

APPENDIX 8.2

***CULTURAL HERITAGE SUPPLEMENTARY
ASSESSMENT***

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1**CULTURAL HERITAGE**

The following report updates *Volume 8, Chapter 9* of the draft EIS and includes the following:

- Outcomes of indigenous cultural heritage site mapping.
- Significance assessments for non-indigenous cultural heritage sites.
- Survey methodologies for ongoing field development.
- Mitigation strategies which focus specifically on areas potentially impacted by the Project.

1.1**INDIGENOUS CULTURAL HERITAGE**

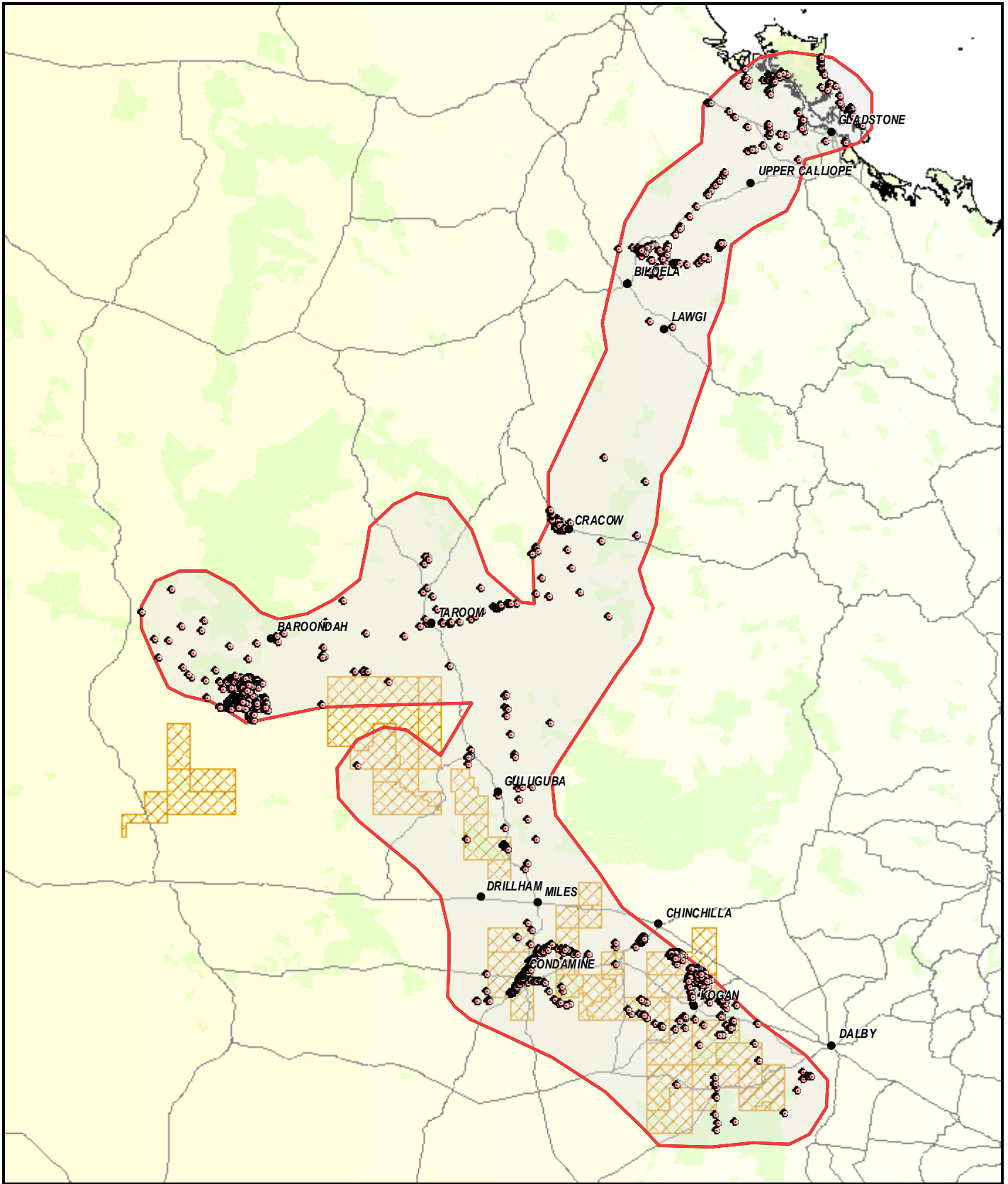
Aboriginal cultural heritage may exist on any site regardless of the tenure of the land. The *Aboriginal Cultural Heritage Act 2003* and *Torres Strait Islander Act 2003* define Aboriginal cultural heritage as:

- A significant Aboriginal or Torres Strait Islander area in Queensland.
- A significant Aboriginal or Torres Strait Islander object.
- Evidence of significant archaeological or historical Aboriginal or Torres Strait Islander occupation of an area in Queensland.




The study area as a whole encompasses a very large area, consequently a large variety of places and items of Aboriginal cultural heritage value have been previously recorded within this area.

A search of the DERM Aboriginal and Torres Strait Islander Register and Database was undertaken in June 2009 to identify previously recorded sites within the study area. A search of the register does not provide a definitive result as to whether Aboriginal cultural heritage exists, as it only contains places which have previously been identified through surveys and research, and is therefore not a true reflection of the Aboriginal cultural heritage values of the study area. The results of the search are shown at *Figure 1.1* and *Figure 1.2*.

Comprehensive surveys of the entire study area have been undertaken with Traditional Owners, but these results are currently unavailable.



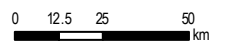
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-  Aboriginal Heritage Sites within Study Area
-  Study Boundary
-  QGC Mining Tenements

