# Australia Pacific LNG Project 

## Volume 2: Gas Fields

Chapter 18: Indigenous Cultural Heritage

## Contents

18. Indigenous cultural heritage ..... 1
18.1 Introduction ..... 1
18.1.1 Purpose ..... 1
18.1.2 Scope of works ..... 2
18.1.3 Legislative framework. ..... 2
18.2 Methodology ..... 4
18.2.1 Limitations ..... 4
18.3 Cultural heritage values ..... 6
18.3.1 Archaeological context ..... 6
18.3.2 Constraints analysis ..... 7
18.3.3 Results of register searches. ..... 8
18.3.4 Field surveys ..... 9
18.3.5 Cultural heritage management plan development ..... 10
18.3.6 Cumulative impacts ..... 12
18.4 Potential impacts ..... 12
18.5 Mitigation and management ..... 13
18.6 Conclusions ..... 13
18.6.1 Assessment outcomes ..... 13
18.6.2 Commitments ..... 17
References ..... 18
Figures
Figure 18.1 Registered Indigenous cultural heritage sites and identified site provinces ..... 5
Figure 18.2 Native Title claims within the gas fields' development area ..... 11
Tables
Table 18.1 Identified Aboriginal parties ..... 10
Table 18.2 Status of cultural heritage management plan negotiations ..... 10
Table 18.3 Summary of values, sustainability principles, potential impacts and mitigation measures ..... 15

## 18. Indigenous cultural heritage

### 18.1 Introduction

### 18.1.1 Purpose

This chapter provides an assessment and proposed management of potential development impacts on Indigenous cultural heritage. It provides a context for assessing Indigenous occupation, recognises the presence of registered Indigenous heritage sites and provides an overview of the framework in which Indigenous cultural heritage will be identified and managed. Australia Pacific LNG is committed to working with identified Aboriginal parties to develop and implement CHMPs and to provide agreed and appropriate protection for Indigenous cultural heritage.

In the preparation of the environmental impact statement (EIS) and going forward with the Project, Australia Pacific LNG will be guided by its sustainability principles when identifying potential impacts the Project may have on Indigenous heritage values and sites, and in the development and implementation of Indigenous cultural heritage management plans (CHMPs). Of the 12 sustainability principles, the key principles relevant to cultural 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 Australia Pacific LNG's 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, cultural heritage values are reflected in a number of ways. The primary role of Indigenous people in custodianship of their heritage is recognised. The development of CHMPs will occur through negotiation and agreement with the identified Aboriginal party.

Identification of unrecorded Indigenous heritage resources within the project areas will be undertaken during dedicated field surveys. Where practicable, facilities will generally be sited to avoid locations of Aboriginal cultural heritage. In instances where this cannot be avoided, measures to mitigate impacts will be undertaken with Aboriginal parties, in accordance with agreed CHMPs.

Through these plans, procedures will be developed covering the management of cultural heritage sites and values. To promote an understanding of cultural heritage in the workplace, cultural heritage induction for site personnel will be developed.

### 18.1.2 Scope of works

As part of the overall assessment of development impacts, Indigenous cultural heritage has been assessed in accordance with the requirements of the EIS terms of reference for the Project. Specifically, the aims of the Indigenous cultural heritage assessment are to:

- Provide a context for assessing Indigenous occupation of the project area
- Recognise the presence of registered Indigenous heritage sites in the project area
- Develop CHMPs with identified Aboriginal parties regarding the proposed project works in accordance with the Aboriginal Cultural Heritage Act 2003 and the Cultural Heritage Management Plan Guidelines gazetted on 22 April 2005.

This chapter discusses the gas fields' element of the Project. The CHMPs will, among other things:

- Define the process by which Indigenous cultural heritage is identified within the gas fields
- Propose mechanisms for the development of site management strategies to maximise the retention of Indigenous heritage values.


### 18.1.3 Legislative framework

In Queensland, both Commonwealth and state legislation protects Indigenous heritage. This section discusses the legislation of relevance to this assessment.

