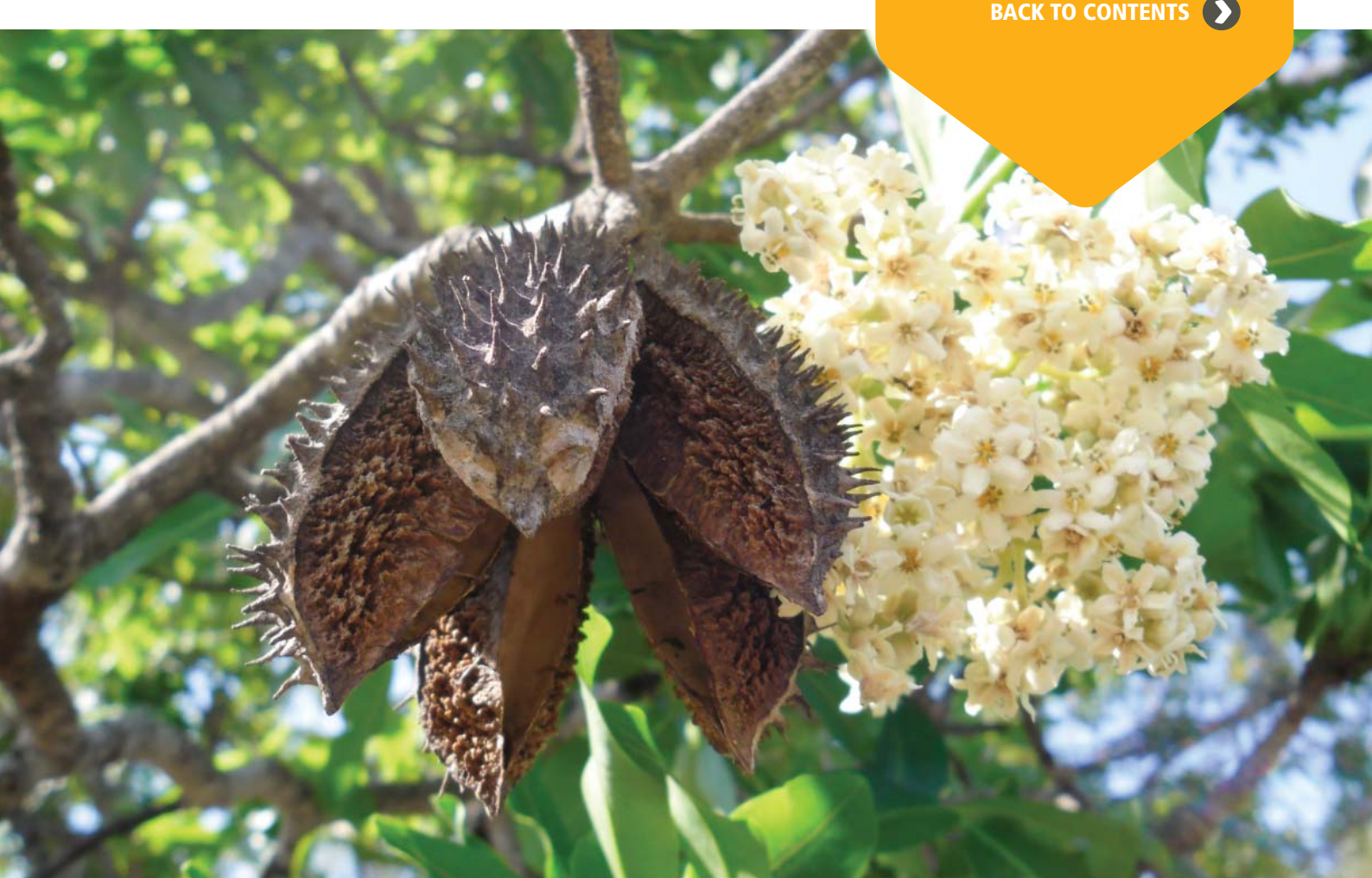


› 25

INDIGENOUS CULTURAL HERITAGE

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BACK TO CONTENTS 



25 Indigenous Cultural Heritage

This chapter provides a description of the Indigenous cultural heritage values within the Project area and an assessment of the potential for these values to be affected by direct and indirect impacts associated with the Project. For the detailed findings of the Project's Indigenous cultural heritage impacts, refer to the Indigenous Cultural Heritage Technical Report (Appendix W) of this EIS.

A cross reference to the locations where each of the requirements of the ToR has been addressed is given in Appendix B which references both the study chapters (Sections 1 through 34) and/or the Appendices (A through EE).

