# Australia Pacific LNG Project

## Volume 4: LNG facility

## Chapter 19: Non-Indigenous Cultural Heritage

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# 19. Non-Indigenous cultural heritage

## 19.1 Introduction

### 19.1.1 Purpose

This chapter summarises the non-Indigenous heritage assessment of the liquefied natural gas (LNG) facility site near Laird Point on Curtis Island as part of the Australia Pacific LNG project (the Project). It describes the post-contact land use history of Curtis Island and the registered heritage places and potentially significant site locations in and around the LNG facility study area. The assessment of potential impacts has been conducted in accordance with the environmental impact statement (EIS) terms of reference for the Project. The chapter documents the proposed measures to mitigate any impacts that might result from development of the LNG facility. Volume 5 Attachment 41 contains the full assessment report.

Development of the LNG facility has the potential to impact on non-Indigenous cultural heritage sites located within the area. Australia Pacific LNG's sustainability principles will be applied to the planning, design, construction and operation of the LNG facility to ensure such impacts are avoided or minimised where possible.

In the preparation of the EIS and going forward with the Project, Australia Pacific LNG will be guided by its 12 sustainability principles when identifying potential impacts the Project may have on non-Indigenous heritage values and sites, and in the development and implementation of mitigation measures. Of these 12 sustainability principles, those relevant to non-Indigenous heritage include:

- Minimising adverse environmental impacts and enhancing environmental benefits associated with Australia Pacific LNG's activities, products or services; conserving, protecting, and enhancing where the opportunity exists, the biodiversity values and water resources in its operational areas
- Respecting the rights, interests and diverse cultures of the communities in which Australia Pacific LNG operates
- Engaging regularly, openly and transparently with people and communities affected by its activities, considering their views in its decision-making and striving for positive social outcomes
- Working cooperatively with communities, governments and other stakeholders to achieve positive social and environmental outcomes, seeking partnership approaches where appropriate.

Under these principles, non-Indigenous heritage values are reflected in a number of ways. Australia Pacific LNG has consulted widely during this assessment to identify, avoid, protect and manage non-Indigenous sites. Australia Pacific LNG commits to implementing appropriate procedures to further identify, avoid, protect and/or record areas of significant heritage value.

These principles guide the way in which Australia Pacific LNG proposes to mitigate any potential impacts that the Project may have to non-Indigenous shared heritage values and sites. Australia Pacific LNG commits to identifying and avoiding, protecting and/or recording areas of significant heritage value or likely to contain artefacts and/or human remains.

Through this assessment, Australia Pacific LNG has been able to identify and document much of the history of Curtis Island and the surrounding area, with the help of local individuals and community groups.

### 19.1.2 Scope of work

The specific aims of the non-Indigenous heritage assessment were to:

- Meet the conditions for non-Indigenous heritage in the EIS terms of reference
- Identify historical themes relevant to the non-Indigenous use of Curtis Island
- Identify known non-Indigenous heritage sites in and around the LNG facility site
- Assess the likelihood of further items of heritage significance occurring in the LNG facility site
- Assess the significance of sites located in and around the LNG facility site, in terms of their meeting criteria defined for inclusion in local, state or national heritage registers
- Provide advice on appropriate measures for the mitigation of impacts to identified heritage sites, appropriate to their level of significance
- Propose a methodology for the management of non-Indigenous heritage sites identified during construction on Curtis Island.

### 19.1.3 Legislative framework

In Queensland, both Commonwealth and State legislation protects non-Indigenous heritage sites. The following section discusses both State and Commonwealth legislation of relevance to this assessment.

#### *Commonwealth legislation*

Two pieces of Commonwealth legislation serve to protect Australia's heritage. These are the *Environment Protection and Biodiversity Conservation Act 1999* and the *Australian Heritage Council Act 2003*. The Commonwealth authority responsible for the administration of this legislation is the Department of Environment, Water, Heritage and the Arts (DEWHA).

**Environment Protection and Biodiversity Conservation Act**

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides protection for items and places with World, National or Commonwealth heritage values. It is the primary piece of Commonwealth environmental legislation in Australia, providing the legal framework for the protection and management of nationally and internationally recognised flora, fauna, ecological communities and the heritage places defined as being of national significance.

Both nominated or recognised cultural heritage sites can be protected under the EPBC Act, either through inclusion on the National Heritage List or, if they are on Commonwealth land or waters, on the Commonwealth Heritage List. This Act also provides protection for cultural heritage items and places on the World Heritage list.

World heritage properties and national heritage places are matters of national environmental significance under the EPBC Act. Any action likely to have a significant impact on these heritage properties and places will require approval under the Act.

### Australian Heritage Council Act

The *Australian Heritage Council Act 2003* established the Australian Heritage Council, as the principal advisory body to the Australian Government on heritage matters, particularly in relation to administering the heritage registers now created under the EPBC Act. It replaced the Australian Heritage Commission, the authority previously responsible for advising on the administration of Commonwealth heritage legislation.

The role of the Australian Heritage Council is to:

- Assess cultural heritage items and places for inclusion in the National Heritage List or Commonwealth Heritage List
- Advise the Minister in relation to the inclusion of places in, and the removal of places from, the List of Overseas Places of Historic Significance to Australia
- Advise the Minister on matters relating to the condition of places included in the National Heritage List or Commonwealth Heritage List
- Advise the Minister on the Commonwealth's responsibilities for historic shipwrecks
- Promote the identification, assessment, conservation and monitoring of heritage, and
- Keep the Register of the National Estate

The National Heritage Places Inventory is maintained by DEWHA and contains summary information about places listed in state, territory and Commonwealth heritage registers and lists. It is an online, searchable database.

