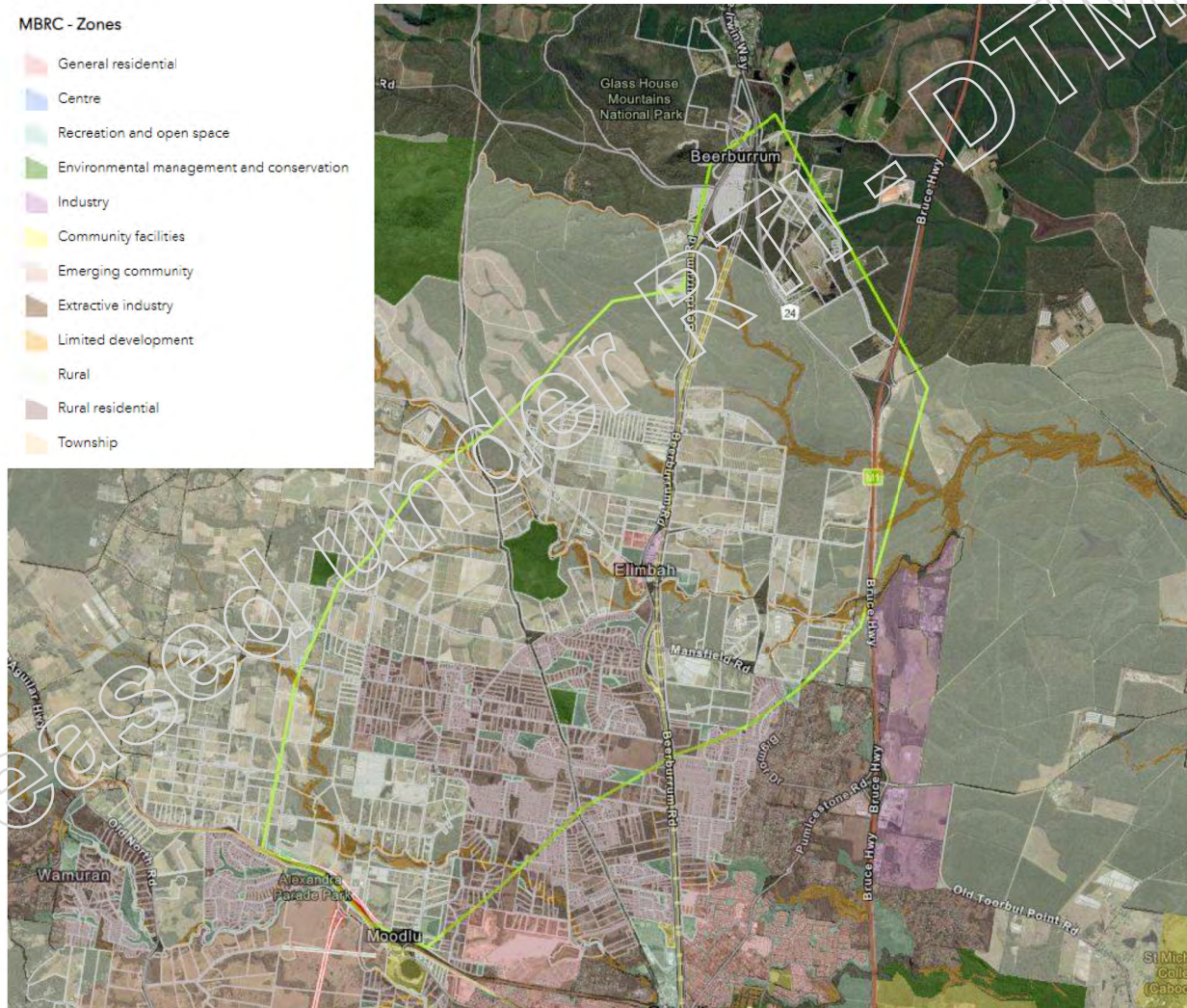
Draft ShapingSEQ Update – proposed Major Development Area (MDA) at Elimbah