## Commonwealth legislation

Three pieces of Commonwealth legislation serve to protect Australia's heritage. These are the Environment Protection and Biodiversity Conservation Act 1999, the Australian Heritage Council Act 2003 and the Aboriginal and Torres Strait Islander Heritage Protection Act 1984. The Commonwealth authority responsible for the administration of this legislation is the Department of the Environment, Water, Heritage and the Arts.

## Environment Protection and Biodiversity Conservation Act

The Environment Protection and Biodiversity Conservation Act 1999 provides protection for items and places with world, national or Commonwealth heritage values. Natural, historical and Indigenous heritage sites, either nominated or approved, are protected under this Act. The Act provides for the National Heritage List and the Commonwealth Heritage List.

The National Heritage List provides protection for areas that demonstrate outstanding heritage value to the nation and the Commonwealth Heritage List provides for protection of areas that have significant values that are on Commonwealth land.

The Act also provides protection for cultural heritage items and places on the World Heritage List. The criteria used for inclusion on the National (and Commonwealth) Heritage List is outlined within the Act.

## Australian Heritage Council Act

The Australian Heritage Council Act 2003 established the Australian Heritage Council to administer the National Heritage List and Commonwealth Heritage List. This Act established the Australian Heritage Council as the principal advisory body to the Australian Government for heritage matters, particularly in relation to administering the lists now created under the Environment Protection and Biodiversity Conservation Act 1999. It replaced the Australian Heritage Commission, the authority
previously responsible for assisting in the administration of Commonwealth Heritage Legislation. The Australian Heritage Council maintains an online searchable database.

## Aboriginal and Torres Strait Islander Heritage Protection Act

This legislation was enacted for '... the preservation and protection from injury or desecration of areas and objects in Australia and in Australian waters, being areas and objects that are of particular significance to Aboriginals in accordance with Aboriginal tradition'.

It gives Indigenous people the right to request the responsible Federal Minister to intervene to protect cultural sites and places that Indigenous people believe to be at risk.

## State legislation

## Aboriginal Cultural Heritage Act

The primary piece of State legislation protecting Aboriginal Cultural Heritage Sites is the Aboriginal Cultural Heritage Act 2003. The intent of this Act is to effectively recognise and protect Aboriginal cultural heritage and to establish a process whereby this can be achieved. It places an onus on project proponents, or anyone whose activities harm Aboriginal cultural heritage, to observe a 'duty of care'. It provides for assessment of significance to be undertaken by identified Aboriginal parties, to be decided in a manner consistent with tradition and emphasises that the definition of areas and objects goes beyond archaeological sites to include those where there are no physical traces. It requires that a CHMP be developed when a project is required to develop an EIS. Major elements of the Act are:

- Protection of areas and objects of traditional, customary and archaeological significance
- Recognition of the primary role of Aboriginal parties in cultural heritage protection and management
- Establishment of a Cultural Heritage Register and Cultural Heritage Database
- The provision of a general duty of care with the onus on developers to manage their duty of care
- The mandatory requirement to prepare CHMPs in situations where an EIS is required for any project approvals
- Substantial penalties for harming Aboriginal cultural heritage in breach of the Act.


## Queensland Heritage Act

The Queensland Heritage Act 1992 primarily provides for the protection of non-indigenous heritage places, but also for those with joint Indigenous and non-indigenous values.

## Local legislation

The Queensland Heritage Act 1992 requires local government agencies to establish their own registers of heritage places. These places may have Indigenous or non-indigenous values.

Although the requirement for local heritage lists was established under the Queensland Heritage Register and therefore would not apply to sites solely significant to Indigenous people, some local heritage overlays do include Indigenous sites. This is the case with the Calliope Shire, which includes Curtis Island. These sites could therefore be subject to provisions of the Sustainable Planning Act 2009. However, Indigenous heritage sites are offered greater protection under Queensland's Aboriginal Cultural Heritage Act 2003.

### 18.2 Methodology

Assessing and minimising the potential impacts of the gas fields' development to Indigenous heritage values has been a multi-staged process. The initial phase of this study was the collation of site information from the following sources:

- Online resources, principally for heritage site databases and regional history
- Commonwealth Heritage lists (World Heritage List, National Heritage List, and Register of the National Estate) for sites of international and national significance
- Indigenous Cultural Heritage Register and Database
- The Queensland Heritage Register
- Australia Pacific LNG Cultural Heritage Database
- Register of the National Trust of Queensland
- Data in heritage studies previously carried out in nearby areas
- Publicly available books and local histories
- Targeted field inspections to test the validity of models of Indigenous site distribution, developed from the literature review.

