

## 7 CULTURAL HERITAGE IMPACT ASSESSMENT

This chapter includes:

- responses to submissions on the draft EIS, principally DERM's clarification of its requirements
- discussion of the distribution and significance levels of recorded Indigenous cultural heritage sites
- further information in the significance of non-indigenous sites identified in the study area
- a more detailed methodology and mitigation strategies for ensuring project implementation and compliance with cultural heritage requirements.

### 7.1 SUBMISSIONS AND RESPONSES

The following submissions made reference to cultural heritage issues.

Summary of Submission	Response	Submitter Number
No CHMP or negotiation to deal with water and areas below low tide areas.	QGC is progressing CH negotiations with the endorsed parties for impacts in the project area, and will seek to finalise a CHMP in the near future. Further detail is provided in <i>Chapter 7</i> of this Volume.	23
Cultural heritage value of the pipeline crossing needs further impact assessment by experts with the co-operation and participation of the PCCC.	Spiritual and Indigenous community values such as the sensitivity of Kangaroo Island and Phillippe's Landing are referenced in the draft EIS <i>Volume 8, Chapter 7</i> and <i>Chapter 9</i> . Material cultural heritage values (mapped sites and finds) have been considered in assessing the Narrows pipeline crossing options and are discussed in <i>Chapter 7</i> of this Volume. The pipeline crossing is likely to be constructed as part of the common user corridor, which will require further consultation with the Traditional Owners, as well as legislated clearance and cultural heritage protection procedures.	23
Cultural heritage value of the LNG development area needs further impact assessment by experts with the cooperation and participation of the PCCC.	QGC is committed to an ongoing consultation process with the PCCC to ensure potential impacts are correctly identified and mitigated in consultation with Traditional Owners.	23
The non-indigenous heritage field surveys of the pipeline route and gas fields are inadequate to describe potential impacts and it is understood that the pipeline route has altered since the time of the initial survey.	More comprehensive field survey in the Gas Field and Pipeline study areas will continue as sites for infrastructure are established and land access is approved. This is discussed in <i>Section 7.3</i> of this chapter. The methodology for each study area is described in detail in the sEIS <i>Volume 8, Chapter 7, Section 7.3.1</i> .	31

Summary of Submission	Response	Submitter Number
There has been no assessment of the significance of places identified by the study.	Detailed significance assessment of the identified sites in the LNG Plant and Pipeline areas are presented in <i>Section 7.3.2</i> of this chapter.	31
No specific measures are recommended for recorded cultural heritage places likely to be impacted by the project. Need clear process for how reporting will occur.	Mitigation measures for places impacted upon in Gasfield, Pipeline and LNG Plant areas are further detailed <i>Section 7.4</i> of this chapter.	31

## 7.2 ABORIGINAL CULTURAL HERITAGE

### 7.2.1 Update on CHMPs

As stated in the QCLNG EIS, QGC Aboriginal cultural heritage in Queensland is governed by the *Aboriginal Cultural Heritage Act 2003* (ACHA). Under the ACHA, a Cultural Heritage Management Plan (CHMP) is required when an environmental impact statement is required under other legislation (e.g. SDPWOA).

QGC has committed to negotiating CHMPs with each of the eight Traditional Owner (TO) groups impacted by the QCLNG Project. This is achieved by implementing a cultural heritage process, the key steps of which are:

- Identification of parties for potential inclusion in negotiation.
- Advertisement seeking indigenous parties for 'endorsement' in accordance with ACHA.
- Endorsement of indigenous parties (any Aboriginal party that gives notice within the 30 day period).
- Agreement on undertaking cultural heritage surveys, preparation of technical reports and provision of protection and management recommendations.
- Development and execution of CHMP agreement.
- Approval of CHMP in accordance with ACHA.
- Implementation of CHMP.