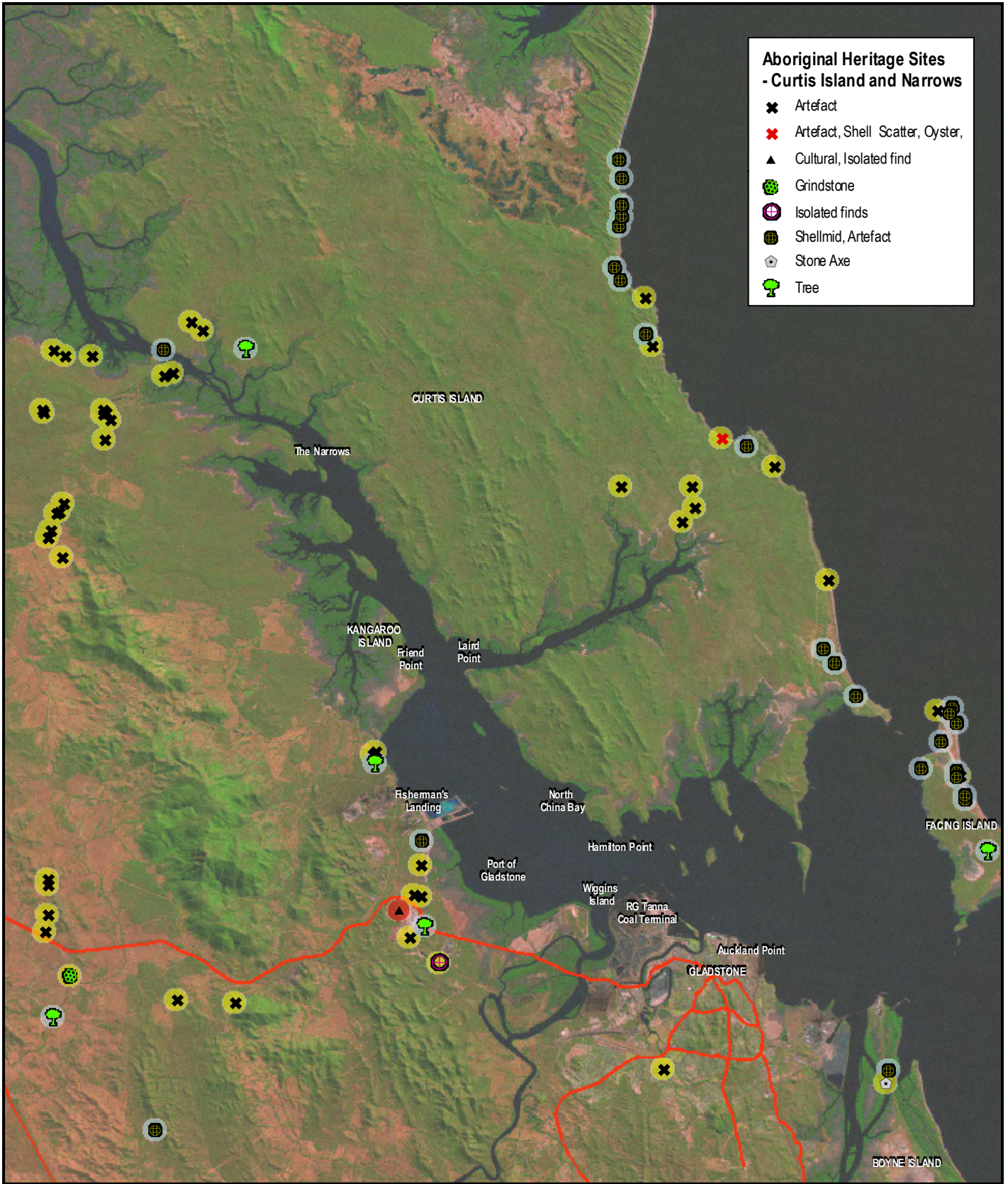
Source Note:
StreetPRO Australia - Pithey Bowes MapInfo

Projection: UTM MGA Zone 56

Datum: GDA 94



 A BG Group business	Project	Queensland Curtis LNG Project		Title	Aboriginal Heritage Sites within Study Area
	Client	QGC - A BG Group business			
 Environmental Resources Management Australia Pty Ltd	Drawn	JB	sEIS Appendix 8.2	Figure 1.1	Disclaimer: Maps and Figures contained in this Report may be based on Third Party Data, may not be to scale and are intended as Guides only. ERM does not warrant the accuracy of any such Maps and Figures.
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	Date	19.01.10	Revision	0	



- Aboriginal Heritage Sites - Curtis Island and Narrows**
- ✕ Artefact
 - ✖ Artefact, Shell Scatter, Oyster,
 - ▲ Cultural, Isolated find
 - 🌿 Grindstone
 - 🌿 Isolated finds
 - 🌐 Shellmid, Artefact
 - 🏠 Stone Axe
 - 🌳 Tree

Legend

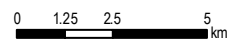
- High Constraint
- Moderate Constraint
- Low Constraint



Source Note:

StreetPRO Australia - Pitney Bowes MapInfo

Projection: UTM MGA Zone 56

Datum: GDA 94



 <p>QUEENSLAND CURTIS LNG A BG Group business</p>	Project	Queensland Curtis LNG Project		Title	Aboriginal Heritage Sites - Curtis Island and The Narrows
	Client	QGC - A BG Group business			
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1.1.1 *Mapping of Indigenous Cultural Heritage Sites*

The following section provides an outline of each of the site types known to exist within the study area, including a description of what each site was generally used for, what they look like, and where they are generally located. The results have been separated in accordance with the following potential constraints:

- *High constraint sites* - extremely significant, and should not be touched.
- *Moderate constraint sites* - highly significant, but have some potential for mitigation.
- *Low constraint sites* - also significant, but are more easily mitigated in the proposed development.

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

1.1.1.1 *High Constraint Sites*

High constraint types within the study area are shown at *Figure 1.3*, and comprise burials, art sites, repatriation sites, pathways, rockshelters and ceremonial sites.

Burials

Burial practices vary across Queensland and have also changed throughout time. In some cases, burials involved a single procedure, such as cremation, or the placing of remains in the ground, caves or trees. Aboriginal burial sites normally contain the remains of one or two people, however cemeteries that contain the remains of hundreds of people buried over thousands of years have been found in Australia.

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

Rock Art

Rock art typically includes paintings, stencils, engravings and other markings on rock surfaces in shelters and open sites and engravings in limestone caves. Rockshelter paintings often feature stick figures, simple forms such as kangaroo and emu tracks, and sets of stripes or bars.

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

Repatriation Site

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

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

Pathway

Aboriginal pathways have been used to connect people and their ceremonies, sacred places and trade routes, and particularly they were used to travel to and from places where special events took place. Pathways have also been used to represent clan boundaries, and were used as a way of travelling safely through areas occupied by other clan groups.

Following European settlement, many of these pathways became the first roads, and today many of these pathways have evolved into major roads in towns and cities throughout Queensland and Australia.

Rockshelter

A rockshelter is a type of occupation site where Aboriginal people lived and used the natural resources. Their use is demonstrated by a deposit of archaeological material such as stone artefacts or evidence of a campfire, rock art or burials.