25.1 Legislative Context

The following legislation is relevant to identify values of, and mitigating and managing impacts to, Indigenous cultural heritage during construction, operation and decommissioning of the Project.

Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth). This Act protects natural, historic and Indigenous places on the World Heritage List, Commonwealth Heritage List and National Heritage List.

Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth). This Act assists in the preservation and protection of places, areas and objects on land or in Australian waters that are of particular significance to Indigenous peoples in accordance with their traditions.

Queensland Heritage Act 1992 (Qld). This Act principally provides protection for significant non-Indigenous cultural heritage sites. However, sites deemed significant for both their non-Indigenous and Indigenous values are protected under this Act.

Aboriginal Cultural Heritage Act 2003 (ACH Act) (Qld). This Act recognises and protects significant Indigenous cultural heritage in Queensland. The ACH Act sets out requirements for the protection and management of Indigenous cultural heritage. Section 8 of the Act defines Indigenous cultural heritage as anything that is:

- a) A significant Aboriginal area;
- b) A significant Aboriginal object; or
- c) Evidence of Aboriginal occupation that is of archaeological or historical significance.

Areas or objects must be considered significant because they play a part in Indigenous tradition and/or compromise a component of the history of an Aboriginal party in the area. Primary determination of significance lies with the Aboriginal parties for the area and must be consistent with their tradition.

The ACH Act operates on the basis of a duty of care owned by development proponents and others to Aboriginal cultural heritage. The duty of care can be met in a variety of ways. Where an EIS is a mandatory requirement for a licence to operate a project (such is the case with this Project) or is necessary to comply with a limited range of regulatory processes (see ss. 87-89 ACH Act) then it is essential to develop a Cultural Heritage Management Plan (CHMP). Alternatively, s. 86 of the ACH Act allows the duty of care to be met by settlement of a Native Title agreement of a specified form, being an Indigenous Land Use Agreement (ILUA), s. 31 agreement or by use of the Native Title Protection Conditions.

Section 25 Indigenous Cultural Heritage

Where there is no need to comply with ss. 87-89 a range of options are available to the proponent. These include a voluntary CHMP. The mechanisms by which one can meet the duty of care are specified in s. 23 of the ACH Act. These include use of the Duty of Care Guidelines.

Failure to comply with the duty of care can result in a charge of 'Harm' being made against a project sponsor. Substantial penalties can arise where a party, individual or corporation, is found guilty of harming Aboriginal cultural heritage.

The ACH Act also defines those people with whom a proponent must engage. These people are referred to as Aboriginal parties. There is a descending hierarchy of persons who constitute Aboriginal parties:

- Determined Native Title holders;
- Currently registered Native Title claimants; and
- Native Title claimants who were registered as of April 2004 (the introduction of the ACH Act) but whose claims have subsequently failed are also Aboriginal parties until such time as another claim is registered over the area.

If there are no persons meeting these categories then any person claiming to meet the criteria specified s. 35(7) of the ACH Act is an Aboriginal party.

The ACH Act is currently under review and a paper outlining key issues and a series of draft recommendations has been published.

25.2 Assessment Methods

The Indigenous cultural heritage assessment comprised of a desktop study, consultation and impact assessment. Methods are summarised below.

25.2.1 Desktop Study

The study area includes the Project area plus a surrounding one kilometre-wide zone, referred to within this report as the 'Study Area buffer'.

This desktop assessment includes:

- The Indigenous Cultural Heritage Register and Database (ICHRaD) maintained by the Cultural Heritage Coordination Unit within the Department of Aboriginal and Torres Strait Islander and Multicultural Affairs (DATSIMA).
- The Queensland Heritage Register and the Cultural Heritage Information Management System (CHIMS) maintained by the Cultural Heritage Branch within the EHP.
- Investigation of list and registers from the Commonwealth that protect important heritage places throughout Australia, which includes the World Heritage List, the Commonwealth Heritage List, the National Heritage List and the Register of the National Estate. These lists are administered by the DSEWPaC.
- Searchable web-based systems which provide further details regarding the heritage values of individual places included on the various databases, lists and registers.

Section 25 Indigenous Cultural Heritage

- Review of material held in a range of publicly available archives, collection and publication for other Aboriginal cultural heritage information.

In addition to the desktop study, investigations and consultations were held with local government authorities regarding cultural heritage areas, objects and values that have been noted within their current planning schemes and/or development control plans.

