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# 16 Aboriginal cultural heritage

## 16.1 Chapter content

The Project impact assessment for Aboriginal cultural heritage was provided in Chapter 16 of the Project EIS.

This chapter provides additional information to address a submission received during the statutory public display period of the Project EIS. The key issue raised from the Project EIS submission process, relevant to the Aboriginal cultural heritage assessment, is summarised Table 16.1.

**Table 16.1** Summary of submission issue received in relation to the Project EIS Aboriginal cultural heritage assessment chapter

Submitter ID number (refer Appendix A)	Summary of submission issue raised	Project EIS section (public notification version)	AEIS section containing information to address submission comments	Complete replacement section for Project EIS	Supplements the Project EIS information
12.04	Potential impacts and risk assessment rating tables in each draft EIS chapter should be amended to include effective mitigation measures to assist with their interpretation	Section 16.9	Section 16.2	✓	

## 16.2 Risk assessment

This section replaces the Project EIS Section 16.9 (risk assessment).

### 16.2.1 Methodology

To assess and appropriately manage the potential Aboriginal cultural heritage risks to environmental values as a result of Project activities, a risk assessment process has been implemented (herein referred to as 'risk assessment'). The risk assessment methodology adopted is based on principles outlined in the:

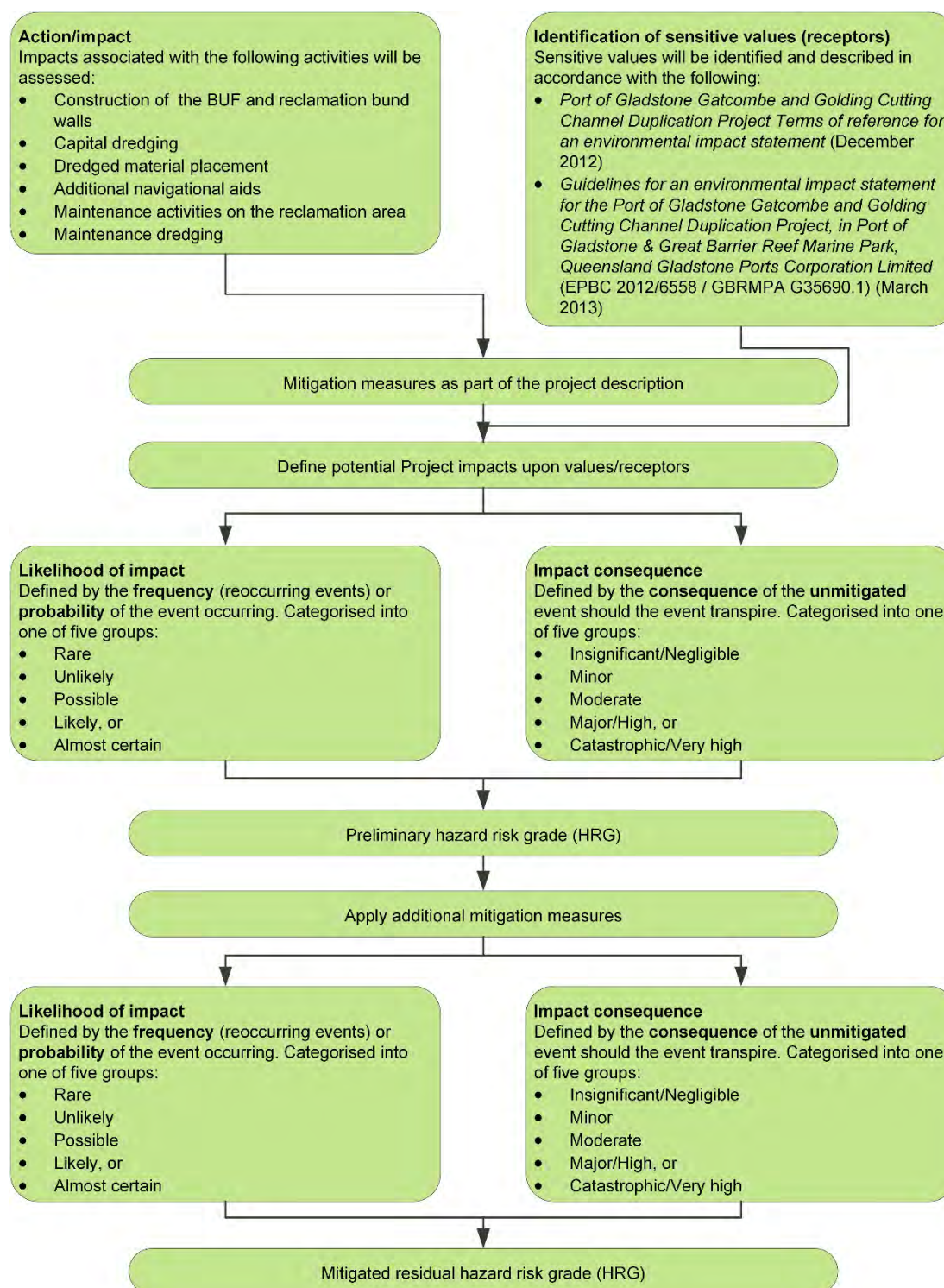
- AS/NZS ISO 31000:2009 Risk management – Principles and guidelines
- HB 203:2012 Handbook: Managing environment-related risk.

