

Chapter 12
Non-Indigenous Cultural Heritage

ESMERALDA GRAPHITE PROJECT

aarc ENVIRONMENTAL SOLUTIONS
APEM Group

GRAPHINEX

Table of Contents

Glossary, acronyms and abbreviations 1

12 Non-Indigenous cultural heritage 1

12.1 Environmental objective 1

12.2 Legislation 1

12.2.1 World Heritage List 1

12.2.2 Environment Protection and Biodiversity Conservation Act 1999 1

12.2.3 Queensland Heritage Act 1992 2

12.2.4 Croydon Shire Planning Scheme 2019 2

12.2.5 Burra Charter of Australia International Council on Monuments and Sites (Burra Charter) 3

12.3 Assessment methodology 3

12.4 Description of existing values 3

12.4.1 Historical overview 3

12.4.2 Non-Indigenous heritage values from database and register searches 5

12.4.3 Assessment outcomes 6

12.4.4 Results of significance assessment 6

12.5 Potential impacts 7

12.6 Mitigation and management measures 7

12.7 TOR Reconciliation table 11

List of Figures

Figure 12-1: Location of Rowe's old camp and yards shown in yellow circle and the Project area in red 4
Figure 12-2: Stock route to Esmeralda from Croydon in 1892, approximate Project location (red dot) below 'ESMERALDA' 5

List of Tables

Table 12-1: Results of database heritage searches 5
Table 12-2: Significance ratings for the Project area 6
Table 12-3: Stop Work procedure 8
Table 12-4: Procedure for discovery of palaeontological resources 10

Glossary, acronyms and abbreviations

Acronym or Abbreviation	Meaning
CHL	Commonwealth Heritage List
DEHP	Department of Environment and Heritage Protection
DESI	Department of Environment, Science and Innovation
DETSI	Department of the Environment, Science, Innovation and Tourism
EIS	Environmental Impact Statement
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
LHR	Local Heritage Register
MLA	Mining Lease Application
MNES	Matter of National Environmental Significance
NHL	National Heritage List
NICH	Non-indigenous cultural heritage
QH Act	*Queensland Heritage Act 1992*
QHR	Queensland Heritage Register
QM	Queensland Museum
TOR	Terms of Reference
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WHL	World Heritage List

12 Non-Indigenous cultural heritage

This chapter details the non-Indigenous cultural heritage associated with the Esmeralda Graphite Project (the Project) site. It contains a discussion of the potential impacts on non-Indigenous cultural heritage and the mitigation and management measures that will be implemented to avoid or minimise impacts.

To assess the potential impacts non-indigenous cultural heritage, an assessment by Converge Heritage + Community (Appendix Q), was undertaken. Converge Heritage + Community are an appropriately qualified cultural heritage practitioner with extensive experience in cultural heritage assessment and reporting. Dr Andrew Rozefelds (Principal Scientist and Curator of Palaeobotany) of the Queensland Museum (QM) assisted with the Paleontological information and recommendations for the study.

The assessment considered the following guidelines:

- Identifying and assessing places of local cultural heritage significance in Queensland (Queensland Government, 2020); and
- *Non-Indigenous cultural heritag*e – *EIS information guideline* (Queensland Government 2026).

12.1 Environmental objective

This chapter has been prepared to enable an assessment of the Project with respect to the environmental objectives stated in the Terms of Reference (TOR) in relation to non-Indigenous cultural heritage (NICH), detailed in Section 12.7. Specifically, where the design and all phases of the Project are to:

- avoid, minimise and mitigate adverse impacts on non-Indigenous cultural heritage of Queensland;
- achieve the purposes that are relevant to the *Queensland Heritage Act* 1992 (QH Act); and
- ensure that the nature and scale of the Project do not compromise the non-Indigenous cultural heritage significance of a heritage place or heritage area.

12.2 Legislation

This section details the relevant legislation to be addressed to manage non-indigenous cultural heritage. Several national, state and local acts and regulations are relevant to this assessment.

12.2.1 World Heritage List

The World Heritage List (WHL) is compiled by United Nations Educational, Scientific and Cultural Organisation (UNESCO) and is an inventory of places considered to have outstanding universal value. WHL places in Australia are managed under the provisions of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (refer to Section 12.2.2).

12.2.2 Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth EPBC Act provides a framework to protect and manage nationally and internationally important flora, fauna, ecological communities, and heritage places, which are defined in the EPBC Act as MNES. The EPBC Act applies to nine MNES, including:

- Natural, historic or Indigenous places of outstanding national heritage value;
- Heritage places on or in Commonwealth lands and waters, or under Australian Government control; and
- Areas on the WHL, or that the minister declares as a World Heritage property.