25.2.2 Impact Assessment

A qualitative risk assessment was used to assess the likelihood of harm to cultural heritage sites. Impact assessment studies have been undertaken within legislative parameters that have largely required the cultural heritage information derived from them to be maintained and controlled by government agencies. Under Part 5 of the ACH Act such information regarding Aboriginal cultural heritage is controlled by the Cultural Heritage Coordination Unit within the DATSIMA.

25.3 Existing Environmental and Cultural Values

The assessment identified that the key values are associated with either archaeological significance (i.e., including physical evidence) or cultural significance (i.e., of significance to Indigenous peoples for cultural, spiritual or historical reasons). Aspects of the existing environment that contribute to the compilation of a set of Indigenous cultural heritage values include the following:

- Places with identified Indigenous values that are listed on the ICHRaD and the CHIMS; and
- Places identified during previous EIS studies.

25.3.1 Currently Identified Aboriginal Parties

ILUAs have already been settled with all Aboriginal parties whose country falls within the study area and who have registered Native Title claims. This includes the Barada Barna, Birri, Jangga and Wiri Peoples.

Arrow is seeking to settle ILUAs with various other groups who have interests in the area but do not have registered Native Title claims. This includes the Kangoulu People, whose Native Title claim was deregistered in 2010. However, under the 'last man standing' rule in the ACH Act (as discussed in Section 25.1) this group remains an Aboriginal party.

25.3.2 Registration of Indigenous Cultural Heritage on Government Heritage Database

Formal searches were conducted of a range of State and Commonwealth heritage databases, lists, and registers. Within the study area, there are 2,300 (2,700 including those partially within the study area) Indigenous cultural heritage places listed on the ICHRaD. An additional two Indigenous cultural heritage value places were found on the CHIMS. The absence of any places on Commonwealth heritage lists or registers is unusual for such a large area. The results of the formal searches are shown in Table 25-1.