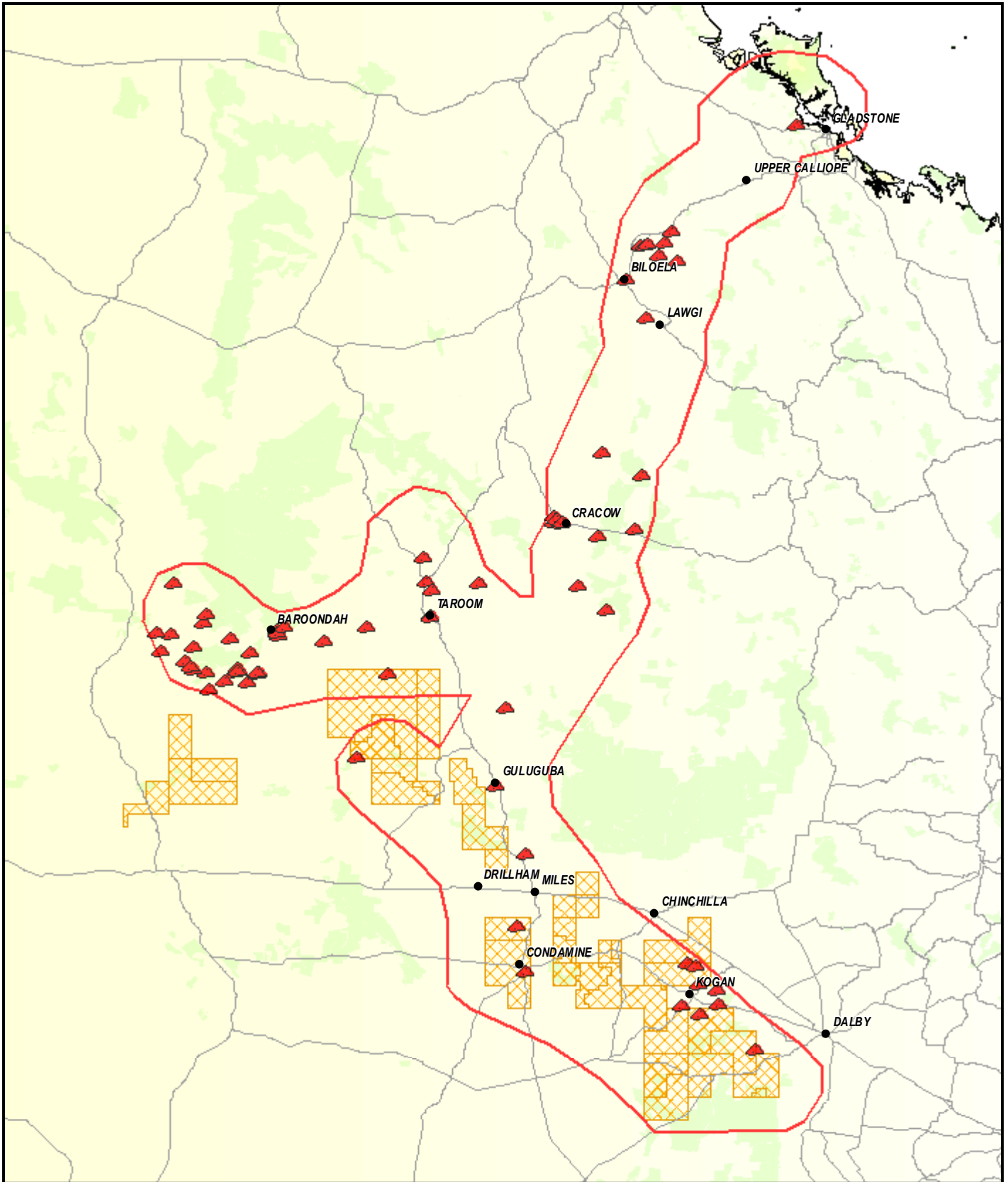
Rockshelters are generally sandstone overhangs which occur within naturally formed hollows or overhangs in cliffs and outcrops of boulders.

Ceremonial/ Cultural Place




A ceremonial site is used for a formal act or series of acts prescribed by ritual, belief in a mythological manifestation, religious belief or observance, protocol or convention that is connected with the traditional cultural life of Aboriginal people past or present. Earthen rings and stone arrangements are the visible remains of areas where important and often sacred rituals were performed seasonally. Ceremonial sites are part of a larger network of ritually significant places (including natural features) that together form a larger ritual landscape.

Ceremonial places are found throughout Queensland, with earthen rings generally found to the east of the Great Dividing Range and stone arrangements to the west.

Other cultural places such as story places are often associated with mountains, rock outcrops, swamps, lagoons, creeks, waterholes and other natural places. Dreaming sites with associations to creation stories and ancestors are also highly significant sites in the Aboriginal community.





Legend

-  Study Boundary
-  QGC Mining Tenements
-  Aboriginal Heritage Sites - High Constraints

Source Note:
StreetPRO Australia - Pitney Bowes MapInfo

Projection: UTM MGA Zone 56 Datum: GDA 94
0 12.5 25 50 km



 <p>QUEENSLAND CURTIS LNG A BG Group business</p>	Project	Queensland Curtis LNG Project	Title	Aboriginal Heritage Sites - High Constraints	
	Client	QGC - A BG Group business			
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1.1.1.2

Moderate Constraint Sites

Moderate constraint sites include scarred trees, grinding grooves, middens, quarries and occupation sites, and their presence within the study area is mapped at *Figure 1.4*.

Scarred or Carved Trees

Scars on trees indicate the removal of bark by Aboriginal people for the manufacture of canoes, containers, shields, boomerangs or the sides of huts. Trees on which scars occur are generally box, ironbark or river red gums. The scars, which vary in size, expose the sapwood on the trunk or branch of a tree.

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

Grinding Grooves

Grinding grooves are oval shaped indentations in rocky outcrops and are physical evidence of tool making or food processing activities undertaken by Aboriginal people. Grooves are created by the manual rubbing of stones onto flat areas of soft rock, particularly sandstone, in areas near creek beds or other water sources where water provided the lubricant.

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

Midden

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

Middens are deposits of food refuse (usually shellfish remains), which provide physical evidence of Aboriginal and Torres Strait Islander peoples' campsites and long term occupation. Middens usually occur as fairly thin layers or small patches of shell, and usually come from both the freshwater mussel (*Velesunio ambiguus*) and river mussel (*Alathyria jacksoni*). Shell middens often contain evidence of cooking such as charcoal, ash, fire-stones, burnt earth or burnt clay, and sometimes they also contain animal bones, fish bones, stone tools and Aboriginal burials. The shells may be the remains of just one meal or hundreds of meals eaten over thousands of years.

Middens are found along open coastlines (on sandy beaches or rocky headlands), around estuaries, along coastal and inland river floodplains and

around the shores of lakes. Freshwater shell middens are found along river banks and flood plains, near swamps and lakes, and in sand dunes. They are sometimes found in dry areas, where fresh water was once present. They occur as open sites or as deposits within rock shelters.