# Key constraints

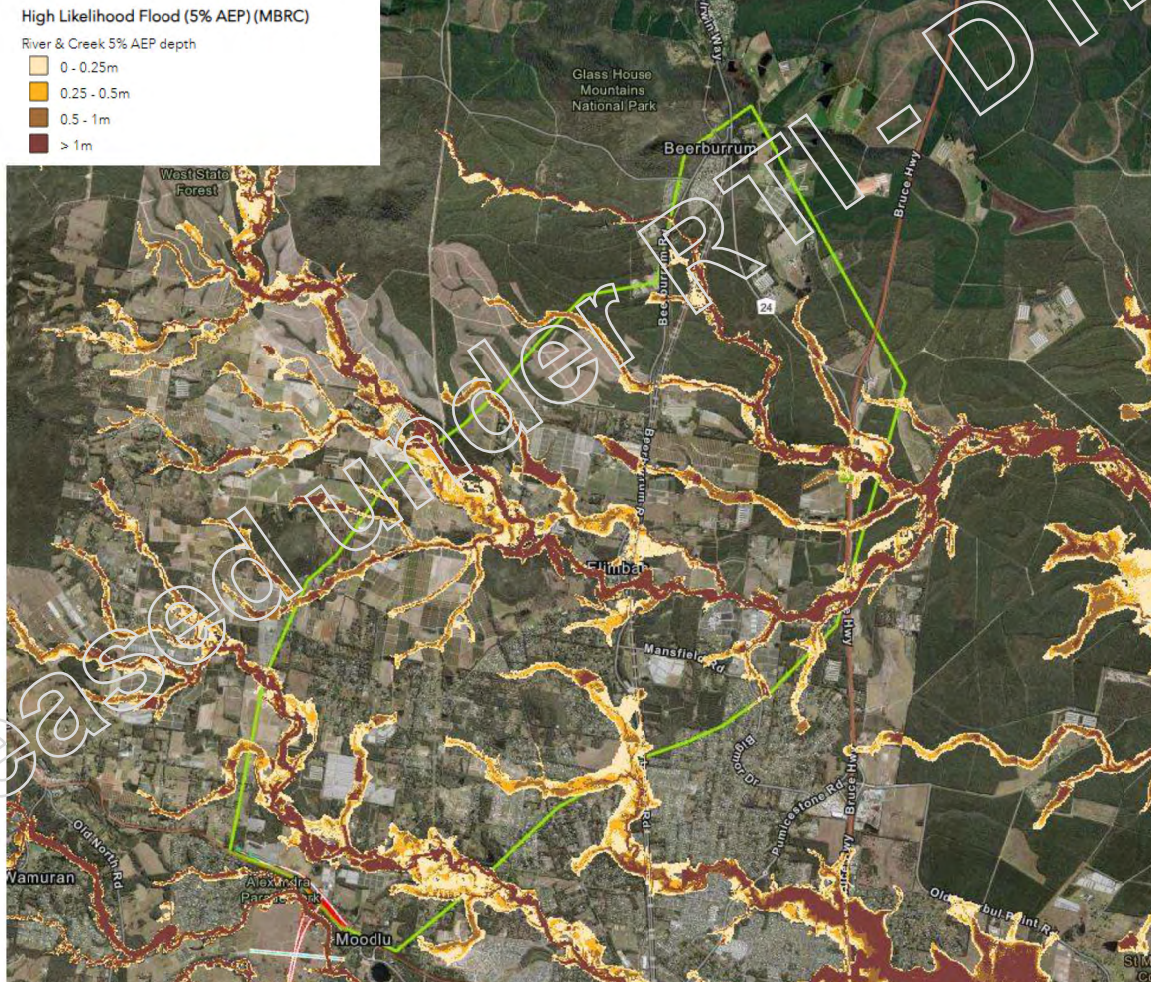
## Property impacts

- MBRC - Zones
- General residential
  - Centre
  - Recreation and open space
  - Environmental management and conservation
  - Industry
  - Community facilities
  - Emerging community
  - Extractive industry
  - Limited development
  - Rural
  - Rural residential
  - Township