Section 25 Indigenous Cultural Heritage

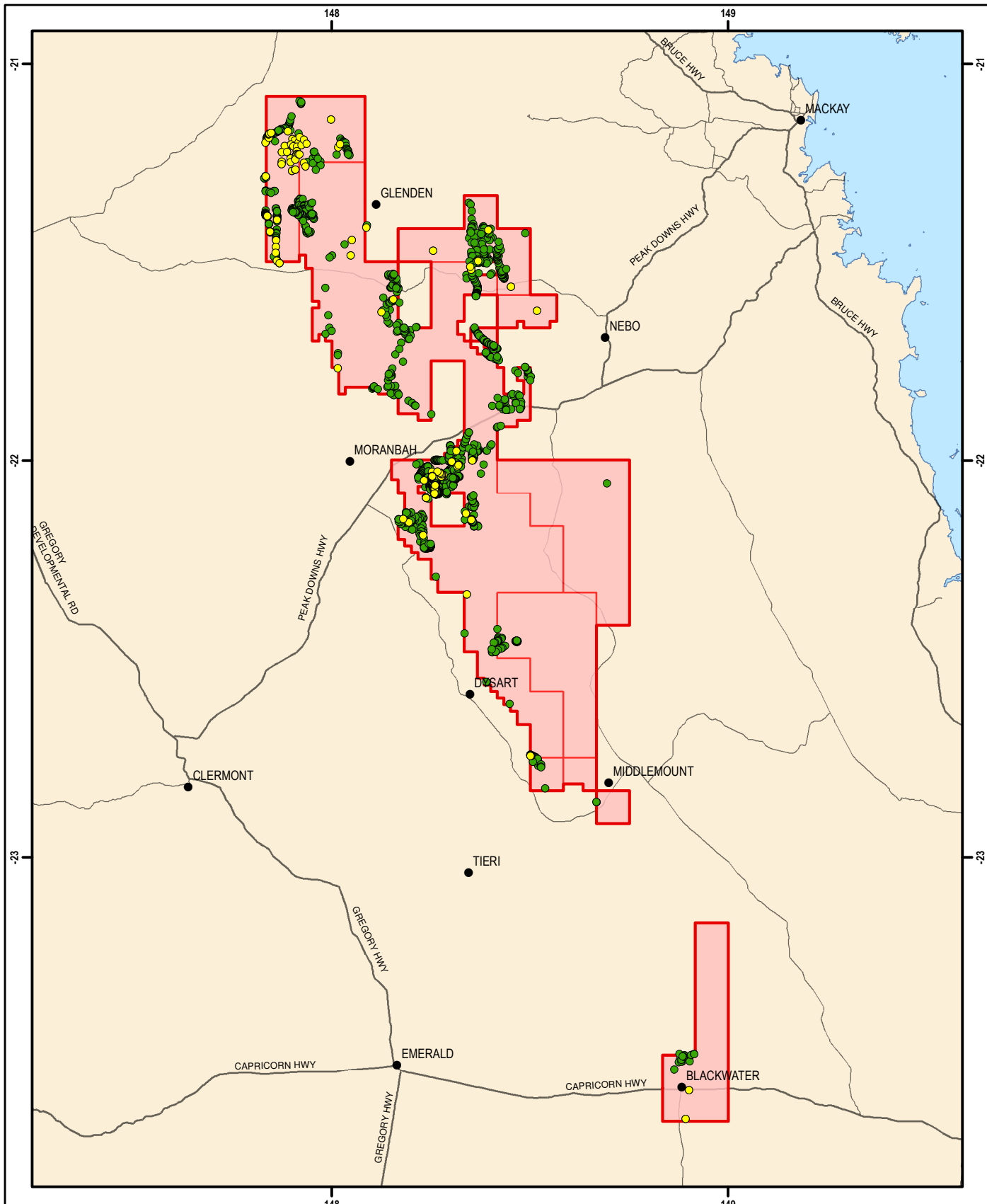
Table 25-1 Identified Heritage Places

Database, List or Registered Name	Administering Body	Places Identified within Study Area Buffer	Places Identified within Study Area	Identified Aboriginal Cultural Heritage Values
World Heritage List	DSEWPaC, Commonwealth	0	0	0
Commonwealth Heritage List	DSEWPaC, Commonwealth	0	0	0
National Heritage List	DSEWPaC, Commonwealth	0	0	0
Register of the National Estate	DSEWPaC, Commonwealth	0	0	0
Queensland Indigenous Cultural Heritage Register and Database	DATSIMA, State	2,693 (3,131 records)	2,300 (2,712 records)	2,300 (2,712 records)
Queensland Heritage Register	EHP, State	0	0	0
Cultural Heritage Information Management System	EHP, State	3	3	2
Total		2,696	2,303	2,302

Of those identified from the ICHRaD, there were multiple records with the same State ID.

The results were dominated by places containing only stone artefacts, which accounts for approximately 75% of the total place listing. Scarred trees are the next most present place type, comprising around 4% of the total. Although small in number, a range of uncommon and culturally important places were also identified, including hearths, wells, pathways (containing rock art), ceremonial places, and earthen arrangements. Additionally, there are a number of places associated with the region's contact period, clustered in the central and northern portion of the study area.

Significantly, there are a number of places within the study area that contain multiple heritage values, such as scarred trees, pathways, and stone artefacts. These cultural heritage 'precincts' are located in the central and northern portions of the study area, and are often in close proximity to major waterways. Figure 25–1 through to Figure 25–5 show the registered locations of Indigenous cultural heritage as obtained from the register and list searches.



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0 10 20 40 km
 1:1,500,000
 Projection: Geographic (GDA94)