### Historic Shipwrecks Act

The *Historic Shipwrecks Act 1976* protects shipwrecks and associated relics more than 75 years old in Commonwealth waters. All wrecks are recorded in the Australian National Shipwrecks Database with details of their location, if this is known. Each of the states and the Northern Territory has complementary legislation for state waters including bays, harbours and rivers. The Minister for the Environment can also make a determination to protect historically significant wrecks or relics less than 75 years old.

## *Queensland cultural heritage legislation*

The Queensland body responsible for non-Indigenous cultural heritage protection is the Cultural Heritage Branch of the Department of Environment and Resource Management. It keeps a register of significant heritage places and sites, the Queensland Heritage Register, and administers the *Queensland Heritage Act 1992.*

### Queensland Heritage Act

For non-Indigenous heritage, the *Queensland Heritage Act 1992* provides specific pathways to protection. Its stated aim is 'to provide for the conservation of Queensland's cultural heritage for the benefit of the community and future generations.'

The Queensland Heritage Register is a record of State heritage places and protected areas and since amendments in 2008 also includes archaeological sites. Register entries include details of the boundaries of the area or place, its history, a description of its fabric and whether it is the subject of a heritage agreement.

The development of state heritage listed sites requires government approval. Section 68 of the Act provides for the assessment of development applications for heritage listed sites under the *Sustainable Planning Act 2009* (discussed in Volume 1 Chapter 2) to be consistent with the purposes of the Queensland Heritage Act.

Not all places and objects of heritage value are known prior to development. This is particularly the case with archaeological sites, sometimes unearthed during construction. A person must advise the Chief Executive about any archaeological artefacts that are discovered and considered an important source of information about an aspect of Queensland's history. Once artefacts have been reported under the Act it is an offence to interfere with these artefacts.

Places of heritage significance are not always listed on the register, but maybe known to members of the public. A place can be nominated for inclusion on the Queensland Heritage Register at any time. The Minister may issue a stop order to protect from damage any place (entered on the register or not) considered to be of cultural heritage significance.

The *Queensland Heritage Act 1992* deals only with non-Indigenous heritage places and those with joint Indigenous and non-Indigenous values.

#### National Trust of Queensland Act

Listing by the Queensland National Trust under the *National Trust of Queensland Act 1963* provides a major indication of a community's feeling about the value of individual buildings, precincts, natural environment places or culturally significant artefacts. However, despite being established by an Act of Parliament, listing on the Register of the Queensland National Trust provides no legal protection for places or buildings, or obligation on owners to conserve these properties.

The Burra Charter, adopted in 1979 by the Australian Chapter of the International Council of Monuments and Sites (ICOMOS), defines the basic principles and procedures to be followed in the conservation of Australian heritage places, and became a guide for inclusion on the National Trust. The Charter has wide-ranging application for heritage protection in Australia, defining conservation as 'the processes of looking after a place so as to retain its cultural significance' (Article 1.4). A place is considered 'significant' if it possesses aesthetic, historic, scientific or social value for past, present or future generations (Article 1.2). Conservation of a place should identify and take into consideration all aspects of its cultural significance without unwarranted emphasis on any one aspect at the expense of others (Australia ICOMOS 1999).

### *Local government legislation*

Amendments to the *Queensland Heritage Act 1992* introduced in 2008, required local government agencies to establish their own registers of heritage places.

A further amendment also provides for the integration of Queensland and local government assessment and approval processes under the integrated development assessment system of the *Sustainable Planning Act 2009*. Sites listed on the state heritage register and local government heritage schedules within the Project area are subject to assessment provisions specified under this Act.

## 19.2 Methodology

### 19.2.1 Method

To ensure a thorough identification and assessment of the potential impacts the proposed development may have on the heritage values of the study area, a number of methods were employed including desktop research, consultation and three detailed site surveys. These methods are further detailed below:

- Literature review including use of on-line resources
- A search of the Commonwealth register for listed sites of international and national significance (World Heritage List, National Heritage List, and Register of the National Estate)
- A search of the National Shipwrecks database
- A search of the Queensland Heritage Register
- A search of the register of the Queensland National Trust
- A search of data in heritage studies previously carried out in the area. In particular, one written for the Coastal Planning Unit of the Environmental Protection Agency, identifying sites of local heritage significance along the Curtis Coast, by historian Lorna McDonald in 2001; and a similar study of regional heritage sites, prepared by Allom and Lovell in 1999. These two documents are referenced in the Curtis Coast Regional Coastal Management Plan as forming the basis for a list of significant non-Indigenous heritage places in the district
- Requests for information to local councils (Gladstone Regional Council and Banana Shire Council) and historical societies (Calliope River Historical Village) and a search of the respective council's heritage lists
- Publicly available books and histories
- discussions with individuals and organisations with an interest in the region's heritage
- Three field surveys covering areas likely to be affected by construction and operations of the LNG facility as detailed below.