# Key constraints

## Flooding



# Long list of surface options

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# Assessment Framework

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# Summary of draft assessment findings

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# Draft Pairwise and weightings

PAIRWISE ANALYSIS		Road Transport Benefits and Opportunities	Public and Active Transport	Expansion of the Urban Footprint	Existing Urban Footprint	Amenity Impacts	Impacts on Community Facilities and Open Space	Property Impacts	Cultural Heritage Impacts	Environment Impacts	Environmental Opportunities	Capital Cost and Constructability	Occurrence +1	WEIGHTING
		A	B	C	D	E	F	G	H	I	J	K		
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Property Impacts	G													
Cultural Heritage Impacts	H													
Environment Impacts	I													
Environmental Opportunities	J													
Capital Cost and Constructability	K													

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# Discussion

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# Next steps

## BHWA Stage 4

- Consultation

- Sch.4 Part 4 s.4 deliberative processes of gov

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# Appendix B

## Long List of Options Plots

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**Appendix C**  
**MCA Meeting Minutes**

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Minutes

**Project title** Bruce Highway Western Alternative Stage<sup>N</sup> and 4  
**Job number** 286784 / 295294  
**Meeting name & number** BHWA<sup>NR</sup> [redacted] Stage 4 Alignments MCA, -  
**File ref**  
**Time and date** 1pm - 4pm 30 August 2023  
**Location** MS Teams  
**Purpose of meeting** Discussion of<sup>NR</sup> [redacted] and Stage 4 Alignments MCA

**Present**

- [redacted] (TMR)
- [redacted] (TMR)
- [redacted] (TMR)
- [redacted] (TMR)
- [redacted] (TMR)
- [redacted] (TMR)
- [redacted] (TMR)
- [redacted] (TMR)
- [redacted] (TMR)
- [redacted] (CMB)
- [redacted] (CMB)
- [redacted] (CMB)
- [redacted] (Arup)
- [redacted] (Arup)
- [redacted] (Arup)
- [redacted] (Arup)
- [redacted] (Arup)
- [redacted] (Arup)

**Apologies**

- [redacted] (TMR)
- [redacted] (TMR)
- [redacted] (CMB)

**Circulation** Those present  
Present + Apologies

Prepared by: [redacted]

Date of circulation: 11 September 2023  
Date of next meeting: N/A

**Project title** Bruce Highway Western Alternative Stage N and 4  
**Job number** 286784 / 295294  
**Date of Meeting** 30 August 2023

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**Topic**

**Action**

Not Relevant

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**Project title** Bruce Highway Western Alternative Stage **N** and 4  
**Job number** 286784 / 295294  
**Date of Meeting** 30 August 2023

Not Relevant

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**Project title** Bruce Highway Western Alternative Stage <sup>N</sup> and 4  
**Job number** 286784 / 295294  
**Date of Meeting** 30 August 2023

Not Relevant

**2. Stage 4 Alignments MCA**

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**Job number** 286784 / 295294  
**Date of Meeting** 30 August 2023

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PAIRWISE ANALYSIS	Road Transport Benefits and Opportunities Public and Active Transport Expansion of the Urban Footprint Existing Urban Footprint Economic Impacts Amenity Impacts Impacts on Community Facilities and Open Space Property Impacts Cultural Heritage Impacts Environment Impacts Environmental Opportunities Capital Cost and Constructability Occurrence +1 WEIGHTING												
	A	B	C	D	E	F	G	H	I	J	K	L	
Road Transport Benefits and Opportunities	A	Sch.4 Part 4 s.4 deliberative processes of gov											
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Environment Impacts	J												
Environmental Opportunities	K												
Capital Cost and Constructability	L												

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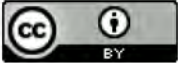
# TMR Risk Management Framework

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## Contact for enquiries

Contact	Risk Advisory Services Team
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## Prepared by

Prepared by	Risk Advisory Services Team
Title	TMR Risk Management Framework
Branch & Division	Governance Branch, Corporate Division
Status	Approved