The risk assessment identifies and assesses the potential Aboriginal cultural heritage impact risks to environmental values/receptors for both the establishment of the reclamation area, dredging activities, installing navigational aids and operational management of the reclamation area.

The purpose of this risk assessment is to identify potential impacts to environmental values/receptors, prioritise environmental management actions and mitigation measures, and to inform the Project decision making process.

The risk management framework incorporates the Australian/New Zealand Standard for Risk Management (AS/NZS 4360:2004) and contains quantitative scales to define the **likelihood** of the potential impact occurrence and the **consequence** of the potential impact should it occur.

An overview of the interaction between Project activities (drivers/stressors), sensitive values/receptors and the risk impact assessment process is provided in Figure 16.1.



**Figure 16.1 Risk assessment framework**

Criteria used to rank the **likelihood** and **consequence** of potential impacts are provided in Table 16.2 and Table 16.3, respectively.

**Table 16.2 Environmental (ecosystem), public perception and financial consequence category definitions (adapted from GBRMPA 2009)**

Description	Definition/quantification <sup>1</sup>		
	Environmental*	Public perception	Financial
Negligible (Insignificant)	No impact or, if impact is present, then not to an extent that would draw concern from a reasonable person  No impact on the overall condition of the ecosystem	No media attention	Financial losses up to \$500,000
Low (Minor)	Impact is present but not to the extent that it would impair the overall condition of the ecosystem, sensitive population or community in the long term	Individual complaints	Financial loss from \$500,001 to \$5 million
Moderate	Impact is present at either a local or wider level Recovery periods of 5 to 10 years likely	Negative regional media attention and region group campaign	Financial loss from \$6 million to \$50 million
High (Major)	Impact is significant at either a local or wider level or to a sensitive population or community Recovery periods of 11 to 20 years are likely	Negative national media attention and national campaign	Financial loss from \$51 million to \$100 million
Very high (Catastrophic)	Impact is clearly affecting the nature of the ecosystem over a wide area <b>or</b> impact is catastrophic and possibly irreversible over a small area or to a sensitive population or community  Recovery periods of greater than 21 years likely <b>or</b> condition of an affected part of the ecosystem irretrievably compromised	Negative and extensive national media attention and national campaigns	Financial loss in excess of \$100 million

**Table notes:**

1 Quantification of impacts should use the impact with the greatest magnitude in order to determine the consequence category

\* For Matters of National Environmental Significance (MNES) protected under the provisions of the EPBC Act the *Matters of National Environmental Significance – Significant Impact Guidelines 1.1 – Environmental Protection and Biodiversity Conservation Act 1999* (DoE 2013) are to be used to determine the consequence category

**Table 16.3 Likelihood category definitions (adapted from GBRMPA 2009)**

Description	Frequency	Probability
Rare	Expected to occur once or more over a timeframe greater than 101 years	0-5% chance of occurring
Unlikely	Expected to occur once or more in the period of 11 to 100 years	6-30% chance of occurring
Possible	Expected to occur once or more in the period of 1 to 10 years	31-70% chance of occurring
Likely	Expected to occur once or many times in a year (e.g. 1 to 250 days per year)	71-95% chance of occurring
Almost certain	Expected to occur more or less continuously throughout a year (e.g. more than 250 days per year)	96-100% chance of occurring

Once the likelihood and the consequence has been defined, determination of the HRG of the potential hazard will be determined through the use of a five by five matrix (refer Table 16.4).

**Table 16.4 Hazard risk assessment matrix (adapted from GBRMPA 2009)**

Likelihood	Consequence rating				
	Negligible (insignificant)	Low (minor)	Moderate	High (major)	Very high (catastrophic)
Rare	Low	Low	Medium	Medium	Medium
Unlikely	Low	Low	Medium	Medium	High
Possible	Low	Medium	High	High	Extreme
Likely	Medium	Medium	High	High	Extreme
Almost certain	Medium	Medium	High	Extreme	Extreme

**Table note:**

Hazard risk categories identified in Table 16.4 and defined in Table 16.5

**Table 16.5 Risk definitions and actions associated with hazard risk categories (adapted from GBRMPA 2009)**

Hazard risk category	Hazard risk grade definition
Low	These risks should be recorded, monitored and controlled. Activities with unmitigated environmental risks that are graded above this level should be avoided.
Medium	Mitigation actions to reduce the likelihood and consequences to be identified and appropriate actions (if possible) to be identified and implemented.
High	If uncontrolled, a risk event at this level may have a significant residual adverse impact on MNES, MSES, GBRWHA and/or social/cultural heritage values. Mitigating actions need to be very reliable and should be approved and monitored in an ongoing manner.
Extreme	Activities with unmitigated risks at this level should be avoided. Nature and scale of the significant residual adverse impact is wide spread across a number of MNES and GBRWHA values.

## 16.2.2 Summary of risk assessment.

The potential Aboriginal cultural heritage impacts risk assessment is summarised in Table 16.6.