- Bowen Gas Project Tenements
- Main Road
- Drainage

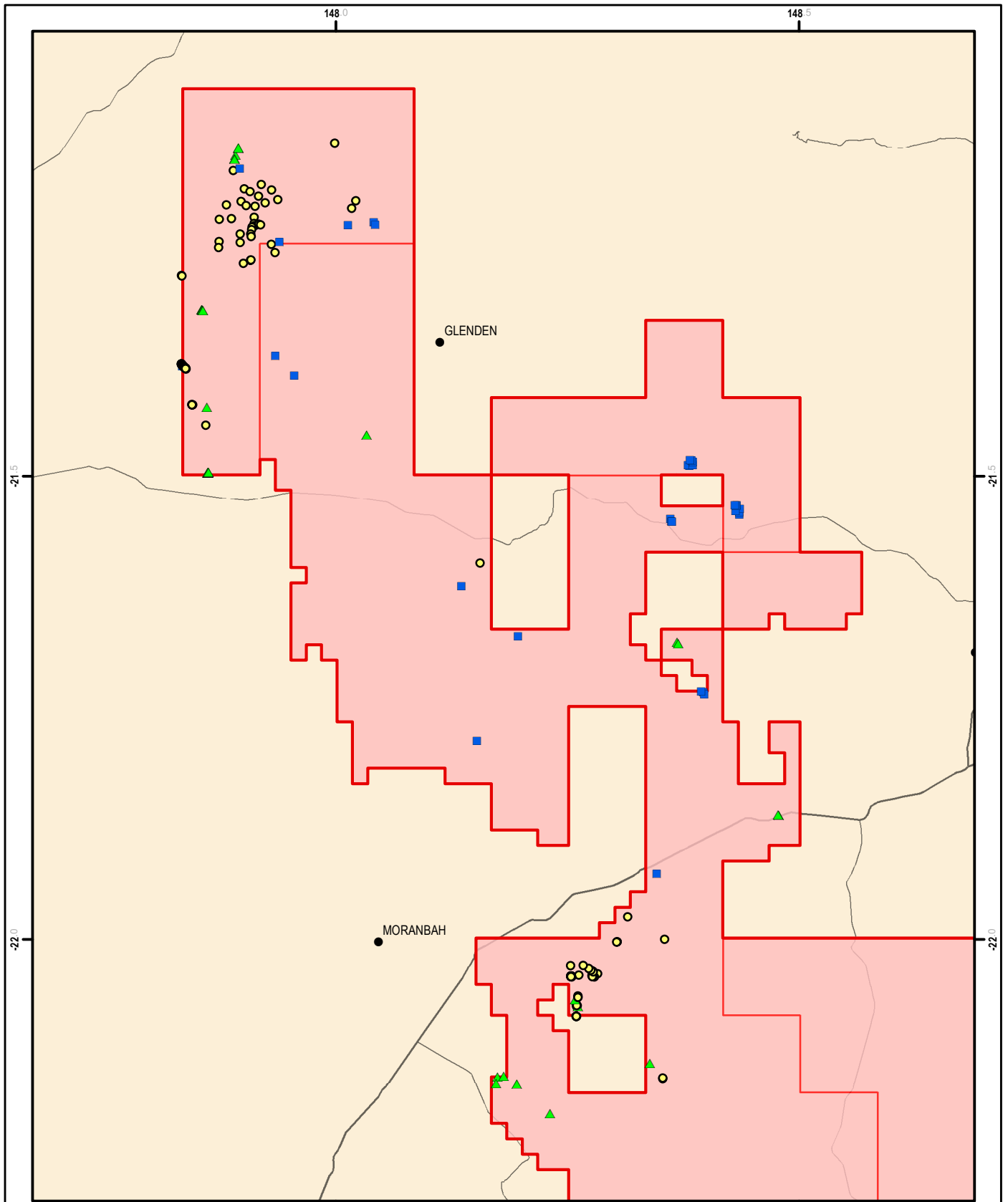
- Cultural Heritage Places**
- Rare and/or Uncommon Places
 - Other Cultural Heritage Places

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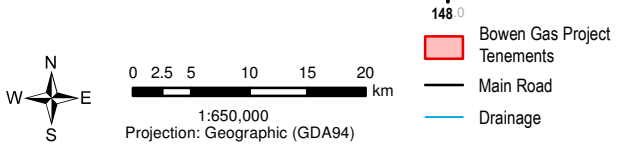


BOWEN GAS PROJECT EIS

**RESULTS OF THE QUEENSLAND
 INDIGENOUS CULTURAL HERITAGE
 REGISTER AND DATABASE**



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- Cultural Heritage Places**
- Hearth
 - ▲ Resource Area
 - Quarry