A contextual history of the area has been provided and previous studies reviewed (refer to Volume 5 Attachment 41). Site information from the various site databases and data sources, has then been collated and mapped (Figure 19.1). To provide a context in which to assess the heritage values of the sites in the Project area, heritage locations in the surrounding area have also been investigated. While this may have resulted in the inclusion of sites well distant from the location of the planned development, it has ensured that significant heritage places that might be indirectly impacted by the Project are also identified.

Details of the methodological limitations of the study are provided in Volume 5 Attachment 41.

#### *Field investigations*

To test the validity of the site distribution models and to examine locations identified from consultation, three field studies were undertaken at the LNG facility site to identify locations with non-Indigenous heritage values. This was valuable, in identifying several heritage sites along Graham Creek and in the facility site itself. Field investigations included land based surveys undertaken over nine days in September, October and December 2009. In addition to land based site investigations, a review of sites along Graham Creek was undertaken by boat. Sites located during these investigations have

been included in this analysis. Additional investigations will be undertaken on the locations proposed for the mainland facilities.

### *Consultation*

Information on non-Indigenous heritage sites on Curtis Island came from a wide range of sources including that from consultation with long term residents involved in the collection of and involvement with local history. Additionally, representatives of organisations charged with protecting heritage sites, including regional council officers and the National Trust of Queensland, provided valuable insights into the listed sites along the route. The people contacted as part of this investigation are listed in Table 19.1.

**Table 19.1 List of heritage and other local contacts for LNG facility study area**

| Contact | Organisation or location | Region |
|---|---|---|
| Amy Lockyer | Banana Shire Council | Banana Shire |
| Information Officer | Calliope River Historical Village | Port Curtis and hinterland |
| Information Officer | Gladstone Regional Council | Gladstone and district |
| Neville Robertson-Hughes | Gladstone Maritime Museum | Gladstone and district |
| Danny Aischlemann | Gladstone Maritime Museum | Gladstone and district |
| J.W. Harris | Gladstone – local historian | Curtis Island, Gladstone, Calliope region |
| Information Officer | Miriam Vale Museum | Miriam Vale and district |
| Dr Val Dennis<br>Heritage Information Officer | National Trust of Queensland | Entire LNG facility study area |

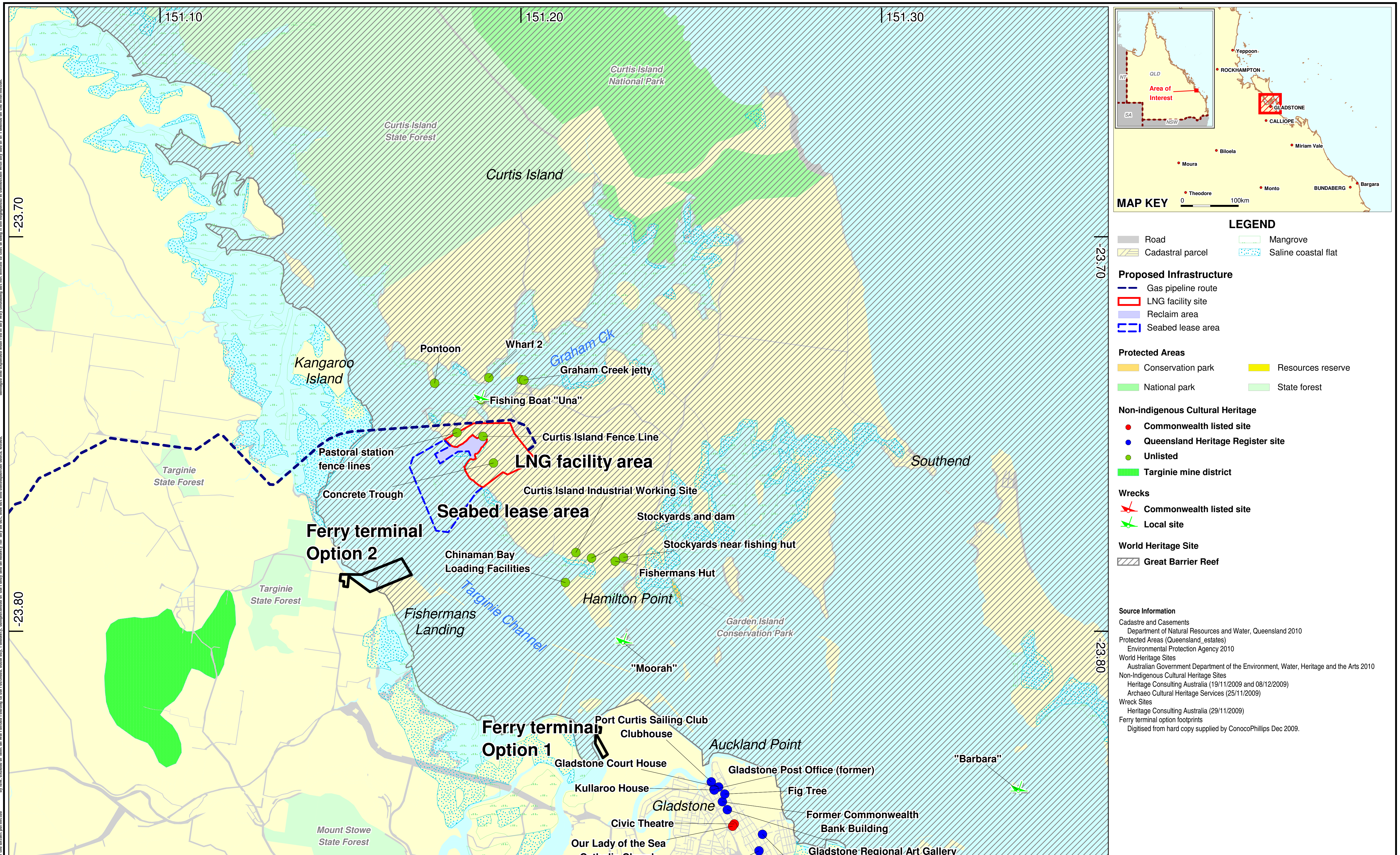


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**Figure 19.1 Non-indigenous Cultural Heritage Sites**