The second stage used these mapped site locations to identify patterns in the data and from these identify zones of high site occurrence and high site potential (site provinces) (refer to Figure 18.1). These zones guided planning, to minimise potentially adverse impacts to significant cultural landscapes and heritage sites. The third stage of the assessment process will further refine development through targeted field investigations, checking the validity of the identified sensitivity zones and identifying further heritage features to be protected from construction impacts. Field investigations will be undertaken with representatives of Aboriginal parties.

In accordance with Part 7 of the Aboriginal Cultural Heritage Act 2003, CHMPs are being developed for this project. Part 4 of the Act provides a framework for the identification of an Aboriginal party or parties for a particular area. Aboriginal parties that are endorsed are required to be consulted regarding the development of CHMPs. The identified Aboriginal parties for the gas fields' study area are outlined in Section18.3.5, which also provides an update of the progress of the CHMP development.

### 18.2.1 Limitations

While register searches provide a small catalogue of sites to be considered and avoided during infrastructure planning, the results of these searches cannot be construed as a comprehensive record of the Aboriginal cultural heritage sites in the region. Site registers document unusual or spectacular sites known to the community, or Indigenous objects and areas identified during previous intensive cultural heritage clearances. Many parts of the study area have not yet been examined for traces of prior Aboriginal habitation, yet are likely to contain Aboriginal cultural heritage.


### 18.3 Cultural heritage values

Included in this section is an evaluation of the archaeological context for Indigenous use of the Project's gas fields, the outcomes of the register searches and the constraints analysis. Following this, an update about CHMP negotiations with the identified Aboriginal parties is provided. A detailed outline of the historical context of Indigenous use of Project's gas fields can be found in the Volume 5 Attachment 36.

### 18.3.1 Archaeological context

Recent archaeological studies (Lance 2009) have been carried out in the Yuleba district, in the western portion of the gas fields. These studies provide the first radiocarbon dates in the area, demonstrating an Aboriginal presence of at least 6,700 years. Scatters of stone artefacts and stratified occupation deposits are the most commonly represented Indigenous sites in the gas fields' study area.

Older, deep, dated archaeological sequences are known to occur in the region adjacent to the gas fields. These sites provide evidence of Aboriginal occupation dating back nearly 20,000 years. The oldest tools in these stratified rock-shelter sites are simple retouched flakes, believed by the researchers to have been hand-held tools. From around 4,100 years at Kenniff Cave and 3,500 years ago at The Tombs, a suite of small implements was added to the toolkit. These implements including backed artefacts (points and microliths) and adzes.

These were interpreted by the researchers as having been hafted into handles and used as composite tools. About 2,500 years ago, the small, retouched tools were dropped from the tool assemblage and the long, retouched Juan knife was added, although it did not necessarily functionally replace the small tools. The main raw material used for tool manufacture throughout the sequence was quartzite, although within the last 4,000 years volcanic stone was also used.

Sites excavated in the Balonne River sub-catchment area (Lance 2009) contain stone artefact assemblages more similar to those from the Dawson River catchment investigated by Morwood and Godwin (1987) than from the Central Queensland sandstone belt sites. In both sets of open sites there is an absence of formal tool types, such as adzes, backed artefacts and extensively retouched flake tools. While there is an overlap in the period that these sites were occupied, there appears to be little overlap in the tool industries present.

The sites in the Yuleba district were occupied by Aboriginal people using unspecialised flake tool industries with an absence of formal tool types, at the same time as Aboriginal people occupying shelters in the sandstone belt were using specialised tool industries, with large numbers of retouched tools and formal tool types. One possible explanation is that there were cultural differences between those using the sandstone belt sites and those occupying sites in the Balonne River sub-catchment. As the formal tool types are known from open sites elsewhere in the study region, such an interpretation is unjustified. The discrepancy can better be explained as resulting from differences in activities occurring in rock-shelters compared with open sites.