Quarry

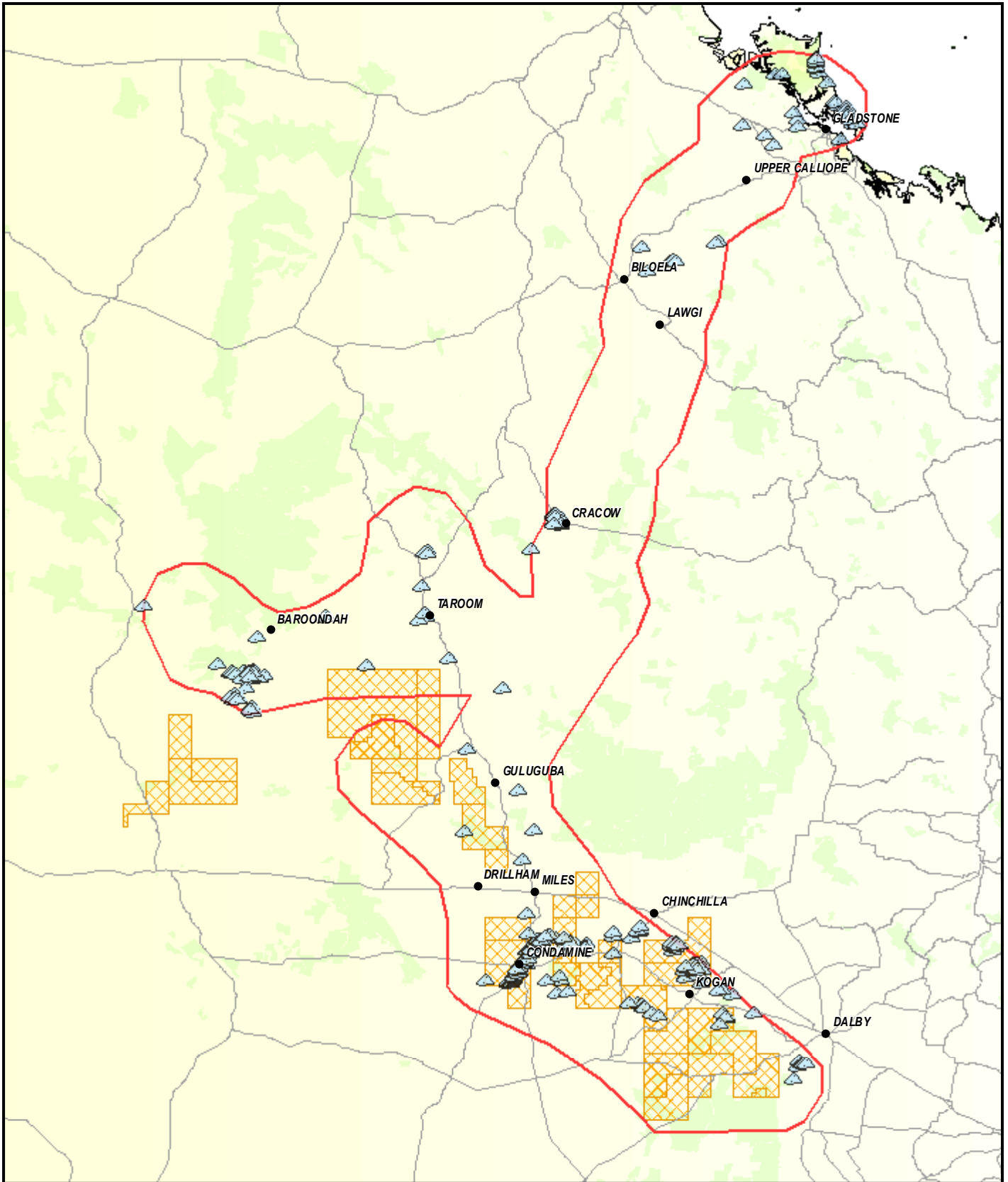
Quarries are places where raw materials such as stone or ochre were obtained from rocky outcrops to make chipped or ground stone tools for many different purposes.

These sites are generally located at rock or ochre deposits on hills and ridges where erosion has exposed the stone, slopes above creeks and rivers although some sites have been recorded on floodplains and on scarps. The rock deposits are usually bedrock outcrops.

Occupation Site/ Campsite/ Hearth

An occupation site is a general term for a place where Aboriginal people lived and used the natural resources, and may include rockshelters, quarry sites, middens and open camp sites. Their presence may be demonstrated by a scatter of stone artefacts, animal bone and shell material, campfire or hearth.

Occupation sites are situated in close proximity to a reliable water source.





Legend

- Study Boundary
- QGC Mining Tenements
- ▲ Aboriginal Heritage Sites - Moderate Constraints

Source Note: StreetPRO Australia - Pitney Bowes MapInfo
 Projection: UTM MGA Zone 56 Datum: GDA 94
 0 12.5 25 50 km



 A BG Group business	Project	Queensland Curtis LNG Project		Title	Aboriginal Heritage Sites - Moderate Constraints
	Client	QGC - A BG Group business			
 Environmental Resources Management Australia Pty Ltd	Drawn	JB	sEIS Appendix 8.2	Figure 1.4	Disclaimer: Maps and Figures contained in this Report may be based on Third Party Data, may not be to scale and are intended as Guides only. ERM does not warrant the accuracy of any such Maps and Figures.
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	Date	19.01.10	Revision 0		

1.1.1.3

Low Constraint Sites

Low constraint sites include artefact scatters and isolated finds, and their presence within the study area is mapped at *Figure 1.5*.

Artefact Scatter

Surface artefact scatters are the material remains of past Aboriginal people's activities and generally comprise stone artefacts. However, other material such as charcoal, animal bone, shell and ochre may also be present.