- Bowen Gas Project Tenements
- Main Road
- Drainage

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BOWEN GAS PROJECT EIS

SELECTED SUBSISTENCE BASED CULTURAL HERITAGE PLACES IN THE CENTRAL AND NORTHERN PORTIONS OF THE STUDY AREA



INDIGENOUS CULTURAL HERITAGE

Figure: **25-2**

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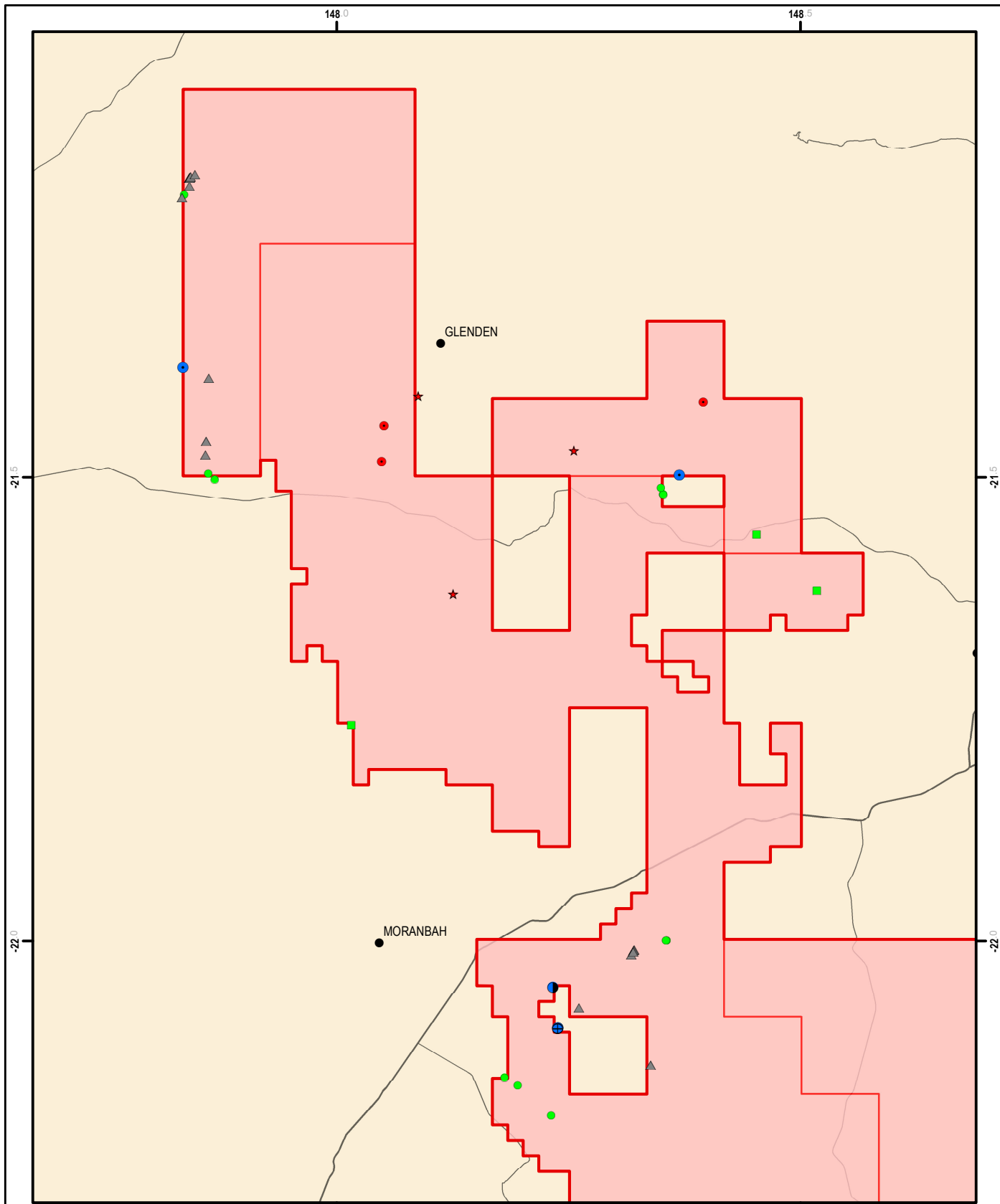
Approved: DS

Date: 18-10-2012


Rev. A

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0 5 10 15 20 km

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Projection: Geographic (GDA94)

Bowen Gas Project Tenements

Main Road

Drainage

Cultural Heritage Places

- Contact Place
- Cultural Place
- Landscape Feature
- Earthen Arrangement
- Pathway
- Stone Arrangement
- Rock Art
- Well
- Story Place