QGC is now well advanced in the development of the CHMPs required for the Project. A CHMP has been signed with one of the groups and has been lodged with the Queensland Government Cultural Heritage Coordination Unit. Agreement has been reached on CHMPs with three further groups and the CHMP has been incorporated in the Indigenous Land Use Agreements (ILUAs) reached with these groups. ACHA compliance can be achieved when the CHMP is included as a schedule to an Indigenous Land Use Agreement (ILUA) that is registered for an area of the Project.

QGC has reached agreement in principle for CHMPs with two other groups and expects to have those documents finalised in the first quarter 2010. CHMP negotiations are well advanced with the remaining two groups and QGC expects to have those agreements in place in the second quarter of 2010.

Each CHMP contains an arrangement whereby CH will be managed by a CH Committee comprising TO group and QGC representatives. This will ensure ongoing cooperation and dialogue with TO groups over the life of the project and will assist in meeting social performance standards and objectives for the Project.

### **7.2.2 *Mapping of Indigenous Cultural Heritage Sites***

As discussed in the draft EIS, Aboriginal cultural heritage may exist on any site regardless of the tenure of the land.

A search of the DERM Aboriginal and Torres Strait Islander Register and Database was undertaken in June 2009 to identify previously recorded sites within the study area. A search of the register does not provide a definitive result as to whether Aboriginal cultural heritage exists, as it only contains places which have previously been identified through surveys and research, and is therefore not a true reflection of the Aboriginal cultural heritage values of the study area.

Comprehensive surveys of the study area have been undertaken with Traditional Owners, and these results are reflected in the Cultural Heritage Management Plans being finalised with each of the Traditional Owner groups.

The study area as a whole encompasses a very large area, and consequently a large variety of places and items of Aboriginal cultural heritage value have been previously recorded within this area. QGC has mapped all sites and finds shown on DERM's register in order to ensure project design avoids or mitigates impacts on cultural heritage values. This information is not publicly searchable and has not been provided here. The results of the search are discussed in general terms below.

### **7.2.3 *Description of Site Types***

The following provides an outline of each of the Aboriginal cultural heritage site types known to exist within the study area, including a description of what each site was generally used for, what they look like, and where they are generally located.

The results have been discussed in accordance with their potential constraint:

- high constraint sites are extremely significant, and should not be touched
- moderate constraint sites are highly significant, but have some potential for mitigation
- low constraint sites which are also significant, but are more easily mitigated in the proposed development.

### 7.2.3.1 *High Constraint Sites*

High constraint types within the study area comprise burials, art sites, repatriation sites, pathways, rock shelters and ceremonial sites.

In Queensland burials have been found in almost every kind of landscape, from coastal dunes to rock shelters. They tend to be near water courses or in dunes surrounding old lake beds. Many burials have been found on high points, such as dune ridges, within surrounding flat plains. They are often near or within Aboriginal occupation sites such as oven mounds, shell middens or artefact scatters.

Painting sites are generally found on rock surfaces in rock shelters that are large enough to protect a small number of people from wind and rain and open sites. Engraving sites are more scattered, although they all occur in limestone caves. Finger lines occur in areas of near or total darkness, while scratched motifs tend to be closer to cave entrances.

In the late nineteenth and early twentieth centuries, human remains of Indigenous Australians and sacred objects were collected and sent to museums throughout Australia and overseas. Indigenous appeals for the return of their cultural property have led to a number of sites of repatriation around Australia in recent history.

Repatriation sites may occur at the location where material was originally removed, or an alternative location with significance to the community and where the material will be safe and remembered.

Aboriginal pathways have been used to connect people and their ceremonies, sacred places and trade routes, and particularly they were used to travel to and from places where special events took place. Pathways have also been used to represent clan boundaries, and were used as a way of travelling safely through areas occupied by other clan groups. Following European settlement, many of these pathways became the first roads, and today many of these pathways have evolved into major roads in towns and cities throughout Queensland and Australia.

Rock shelters are generally sandstone overhangs which occur within naturally formed hollows or overhangs in cliffs and outcrops of boulders. Their use is demonstrated by a deposit of archaeological material such as stone artefacts or evidence of a campfire, rock art or burials.