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### *Assessing site significance*

The evaluation of site significance undertaken for this assessment is based on framework identified in the Burra Charter which requires consideration of the aesthetic, historic, scientific, social and spiritual values of places in the past, present and in the future (Australia ICOMOS 1999). Within this framework, the significance assessment of locations identified at the site of the LNG facility has been carried out using criteria laid down in Section 35 of the *Queensland Heritage Act 1992* to identify heritage items of State significance. These criteria are:

- The place is important in demonstrating the evolution or pattern of Queensland's history
- The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage
- The place has potential to yield information that will contribute to an understanding of Queensland's history
- The place is important in demonstrating the principal characteristics of a particular class of cultural places
- The place is important because of its aesthetic significance
- The place is important in demonstrating a high degree of creative or technical achievement at a particular period
- The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
- The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

In addition to locations deemed to be of national, state or local significance, and recognised through their listing on relevant heritage lists and registers, there are other sites that do not meet register listing criteria, but which still provide a setting in which to understand the historical land-use of a region. These sites, while adding to our understanding of a region's past land use, do not uniquely add to that understanding. These sites are described in some recent studies (e.g. Archaeo Cultural Heritage Services 2009) as being of 'historical interest'. This heritage value does not warrant the level of protection necessary for sites of local, state and national heritage significance.

In addition to the criteria specified in the *Queensland Heritage Act 1992* for the assessment of site significance, archaeological sites can also be assessed using additional criteria. These address the scientific values of archaeological sites and refer to site integrity, site contents and site structure.

## 19.2.2 Study area

The study area for the LNG facility of the non-Indigenous heritage assessment is Curtis Island and surrounding marine areas, in particular Laird Point. Laird Point is situated on the western side of Curtis Island, on the southern edge of Graham Creek, immediately adjacent to The Narrows, and opposite industrial estates to the north of the City of Gladstone. The study area also includes marine areas adjacent to Curtis Island where the construction of a materials offloading facility and ship berths are proposed. Two options have been considered in detail for the ship berths: Option 1b to the south-west of North Passage Island and adjacent to the Gladstone Port Corporation's proposed Fisherman's Landing Northern Expansion project with shipping access via the Targinie channel, and Option 2a adjacent to the Australia Pacific LNG project site between Curtis Island and North Passage Island with

shipping access along Curtis Island past other proposed LNG facilities (refer Chapter 1). Mainland facilities to support the construction and operations will be located on heavily disturbed land or on reclaimed land. These options are on either heavily disturbed or recently reclaimed land (refer Volume 4 Chapter 3).

Curtis Island is approximately 40km long and 10km to 20km wide and is oriented in a north-south direction, parallel with the coast. It is the largest of the islands that enclose Gladstone Harbour and is one of the group of offshore islands included in the World Heritage listed Great Barrier Reef. Curtis Island has some connection to early maritime exploration in the Port Curtis area along with The Narrows, a channel of variable depth which separates Curtis Island from the mainland by as little as 200m, which is a place where ships often ran aground.

There is a small settlement (South End), which began as a fishing village on an earlier grazing lease, at the southeast tip of the island. The island remains relatively isolated, due to the absence of road access from the mainland, with much of it undeveloped and some annexed as national park.

Laird Point is visually separated from South End and other areas of the island by a range of hills, and modified open forest and mangrove swamp. The limited impacts on the natural environment that have been experienced in the area have come from pastoral activity and bushfire regeneration. The entire island has, because of its location and history of isolation, remained relatively wooded, in stark contrast to the heavy industrial development of Gladstone opposite.

## 19.3 Non-Indigenous heritage values

### 19.3.1 Historical context

The existing environmental values and non-Indigenous heritage sites present in the study area have been shaped by the post-European history of Curtis Island. At present the island is largely uninhabited, except for a small settlement on the far side of the Island from the study site. The history of the island has been strongly influenced by the history of the surrounding area, in particular Gladstone and there are a number of prevalent themes. These are:

- Maritime exploration and mapping
- Contact with Indigenous peoples
- Early settlement of the mainland and Curtis Island
- Pastoral settlement
- Navigation of The Narrows and transportation of goods.

All of these aspects of history contribute to an understanding of the non-Indigenous use of the LNG facility study area, and provide a context in which to evaluate known heritage sites and predict the location of potential heritage sites within it. A detailed discussion of the study area's history in the context of the key themes is provided in Volume 5 Attachment 41.

### 19.3.2 Heritage sites

Site information collated for Curtis Island includes sites listed on national, state and local heritage registers and sites described in other information sources. Heritage lists used by the Gladstone Regional Council contain only sites of State heritage significance, however, regional heritage studies also include locally significant sites, although these are not recognised in Council planning instruments.