## Version history

Version number	Date	Changed by	Nature of amendment
3.0	20 August 2018	Risk Advisory Services Team	Amendments to reflect changes in the International Risk Management Standard.
3.1	15 October 2018	Risk Advisory Services Team	Framework review and changes following GM feedback.
3.2	11 October 2019	Risk Advisory Services Team	Framework review.
3.3	3 December 2019	Risk Advisory Services Team	Update including Director feedback and inclusion of Enterprise Operating Risk.
3.4	05 March 2020	Risk Advisory Services Team	Minor administrative and technical amendments.
3.5	02 October 2020	Risk Advisory Services Team	Inclusion of control and treatment owner responsibilities.
3.6	23 November 2021	Risk Advisory Services Team	Framework review.
3.7	05 May 2022	Risk Advisory Services Team	Minor administrative and technical amendments.
3.8	29 June 2023	Risk Advisory Service Team	Framework review.
3.9	12 June 2023	Risk Advisory Service Team	Minor changes to reflect the introduction of the TMR Risk and Opportunity Appetite Statement and TMR Emerging Risk Management Procedure

## Document sign off

The following officer has **approved** this document (V3.8 comprehensive review).

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The following officer has **approved** this document (V3.9 minor changes).

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# 1. Introduction

The Department of Transport and Main Roads' (TMR) Risk Management Framework (framework) provides the structure for designing, implementing, monitoring, reviewing and continually improving risk management in TMR. The framework supports [TMR's Risk Management Policy](#) which outlines TMR's obligation to manage risks.

TMR identifies risk as 'the effect of uncertainty on objectives' (ISO 31000:2018, *Risk management — Guidelines*).

## 2. Purpose

Governance Branch, within Corporate Division is responsible for maintaining the framework that facilitates effective management of risks.

The framework aims to lay a foundation for the formal adoption of integrated risk management practices into activities and functions throughout TMR. The framework assists all areas of the department to benefit from a consistent and coordinated risk management process.

## 3. Risk management in TMR

The department is dedicated to establishing an appropriate risk management culture whilst contributing to good corporate governance through a consistent risk management approach. It also provides for the identification of factors that might impact on the department's ability to deliver its services, along with promoting opportunities through a process of risk identification, analysis and responses.

Risk management contributes to good corporate governance by:

- providing reasonable assurance to executive leadership that organisational objectives will be achieved within a tolerable degree of risk
- identifying factors that may impact on the ability of the department to deliver its objectives
- promoting opportunities through a process of risk identification, analysis, evaluation, treatment and review
- informing the policies and procedures that enable the department to function effectively in a changing environment
- ensuring compliance with legislated requirements and good business practice.

Risk management is an essential component of managerial responsibility and accountability to achieve TMR's vision and purpose as outlined in the TMR Strategic Plan.

The *Financial Accountability Act 2009 (FAA)* requires that:

- the Director-General as the accountable officer, must 'establish and maintain appropriate systems of internal control and risk management' (section 61(b) of the *FAA*).

The *Financial and Performance Management Standard 2019 (FPMS)* requires that:

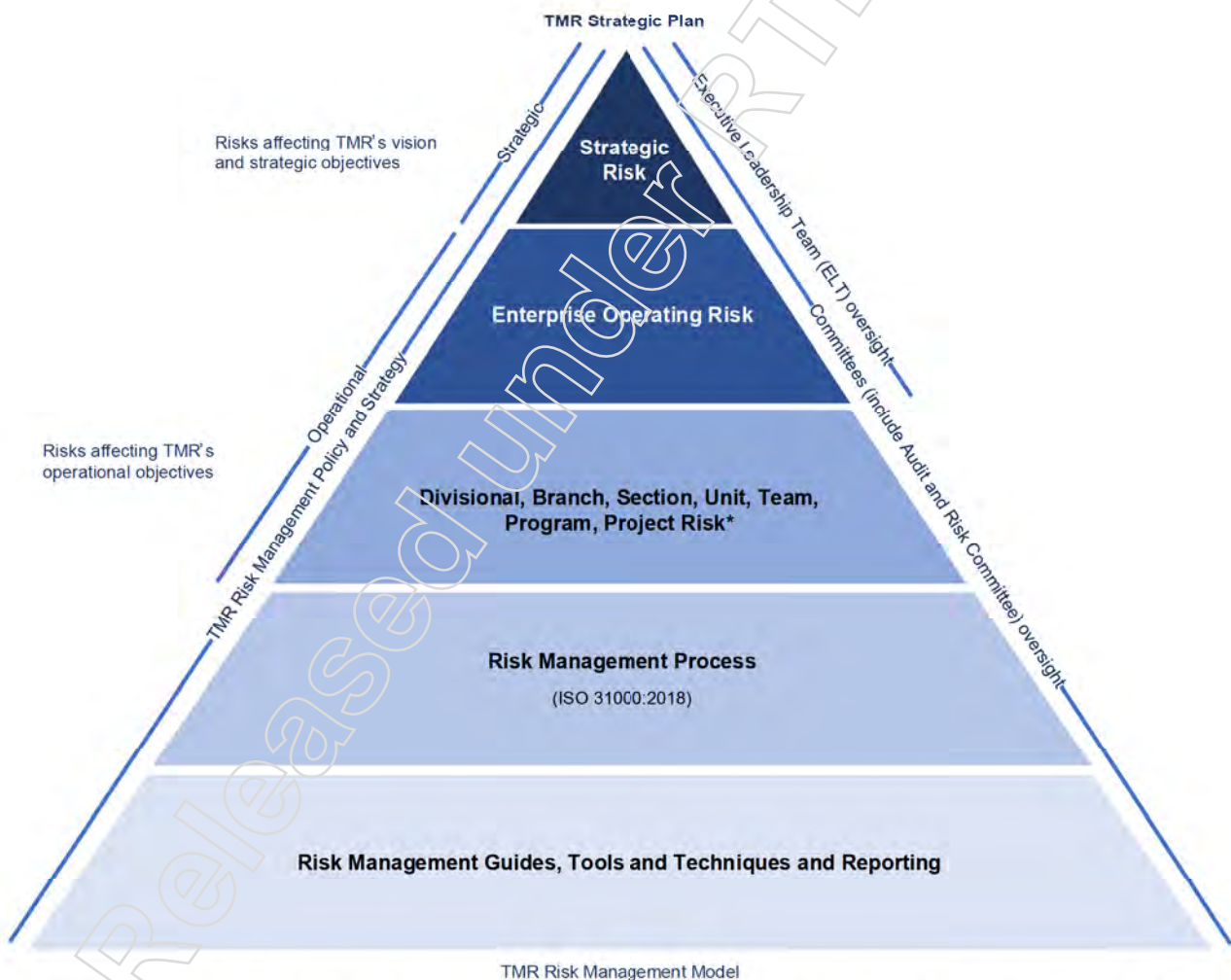
- the accountable officer 'must establish and maintain a risk management system' (section 11(1)(h) of the *FPMS*)

- the accountable officer 'must manage the strategic and operational risks of the department in accordance with the risk management system for the department' (section 23 of the FMPS).

Senior management demonstrate leadership and commitment by ensuring TMR has the capacity and capability to manage risks in an increasingly complex operating environment. They are required to drive organisational culture to enable positive behaviours, effective management of current and emerging risks and opportunities across the department.

The TMR Risk Management Model (**Figure 1**) represents a structured approach to enable TMR to provide a level of assurance of effective risk management across the organisation. This model is focused on two (2) categories of risk identification within TMR, namely Strategic and Operational, all of which may affect the ability of TMR to achieve its strategic objectives and deliver on its core operations.

**Figure 1: TMR Risk Management Model**



\*Portfolio related risks are recorded at business areas' level (considered as divisional or branch risk type in the Risk Management System)

### 3.1 TMR risk and opportunity appetite

The department's Risk and Opportunity Appetite Statement (ROAS), summarises TMR's overall risk appetite as the amount of risk acceptable in pursuit of its strategic and operational objectives.