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

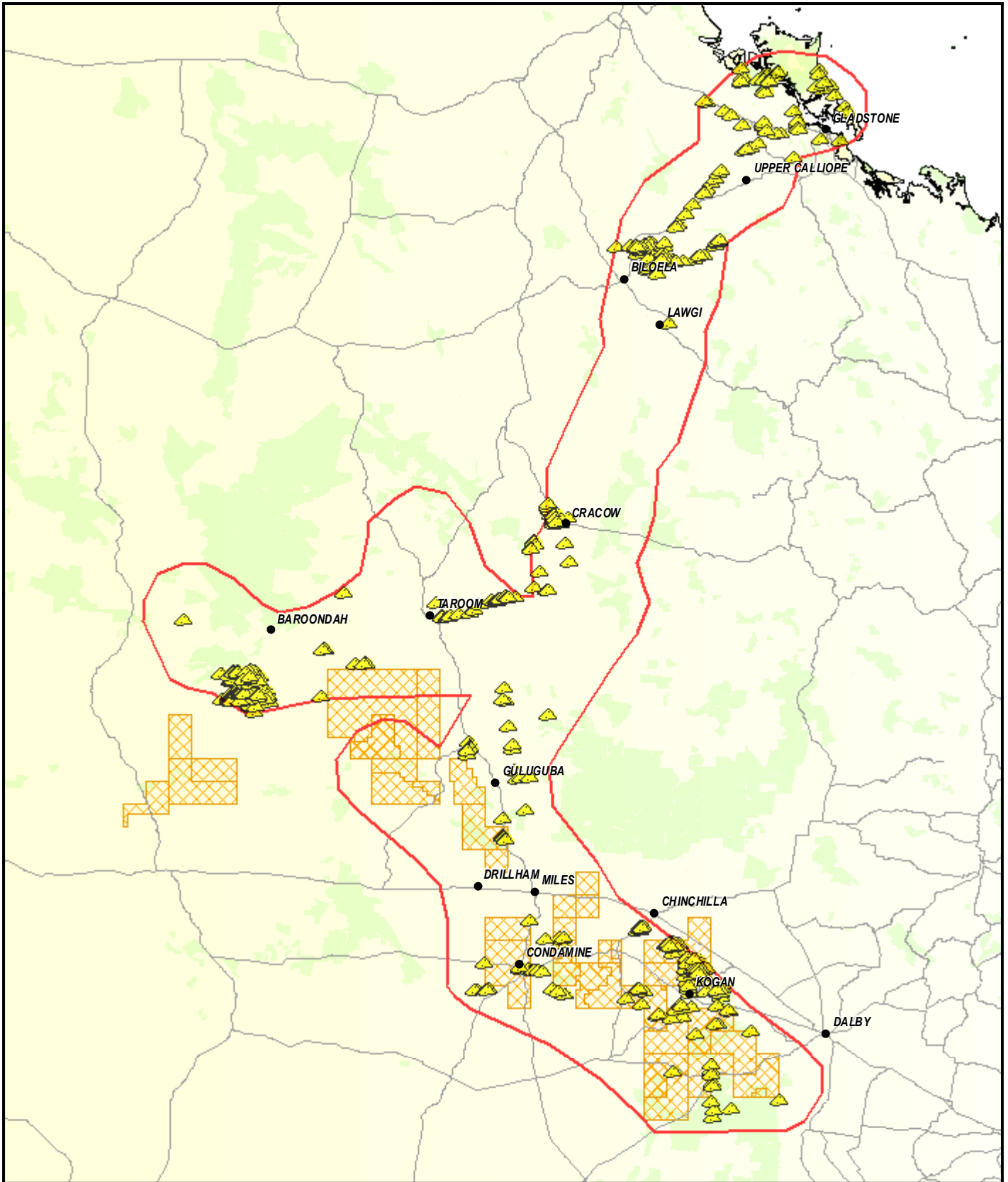
Isolated Finds

An isolated find refers to a single artefact. These artefacts may have been dropped or discarded by its owner once it was of no use. This site type can also be indicative of further subsurface deposits. Isolated finds may be any type of stone tool including an axe, flake, core, hammerstone, scraper, anvil, manuport, assayed cobble. The types of stone commonly used include quartz, quartzite, silcrete, and chert which can all be flaked to produce tools.




Isolated artefacts can be found in almost any location where Aboriginal occupation has occurred in the past, but are more prevalent in close proximity to reliable water sources.

Deposit/Potential Deposit

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





Legend

-  Study Boundary
-  QGC Mining Tenements
-  Aboriginal Heritage Sites - Low Constraints

Source Note: StreetPRO Australia - Pitney Bowes MapInfo
 Projection: UTM MGA Zone 56 Datum: GDA 94
 0 12.5 25 50 km



 A BG Group business	Project	Queensland Curtis LNG Project		Title	Aboriginal Heritage Sites - Low Constraints
	Client	QGC - A BG Group business			
 Environmental Resources Management Australia Pty Ltd	Drawn	JB	eEIS Appendix 8.2	Figure 1.5	Disclaimer: Maps and Figures contained in this Report may be based on Third Party Data, may not be to scale and are intended as Guides only. ERM does not warrant the accuracy of any such Maps and Figures.
	Approved	TK	File No: 0086165b_SUP_GIS006_S8.2.1.5		
	Date	19.01.10	Revision	0	

1.2 NON-INDIGENOUS CULTURAL HERITAGE

1.2.1 Significance Assessment

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

Places identified in the LNG Plant and Pipeline areas of the survey have been assessed against these criteria to determine their level of significance. The results are presented in *Section 1.2.1.2*.

1.2.1.1 Significance and Threshold Indicators

Heritage criteria assist in the assessment of the qualities and attributes that a place may have to qualify for inclusion on a heritage register. While a place can be assessed against criteria for its heritage value, this may not always be sufficient to determine whether it is worthy of inclusion on a particular heritage list.

At State level the Cultural Heritage Branch of the DERM has developed a systematic approach to the assessment of cultural heritage significance and prepared a booklet, *Using the criteria: a methodology*, which provides a model for professional assessment of historical cultural heritage significance in Queensland in accordance with the QHA.

The methodology states “The application of significance and threshold indicators is an internationally accepted and utilised method for determining whether places are of cultural heritage significance.” It provides a summary of significance indicators and state-level threshold indicators for the criteria specified under the provisions of the QHA. This table, highlighted below, can also be applied to determine whether a place is of local significance by using the same criteria and threshold indicators.

Table 1.1 Cultural Heritage Indicators of Significance

Type of Cultural Heritage Significance	Criterion	Significance Indicators	Threshold Indicators
Historical significance Scientific significance	(a) <i>the place is important in demonstrating the evolution or pattern of Queensland's history</i>	<ul style="list-style-type: none"> • Product, result or outcome of an event, phase, movement, process, activity or way of life that has made a strong, noticeable or influential contribution to the evolution or pattern of development of our society or of our environment. • Example of a process or activity that has made a strong, noticeable or influential contribution to the evolution or pattern of development of our society or of our environment. • Influenced by an event, phase, movement, process, activity or way of life that has made a strong, noticeable or influential contribution to the evolution or pattern of development of our society or of our environment. • Has influenced an event, phase movement, process, activity or way of life that has made a strong, noticeable or influential contribution to the evolution or pattern of development of our society or of our environment. • Site of or associated with an event or activity that has made a strong, noticeable or influential contribution to the evolution or development of our society or of our environment. • Symbolic association with an event, phase, movement, process, activity or way of life that has made a strong, noticeable or influential contribution to the evolution or pattern of development of our society or of our environment. 	<ul style="list-style-type: none"> • Regional importance • Earliness • Representativeness • Distinctiveness/ Exceptionality • Rarity
All aspects of cultural heritage significance.	(b) <i>the place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage</i>	<ul style="list-style-type: none"> • Way of life (including fashion. Taste and aspiration) that once was common but is now rare or that has always been uncommon or is endangered. • Custom that once was common but is now rare or uncommon or no longer practised or has always been uncommon or is endangered. • Process that once was common but is now rare or uncommon or has always been uncommon or is endangered. • Function that once was common but is now rare or uncommon or has always been uncommon or is endangered. • Land use that once was common but is now rare or uncommon or has always been uncommon or is endangered. • Design or form that once was common but is now rare or uncommon or has always been uncommon. 	<ul style="list-style-type: none"> • Intactness/Integrity • Distinctiveness • Exceptionality

Type of Cultural Heritage Significance	Criterion	Significance Indicators	Threshold Indicators
Scientific significance Historical significance	(c) <i>the place has potential to yield information that will contribute to an understanding of Queensland's history</i>	<ul style="list-style-type: none"> • Potential to contribute new knowledge about Queensland's history. • Potential to contribute knowledge that will lead to a greater understanding of particular aspects of Queensland's history. • Potential to contribute knowledge that will aid in comparative analysis of similar places. 	<ul style="list-style-type: none"> • Earliness • Rarity • Extensiveness • Intactness
Architectural significance Historical Significance	(d) <i>the place is important in demonstrating the principal characteristics of a particular class of cultural places</i>	<ul style="list-style-type: none"> • Exemplifies or illustrates in the surviving fabric: <ul style="list-style-type: none"> - a way of life or custom that has made a noticeable contribution to the pattern or evolution of Queensland's history; - the impact of ideology, value or philosophy on Queensland's history; - a process or land use that has made a strong contribution to the pattern or evolution of Queensland's history; - a function that has been an important part of the pattern of Queensland's history; - the work of a designer who made an important contribution to Queensland's built environment; - an architectural style or form that has made an influential or noticeable contribution to the evolution of Queensland's built environment; - a construction technique or particular use of materials that has made a conspicuous or early contribution to the evolution of Queensland's built environment; or - variations within, or the evolution of, or the transition of, the principal characteristics of a class of cultural places. 	<ul style="list-style-type: none"> • Intactness/Integrity • Earliness • Rarity/Uncommonness • Exceptionality
Aesthetic significance Architectural significance	(e) <i>the place is important because of its aesthetic significance</i>	<ul style="list-style-type: none"> • Demonstrates or possesses: <ul style="list-style-type: none"> - Beautiful attributes; - Natural beauty or other natural aesthetic quality; - Picturesque attributes; - Evocative qualities; - Expressive attributes; - Landmark quality; or - Symbolic meaning. 	<ul style="list-style-type: none"> • Intactness • Integrity • Degree of deterioration • Setting and location context • Demonstrated representation