### *Registered sites*

Sites on Curtis Island are registered on a number of heritage lists. These include the Australian Heritage Places Inventory, and associated contributing lists: the World Heritage List, National Heritage List, State Heritage Register and the Register of the National Estate (with much overlap). There are no sites listed for Curtis Island on the list of the National Trust of Queensland.

Registered and listed non-Indigenous heritage sites in the general vicinity, but not within, the LNG facility site are described in Table 19.2.

**Table 19.2 Registered non-Indigenous heritage sites**

| Site | Distance from LNG facility | Heritage register | Significance rating |
|---|---|---|---|
| Great Barrier Reef World Heritage Area | Within | World Heritage List, WHL ID 105060<br><br>Indicative listing on both the National Heritage and Commonwealth Heritage lists, NHL ID 105709 & CHL ID 105573; Register of the National Estate, RNE ID 103284 | International, national (high) |
| Sea Hill Point Lighthouse | Approximately 35km from LNG facility | Register of the National Estate, ID101513 | State |
| Cape Capricorn Lighthouse station | Approximately 30km from LNG facility | Queensland Heritage Register ID 601723;<br><br>Register of the National Estate ID100379 | State |

#### Great Barrier Reef World Heritage Area

The whole of Curtis Island is listed as part of the Great Barrier Reef World Heritage Area. This World Heritage Site is divided into World Heritage Area (Marine) and World Heritage Area (Land). Curtis Island is the largest of the islands included in the World Heritage Area (Land). The criteria supporting its listing relate to evolutionary history, geological processes, biological diversity, rare phenomena, exceptional natural beauty, and habitat for endangered plant and animal species. Non-Indigenous cultural heritage values have also been highlighted and include lighthouses, shipwrecks and ruins.

To ensure that these non-Indigenous heritage values are protected, and because the island is a World Heritage Site, impacts are assessed jointly by the Australian and Queensland governments under Sections 12 and 15a of the EPBC Act. Two sites are identified in Queensland and Commonwealth heritage registers on Curtis Island. These are the Sea Hill Point Lighthouse, listed on the Register of the National Estate, but not on the Queensland Heritage Register nor the National Heritage List; and the Cape Capricorn Lighthouse station, listed on the Queensland Heritage Register.

**Sea Hill Point Lighthouse**

This lighthouse is located on the north-western tip of Curtis Island, and dates from 1873. It was replaced in the 1920s and the original lighthouse was transported to the Gladstone Maritime Museum. It marked the eastern side of the entrance to Keppel Bay and was apparently deactivated in 2006 and demolished in early 2009. It was accompanied by a pilot station established in 1858. Sea Hill developed into a small township with a primary school, and became a quarantine station (McDonald 2001).

Sea Hill Point Lighthouse is distant from the proposed development of the LNG facility at Laird Point and will not be affected.

**Cape Capricorn Lighthouse station**

This lighthouse is located on the Northeast tip of Curtis Island and comprises a lighthouse and associated cottages, keeper's quarters, sheds, store, winch-house and powerhouse. It was built in 1875, with further rebuilding in the 1930s and 1960s. This area is especially significant for its definition of the life of the lighthouse keepers, their families and workers. It is an isolated and almost self-sufficient complex, contributing to the network of navigational aids set up along the coast.

Cape Capricorn Lighthouse station is distant from the proposed development of the LNG facility at Laird Point and will not be affected.

### *Additional sites listed in other sources*

McDonald (2001) compiled a list of non-Indigenous heritage sites on the Curtis Coast which is referenced in the Curtis Coast Regional Management Plan. McDonald did not intend it to be comprehensive, as the list was developed from historical research and discussions with local residents, rather than systematic field survey.

In addition to these locally significant sites, three additional sites were identified following discussions with a local historian, Mr Jimmy Harris. Mr Harris advised that there are several unlisted sites on Laird Point. These include a child's grave, an underground brick-lined water tank and a possible house site. As a result of this consultation, a further field survey was undertaken however these sites were not located during this recent survey and as such are considered not likely to occur on the Laird Point site.

The results of these further investigations of Curtis Island sites are contained in Table 19.3, with further detailed descriptions of the site provided in Volume 5 Attachment 41. It is noted that these are not located on the LNG facility site.

**Table 19.3 Non registered heritage sites of significance**

| Place | Description | Significance rating |
|---|---|---|
| The Narrows | Matthew Flinders first noted the channel but did not name it. The Narrows has a long history as the difficult to navigate link between Gladstone and Rockhampton. | State and Local |
| Ramsey Crossing | McDonald (2001) identifies this as the cattle crossing used by Monte Christo station since the 1860s. | Local |
| Graham Creek | Graham Creek has a deep-water entry extending some kilometres, used by boats as a safe anchorage. | Local |

| Place | Description | Significance rating |
|---|---|---|
| Yellow Patch | This body of coloured sand is located on the north-western shore of Cape Capricorn and was a popular tourist destination for local residents. | Local |
| Joey Lee's Cave and Beach | Joseph Lee took up an oyster lease in this location, as a returned soldier after World War II. He built a shack and sold his oysters in Gladstone. Cattle from Monte Christo station used a fresh water spring near his shack. | Local |
| Sea Hill | This site is listed on the Register of the National Estate. McDonald (2001) outlines the early history of the location. The pilot station was built to guide boats bringing 15,000 people coming by ship to the Canoona goldfields. | State and Local |
| Quarantine Station | The quarantine station was established at Sea Hill in 1862 to quarantine arriving British migrants. A graveyard is associated with this site. | State and Local |
| Monte Christo Station | Monte Christo is significant both because of its connections to the author, Rosa Praed, and as an early and surviving cattle station.<br><br>It may qualify for inclusion on the Queensland Heritage Register. | State and Local |
| South End | South End was a weekend retreat visited by local residents from the early 1900s. By 1925 there were 125 houses and five permanent residents. South End is listed in the Curtis Coast Regional Management Plan for its history as a recreation place (Allom and Lovell 1999). | Local |
| Cattle crossing | There are numerous mentions of the crossing used to herd cattle from Curtis Island to the mainland. | Local |