The ROAS provides high level guidance on TMR's willingness to assume a level of risk to achieve its objectives. It is a management tool for risk-informed decisions with regards to allocation of resources, management controls, and potential consequence and impacts in different areas.

### 3.2 Lines of defence

The three lines of defence model (Figure 2) represents an approach to providing structure around risk management and internal controls within TMR by defining roles and responsibilities in different areas and the relationship between those different areas.

Figure 2: TMR Three Lines of Defence

**Three Lines of Defence**

FIRST	SECOND	THIRD
Business Areas	Risk and Compliance Management	Internal Audit
Functions with primary responsibility for identifying, managing and monitoring risks (risk owners).	Functions that help and support the first line of defence in building, monitoring and reporting risks.	Functions that perform independent assurance on effectiveness of risk management and internal control, including first and second line controls.
<b>Business Areas</b> provide the first line of assurance by identifying, assessing, responding, and monitoring day-to-day risks and ensure controls operate as designed.	<b>Risk Advisory Services</b> provides a second line of defence over TMR's risk management by: <ul style="list-style-type: none"> <li>• developing and continually reviewing TMR's risk management framework, guides, tools and techniques</li> <li>• providing risk management advice and support to the whole of TMR</li> <li>• promoting and building risk management capability and maturity in TMR</li> <li>• updating and maintaining Risk Management System (RMS)</li> <li>• preparing regular risk management report to Executive Leadership Team (ELT), Audit and Risk Committee (ARC) and other Governance Committees as requested.</li> </ul> <b>Legislative Compliance</b> in Governance team ensures consistency and maturity of managing compliance is embedded across TMR. Identify, register and allocate legislative changes as they arise.	<b>Internal Audit</b> provides independent assurance over the effectiveness of risk management, internal controls and governance processes in accordance with the annual audit plan.

**Note:** Other independent assurance may also be provided by the Queensland Audit Office (QAO) as an External Assurance Provider or industry regulators.

## 3.3 Risk types in TMR

### 3.3.1 Strategic risks

Strategic risks are those risks which could significantly affect and impact on the department's ability to deliver its vision and strategic objectives (as outlined in TMR's Strategic Plan) and therefore require oversight by the Executive Leadership team. Deputy Director-Generals are generally the risk owners (sponsors) of strategic risks.

Strategic risks can include:

- agency-level risks which become risks for the state, due to their size or significance, the wider impact of measures to treat them, or poor management by agencies and therefore need to be addressed at a whole-of-government level
- cross-agency risks, requiring management by more than one agency for treatment to be effective, and
- state risks, which are beyond the boundaries of any one agency due to their magnitude and/or impact on service delivery and call for a response across agencies, coordinated by a central agency.
- Refer to the **Section 5.2 Strategic risks** within the [TMR Risk Management Guide](#) for more information on how strategic risks are managed in TMR.

### 3.3.2 Operational risks

Operational risks arise in day-to-day operations, and which require specific and detailed response and monitoring regimes. If not treated and monitored, operational risks could potentially result in major adverse consequences for the department.

Operational risks could have a significant impact on the achievement of:

- TMR's objectives at enterprise level (relevant risks are known as enterprise operational risks),
- The business objectives from the perspective of the actions undertaken by a division, branch, section, work unit or team (relevant risks are known as business areas risks), or
- the individual portfolio, program or project management objectives (relevant risks are known as portfolio, program and project risks).

Refer to the **Section 5.3 Operational risks** within the [TMR Risk Management Guide](#) for more information on different levels of operational risks and how these risks are managed in TMR.

## 3.4 Opportunity

In the context of TMR risk management, an opportunity is an uncertain event that would have a favourable impact on objectives or deliver benefits if it occurred. Risk and opportunity are not opposites. Risk management is as much about maximising opportunities as it is about minimising negative consequences. When considering risk and undertaking risk management activities, time should be taken to reflect on the upsides and downsides from a potential future event. Consideration needs to be given to controls or strategies that would enable TMR to capitalise on such situations should they arise, as well as controls or strategies to minimise or

manage negative outcomes. ROAS incorporates the innovation/opportunity side by taking into account of potential positive impacts in key risk areas.