The EPBC Act provides a number of statutory and legislative controls for heritage places aimed at protecting Australia's heritage. Places of national heritage value and those owned or managed by the Commonwealth are located on the National Heritage List (NHL) and Commonwealth Heritage List (CHL) respectively.

The Project was determined as a 'not a controlled action' (EPBC reference 2025/10140) under the EPBC Act on 23 June 2025. Impacts to MNES are not discussed in this report. However, the assessment does consider other tools, guidelines and conservation listings relevant to the EPBC Act, where they provide context to the characterisation of the environmental values for the site.

12.2.3 Queensland Heritage Act 1992

The purpose of the Queensland Heritage Act (QH Act) is to provide for the conservation of Queensland's cultural heritage for the benefit of the community and future generations. The purpose is achieved by several mechanisms, including:

- keeping a register of places and areas of State cultural significance — the Queensland heritage register;
- requiring reporting and discovery of archaeological artefacts; and
- providing for identification and management of places of local cultural heritage significance by local governments.

Non-Indigenous cultural heritage includes all objects or places that have cultural heritage significances unless solely through their association with Aboriginal or Torres Strait Islander Peoples' traditions or customs. Archaeological artefacts are physical evidence of past human activity, and tell us much about the lives, behaviour and attitudes of past generations.

A place may be entered in the register if it satisfies one or more of the assessment criteria under Section 35 (1) of the QH Act.

The Act also applies to potential archaeological places under Part 9 'Discovery and protection of archaeological artefacts and underwater cultural heritage artefacts'; Section 88 – 90:

- Section 89 requires a person to advise the Chief Executive Officer of DESI of an archaeological artefact that is an important source of information about an aspect of Queensland's history. This advice must be given as soon as practicable after the person discovers the item.
- Section 90 stipulates that it is an offence to interfere with an archaeological artefact once notice has been given of the artefact to the Chief Executive Officer.

12.2.4 Croydon Shire Planning Scheme 2019

Local heritage places are managed under 'Part 11: Provisions about places of cultural heritage significance in local government areas' under the QH Act and local planning schemes. It is mandatory for local government to have a Local Heritage Register (LHR). The QH Act provides a process for establishing and nominating places to a LHR. Specific criteria must be met to nominate a place to the LHR, and these include:

- Enough information to identify the location and boundaries of the place.
- A statement about the cultural heritage significance of the place.

As the Project area is located within the local government area of the Croydon Shire Council, the relevant planning scheme is the Croydon Shire Planning Scheme 2019. Places listed in the Croydon Shire Council's LHR are identified in 'Schedule 3 – Croydon heritage places'.

12.2.5 Burra Charter of Australia International Council on Monuments and Sites (Burra Charter)

The Burra Charter (Australia ICOMOS 2013) is the leading guideline for heritage practitioners and provides guidance for the conservation and management of significant places. It defines cultural significance as "aesthetic, historic, scientific or social value for past, present and future generations" and goes onto state "cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects" (Australia ICOMOS 2013). It outlines a specific methodology/process for assessing sites.

12.3 Assessment methodology

The Non-Indigenous Cultural Heritage Technical Report (Appendix Q) on MLA 100430 and MLA 100431 included the following methods:

- A desktop study was undertaken to determine the existence, extent and probable levels of significance of any places likely to be located within the Project area. This study comprised searches of statutory and non-statutory registers and databases and historical and archival research of the region in the vicinity of the Project area relevant to non-Indigenous historical cultural heritage.
- A non-indigenous cultural heritage significance assessment was prepared based on the result of the desktop assessment. Determining the significance of a heritage place, item or site requires researching and understanding its value or level of importance. Assessments of significance are based on an understanding of a place's history together with a physical analysis and an appreciation of the comparative level of rarity or representativeness that a site possesses. Once practitioners understand its value and significance, they can then make recommendations about how best to manage and protect those values. For Queensland heritage, the Burra Charter (Australia ICOMOS 2013) and the QH Act are used to undertake significance assessments.
- A physical site inspection was not undertaken for this study.

12.4 Description of existing values

This section described the methods undertaken to identify non-indigenous cultural heritage in the Project area, and the results of the assessment method, including the results of a significance assessment.