A recent heritage study was undertaken to investigate the potential impacts to non-Indigenous cultural heritage of another major infrastructure Project on Curtis Island (Archaeo Cultural Heritage Services 2009). This led to the discovery and description of a small number of sites that help to further document the Island's history and provide the local context in which to assess sites found in the Project area. These are described in Table 19.4 below.

**Table 19.4 Sites of historical interest and local significance**

| Place | Description | Significance rating |
|---|---|---|
| Curtis Island fence line (HI-08)<br><br>(Archaeo Cultural Heritage Services 2009) | 56K 315474 7372209<br><br>Numerous fence alignments were located across the island. They comprise timber posts without wire at the northern end of Laird Point. These provide evidence of early to mid-20th Century pastoralism.<br><br>Some are located around the inter-tidal and mangrove zones, presumably to keep cattle from unstable mud flats. | Historical interest |
| Stockyards and dam (HI-09)<br><br>(Archaeo Cultural Heritage Services 2009) | 56K 318584 7368834<br><br>A small dam fenced to exclude stock and a metal loading ram. | Historical interest |
| Stockyards near fishing hut (HI-10)<br><br>(Archaeo Cultural Heritage Services 2009) | 56K 319490 7368864<br><br>Large steel stockyards located near Fisherman's hut. | Historical interest |
| Chinaman Bay loading facilities (HAS-29)<br><br>(Archaeo Cultural Heritage Services 2009) | 56K 317858 7368136<br><br>Loading areas from island to bay and rubbish dump/ hut likely used by people loading on the wharf and slipway. Includes dump of scattered machinery and household refuse on Hambledon selection (Monte Christo Station). Timber stockyard with loading ramp. Wharf with four tall vertical stumps set into dune sand. Slipway built with logs set into edge of bay. | Local significance |
| Curtis Island Industrial working site (HAS-30)<br><br>(Archaeo Cultural Heritage Services 2009) | 56K 318141 7368983<br><br>Fences, old machinery, wire, windmill, tanks and engine footings, sheds and boardwalk. | Local significance |
| Fishermans hut<br><br>(HAS-33)<br><br>(Archaeo Cultural Heritage Services 2009) | 56K 319257 7368751<br><br>Two huts, steel and fibro and an early construction with adzed timbers and old wire drawn nails. Fenced yard to the west with water tanks and domestic plantings; cattle dip and associated farm infrastructure. | Local significance |

### *Sites identified during local field investigation*

Field investigations included land-based surveys undertaken over nine days in September, October and December 2009. In addition to land-based site investigations, a review of sites along Graham Creek was undertaken by boat. As a result of this field inspection, two additional sites of local heritage significance were identified. Each of these is detailed in Table 19.5 and is discussed in further detail later in the chapter. The italic text provides evidence for the site significance rating.

**Table 19.5 Sites identified during site survey**

| Place | Description | Significance assessment | Significance rating |
|---|---|---|---|
| Graham Creek jetty | 56K 316542 7373813<br><br>56K 316615 7373806<br><br>The remains of this jetty are found on the shore in mangroves on the southern bank of Graham Creek and submerged 70m to the east.<br><br>These jetty remnants are associated with the pastoral industry on the island, with materials brought from the mainland unloaded at this jetty. | Criterion (c) the place has a potential to yield information that will contribute to an understanding of Queensland's history.<br><br>The jetty is significant for its connection with the pastoral industry, particularly with transporting goods to service the pastoral station on the island in the early part of the 20th Century. It documents the connection between mainland and Curtis Island.<br><br>As an archaeological site, the significance also needs to be assessed for its research potential and representativeness.<br><br>**Research potential:**<br><br>**Integrity**: Although the jetty has collapsed and displaced from its original location, many of the large structural beams remain.<br><br>**Structure and contents:** The site will reveal details of construction techniques used for maritime structures on the island.<br><br>**Representativeness:** The jetty is more substantial than the other surviving jetties in Graham Creek and is therefore unique. | Local significance |
| Pastoral station fence | 56K 314740 7372304 | Criterion (c) the place has a potential to yield information that | Local significance |

| Place | Description | Significance assessment | Significance rating |
|---|---|---|---|
| lines | This location is the north-western point of an extensive network of fences found on the western edge of the island. The fences extend across the proposed LNG facility site.<br><br>Fence posts had bored holes that held three strands of barbed wire. Rusted strands of wire are found adhering to some posts.<br><br>The posts vary in height, width and thickness, with the tallest posts found on the mud flats, where they stand up to 1.5m high. Most posts stand approximately 1.0m high.<br><br>At the southern end of the fence lines is a concrete stock watering trough. The watering point is still used, although a windmill originally used at this site has been removed to be replaced by an electrically-powered pump. The trough is no longer used. | will contribute to an understanding of Queensland's history.<br><br>The fence posts are significant due to the connection with the pastoral industry on Curtis Island in the late 19th and early 20th Centuries.<br><br>The fences contain redundant information about pastoralism on Curtis Island and therefore, these fences do not meet the criteria for State heritage listing.<br><br>As an archaeological site, the significance also needs to be assessed for its research potential and representativeness.<br><br>**Research potential:**<br><br>**Integrity:** While some fence posts have been affected by termite attack or burnt in bushfires, many intact posts remain in situ.<br><br>**Structure and contents:** The fence posts provide evidence of the techniques used for fencing on the island. There is little variation between the posts.<br><br>**Representativeness:** The fence posts are represented by posts found near Laird Point in areas where they will not be affected by planned development. | |