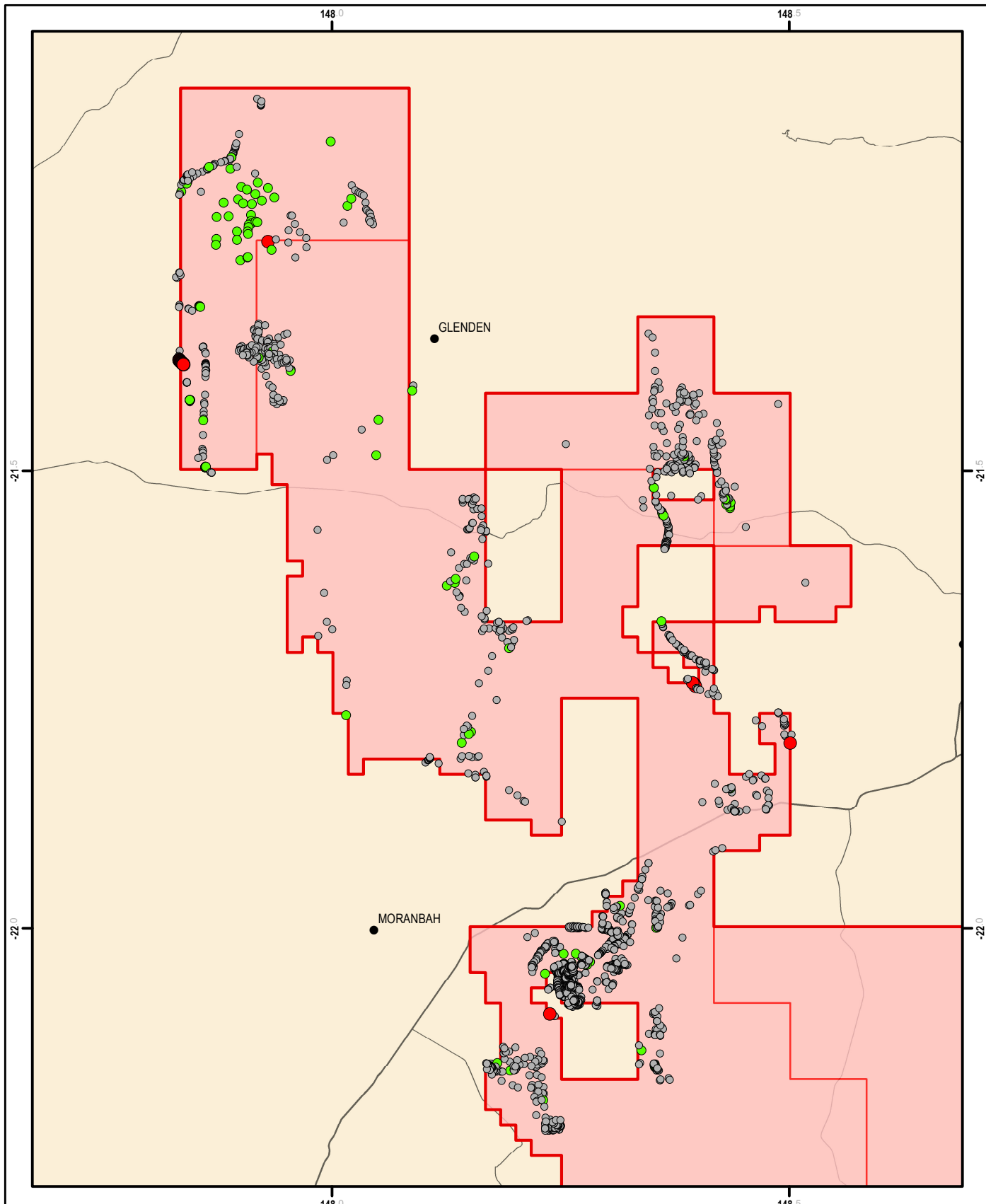
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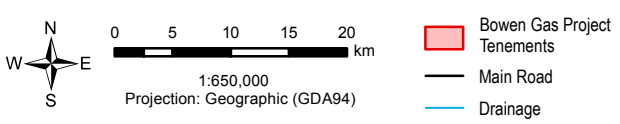


BOWEN GAS PROJECT EIS

SELECTED UNCOMMON/CULTURALLY IMPORTANT CULTURAL HERITAGE PLACES AND THEIR DISTRIBUTION ACROSS THE CENTRAL AND NORTHERN PORTIONS OF THE STUDY AREA