Type of Cultural Heritage Significance	Criterion	Significance Indicators	Threshold Indicators
Architectural significance Technological significance	(f) <i>the place is important in demonstrating a high degree of creative or technical achievement at a particular period</i>	<ul style="list-style-type: none"> • Displays artistic value. • Displays architectural excellence. • Is innovative or develops new technology. • Represents a breakthrough in design or construction technique. • Is a particularly appropriate solution to a technical problem that extends the limits of existing technology. • Adapts technology in a creative manner. 	<ul style="list-style-type: none"> • Intactness/Integrity • Peer recognition/award
Social significance	(g) <i>the place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons</i>	<ul style="list-style-type: none"> • Important to the community as a landmark, marker or signature. • A place which offers a valued customary experience. • A popular meeting or gathering place. • Associated with events having a profound effect on a particular community or cultural group. • A place of ritual or ceremony. • Symbolically representing the past in the present. • A place of essential community function leading to special attachment. 	<ul style="list-style-type: none"> • Length of association • Demonstrated extent and degree of community association. • Significant former association
Historical significance	(h) <i>the place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history</i>	<ul style="list-style-type: none"> • Has a special association with: <ul style="list-style-type: none"> - A person who has made an important or notable contribution to the evolution or development of our society or our physical environment; - A group of people who have made an important or notable contribution to the evolution or development of or society or of our physical environment; or - An organisation that has made an important or notable contribution to the evolution or development of our society or of our physical environment. 	<ul style="list-style-type: none"> • Importance of the person, group or organisation in Queensland's history • Degree or extent of the association • Length of association • Influence of the association

1.2.1.2

Results of Significance Assessments

In the Pipeline study area, the Defence Road (PLNICH02) was assessed as potential State significance for its historical and social significance as a road network constructed by Italian and Albanian detainees working in the Civil Aliens Corps during World War 2, and as an intact and rare form of surviving infrastructure from this period. The Defence Road has been reported to DERM and is currently being assessed by staff undertaking a Statewide survey of historic heritage places in the region to determine whether it meets the threshold requirements for entry in the *Queensland Heritage Act 1992*.

The O'Reilly Graves and former Rainbow Hotel site (PLNICH01) was assessed as having local significance for its historical heritage values. While the Rainbow Hotel site was not surveyed by ERM, photographs provided by Unidel and additional research has identified that there is potential to reveal further information about the site and its role in the region.

On Curtis Island, the former Yards site (CINICH01) was assessed as having local historical and archaeological significance, and a degree of rarity as evidence of interwar development on Curtis Island. The Wharf Remains (CINICH03), Mill Remains (CINICH04) and former Dairy site (CINICH07), also possess some local historical significance in demonstrating evidence of the early occupation of Curtis Island, but do not meet the threshold requirements for listing on the Queensland Heritage Register.

Further detail on Significance assessments for places of interest identified in Pipeline and LNG Plant areas is provided below.

O'Reilly Graves and Former Rainbow Hotel Site (PLNICH01)

(a) The place is important in demonstrating the evolution or pattern of Queensland's history.

The Rainbow Hotel was constructed in the late nineteenth century and serviced the influx of people in the Calliope to Gladstone area due to the increase in wool and mining industries in the region. While the site is important in demonstrating the early establishment and development of the region, it is not the product of or an example of a process or activity which has made a strong, noticeable or influential contribution to the evolution or pattern of development of Queensland. Therefore, the place is considered to have local significance only

(b) The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.

Early twentieth gravesites and late nineteenth century hotels are found throughout Queensland, and there are examples which are in better condition than these with a higher level of integrity. The place is not considered rare, uncommon or endangered in a State context, and does not meet this criterion.

(c) The place has potential to yield information that will contribute to an understanding of Queensland's history.

The former Rainbow Hotel site was not surveyed by ERM archaeologists as the alignment of the pipeline was proposed on the eastern side of Coal Road where the graves are located. Further research found the associated Hotel site is located on the western side of the road, and while no structures remain, it is believed that yards and a bottle dump indicate the former position of buildings. Taking this into account, the area has a degree of archaeological potential, but any information yielded by the site is likely to be of local interest only, and not likely to contribute to our understanding of Queensland's history.

(d) The place is important in demonstrating the principal characteristics of a particular class of cultural places.

The gravesites are not good examples of their type as they are in poor condition and have been laid in concrete and surrounded by modern fencing. The place does not meet this criterion.

(e) The place is important because of its aesthetic significance.

The O'Reilly Graves and former Rainbow Hotel site is not a landmark, and not considered to be picturesque or a place of natural beauty. The place does not meet this criterion.

(f) The place is important in demonstrating a high degree of creative or technical achievement at a particular period.

The O'Reilly Graves and former Rainbow Hotel site do not display architectural or technical excellence in a State or local context.

(g) The place has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

The former Rainbow Hotel site and associated graves have special association with descendants of the O'Reilly family, but does not have spiritual or cultural associations with a particular community or cultural group, and therefore does not meet this criterion.

(h) The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

The former Rainbow Hotel site and associated graves have special association with descendants of the O'Reilly family, but is not associated with a particular person or group of State importance, and therefore does not meet this criterion.

Defence Road and Associated Infrastructure (PLNICH02)

(a) The place is important in demonstrating the evolution or pattern of Queensland's history.

A defence road was initially proposed to be constructed across Queensland prior to the outbreak of World War 2, and during the war 78 kilometres of the road was constructed east of Theodore and Cracow and west of Eidsvold. The Defence Road and Associated Infrastructure is significant in demonstrating the impact of the World War 2 on infrastructure in central Queensland, and has historical significance as evidence of a major road project undertaken by the Civil Aliens Corp to assist with the transportation of troops and vehicles to the north of Australia. This criterion is met.

(b) The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.

The Defence Road and Associated Infrastructure has a degree of rarity as a large and intact piece of road network in Queensland constructed during World War Two by the Civil Aliens Corp. This criterion is met.

(c) The place has potential to yield information that will contribute to an understanding of Queensland's history.

Much has been documented about the infrastructure projects undertaken in Queensland during World War 2, and are now stored in the National Archives of Australia. Therefore it is unlikely that the place can yield more information that will contribute to an understanding of Queensland's history.