Morwood and Godwin (1987) excavated several open and rock-shelter sites along the Dawson River near Nathan Gorge, 70km to the north of the gas fields' study area. These sites include shell middens and occupation deposits with stone artefact assemblages and date from the last 1,500 years. Tools found in these sites were only partially retouched or had edge damage, indicative of use. There were few formal tool types (backed artefacts, adzes, 'scrapers'). At Site 3, $21.5 \%$ of the 79 pieces bore traces of retouch or use (Morwood and Godwin 1987). At Site 5, a hearth associated with shell midden and small number of stone artefacts was excavated and recovered charcoal revealed the hearth dated
from $300 \pm 60 b p$ (Morwood and Godwin 1987). Shell midden recovered from the same site gave a date of $610 \pm 50 \mathrm{bp}$. The middens were small and discrete, characteristic of the 'dinner-time camp' identified in ethno-historical studies carried out in northern Australia (Meehan 1982, 1988).

### 18.3.2 Constraints analysis

Patterns of site distribution and heritage site sensitivity were sought from known sites mapped using geographic information systems (GIS) software. These assisted with the initial high level evaluation of factors potentially affecting the selection of sites for gas fields' facilities.

By examining the environmental setting of each previously located site and comparing this with Indigenous land use patterns from elsewhere in the region, it was possible to develop a model of precontact Indigenous settlement in the area to explain site distribution. This allows site patterning to be predicted in areas where no sites had previously been found, based upon the distribution of key resources (food, water, raw materials for tool manufacture). Figure 18.1 provides an outline of registered Indigenous cultural heritage sites and the identified Condamine River site province.

A similar investigation of site distribution in the wider south-east Queensland bioregion was undertaken by Rowland and Connelly (2002) using a larger data set. The types of sites and the distribution patterns they detected have direct relevance to the present study.

Rowland and Connolly (2002) observed within inland settings, nearly $50 \%$ of sites occur within 200 m of water sources and $91.5 \%$ within 700 m of a water source. In the present study area, an examination of the data, primarily from Department of Environment and Resource Management, showed a similar pattern, with many sites located within 200 m of watercourses and most within 700 m of water. As most of the sites and isolated artefacts were located during survey of cross-country utilities, which are planned to avoid watercourses, this has skewed the results in favour of cultural heritage items distant from water. Despite this limitation, the indications were clear, with approximately 70 to $80 \%$ of Department of Environment and Resource Management-recorded sites located within 700m of a watercourse.

Generalised models of site distribution tally with the patterning of sites found in the Project's gas fields, suggesting the models have widespread application. It is possible to identify zones of high archaeological potential, which may impose constraints to the positioning of project infrastructure. It is of course only possible to ascertain whether these impose actual constraints, once detailed field studies of the gas fields' infrastructure locations has been completed and analysed.

While the Department of the Environment and Resource Management and project data from which site distribution models were generated is patchy, it is possible to discern patterns and correlations between sites and landscape types hinting at the potential for site occurrence, even in areas where no sites (or at least very few sites) have previously been detected. In some localities, the presence of favourable landscape conditions (e.g. availability of raw materials suitable for stone tool manufacture, or the presence of concentrated food resources) forecasts the presence of high site densities or highly significant resource exploitation sites, including quarries. These high-sensitivity localities are termed 'site provinces'.

One such province of relevance to the gas fields' area is the Condamine River site. Sites in this zone include stone artefact scatters and scarred trees.