12.4.1 Historical overview

12.4.1.1 Development of Esmeralda station

The historical overview provides context from the broader region based on library and archival research in relevant documents and secondary sources, and is summarised from Appendix Q, Non-Indigenous Cultural Heritage Technical Report.

Exploration was deemed an important activity in colonial Australia as it served dual roles of not only establishing the geography of the land but also identifying natural resources for future development. The routes taken by early expeditions regularly followed Aboriginal pathways. The Gulf Savannah region in which the Project is located was first explored in the 1860s. John McKinley first travelled north of Esmeralda and south of Croydon in 1862, while searching for another lost expedition. John Graham McDonald explored a route from Carpentaria Downs to the Gulf in 1864. H.E. Young also explored a possible, overland telegraph route in the region which eventually passed through the Croydon district. However, none of these routes traversed close or directly through the Project area.

Pastoralists, with sheep, followed the early explorers, however without success; pastoralists with cattle took up land in the area in 1881. Esmeralda cattle station and homestead, about 30 km east of the Project area was built to the west of Esmeralda Creek and bought prior to 1885 by De Mestre and Rowe. Ownership of Esmeralda station changed to the Trust and Agency Company of Australasia by 1899. The station continued to expand considerably in the late 1890s as it incorporated surrounding runs of large, unfenced tracts of land used for grazing. Thereafter, Esmeralda Station changed ownership several times. In 1914, the Rowe holding, comprising of the Yenda and Yenda West holdings also became part of the Esmeralda station. In 1952, other surrounding landholdings with a combined area of 1,503 square miles (approximately 389,275ha) came to be referred as the 'Esmeralda Aggregation Part III', leading to the current expansive footprint of the Esmeralda property, consisting of 8 holdings. The current Project area is situated in what was formerly Rowe. 'Rowe's old camp' and yards can be seen about 12 km to the northeast of the Project area in Figure 12-1.



Figure 12-1: Location of Rowe's old camp and yards shown in yellow circle and the Project area in red

12.4.1.2 Stock routes

Several stock routes were developed in the region. Stock routes served as vital infrastructure for early pastoralists. Stock routes feature prominently in Queensland's rural history as they were the principal means of moving livestock before roads were developed. Specifically, a stock route from Croydon to Esmeralda was established between 1860 and 1890 (Figure 12-2). By 1922 a stock route had been established along the south bank of the Yappar River, running northwest from the Esmeralda head station through Rowe. Use of stock routes declined in the 1950s and 1960s when road improvements made road transport more convenient and efficient. While there is a stock route nearby - 395CROY, no stock routes pass directly through the Project area (refer to Chapter 8, Tenure including Native Title).

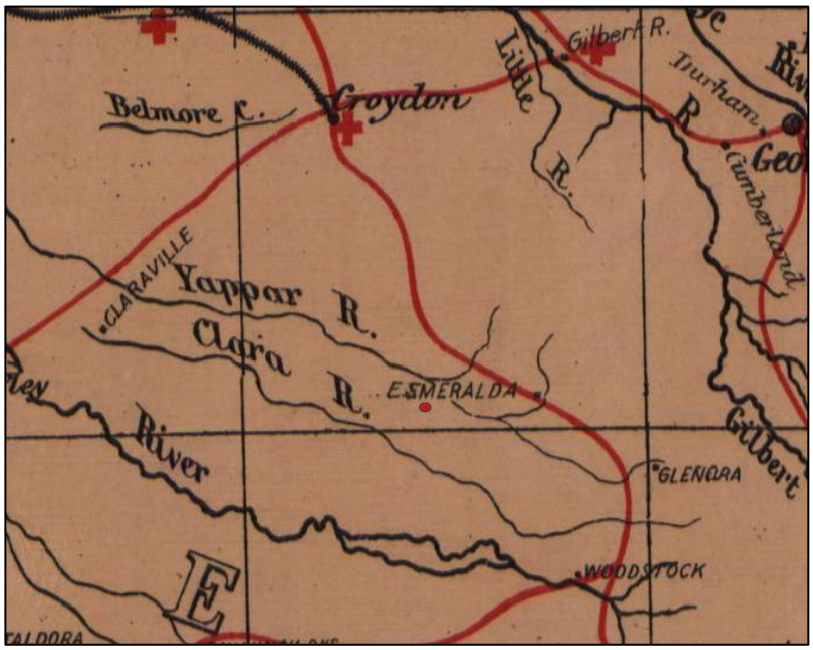


Figure 12-2: Stock route to Esmeralda from Croydon in 1892, approximate Project location (red dot) below 'ESMERALDA'

12.4.1.3 Croydon and surrounds

The nearest town to the Project area is Croydon, which is a small, rural township originally named after the Croydon Downs pastoral station. Gold was discovered at the site of the future township in 1885, generating considerable increase in settlement activity.