(d) The place is important in demonstrating the principal characteristics of a particular class of cultural places.

Roads, bridges and culverts of this type are not uncommon in Queensland, and their construction technique and use of material are not early or rare examples. The place does not meet this criterion in a local or State context.

(e) The place is important because of its aesthetic significance.

The Defence Road and Associated Infrastructure does not have landmark qualities, and is not considered to be picturesque or a place of natural beauty. The place does not meet this criterion.

(f) The place is important in demonstrating a high degree of creative or technical achievement at a particular period.

The construction technique used for the road bridges and culverts is not early and does not display architectural or technical excellence in a State or local context.

(g) The place has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

The Defence Road does not have spiritual or cultural associations with a particular community or cultural group, and therefore does not meet this criterion.

(h) The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

The Defence Road and Associated Infrastructure was constructed by Italian and Albanian detainees who were released from internment camps to join the Civil Alien Corps to work on non combatant works such as major road projects under the supervision of the Allied Works Council. The place has a special association with members of the Civil Alien Corp and Allied Works Council who were engaged in this project during World War Two, and therefore this criterion is met.

Former Yards Site (CINICH01)

(a) The place is important in demonstrating the evolution or pattern of Queensland's history.

The Former Yards site on Curtis Island provides evidence of early pastoral and grazing on the island, and is likely to date back to the interwar period when the southern portion of Curtis Island was subdivided into soldier settlement blocks. The place is important in demonstrating the early historical use of the southern portion of Curtis Island, but does not meet threshold indicators of Earliness, representativeness, regional importance, distinctiveness, exceptionality or rarity for State listing. The former Yards site is consequently of local historical significance only.

(b) The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.

Remnants of early twentieth century pastoral properties exist throughout Queensland, and there are examples which are in better condition than these with a higher level of integrity. The place is not considered rare, uncommon or endangered in a State context, but is rare evidence of early pastoral activities on Curtis Island, and therefore is significant in a local context.

(c) The place has potential to yield information that will contribute to an understanding of Queensland's history.

A range of material is scattered around the site and has a degree of archaeological potential, but any information yielded by the site is likely to be of local interest only, and not likely to contribute to our understanding of Queensland's history, therefore this criterion is not met in a State context.

(d) The place is important in demonstrating the principal characteristics of a particular class of cultural places.

The former Yards site is in poor condition and is not representative of its type. Therefore this criterion is not met.

(e) The place is important because of its aesthetic significance.

The place does not possess landmark qualities, nor is it considered to be picturesque, and therefore this criterion is not met.

(f) The place is important in demonstrating a high degree of creative or technical achievement at a particular period.

The former Yards site does not display architectural or technical excellence in a State or local context, and does not meet this criterion.

(g) The place has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Consultation has not identified a special association with the place for spiritual or cultural reasons, therefore this criterion is not met.

(h) The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

The place is not associated with anyone of importance in Queensland's history; therefore this criterion is not met.

Timber Posts (CINICH02)

(a) The place is important in demonstrating the evolution or pattern of Queensland's history.

The timber posts do not have historical significance and this criterion is not met.

(b) The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.

The timber posts are not rare, uncommon or endangered in a local or State context.

(c) The place has potential to yield information that will contribute to an understanding of Queensland's history.

There is no potential for the timber posts to yield information about Queensland's history, and therefore this criterion is not met.

(d) The place is important in demonstrating the principal characteristics of a particular class of cultural places.

The timber posts are not representative of a particular class of cultural places, and this criterion is not met.

(e) The place is important because of its aesthetic significance.

The timber posts are not a landmark, and the place is not considered to be picturesque or a place of natural beauty. The place does not meet this criterion.

(f) The place is important in demonstrating a high degree of creative or technical achievement at a particular period.

The timber posts do not display architectural or technical excellence in a State or local context, and therefore this criterion is not met.

(g) The place has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

The timber posts do not have spiritual or cultural associations with a particular community or cultural group, and therefore does not meet this criterion.

(h) The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

The place is not associated with anyone of importance in Queensland's history; therefore this criterion is not met.

Wharf Remains (CINICH03)

(a) The place is important in demonstrating the evolution or pattern of Queensland's history.

The Wharf Remains has some local historical significance in demonstrating evidence of the early occupation of Curtis Island.

(b) The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.

While the Wharf remains are not rare or uncommon in a Queensland context, it is rare on Curtis Island. However, threshold indicators of distinctiveness, exceptionality and intactness/integrity are not met.

(c) The place has potential to yield information that will contribute to an understanding of Queensland's history.

While the wharf extend out into the mangroves, any further information yielded by the site is likely to be of local interest only, and not likely to contribute to our understanding of Queensland's history, therefore this criterion is not met.

(d) The place is important in demonstrating the principal characteristics of a particular class of cultural places.

The Wharf Remains are in poor condition and are not a good example of their type, therefore this criterion is not met.

(e) The place is important because of its aesthetic significance.

The Wharf Remains does not have landmark qualities, and is not considered to be picturesque or a place of natural beauty. The place does not meet this criterion.

(f) The place is important in demonstrating a high degree of creative or technical achievement at a particular period.

The wharf was originally constructed using timber piles and a stone causeway, and neither the method of construction or materials used demonstrate an early, rare or high degree of technical achievement. This criterion is not met.

(g) The place has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Consultation has not identified a special association with the place for spiritual or cultural reasons, therefore this criterion is not met.

(h) The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

The place is not associated with anyone of importance in Queensland's history; therefore this criterion is not met.

Former Sawmill Remains (CINICH04)

(a) The place is important in demonstrating the evolution or pattern of Queensland's history.

The Mill Remains have some local historical significance in demonstrating evidence of the early occupation of Curtis Island, and is likely to be associated with the wharf remains located nearby.

(b) The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.

Remains of early twentieth century sawmills are found throughout Queensland, and are consequently not rare or uncommon in a State context. Threshold indicators of distinctiveness, exceptionality and intactness/integrity are not met.

(c) The place has potential to yield information that will contribute to an understanding of Queensland's history.

It is highly unlikely that the place can provide further information that will contribute to an understanding of the history and development of Queensland or the Gladstone region, therefore this criterion is not met.

(d) The place is important in demonstrating the principal characteristics of a particular class of cultural places.

The place demonstrates characteristics found at early twentieth century sawmill sites, however it is in poor condition with low integrity and is not a good example of its type. This criterion is not met.

(e) The place is important because of its aesthetic significance.

The former Mill Remains is concealed from the road and does not have landmark qualities, and is not considered to be picturesque or a place of natural beauty. The place does not meet this criterion.

(f) The place is important in demonstrating a high degree of creative or technical achievement at a particular period.

The former Mill Remains does not display architectural or technical excellence in a State or local context, and does not meet this criterion.

(g) The place has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

The former Mill Remains does not have spiritual or cultural associations with a particular community or cultural group, and therefore does not meet this criterion.

(h) The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

The place is not associated with anyone of importance in Queensland's history; therefore this criterion is not met.

China Bay Yards (CINICH05)

(a) The place is important in demonstrating the evolution or pattern of Queensland's history.