Based upon the constraints analysis, the following conclusions have been derived:
a) Isolated stone artefacts and stone artefact scatters are clearly the main evidence of prior Aboriginal habitation across the gas fields' study area and reflect the durability of this form of
evidence. Isolated stone artefacts may represent the discarding or loss of maintenance tools during foraging expeditions or may result from incomplete exposure of larger concentrations of artefacts left during more intensive activity. These traces may point to the location of other, more substantial archaeological sites, namely, stratified occupation deposits
b) There is a strong likelihood that cultural heritage areas and objects, particularly isolated stone artefacts and artefact scatters, scarred trees, shell middens and hearths will be identified throughout the gas fields. In all instances where previous surveys have occurred, sites and isolated artefacts have been detected. These items are most commonly found near water
c) Site densities decline with distance from water sources. The decrease reflects the concentration of Indigenous domestic activities near water sources. Beyond 200m, sites with stone artefacts are usually smaller (unless these comprise raw material sources), reflecting shorter periods of continuous use
d) Where gas fields' infrastructure is located in site rich landscapes, such as the Condamine River Site Province, or where it is located within the vicinity of previously recorded sites, detailed impact mitigation measures may be required
e) Burial sites are most often uncovered from soft sediments (bordering dunes, friable silts) near water, or as bundle burials or cached secondary interments in sandstone shelters. Avoiding areas with these types of geological profiles mitigates the potential for the inadvertent disturbance of burial sites
f) While cultural heritage objects and areas have been found across the gas fields' study area, these do not necessarily represent an irredeemable impediment to construction. Isolated stone artefacts and small stone artefact scatters may be avoided by minor relocation of the proposed development, or through recovery of occupation material using surface collection or controlled excavation. These issues will be dealt with following consultation with the relevant Aboriginal parties and outlined in negotiated and approved CHMPs.

Much of the assessment will refer to the CHMPs to be developed for the gas fields. Confidential results of previous heritage surveys held by the Aboriginal parties will be combined with fieldwork results to help inform the CHMP process.

### 18.3.3 Results of register searches

A small number of Indigenous cultural heritage sites are listed on local, State and Federal heritage registers within the gas fields' study area. All registered sites have been taken into account during project planning and have been avoided.

## Register of the National Estate or World Heritage Area

Two Indigenous places registered on the National Estate have been identified in the gas fields' study area. These are:

- Indigenous Place, Kogan ID: 13810, ceremonial site
- Indigenous Place, Kogan ID: 13812, ceremonial site.

No listed World Heritage or National Trust of Queensland Heritage areas were identified in the gas fields.

## Aboriginal Cultural Heritage Database and Register

A total of 274 sites listed on the Queensland Heritage Database and Register are found within 2 km of proposed infrastructure (pipelines, water pipelines, compressor station sites) in the gas fields. These include a large number of scarred trees and hatchet head grinding grooves located in the Condamine River Site Province.

Numerous sites have been recorded in the northern section of the gas fields. These include numerous isolated stone artefacts and clusters of artefacts given the same site number, but separate listing status in the heritage register. Of the 274 sites, 199 are found within 1 km and seven within 100 m of planned facilities. A full list of sites can be found in Volume 5 Attachment 36. These registered Indigenous cultural heritage sites are shown in Figure 18.1.

## Local heritage lists and heritage overlays

No places or sites with Indigenous values are recorded on the local heritage list for the Western Downs Regional Council.

## Australia Pacific LNG cultural heritage database

Sites and isolated artefact occurrences have been recorded during site clearances for Australia Pacific LNG. In accordance with the wishes of the Aboriginal parties, who have responsibility for Aboriginal cultural heritage in the gas field area, the details of these sites remain confidential. The locations of these recorded sites and heritage locations would be taken into account whenever infrastructure is planned, and are avoided or otherwise appropriately managed.

### 18.3.4 Field surveys

Targeted field surveys were conducted with Traditional Owner representatives to test site distribution models and to examine sensitive landscapes where infrastructure development may occur. These locations showed a clustering of sites containing stone artefacts along even the smallest watercourse. A similar pattern of site distribution was seen in earlier studies carried out through the region (Lance and McNamara 2004; Lance 2001a and b, 2008, 2009).

Site investigations were carried out in the western portion of the gas fields, north of Wallumbilla, in the vicinity of Cattle Creek and near Ten Mile Creek. These highlighted patterns of site and isolated artefact distribution that had been revealed during earlier intensive field investigations carried out with the Mandandanji People (Lance 2008, 2009). The ubiquitous presence of archaeological traces occurs throughout the landscape, both near water sources and in areas distant from water. Sites were found up to 2 km from water sources and located in areas that may have been on access routes through the region. All these inspected areas will be subject to detailed recording by the Aboriginal parties as part of negotiated CHMPs.