### Graham Creek jetty

Three uprights that mark the location of a former jetty were found on the southern bank of Graham Creek, 1.2km to the northeast of the proposed LNG facility site (Figure 19.2). Submerged in the water 70m to the east of this location are found at least five substantial, dressed timber beams from the jetty. This site is of local heritage significance and will not be affected by proposed construction activities associated with the development of the LNG facility.

**Figure 19.2 Jetty remnants on southern bank of Graham Creek**

### Pastoral station fence lines

Lines of old station fence posts were identified during a recent heritage survey on the western side of Curtis Island (Archaeo Cultural Heritage Services 2009). While these posts were noted, their full extent was not fully documented. As part of the present investigation, these derelict fence lines were followed and mapped. One line was found to extend south from the mangroves on the southern side of Graham Creek to enter the proposed LNG facility site from the north western boundary. This fence line continues 440m in a south-easterly direction to the shore of an extensive mud flat, then skirts the edge of this mud flat to the mangroves facing North Passage Island (Figure 19.3). Another fence line branches southward for 480m to a dam and abandoned concrete cattle trough. The fences have been used to keep cattle from straying onto the mud flats. A similar line of fence posts is found around a mud flat to the south of the Project area.

The fence posts originally supported three strands of wire, and traces of rusted barbed wire remain in places. In other areas, more recent wire is present, and near the dam at the southern end of the fence line, and in the mangroves adjacent to Graham Creek, are found fallen rails. The sites located during the field survey are listed in Table 19.5.

**Figure 19.3 Pastoral fence line crossing mud flats. Mount Larcom is in the background.**

## 19.4 Potential Impacts

### 19.4.1 Potential impacts to known sites

Only one non-Indigenous heritage site is known to be located at the LNG facility site. This is a network of fences with an associated dam and stock watering trough, dating from the early-mid 20th Century. Approximately 2.58km of fence lines occur in the LNG facility site, and this would be destroyed by construction. As this site is potentially of local heritage significance, it will be necessary for detailed recording of the site prior to construction in this area.

The jetty on Graham Creek will not be affected by direct construction impacts, as it is situated at least 700m from the nearest facility associated impacts. It is unlikely that indirect impacts, such as vibration from construction, will have any impact on these archaeological traces.

### 19.4.2 Potential impacts to undetected sites

There is a possibility that undetected, non-Indigenous heritage sites remain in the Project area. These will most likely include sites associated with the pastoral history of Curtis Island. These may include further fences, cattle yards, stock watering points, machinery or loading facilities. It is possible that sites associated with the early contact period and conflict with Indigenous people might be found on the island. Based on the results of earlier site investigations, and the range of sites previously documented, these are unlikely to be of great heritage significance.

The initial marine survey did not detect any sites, however sites associated with the maritime use of The Narrows may exist along the shore of Curtis Island. These may include items lost when vessels were stranded. Due to the history of The Narrows, if items did exist, it is probable that past dredging has removed any historical traces. As such, it is anticipated that the Project will not identify or impact any historical artefacts in this location.

### 19.4.3 Potential cumulative impacts

In addition to impacts that will arise from construction of the LNG facility, other associated infrastructure is planned. A pipeline to supply the LNG facility with gas will be built to the north and east of the facility. A further pipeline will then be routed south to supply other proposed LNG facilities on Curtis Island. This pipeline will result in further impacts to non-Indigenous heritage sites on Curtis Island. The proposed pipeline route crosses the identified historical fence line, 350m to the north of the LNG facility boundary, and will result in the loss of a further five fence posts, however, two of these are no longer standing.

The other LNG projects will also result in impacts to sites associated with the pastoral industry on Curtis Island. Two pastoral sites will be lost through development of the GLNG LNG facility site (Archaeo 2009): the Chinaman's Bay loading site (HAS-29) and Curtis Island industrial working site (HAS-30). Disused cattle yards (Site CINICH01) will be removed by the construction of the QCLNG LNG facility (QGC 2009 Volume 8: 78).

Through a commitment to archival recording of these impacted sites as detailed in the Gladstone LNG Project EIS and the Queensland Curtis LNG Project EIS, recovery of information on the land use of the island will ensure that any loss of information on the pastoral use of the island is minimised.

## 19.5 Mitigation and management

### 19.5.1 Mitigation of potential impacts to known sites

As the proposed LNG facility occupies a large proportion of the land within the proposed site, and as the fence lines cross the entire area, options for protection are limited. The extent of the fences makes avoidance by redesign of the proposed facilities untenable and the low significance rating for the fences would not warrant such an approach. The low significance rating of the fences also does not warrant relocation or archaeological salvage of individual fence posts or the water trough. In this instance, the most appropriate management strategy for the fence lines on the LNG facility site is detailed archival recording. The local community, through the Port Curtis Historical Society, would be provided with the results of this recording program.