The implementation of the mitigation measures (refer Section 16.2.3 and the Project EIS Appendix M), will result in the residual Aboriginal cultural heritage risks from the Project activities being assessed as low to medium.

## 16.2.3 Mitigation measures

The mitigation measures in this section will be implemented during the relevant Project activities.

### 16.2.3.1 Site avoidance and ongoing consultation

The participating PCCC representatives noted the significance of native vegetation, particularly foreshore mangroves and seagrass meadows, and expressed a general desire for the preservation, wherever possible, of this vegetation, particularly the increasingly limited areas of mangrove and seagrass noted in the Port of Gladstone and at the proposed WBE reclamation area.

PCCC representatives have further indicated that in all cases, the number one option for management of their cultural heritage should be avoidance and leaving all saltwater and freshwater country undisturbed. Therefore, avoidance of cultural heritage sites will be a primary consideration in finalising the design of the WBE reclamation area, inclusive of the location and nature of related activities and infrastructure. While the PCCC representatives acknowledge that site avoidance may not be a practical course of action at the WBE reclamation area, they have indicated that, where possible, Project activities should be designed to minimise the impact on recorded and potential cultural heritage sites and the natural environment more generally. Ultimately, wherever practicable, construction impacts will be minimised such that important cultural activities (e.g. fishing, knowledge transfer) can continue unabated within the Port Curtis area.

To assist in achieving these objectives, consultation will continue between GPC and the Port Curtis Coral Coast (PCCC) in order to ensure that cultural considerations are incorporated into the Project detailed design. Ongoing consultation regarding Project activities that involve disturbance, modification or cumulative impacts to either the land surface or the marine areas will enable appropriate levels of input and ensure that appropriate mitigation programs (inclusive of monitoring programs incorporating PCCC Sea Rangers) are subsequently developed and implemented.

The Protocol entered into by the Indigenous Land Use Agreement (ILUA) parties in 2014 seeks to ensure that:

- All Port-related operations (proposed or undertaken) are conducted in a manner that is compliant with the *Aboriginal Cultural Heritage Act 2003* (Qld) (ACH Act)
- That harm to any Aboriginal cultural heritage with the ILUA Area is avoided or minimised
- That a relationship of cooperation between the parties is sustained.

#### **16.2.3.2 Monitoring**

Given the importance and cultural significance of the marine portions of the WBE reclamation area, GPC will utilise PCCC Sea Rangers to monitor the potential impacts of Project marine activities as part of implementing the Project EMP and Dredging EMP.

#### **16.2.3.3 Western Basin Expansion reclamation area**

During the design and construction of the WBE reclamation area, the footprint will not impinge on the coastal fringe and the existing buffer between the shoreline and proposed development area will be maintained. However, if the WBE reclamation area does result in direct and/or indirect impacts on the natural foreshore, a terrestrial cultural heritage assessment will be undertaken. The assessment should place a particular emphasis on dunes/cheniers, mangrove stands, areas in proximity to creeks and ephemeral creek lines with associated riparian vegetation, lowland and piedmont areas adjacent to creeks, ephemeral creek lines, swamps and waterholes in conjunction with the development and implementation of an archaeological test pitting program.

Within the marine context, the initial seagrass meadows disturbance will be monitored by PCCC Sea Rangers as part of implementing the Project EMP and Dredging EMP.

#### **16.2.3.4 New find measures and cultural heritage inductions**

As there remains potential for further, as yet undocumented Aboriginal cultural material to be present (most likely stone artefacts) within the Project areas, GPC will implement the New Discoveries provision for incidental finds of Aboriginal cultural heritage found during Project activities provided in Section 10.2 of the Protocol.

Before works begin, GPC will use all reasonable endeavours to arrange for all persons (staff and/or contractors) who will be engaged in works and who are likely to have contact with Aboriginal cultural heritage to participate in a cultural heritage induction session. Among other things, these inductions will inform workers what archaeological material may look like and give them clear instructions on what to do if they find anything that could be cultural heritage. These inductions will be jointly presented by GPC, a suitably qualified cultural heritage practitioner and/or a representative(s) from the PCCC.

**Table 16.6**      **Potential Aboriginal cultural heritage impacts and risk assessment ratings**

Potential impact	Project phase					Preliminary HRG			Post mitigation HRG		
	Reclamation area and BUF establishment	Dredging	Navigational aids	Demobilisation	Maintenance	Likelihood	Consequence	HRG	Likelihood	Consequence	HRG
Direct and indirect impacts on recorded and potential cultural heritage sites and the natural environment generally	✓	✓	✓	✓		Likely	High	High	Unlikely	High	Medium
Direct and indirect construction impacts on cultural activities such as fishing and knowledge transfer within the Port Curtis area	✓	✓	✓	✓		Possible	Moderate	High	Possible	Low	Medium
Direct and indirect impacts on the coastline adjacent to the Fisherman's Landing and the existing WB reclamation area	✓					Possible	Moderate	High	Possible	Low	Medium
Potential loss of access to Port Curtis for cultural activities such as obtaining food	✓					Unlikely	Moderate	Medium	Unlikely	Low	Low