The field inspection of the Mandandanji portion of the gas fields was carried out in June 2009 with Ron (Sonny) Manns. The majority of the examined sites were to the west of the gas fields, although considerable concern was shown for contact sites in the vicinity of Tchanning Creek. These sites are well known to the Mandandanji people, who will ensure that these are protected during construction activities that take place in the gas fields, as part of a CHMP negotiated with the group. Cultural heritage assessments of the gas fields' development area will be undertaken in accordance with approved CHMPs.

### 18.3.5 Cultural heritage management plan development

## Aboriginal party identification

Australia Pacific LNG has undertaken appropriate steps to identify correct Aboriginal parties in accordance with the Aboriginal Cultural Heritage Act 2003. Table 18.1 and Figure 18.2 provide an outline of Aboriginal parties within the gas fields' development area.

The entire gas fields' development area is covered by an Aboriginal party that can be identified by being a currently registered, or previously registered, Native Title claim group for an area where there is currently no registered Native Title claimant. The Aboriginal parties identified in this table were endorsed to take part in CHMP development for the Project.

Table 18.1 Identified Aboriginal parties

| Name of Aboriginal party | Category of Aboriginal party |
| :--- | :--- |
| Iman People \# 2 (QC 97/55) | Aboriginal party (registered Native Title claim) |
| Mandandanji People (QC 08/10) | Aboriginal party (registered Native Title claim) |
| Mandandanji People 2 (QC 97/50) | Aboriginal party (previously registered Native Title claim) |
| Barunggam People (QC 99/5) | Aboriginal party (previously registered Native Title claim) |
| Western Wakka Wakka People (QC 99/4) | Aboriginal party (previously registered Native Title claim) |
| Bigambul People (QC 09/02) | Aboriginal party (registered Native Title Claim) |

## Engagement with Aboriginal parties

Table 18.2 provides an update on the status of CHMP negotiations with Aboriginal parties.
Table 18.2 Status of cultural heritage management plan negotiations

| Aboriginal party | Consultations <br> commenced | Number of <br> Meetings | CHMP status | Expected timing <br> for CHMP |
| :--- | :--- | :---: | :--- | :--- |
| Iman People \# 2 (QC <br> 97/55) | June 2009 | 5 | CHMP has agreed | N/A |
| Mandandanji People <br> (QC 08/10) | June 2009 | 5 | CHMP has been agreed | N/A |
| Mandandanji People <br> $2($ QC 97/50) | June 2009 | 5 | CHMP has been agreed | N/A |
| Barunggam People <br> (QC 99/5) | August 2009 | 4 | Negotiations are ongoing | May 2010 |
| Western Wakka <br> Wakka People (QC <br> 99/4) | December 2009 | 1 | Negotiations are ongoing | May 2010 |
| Bigambul People <br> (QC 09/02) | February 2009 | 6 | CHMP has been agreed | N/A |



Engagement of Aboriginal parties has been undertaken through an agreed communication protocol where Australia Pacific LNG requests formal meetings with the appropriate representatives of the Aboriginal party. The meetings have generally included representatives of the Aboriginal party and their technical or legal advisors. In these meetings, the Project and appropriate management and mitigation strategies for Indigenous cultural heritage have been discussed. CHMP's that have been agreed to date have generally addressed similar issues, but the negotiation process has resulted in CHMPs being specific and unique for each Aboriginal party. Agreed CHMP's have generally addressed:

- Ongoing communication protocol's between Australia Pacific LNG and the Aboriginal party
- Processes for the assessment of Indigenous cultural heritage sites and values
- Processes for the management of Indigenous cultural heritage sites and values
- Processes in case of an accidental find of cultural material
- Procedures if human remains are found.

It is currently proposed that all CHMPs will be submitted for approval to the Chief Executive of the Queensland Department of Environment and Resource Management, in June 2010.

### 18.3.6 Cumulative impacts

In addition to impacts that will arise from construction of the gas fields, infrastructure will occur along the gas pipeline and at the LNG facility on Curtis Island at the northern end of the pipeline. Flexibility relating to the placement of these facilities will minimise the impacts to Indigenous heritage sites and places, and any potential impacts will be managed through the mechanism of negotiated agreements with the relevant Aboriginal parties.