## 4. Risk roles and responsibilities in TMR

Risk governance applies the principles of good governance to the identification, assessment, management and communication of risks. It refers to the formal structures used to support risk-based decision making and oversight across all operations of TMR.

Under section 61 of the *Financial Accountability Act 2009*, the Director-General (D-G) has a responsibility to ensure the operations of the department are carried out efficiently, effectively, and economically, and to establish and maintain a system of internal controls and risk management. The D-G has authority to delegate responsibility to appropriately qualified employees.

The Audit and Risk Committee is charged with assisting the D-G in oversight of the process relating to internal risk management and control systems. The Executive Leadership Team is made up of senior executives supporting the D-G to set the strategic direction, prioritise and proactively manage risks impacting TMR and to ensure responsible management.

All employees (including temporary, casual and contracted staff) are required to have an active involvement with risk management in relation to their duties that impact on both internal and external operations.

Refer to the [TMR Risk Management Guide, Section 4 Roles and responsibilities in risk management across TMR](#) for the list of detailed risk management roles and responsibilities.

Refer to the [TMR Emerging Risk Management Procedure, Section 7 Roles and Responsibilities](#) for additional requirement in emerging risk management process.

## 5. Risk management process in TMR

The risk management process involves the systematic application of policies, procedures and practices into key activities. The process is divided into six key steps as per the *ISO 31000:2018 ISO 31000:2018, Risk management — Guidelines*:

1. communication and consultation
2. establishing the scope, context, criteria
3. risk assessment (risk identification, risk analysis, risk evaluation)
4. risk treatment
5. monitoring and review and
6. recording and reporting.

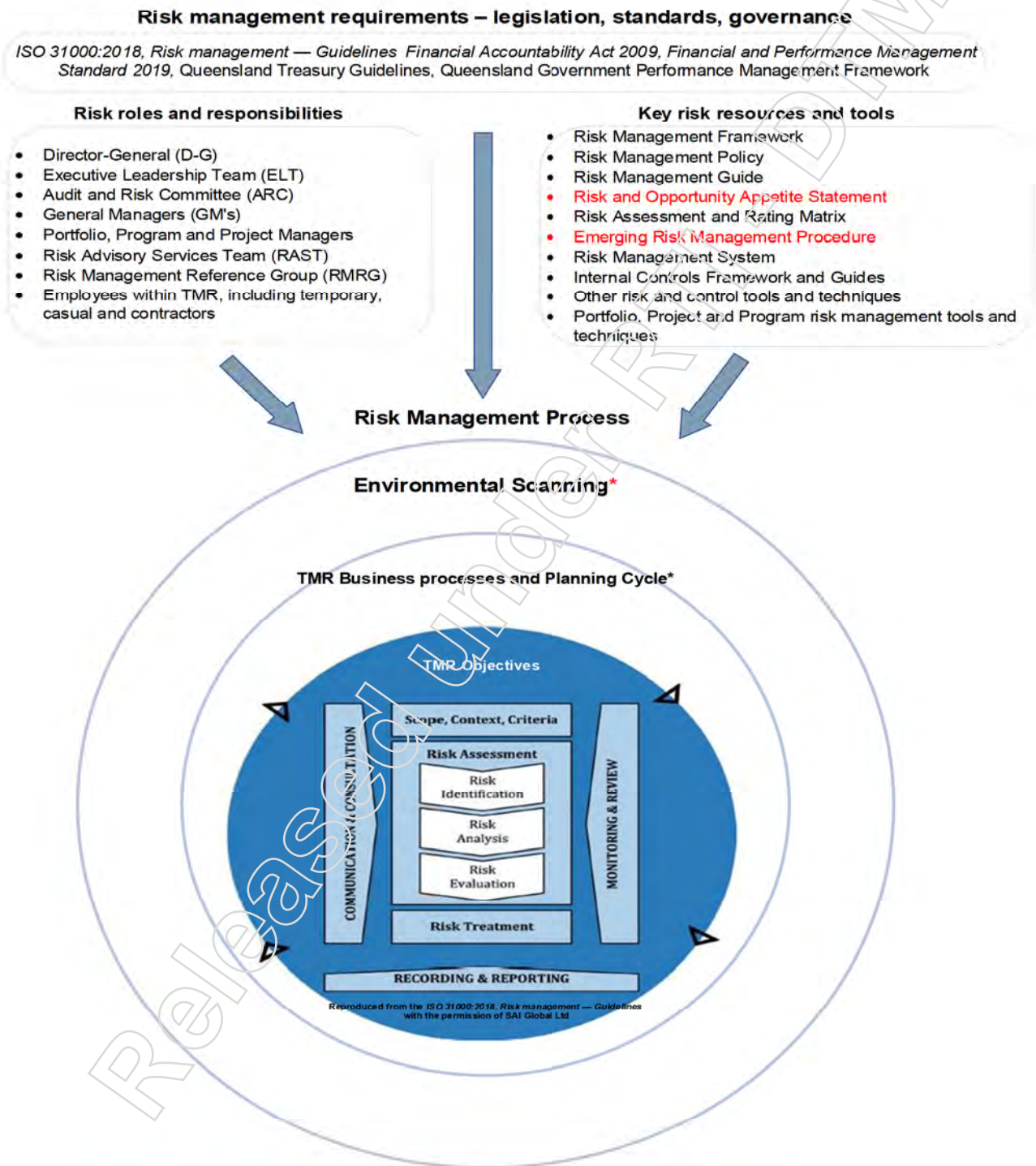
Refer to the [TMR Risk Management Guide, Section 3 Risk management process](#) for detailed information on the risk management process.