To support this activity, batteries to process gold ore and an operational foundry to support the batteries were constructed. Hotels, hospitals, a post office, bank, school, a telegraph office and around 750 dwellings were constructed in this period to support the increased population. This led to the establishment of the Croydon local government in 1892 and subsequent consideration as a municipality in 1903.

Following the discovery of gold at Croydon, a railway between Normanton and Cloncurry was also constructed in 1886. The population then steadily declined following the cessation of gold production in 1931. The population of Croydon had declined to 312 people in 2011.

12.4.2 Non-Indigenous heritage values from database and register searches

The non-indigenous cultural heritage database and register searches were undertaken on 1 December 2025. The results found no places of significance in or near the Project area (refer Table 12-1).

Table 12-1: Results of database heritage searches

Database	Heritage place
World Heritage List	No places were identified on the World Heritage List within or near the Project area
National Heritage List	No places were identified on the National Heritage List within or near the Project area
Commonwealth Heritage List	No places were identified on the Commonwealth Heritage List within or near the Project area
Queensland Heritage Register	No places were identified on the Queensland Heritage Register within or near the Project area
Local Heritage Register	No places were identified on the Croydon Shire Local Heritage Register within or near the Project area

Database	Heritage place
Register of National Estate	No places were identified on the Former Register of the National Estate within or near the Project area
Queensland National Trust	No places were identified on the Queensland National Trust Register within or near the Project area

12.4.3 Assessment outcomes

The research undertaken for this desktop assessment found that the Project area has operated as a cattle station since at least the 1880s. Archival searches did not identify any improvements in the Project area up to the 1940s. The Esmeralda homestead and outbuildings are located about 30 km east of the Project area and Rowe's old camp and yards are located about 12 km to the northeast. Similarly, no evidence of structures or improvements were identified in the Project area by the review of historic aerial imagery, although this was not conclusive.

Searches of the various databases and registers did not identify any non-indigenous cultural heritage in or near the Project area, and the desktop review did not identify any non-indigenous cultural heritage in or near the Project area. It is considered unlikely that non-indigenous cultural heritage sites or places are extant in the Project area.

Based on the results of the desktop assessment, including a review of historic aerial imagery, it is considered there is a very low potential for significant archaeological features or deposits to be present in the Project area.

The desktop assessment indicates that non-indigenous cultural heritage within the Project area would most likely relate to pastoral activities which commenced in the 1880s. The prolonged history of these activities suggests there is some potential for associated materials to be present. Items may include unregistered historic bores, dams, fencing elements and 'dumps', as well as discarded tools and equipment that are not visible in the available aerial and satellite imagery.

Based on the area's geological characteristic and advice received, there is a low potential for fossil material occurring within the Project area.

12.4.4 Results of significance assessment

The significance assessment of the Project area was evaluated in accordance with requirements of the QH Act *1992* (QH Act), the Burra Charter (Australia ICOMOS 2013), the guideline *Non-Indigenous cultural heritage – EIS information guideline* (Queensland Government 2024) and *Assessing cultural heritage significance – using the cultural heritage criteria* (DEHP 2013). The assessment used significance ratings for the Project study area based on the criteria in these guidelines (Table 12-2).

Table 12-2: Significance ratings for the Project area

Criteria	Discussion
1	The Project area is not considered to make a significant contribution to our understanding of local history. This criterion has not been met.
2	There are no archaeological deposits currently identified within the Project area that are likely to contain an archaeological artefact that is an important source of information about Queensland's history. As such, the Project area is not considered to have significant archaeological potential. This criterion has not been met.
3	There are no known architectural elements, designs or forms of note in the Project area. This criterion has not been met.

Criteria	Discussion
4	The Project area is not considered to have aesthetic significance that contributes to an understanding of local history. This criterion has not been met.
5	The Project area is not known to have significant spiritual or social significance. This criterion has not been met.