China Bay Yards constructed c1990s are not significant in demonstrating the evolution of Queensland's history, but have some local significance in demonstrating the more recent history and development of the southern portion of Curtis Island. This does not meet the threshold indicator for earliness, therefore this criterion is not met.

(b) The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.

Stock yards are prevalent throughout Queensland and the local region. This criterion is not met.

(c) The place has potential to yield information that will contribute to an understanding of Queensland's history.

There is no potential for the China Bay Yards to yield information about Queensland's history, and therefore this criterion is not met.

(d) The place is important in demonstrating the principal characteristics of a particular class of cultural places.

While the China Bay Yards demonstrate principal characteristics of a late twentieth century, the places fails to meet the threshold indicator for earliness due to its modern construction, and therefore this criterion is not met.

(e) The place is important because of its aesthetic significance.

The China Bay Yards are not a landmark, and are not considered to be picturesque or a place of natural beauty. The place does not meet this criterion.

(f) The place is important in demonstrating a high degree of creative or technical achievement at a particular period.

The China Bay Yards does not display architectural or technical excellence in a State or local context, and does not meet this criterion.

(g) The place has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Consultation has not identified a special association with the place for spiritual or cultural reasons, therefore this criterion is not met.

(h) The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

The place is not associated with anyone of importance in Queensland's history; therefore this criterion is not met.

New Yards (CINICH06)

(a) The place is important in demonstrating the evolution or pattern of Queensland's history.

The New Yards have some local significance in demonstrating the more recent history and development of the southern portion of Curtis Island.

However, this does not meet the threshold indicator for earliness, therefore this criterion is not met.

(b) The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.

Stock yards are prevalent throughout Queensland and the local region. This criterion is not met.

(c) The place has potential to yield information that will contribute to an understanding of Queensland's history.

There is no potential for the yards to yield information about Queensland's history, and therefore this criterion is not met.

(d) The place is important in demonstrating the principal characteristics of a particular class of cultural places.

While the New Yards demonstrate principal characteristics of a late twentieth century, the places fails to meet the threshold indicator for earliness due to its modern construction, and therefore this criterion is not met.

(e) The place is important because of its aesthetic significance.

The New Yards does not have landmark qualities, and is not considered to be picturesque or a place of natural beauty. The place does not meet this criterion.

(f) The place is important in demonstrating a high degree of creative or technical achievement at a particular period.

The Yards do not display architectural or technical excellence in a State or local context, and does not meet this criterion.

(g) The place has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

The New Yards does not have spiritual or cultural associations with a particular community or cultural group, and therefore does not meet this criterion.

(h) The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

The place is not associated with anyone of importance in Queensland's history; therefore this criterion is not met.

Former Dairy Site (CINICH07)

(a) The place is important in demonstrating the evolution or pattern of Queensland's history.

While not important in a Queensland context, the former Dairy site has some local historical significance in demonstrating evidence of the early occupation of Curtis Island.

(b) The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.

Remains of twentieth century dairies are found throughout Queensland, and are consequently the former Dairy site is not rare or uncommon in a State context. Threshold indicators of distinctiveness, exceptionality and intactness/integrity are not met.

(c) The place has potential to yield information that will contribute to an understanding of Queensland's history.

It is highly unlikely that the place can provide further information that will contribute to an understanding of the history and development of Queensland or the Gladstone region. This criterion is not met.

(d) The place is important in demonstrating the principal characteristics of a particular class of cultural places.

The former Dairy site is in poor condition and has had a number of modern alterations. It is not a good example of its type, therefore this criterion is not met.

(e) The place is important because of its aesthetic significance.

The former Dairy Site does not have landmark qualities, and is not considered to be picturesque or a place of natural beauty. The place does not meet this criterion.

(f) The place is important in demonstrating a high degree of creative or technical achievement at a particular period.

The former Dairy site does not display architectural or technical excellence in a State or local context, and does not meet this criterion.

(g) The place has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Consultation has not identified a special association with the place for spiritual or cultural reasons, therefore this criterion is not met.

(h) *The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.*

The place is not associated with anyone of importance in Queensland's history; therefore this criterion is not met.

1.2.2 Mitigation

Cultural heritage mitigation measures are discussed in detail in *Volume 8, Chapter 8* and *9* of the draft EIS. Additional information on specific mitigation measures for places potentially impacted upon in Gas Field, Pipeline and LNG Plant areas is provided below.

1.2.2.1 Gas Field Mitigation

Mitigation measures in the Gas Field study area will be in accordance with Burra Charter principles of heritage conservation best practice. Specific mitigation measures will be developed once comprehensive cultural heritage surveys are undertaken in the area during site inspection prior to commencement of construction activities.

Where proposed development is likely to impact on an identified non indigenous cultural heritage place, in the first instance measures will be taken to avoid the area by relocating the development elsewhere. If there is no alternative to developing in that particular location, mitigation will involve relocation of the heritage place.

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

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

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

1.2.2.2 Pipeline Mitigation

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

The O'Reilly Graves and Former Rainbow Hotel Site (PLNICH01) have been assessed as being of local significance and should be avoided by the pipeline

route. However the steep terrain in the Coal Road area limits the location of the pipeline, and consequently there is a possibility that the place will be directly or indirectly impacted upon. In the event that the pipeline is constructed in close proximity to the graves, security fencing will be installed to protect the site during construction.

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

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

1.2.2.3 *LNG Plant Mitigation*

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

The former Yards Site (CINICH01) was assessed as having local historical significance and will be impacted upon by the proposed development. The site is located in the centre of the proposed LNG Plant, and will consequently require demolition. To mitigate this impact, a clean up of the area will be undertaken to expose any important features and archival recording will be undertaken in accordance with DERM standards, incorporating measured drawings and black and white and colour photographs.

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

The timber posts (CINICH02) were identified as a feature of interest in the field survey, but further research and assessment has found that they do not possess cultural heritage values at a State or even local level. The timber posts will be demolished to make way for the proposed development, and this impact has been mitigated through recording the location of the feature and taking photographs as part of the field survey in October 2008.

1.2.3 *Survey Methodologies for Ongoing Field Development*

Comprehensive surveys will be undertaken during site inspection prior to commencement of construction work for Gas Field and Pipeline infrastructure.

The methodology for each proposed survey and mechanisms in place to manage potential discoveries, are detailed below.

1.2.3.1 *Gas Field Non Indigenous Heritage Survey*

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

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

1.2.3.2 *Pipeline Survey*

A pipeline survey will be undertaken during site inspection and assessment prior to construction and will involve:

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

1.2.3.3

Responses to Discoveries

Sections 89 and 90 of the *Queensland Heritage Act 1992* outline the requirements for recording and reporting of any places of non indigenous cultural heritage, and the following provides a mechanism for any discoveries during construction, operation and decommissioning of the project in accordance with this legislation.

Discoveries during Construction

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

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

Discoveries during Operation

Non indigenous cultural heritage surveys are also proposed in order to reduce the likelihood of any places or items of non indigenous cultural heritage discovered during operation.

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

Discoveries during Decommissioning

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

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