A ceremonial site is used for a formal act or series of acts prescribed by ritual, belief in a mythological manifestation, religious belief or observance, protocol or convention that is connected with the traditional cultural life of Aboriginal people past or present. Ceremonial sites are part of a larger network of ritually significant places (including natural features) that together form a larger ritual landscape.

Other cultural places such as story places are often associated with mountains, rock outcrops, swamps, lagoons, creeks, waterholes and other

natural places. Dreaming sites with associations to creation stories and ancestors are also highly significant sites in the Aboriginal community.

### 7.2.3.2 *Moderate Constraint Sites*

Moderate constraint sites include scarred trees, grinding grooves, middens, quarries and occupation sites.

Scarred and carved trees were once common throughout Australia, however many have been destroyed as a result of natural decay, bushfires, clearing and timber harvesting. Remaining trees are mainly from the post-European-contact period and are 100–200 years old. Scarred trees are now most commonly found along inland waterway, along major rivers, around lakes and on flood plains.

The grinding grooves associated with the manufacture of stone axes are usually found in sandstone outcrops, often around small holes that collected rainwater. Axe-grinding grooves are almost always found along the edges of rivers, creeks, lakes and swamps, or near dry or drained water bodies.

Middens are among the most common types of archaeological sites present in Australia and are part of a broader cultural landscape, which may include other sites such as bora rings, natural features, pathways or occupation sites.

Middens are deposits of food refuse (usually shellfish remains), which provide physical evidence of Aboriginal and Torres Strait Islander peoples' campsites and long term occupation. Middens are found along open coastlines (on sandy beaches or rocky headlands), around estuaries, along coastal and inland river floodplains and around the shores of lakes.

Quarries are places where raw materials such as stone or ochre were obtained from rocky outcrops to make chipped or ground stone tools for many different purposes. These sites are generally located at rock or ochre deposits on hills and ridges where erosion has exposed the stone, slopes above creeks and rivers although some sites have been recorded on floodplains and on scarps. The rock deposits are usually bedrock outcrops.

An occupation site is a general term for a place where Aboriginal people lived and used the natural resources, and may include rock shelters, quarry sites, middens and open camp sites. Their presence may be demonstrated by a scatter of stone artefacts, animal bone and shell material, campfire or hearth. Occupation sites are situated in close proximity to a reliable water source.

### 7.2.3.3 *Low Constraint Sites*

Low constraint sites include artefact scatters and isolated finds.

Scatters of artefacts are generally found near stone outcrops, in areas favoured for occupation (near rivers and creeks, resource-rich areas, higher ground), in natural erosion zones (including in the nodes of multiple erosion zones) and in 'transit' zones between resource rich areas.

An isolated find refers to a single artefact. These artefacts may have been dropped or discarded by its owner once it was of no use. This site type can also be indicative of further subsurface deposits. Isolated finds may be any type of stone tool including an axe, flake, core, hammerstone, scraper, anvil, manuport, assayed cobble. Isolated artefacts can be found in almost any location where Aboriginal occupation has occurred in the past, but are more prevalent in close proximity to reliable water sources.

In terms of Aboriginal heritage sites a deposit refers to an accumulation of cultural material and sediment deposited over time. Isolated artefacts can be found in almost any location where Aboriginal occupation has occurred in the past, but are more prevalent in close proximity to reliable water sources.

#### 7.2.3.4 *Summary*

There are a number of sites of moderate to high constraints within the study area, which require mitigation. In the case of high constraints, these sites should be avoided and protected, whilst sites of moderate constraint will be managed in co-operation with Traditional Owners, in accordance with CHMP provisions.

In particular, the PCCC Traditional Owner group has identified the existence of sensitive sites in the Narrows, Kangaroo Island and Graham Creek area. Construction in this area will be subject to provisions as negotiated in the CHMP with PCCC.

With major facility locations now being identified in the Gas Field area, it will be necessary to conduct cultural heritage surveys in accordance with the CHMPs agreed with the relevant Traditional Owner Groups in the area.