The potential effects of several planned third-party projects also need to be considered. These other projects could potentially place other Aboriginal cultural heritage at risk, but these proponents are also required to develop CHMPs to manage this risk. Other land uses (agriculture and pastoralism) and natural processes (erosion and decomposition) also contribute to the loss of, or harm to, Aboriginal cultural heritage.

## Matters of national environmental significance

Two Indigenous sites of national heritage significance have been identified in the gas fields' study area. These sites are shown in Figure 18.1. These are two stone arrangements on the Register of the National Estate. The location of these features will be reconfirmed prior to construction and all infrastructure associated with developing the well and gas and water gathering network will be relocated to avoid these sites. A buffer will ensure that the sites and curtilage are avoided.

### 18.4 Potential impacts

There is a considerable degree of flexibility in the placement of facilities in the gas fields. Wells, access roads, compressor stations and gas and water gathering pipelines can generally be sited to address landholder concerns and avoid locations of Indigenous cultural heritage and biodiversity significance. In instances where this cannot be avoided, measures to mitigate impacts will be agreed with the Aboriginal parties, in accordance with approved CHMPs.

No listed Indigenous cultural heritage is likely to be impacted by construction of planned infrastructure in the gas fields. This has been achieved through early identification of these locations. Of the 274
sites on the Queensland Aboriginal Heritage Register and Database, only seven are within 100m of any presently planned infrastructure. Figure 18.1 provides an outline of site locations in relation to project infrastructure. These will be avoided and appropriate measures taken to ensure that sites are not accessed and/or accidentally damaged during construction.

Items of unrecorded Indigenous cultural heritage may occur near proposed infrastructure developments and without appropriate site management initiatives, may be threatened by construction impacts. Unrecorded Indigenous heritage resources within impact areas will be identified during dedicated field surveys conducted by each relevant Aboriginal party as agreed in the CHMP. The conduct of the cultural heritage study and the implementation of site protection or remediation measures will be specified in approved CHMPs, either already agreed or still to be negotiated with each Aboriginal party with an interest in lands in the gas fields.

Impact mitigation measures that may be required include avoiding certain highly sensitive areas, carrying out more field investigations including sub-surface testing, recovering datable occupation material, and collecting and relocating cultural heritage items.

### 18.5 Mitigation and management

For the management and mitigation of impacts on Indigenous cultural heritage, Australia Pacific LNG will use a range of cultural heritage management processes and proven procedures that Origin has effectively implemented in the Queensland regional areas for similar projects.

In addition, a number of CHMPs will be developed based on these existing processes and procedures and implemented for the Project, recognising the primary role of Indigenous people in the custodianship of their heritage. The mitigation measures included within the CHMPs will be comprehensive and entail a number of possible procedures that will include (but not be limited to):

- Avoiding Indigenous cultural heritage, wherever practical
- Carrying out further detailed field investigations
- Collecting and relocating cultural heritage items, as agreed with the relevant Aboriginal parties.

Management measures during construction will include:

- Cultural heritage induction for the workforce and possible monitoring of specific construction activities
- Procedures for unexpected finds
- A conflict resolution process.

Following completion of the Project, cultural heritage items recovered prior to construction and objects identified and salvaged during construction may require management and safe-keeping. Issues relating to the storage of objects will be agreed upon and specified in the CHMP.

### 18.6 Conclusions

### 18.6.1 Assessment outcomes

The assessment of Indigenous cultural heritage for the Project, and the proposed management strategy has been designed to avoid and/or minimise any impacts to Indigenous cultural heritage. The assessment has included collating site data throughout the gas fields' study area from a range of sources including the Aboriginal Heritage Register and Database, published and unpublished sources,
preliminary site studies undertaken with Aboriginal parties in the gas fields and modelling of site distribution as part of the constraints analysis.

To minimise construction impacts, infrastructure locations have been and will continue to be selected with due consideration to the location of these registered sites. All registered sites in the gas fields have been avoided, indicating Australia Pacific LNG's desire to avoid culturally significant sites. However, further unidentified sites are likely to be found in the gas fields, and mechanisms for dealing with these unrecorded sites have been included when preparing and negotiating CHMP strategies with the endorsed Aboriginal parties.

A summary of the values, sustainability principles, potential impacts and mitigation measures in relation to Indigenous cultural heritage is presented below in Table 18.3. This includes the residual risk levels for 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.