[TMR Emerging Risk Management Procedure, Section 5 Emerging risks management in TMR](#) describes how standard risk management process documented in the TMR Risk Management Guide applies to emerging risk management in the context of TMR's current and future practices.

# 5.1 Risk management integration with the TMR planning cycle and business processes

Risk management practices should be integrated and embedded into the TMR planning model and daily business processes to encourage consistency in risk based decision making, as illustrated in the Figure 3.

**Figure 3: TMR Risk Management Integration with Planning Cycle and Business Processes**



\* Environmental scanning is part of the TMR Emerging Risk Management Procedure, align with ISO/TS 31050: 2023 Risk Management – Guidelines for managing an emerging risk to enhance resilience

\*TMR planning cycle includes plan development, implementation and monitoring, evaluation.

## 6. Key internal reference, guides and tools

[Risk Management Policy](#)

[Risk Management Guide](#)

[Risk and Opportunity Appetite Statement](#)

[Risk Assessment and Rating Matrix](#)

[Emerging Risk Management Procedure](#)

[Fraud and Corruption Control Risk Management Guide](#)

[Risk Management System](#)

[Risk Management Tools and Templates](#)

[Risk Logs Templates](#)

[3PCM \(for QTRIP delivery program and projects\)](#)

[Risk Management - Glossary of Terms](#)

[Internal Control Framework](#)

[Control Tools](#)

[Determining control effectiveness rating](#)

[Program Delivery & Operations \(PDO\) risk tools](#)

[Project risk management and contingency development process manual](#)

[ICT Risk Management](#)

[Managing Safety Hazards and Risk Procedure](#)

For scope and usage of the above documents, or more tools and reference, please refer to the [TMR Risk Management Guide](#), section 6 Risk management guides, tools and techniques and the section 7 References.

## 7. External References

[ISO 31000:2018, Risk management — Guidelines](#)

[ISO/TS 31050: 2023, Risk Management – Guidelines for managing an emerging risk to enhance resilience](#)

[Risk Management – Risk assessment techniques \(IEC/ISO 31010\)](#)

[A Guide to Risk Management \(Queensland Treasury\)](#)

[Financial Accountability Act 2009, Part 4, Section 61\(b\)](#)

[Financial and Performance Management Standard 2019, Part 2 Division 4](#)

[Workplace Health and Safety Act 2011](#)

[Public Service Ethics Act 1994](#)