The highest proportion of site types recorded in the study area comprises isolated artefacts and stone artefact scatters, which have a low level of constraint when compared with burial and rock art sites. Mapping of recorded sites has demonstrated that a low proportion of these sites will be impacted upon by the proposed development. However, their presence in the greater study area also indicates the potential for additional places and items of cultural heritage value to exist within the impact areas.

### 7.3 ***NON-INDIGENOUS SITES***

#### 7.3.1 ***Survey methodologies for ongoing field development***

DERM's submission indicated that further clarification was required in relation to non-indigenous heritage field surveys of the pipeline route and Gas Field. While some sites for gas processing infrastructure remain undefined, a full discussion of site-specific impacts is not possible.

A comprehensive survey for non-Indigenous sites will be undertaken during site inspection prior to commencement of construction work for gasfield infrastructure. The methodology for each study area is described below.

### 7.3.1.1 *Gas Field Non Indigenous Heritage Survey*

Once the preliminary locations of infrastructure such as CPPs, FCSs, roads and water treatment facilities are determined, a comprehensive non indigenous heritage field survey will be carried out. This will involve:

- Undertaking site inspections of proposed infrastructure locations to identify any places of non indigenous cultural heritage likely to be impacted upon by the proposed development.
- Consultation with local historical societies and additional research into identified non indigenous cultural heritage places to determine historical background of identified places.
- Significance assessments of places identified against Queensland Heritage Act 1992 criteria and local criteria where this is available to determine whether the place is significant at local, State or National level.
- An assessment of the likely impact on places of non indigenous cultural heritage, and reporting on mitigation measures.
- Implementation of any mitigation measures which may include realigning or relocating infrastructure, collection and relocation of surface artefacts, archaeological investigation or archival recording.

### 7.3.1.2 *Pipeline Survey*

A comprehensive non indigenous cultural heritage survey will be undertaken during site inspection and assessment prior to construction which will involve:

- Undertaking site inspections of areas not inspected in the first stage or subsequently altered to identify any places of non indigenous cultural heritage likely to be impacted upon by the proposed development.
- Consultation with local historical societies and additional research into identified non indigenous cultural heritage places to determine historical background of identified places.
- Significance assessments of additional places identified against Queensland Heritage Act 1992 criteria and local criteria where this is available to determine whether the place is significant at local, State or National level.
- Assessment of the likely impact on places of non indigenous cultural heritage, and reporting on mitigation measures.
- Implementation of any mitigation measures which may include realigning or relocating infrastructure collection and relocation of surface artefacts, archaeological investigation or archival recording.

## 7.3.2 ***Significance Assessment***

DERM's submission noted the need for further assessment of significance of non-Indigenous cultural heritage places identified by the study.



*Volume 8, Chapter 9, Section 9.2* of the draft EIS discusses the significance assessment methodology used by the Department of Environment and Resources Management (DERM), and applies it to the places identified during the field survey. Under Part 4, Section 35 (1) of the *Queensland Heritage Act 1992 (QHA)*, a place may be entered in the Queensland Heritage Register if it meets one of eight criteria relating to rarity, representativeness, historical, architectural, aesthetic, scientific and social significance.

At State level the Cultural Heritage Branch of the DERM has developed a systematic approach to the assessment of cultural heritage significance and prepared a booklet, *Using the Criteria: a Methodology*. The methodology states “*The application of significance and threshold indicators is an internationally accepted and utilised method for determining whether places are of cultural heritage significance.*” It provides a summary of significance indicators and state-level threshold indicators for the criteria specified under the provisions of the QHA. This table has been applied below to determine whether a place is of significance. A copy of this table is at *Appendix 8.2*.

Places identified in the LNG Plant and Pipeline areas of the survey have been assessed against these criteria to determine their level of significance, and the results are presented in *Appendix 8.2*. In summary the results are as follows.