As the recorded pastoral sites are deemed to be of low archaeological potential and low heritage significance, their loss will have low impact on the island's heritage values. Nevertheless, a portion of the historical fence line will remain largely intact in the reserve to the north of the LNG facility site. This area, with only localised disturbance, will provide a representative sample of this feature.

### 19.5.2 Mitigation of potential impacts to undetected sites

Undetected non-Indigenous heritage sites may occur in the Project area. If so, these are likely to include archaeological sites associated with the pastoral, timber and maritime use of Curtis Island and The Narrows. To ensure that these are recorded and their heritage values assessed, the following steps will be implemented during construction, should they be uncovered:

- All work in the vicinity of the suspected heritage site will cease and a temporary buffer established.
- The Australia Pacific LNG Site Manager will be notified as per notification protocols established for the Project

- Australia Pacific LNG Project's cultural heritage personnel will be advised of the finding, and will inspect the suspected heritage items to assess them and ensure that the provisions of the *Queensland Heritage Act 1992* in relation to non-Indigenous archaeological sites are met
- The Australia Pacific LNG Stakeholder and Indigenous Relations Officer will liaise with officers of DERM, as required, to ensure heritage items are properly recorded, their significance assessed and appropriate management measures implemented. These measures may include protecting and avoiding the site; investigating and recording heritage items; or excavation of the heritage items and removing these for safekeeping.

## 19.6 Conclusion

### 19.6.1 Assessment outcomes

The assessment of non-Indigenous heritage involved a comprehensive review of publically available information together with significant stakeholder consultation and comprehensive site inspections of the site near Laird Point and the associated marine areas. The assessment identified that the proposed facilities near Laird Point encompasses an area containing approximately 2.58km of historical fence lines and a stock watering point with dam and concrete watering trough, with local heritage values. The assessment found that these sites are of local significance and the most appropriate management strategy for the pastoral sites on the site is detailed archival recording. The project is not expected to have impacts on the non-Indigenous heritage values of the Great Barrier Reef World Heritage area. A summary of the values, sustainability principles, potential impacts and mitigation measures in relation to non-Indigenous heritage is presented below in Table 19.6

In addition, Table 19.6 includes the residual risk levels for non- Indigenous cultural heritage. Mitigation measures to reduce the risk have been nominated and the residual risk has been calculated. Further details on the risk assessment methodology are provided in Volume 1 Chapter 4.

**Table 19.6 Summary of values, sustainability principles, potential impacts and mitigation measures**

| Environmental Values | Sustainability principles | Potential impacts | Possible causes | Mitigation and management measures | Residual risk level |
|---|---|---|---|---|---|
| Non- Indigenous cultural heritage | Minimising adverse environmental impacts and enhancing environmental benefits associated with Australia Pacific LNG's activities, products or services; conserving, protecting, and enhancing where the opportunity exists, the biodiversity values and water resources in its operational areas<br><br>Respecting the rights, interests and diverse cultures of the communities in which Australia Pacific LNG operates<br><br>Engaging regularly, openly and transparently with people and communities affected by its activities, considering their views in its decision-making and striving for positive social outcomes<br><br>Working cooperatively with communities, governments and other stakeholders to achieve positive social and environmental outcomes, seeking partnership approaches where appropriate | Harm to non-Indigenous heritage sites arising from design, construction and operational activities | Project personnel are not aware of location of non-Indigenous heritage sites and inadvertently damage sites<br><br>LNG facility located in close proximity to non-Indigenous heritage sites – due to indirect damage<br><br>LNG facility located in an area which contains non-Indigenous heritage sites<br><br>Personnel not following appropriate non-Indigenous heritage management procedures | Archival recording of any sites potentially impacted by construction of the LNG facility<br><br>Ensure internal approvals processes for disturbances address site specific non-Indigenous heritage issues<br><br>Induction program for all workers involved in activities on LNG facility site about the importance of non-Indigenous heritage sites<br><br>Establish procedures to be followed upon the discovery of items to include<br>• Cease work and establish a temporary buffer<br>• Notification to site and project management<br>• Assess the significance of the site using criteria established under the *Queensland Heritage Act 1992*, to determine the appropriate protection measures for identified sites<br>• Liaise with the appropriate regulatory authority to implement appropriate management, as required | Low |

### 19.6.2 Commitments

Australia Pacific LNG commits to the following:

- Archival recording of the fence lines on the LNG facility site prior to the commencement of construction
- Implementation of procedures during site activities that aim to identify, assess and record undetected non-Indigenous heritage sites, including appropriate induction of relevant project personnel.

## References

Archaeo Cultural Heritage Services 2009, *Non-Indigenous Heritage Investigation for the Gladstone GLNG Project,* report prepared for URS, Brisbane.

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Australia ICOMOS 1999, *The Burra Charter: The Australia ICOMOS charter for places of cultural significance 1999: with associated guidelines and code on the ethics of co-existence,* Australia ICOMOS, Burwood, Victoria.

McDonald, L 2001, *An overview of the historical cultural heritage resources of the Curtis Coast. Consultancy,* report prepared for the Coastal Planning Unit of the Environmental Protection Agency, Environmental Protection Agency, Brisbane.