The assessment did not identify any non-indigenous cultural heritage (NICH) sites in the Project footprint. Noting that the region is representative of remote regional pastoral activities, it is possible that some non-indigenous cultural heritage material could be encountered and that management measures should be developed to prepare for this. The evaluation determined that:

- There are no known NICH sites or places in the Project area that may meet threshold for entry into World Heritage List (WHL) and National Heritage List (NHL).
- There are no known NICH sites or places in the Project area which may meet the threshold for entry to the Queensland Heritage Register (QHR) under the criteria outlined in the QH Act.
- There are no known NICH sites or places in the Project area which may meet the threshold for entry to the Croydon Shire's Local Heritage Register (LHR).
- There are no known NICH archaeological deposits currently identified within the Project area that are likely to contain an archaeological artefact that is an important source of information about Queensland's history.
- No NICH sites were identified in the desktop assessment.
- There are no known recordings of fossils relevant to the Project area.

Therefore, overall, the Project area assessment did not identify any significant non-indigenous cultural heritage potential.

On the basis of the outcomes of the desktop assessment and significance assessment, it was not considered necessary that a field study be undertaken. Not-withstanding, potential impacts and subsequent mitigation and management measures have been considered and outlined in the following sections. These measures will ensure that non-indigenous heritage values are protected should they be identified at any stage of the Project operation.

12.5 Potential impacts

The Project area will be impacted by construction and mining operation activities. This includes impacts from initial vegetation clearing, topsoil stripping, excavation and bulldozing, and other ground disturbance related to mining activities.

Due to the lack of identified non-indigenous cultural heritage sites within the Project area, the risk of the Project impacting on sites of historical cultural heritage significance is considered to be low. However, it is possible that unidentified sites and items may be identified during works. As a result, it is recommended that a site assessment is conducted to identify areas that may require further management or monitoring.

There is very low potential for fossil finds in the Project area.

12.6 Mitigation and management measures

The assessment has not identified any non-indigenous cultural heritage sites in the Project area. However, the region is representative of the regional pastoral activities established in the 1880s and due to their extended

presence, it is possible that some non-indigenous cultural heritage material may be encountered during the proposed works and particularly those that could not be identified by analysing aerial and satellite imagery. The following mitigations and management measures will be implemented for the Project.

12.6.1.1 Due diligence

Due diligence will be practiced during works within the Project area, particularly during clearing and/or construction activities. To support these obligations, training materials will be developed that assist workers to identify non-indigenous cultural heritage material and outline protocols to safely manage the materials.

This will include a non-indigenous cultural heritage induction booklet, that will be prepared by a suitably qualified heritage professional and is to be provided to all Project personnel during site induction. Subsequent procedures will be incorporated into general procedures for land disturbance and clearing. Site induction training will include:

- specific instructions for workers regarding their obligations to look for and avoid impacting NICH material until it has been properly assessed;
- presentation of familiarisation material for work crews so that they are aware of what constitutes a NICH find;
- provision of educational material to personnel informing them what archaeological material may look like, and clear instructions for required actions if such material is encountered; and
- a process for the collection, transport and storage of any NICH items.

As recommended in the Non-Indigenous Cultural Heritage technical report (Appendix Q), a cultural heritage field survey will be undertaken prior to construction to ground-truth the report findings.

12.6.1.2 Management of unknown sites

Even though there is low potential for further non-indigenous cultural heritage places or items to exist within the Project area, unidentified items including sites/places likely related to pastoral activities, historic survey trees, and remnant boundary fence lines may be encountered during Project activities.

In accordance with the QH Act Section 89, if encountered, in such cases, a “Stop Work” procedure will be utilised by the Project personnel for matters of non-Indigenous cultural heritage, including in dealing with the discovery of currently unknown and unidentified sites, places, or items.

The NICH Stop Work procedure is provided in Table 12-3.

Table 12-3: Stop Work procedure

Procedure for Discovery of a NICH Site, Place or Item of Potential Cultural Heritage Significance
Stop Work If potential places, sites or items of NICH are located during works: stop work, mark and protect the site. Work can continue elsewhere, if it will not affect the item.
↓
Initial Contact Contact the Esmeralda Graphite Project Environment Officer immediately and notify them of the item.
↓
Notification to Project Heritage Advisor

The Esmeralda Graphite Project Environment Officer is to contact the Project Archaeologist, including details of the nature of the item. The Project Archaeologist should be commissioned in an 'on-call' capacity during the Project construction phases.

↓

Assess Significance

The Project Archaeologist will attend the site (if necessary) as soon as possible to assess significance of item and recommend a course of action. These may include:

i) protect and avoid;

ii) excavate, record and remove;

iii) investigate and preserve;

iv) collection, storage and conservation strategies; or

v) no action if the item is deemed to have no significance.