Within the Pipeline study area, the Defence Road has been assessed as being of potential State significance for its historical and social significance as a road network constructed by Italian and Albanian detainees working in the Civil Aliens Corps during World War 2, and as an intact and rare form of surviving infrastructure from this period. The Defence Road has been reported to DERM and is currently being assessed by staff undertaking a statewide survey of historic heritage places in the region to determine whether it meets the threshold requirements for entry in the *Queensland Heritage Act 1992*.

The O'Reilly Graves and former Rainbow Hotel site has been assessed as having local significance for its historical heritage values. Photographs and additional research have identified that there is potential to reveal further information about the site and its role in the region.

On Curtis Island, the former Yards site was assessed as having local historical and archaeological significance and a degree of rarity as evidence of interwar development on Curtis Island. The Wharf Remains, Mill Remains and former Dairy site, also possess some local historical significance in demonstrating evidence of the early occupation of Curtis Island, but do not meet the threshold requirements for listing on the Queensland Heritage Register.

## 7.4

### **MITIGATION STRATEGIES**

Mitigation strategies for both Indigenous and non-Indigenous sites are discussed in the draft EIS. Further detail on specific mitigation measures for places impacted upon in Gas Field, Pipeline and LNG Plant areas are detailed below.



As noted in *Section 7.2*, QGC is well advanced in the development of the CHMPs required for the Project. The CHMPs include detailed provisions for avoidance and mitigation of Indigenous Cultural Heritage. To the extent that provisions in the CHMPs agreed with the eight Traditional Owner Groups conflict with the provisions provided below, the CHMPs prevail.

#### **7.4.1 Gas Field Mitigation**

Locations for CPPs and the first tranche of FCSs have now been determined, which will allow desktop analysis of potential conflicts between cultural heritage sites and major facilities, with detailed on-site surveys to proceed in early 2010. Mitigation measures in the Gas Field study area will be in accordance with the *Aboriginal Cultural Heritage Act 2003* (ACHA) and the Burra Charter principles of heritage conservation best practice. Specific mitigation measures will be developed once comprehensive cultural heritage surveys are undertaken in the area during site inspection prior to commencement of construction activities.

Where proposed development is likely to impact on an identified cultural heritage place, in the first instance measures will be taken to avoid the area by relocating the development elsewhere. If there is no alternative to developing in that particular location, mitigation will involve procedures as agreed in the respective CHMPs, or relocation of non Indigenous cultural heritage places in accordance with the relevant local, State or Commonwealth legislation.

Where the heritage place comprises items or objects of heritage value, or there is potential for subsurface items of significance, archaeological investigation will be undertaken in accordance with the CHMPs and DERM guidelines. Consultation will be undertaken with Traditional Owners, the Queensland Museum and local historical societies and/or museums to establish locations for storage, conservation and exhibition of anything discovered.

Where there is no prudent or feasible alternative to avoiding or relocating objects, mitigation of Indigenous cultural sites will be undertaken in accordance with the CHMPs and the ACHA, and for non indigenous cultural heritage place, archival recording will be undertaken. Archival recording will involve the preparation of measured drawings and colour and black and white photographs in accordance with DERM's draft guidelines dated January 2009.

Further impact assessment will be undertaken once locations for Gas Field infrastructure is known and places of non indigenous heritage value identified.

#### **7.4.2 Pipeline Mitigation**

The Narrows Pipeline Crossing would be constructed in an area where Indigenous cultural heritage sites are known, and where the Traditional Owners have identified places of spiritual and cultural sensitivity. The pipeline crossing will be located to avoid all sites of high constraints (as identified in previous sections). Potential impacts on sites of moderate or low constraint

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will be mitigated in accordance with the CHMP agreed with the PCCC traditional owner group.

With the recent development in the location of the collection header pipeline, a re-examination of potential conflicts between cultural heritage sites and the new locations is being undertaken, to inform pre-construction planning. Mitigation measures will be in accordance with the relevant CHMPs, *Aboriginal Cultural Heritage Act 2003 (ACHA)* and the Burra Charter principles of heritage conservation best practice. Specific mitigation measures will be developed once comprehensive cultural heritage surveys are undertaken in the area during site inspection prior to commencement of construction activities.