Volume 2: Gas Fields
Chapter 18: Indigenous Cultural Heritage

| Values | Sustainability principles | Potential impacts | Possible causes | Mitigation and management measures | Residual risk level |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Indigenous cultural heritage values - (design construction and operation) | 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 | Design - Harm to Indigenous cultural heritage associated with facility design or site investigations | Design process does not adequately consider Indigenous cultural heritage issues. <br> Disturbance to Indigenous cultural heritage from site investigations. | CHMP to detail process for the assessment and management of Indigenous cultural heritage. Avoidance principle to be implemented where practicable. | Low |
|  | Respecting the rights, interests and diverse cultures of the communities in which Australia Pacific LNG operates <br> Engaging regularly, openly and transparently with people and communities affected by Australia Pacific LNG's activities, considering their views in its decision-making and striving for positive social outcomes | Construction - Harm to Indigenous cultural heritage arising from construction activities | Project personnel not aware of Indigenous cultural heritage management procedures <br> Project personnel not following appropriate Indigenous cultural heritage management procedures. | CHMP to include procedures for the management of Indigenous cultural heritage. This will include: <br> - Inductions for employees <br> - Procedures in case of a find of cultural material <br> - Procedures in the event human remains are found <br> - Procedures for the management of identified areas or objects | Low |

Volume 2: Gas Fields
Chapter 18: Indigenous Cultural Heritage

| Volume 2: Gas Fields <br> Chapter 18: Indigenous Cultural Heritage |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Values | Sustainability principles | Potential impacts | Possible causes | Mitigation and management measures | Residual risk level |
|  | Working cooperatively with communities, governments and other stakeholders to achieve positive social and environmental outcomes, seeking partnership approaches where appropriate. | Operation - Harm to Indigenous cultural heritage arising from operational activities. | Operations personnel not aware of Indigenous cultural heritage management procedures <br> Operations personnel not following appropriate Indigenous cultural heritage management procedures. | CHMP to include procedures for the management of Indigenous cultural heritage. This will include: <br> - Inductions for employees <br> - Procedures in case of a find of Indigenous cultural heritage <br> - Procedures in the event human remains are found <br> - Procedures for the management of identified areas or objects | Low |

### 18.6.2 Commitments

Australia Pacific LNG commits to continued engagement and negotiations with endorsed Aboriginal Parties and to developing (where not already developed) and implementing approved cultural heritage management plans for the gas fields' development area.

Australia Pacific LNG is seeking to develop long-term relationships with Aboriginal parties and broader indigenous communities through implementing an Indigenous engagement strategy.

## References

Lance, A 2001a, A cultural heritage survey of the proposed Glentulloch Pipeline, Injune district, Queensland, a report to OCA and the Bidjara Aboriginal community.

Lance, A 2001b, A cultural heritage survey of the proposed Myall Creek Pipeline, Surat district, Queensland, a report to OCA and the Mandandanji and Gunggari Aboriginal communities.

Lance, A 2008, An archaeological investigation of the Mandandanji portion of the DDPS pipeline route, a report to Origin Energy.

Lance, A 2009, A report on the excavation of four Mandandanji sites along the DDPS Pipeline Route, a report to Origin Energy Ltd.

Lance, A and McNamara, K 2004, A heritage site clearance of the Durham to ML1A (PPL90) pipeline route, a report to Origin Energy and the Mandandanji \#2 Native Title Claimant Group.

Meehan, B 1982, Shell bed to shell midden, Australian Institute of Aboriginal Studies, Canberra.
Meehan, B 1988, The 'dinner-time camp', in R. Jones and B. Meehan (eds.), Archaeology with Ethnography: An Australian Perspective, Australian National University, Canberra, pp.171-181.

Morwood, MJ and Godwin, L 1987, 'Archaeology of the Gyranda Region, Dawson River, Central Queensland', Queensland Archaeological Research, vol. 4, pp. 96-114.

Rowland, M and Connolly, M 2002, ‘Towards GIS mapping and spatial modelling of Archaeological sites in the southeast Queensland Bioregion', Queensland Archaeological Research, vol. 13, pp. 3962.