Recommendations i), ii) and iii) will require preparation of a work method statement in consultation with Department of Environment, Tourism, Science and Innovation (DETSI) Cultural Heritage Branch prior to any action commencing.

IS ITEM DISCOVERED SIGNIFICANT?

Yes ↓

Report Find to DETSI Cultural Heritage Branch

Reporting of find to DETSI Cultural Heritage Branch is required by law.

Depending on the nature of the find, the Project Archaeologist and DETSI will negotiate the requirements of the find.

↓

Complete Recording/ Field Work

Complete the cultural heritage or remedial works in accordance with the consent permit or agreed course of action. Advise the Esmeralda Graphite Project Environment Officer when the assessment is complete.

↓

No ↓

Recording

Items deemed to have no significance will require recording as evidence. A photograph of the item and a description of why it is not of significance should be recorded by the Project Archaeologist and forwarded to the Esmeralda Graphite Project Environment Officer.

↓

Advice

Advise the Esmeralda Graphite Project Environment Officer when the assessment is complete.

Confirm advice with DETSI Cultural Heritage Branch if required.

↓

Work Recommences

Esmeralda Graphite Project Environment Officer to advise when works can re-commence in the original or changed form.

↓

Submit Final Report

Project Archaeologist completes reporting in accordance with the appropriate guidelines and conditions. A copy of the report to go to relevant government authorities and Esmeralda Graphite Project Environment Officer.

12.6.1.3 Fossils

A stop work procedure for incidental fossil finds will be implemented (Table 12-4).

Table 12-4: Procedure for discovery of palaeontological resources

Procedure for Discovery of Palaeontological Resources – Queensland Museum
Based upon guidelines developed in various Canadian states for the salvage of significant fossils from active mining sites.
The following procedure can be used to recover and salvage significant palaeontological resources.
Upon discovery of a palaeontological resource (fossil):
a. The machine operator should cease excavation in the immediate vicinity to avoid any future damage to the specimen.
b. A mine supervisor should be notified of the discovery and should redirect excavation to an area a safe distance from the fossil. (Suggest a minimum of 20 m ideally)
c. The mine supervisor should flag and define the area from which the fossil was recovered to ensure no further disturbance from mining equipment or personnel.
d. The 'dump pile' should be left undisturbed to allow for the recovery of associated fossil material.
e. The 'dump pile' should be flagged to minimize and further disturbance from mining equipment or personnel.
f. Mine staff (geologist or mining engineer) should note:
1.Locality description;
2. Stratigraphic position, i.e. Formation;
3. Rock type;
4. Any associated fossil material;
5. General description of fossil; and
6 Photo documentation of the fossil.
g. A professional palaeontological consultant should be contacted to assess the significance of the fossil.
h. If the fossil is deemed to be significant, the paleontological consultant should consult the Queensland Museum (QM) to discuss plans for the recovery and transportation to

12.7 TOR Reconciliation table

Terms of reference - Content requirements of the EIS		EIS Section
Section 12 - Non-Indigenous cultural heritage		
Non-Indigenous cultural heritage - Existing environment		
12.1	Describe the known and potential historic heritage values that are protected under the Queensland Heritage Act 1992, which may be impacted by the project.	Sections 12.3, Section 12.4.3, Section 12.4.4
12.2	Undertake a study of, and describe the known and potential historic heritage values that may be affected by the project in accordance with the Non-Indigenous cultural heritage – EIS information guideline. After identifying local and State values, assess the values against the respective thresholds using recognised criteria.	Section 12.3
12.3	In consultation with the Queensland Museum, review and assess the extent and stratigraphic context of fossil deposits (if any) within the project footprint to determine their value to the community, such as age, species, rarity and representation, if relevant.	Section 12.6.1.3
Non-Indigenous cultural heritage - Impact assessment		
12.4	Detail potential impacts on non-Indigenous cultural heritage values.	Section 12.5
Non-Indigenous cultural heritage - Mitigation measures		
12.5	Propose mitigation measures to avoid and minimise harm to non-Indigenous cultural heritage values in accordance with the Non-Indigenous cultural heritage – EIS information guideline. Management and mitigation strategies should include provisions for discoveries of potentially significant archaeological artefacts in accordance with Section 89 of the Queensland Heritage Act 1992 and include reference to the Guideline - Archaeological Investigations and Assessing cultural heritage significance: Using the cultural heritage criteria.	Sections 12.6
12.6	In consultation with the Queensland Museum, identify strategies to mitigate and/or manage impacts on fossils should they be found within the project footprint, if relevant.	Section 12.6.1.3