Two non indigenous heritage places were identified during the survey as being impacted upon by the proposed pipeline route.

The O'Reilly Graves and Former Rainbow Hotel Site have been assessed as being of local significance and should be avoided by the pipeline route. However the steep terrain in the Coal Road area limits the location of the pipeline, and consequently there is a possibility that the place will be directly or indirectly impacted upon. In the event that the pipeline is constructed in close proximity to the graves, security fencing will be installed to protect the site during construction.

If the pipeline is to be constructed within the site of the former Rainbow Hotel, the area will be archivally recorded in accordance with DERM guidelines prior to any site disturbance. Archaeological investigation will be undertaken by a suitably qualified professional to collect any surface artefacts, and monitoring will also be undertaken by an archaeologist during the construction phase in the event of subsurface material. Security fencing will be installed around any adjacent areas of identified interest to reduce looting and vandalism during construction.

As the Defence Road is a potentially State significant heritage place, the pipeline will avoid directly impacting on significant features such as bridges and culverts. Its impact will be mitigated by crossing the Defence Road where the road is unsealed and maintaining a minimum distance of ten metres from significant features.

### **7.4.3 LNG Plant Mitigation**

While seven places of heritage interest were identified during the field survey, only two of these will be impacted upon by the proposed LNG Plant.

The former Yards Site was assessed as having local historical significance and will be impacted upon by the proposed development. The site is located in the centre of the proposed LNG Plant, and will consequently require demolition. To mitigate this impact, a cleanup of the area will be undertaken to expose any important features and archival recording will be undertaken in accordance with DERM standards, incorporating measured drawings and black and white and colour photographs.

Furthermore, consultation will be carried out with the Queensland Museum and local historical societies and museums to ascertain where any moveable heritage items may be stored, catalogued and exhibited.

The timber posts were identified as a feature of interest in the field survey, but further research and assessment has found that they do not possess cultural heritage values at a State or even local level. The timber posts will be demolished to make way for the proposed development, and this impact has been mitigated through recording the location of the feature and taking photographs as part of the field survey in October 2008.

#### **7.4.4 Management of Discoveries**

As noted in the draft EIS, any discoveries of material during excavation and construction will trigger a statutory requirement to report to DERM. The following details the mechanism for any discoveries during construction, operation and decommissioning of the project.

##### **7.4.4.1 Discoveries during construction**

Comprehensive surveys of the study area will be undertaken in order to reduce the likelihood of places or items of cultural heritage value, and mitigate impacts on cultural heritage values.

Additional mechanisms to mitigate impacts on potential discoveries of non indigenous heritage places and items include incorporating a section on cultural heritage in the induction process for the project. This will outline the types of heritage items which might trigger reporting and stopping work and a notification process in the event that something of heritage value is discovered. Anything discovered during the construction process will be assessed by a suitably qualified heritage professional who will determine whether the feature will require notification to DERM in accordance with the s89 requirements.

##### **7.4.4.2 Discoveries during operation**

Cultural heritage surveys as proposed will reduce the likelihood of any places or items of non indigenous cultural heritage discovered during operation.

While it is unlikely that any new places of non indigenous cultural heritage will be discovered during the operation of the facility, a process will be put into place where the environmental manager will be notified, and a suitably qualified heritage professional engaged to assess the cultural heritage significance of the place. If the feature has potential to significantly contribute to our knowledge of Queensland's past it will be reported to DERM for further assessment. This process will be included in any operational manual produced for the facility.

#### 7.4.4.3 *Discoveries during decommissioning*

Cultural heritage surveys are also proposed in order to reduce the likelihood of any places or items of cultural heritage discovered during decommissioning of the project.

If any new cultural heritage places are discovered during the decommissioning of the project, a similar notification process will be followed in which the feature is assessed by a heritage professional and reported to DERM if assessed as being of high cultural heritage significance. This process will be included in any manual produced for the decommissioning of the facility.