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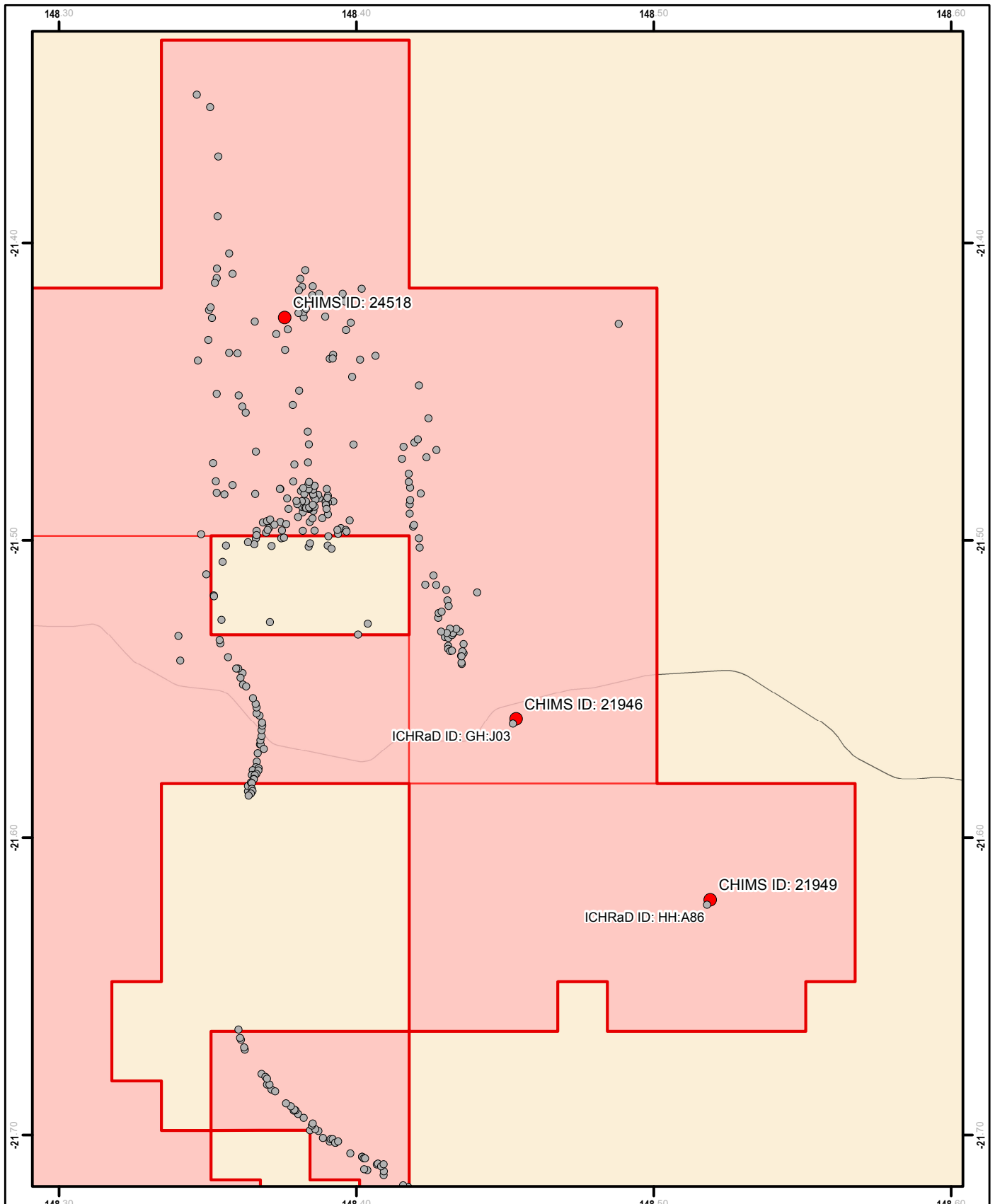
- Cultural Heritage Places**
- Single Value
 - Two Values
 - Three Values

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BOWEN GAS PROJECT EIS

NUMBER OF CULTURAL HERITAGE PLACE TYPE VALUES FOR CULTURAL HERITAGE PLACES ACROSS THE CENTRAL AND NORTHERN PORTIONS OF THE STUDY AREA



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0 1 2 4 6 km
 1:200,000
 Projection: Geographic (GDA94)

- Bowen Gas Project Tenements
- Main Road
- Drainage

- ICHRaD Search Results
- CHIMS Reported Places

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BOWEN GAS PROJECT EIS

CULTURAL HERITAGE INFORMATION MANAGEMENT SYSTEM SEARCH RESULTS

Section 25 Indigenous Cultural Heritage

Of the places identified on the CHIMS, only two places are linked to Indigenous peoples. CHIMDS ID: 21946 is known as the Fort Cooper Camp. The site is on Fort Cooper Station, where, according to news reports of the time, around 90 Aborigines took refuge for a number of years around 1869 after prior known dispersal by the Native Mounted Police. According to historical accounts, the manager of the station engaged around 40 men to clear scrub and cut wood in return for the occasional sheep, or other piecemeal payment. While certain historians assert that the Indigenous peoples at Fort Cooper Station identified as Barada, the reliability of this information is unclear.

The second site (CHIMS ID: 21949) is Fort Cooper North. The site is associated with a historical dispersal of Aboriginal people. However, there are discrepancies between the location of the site in the historical record and contemporary land marks. Further, it is unclear whether or not there was a death toll associated with the dispersal; none is mentioned in the historical account. However, it is widely recognised that the genocidal actions undertaken in rural Australia were often kept out of the reach of newspapers.

25.3.3 Ethnohistorical Accounts of Aboriginal Activity

The first historical account of Aboriginal people in the study area was recorded by Leichhardt and Mitchell in 1847 and 1848 respectively. Leichhardt encountered Aborigines as he travelled down and named the Comet River, and continued on along the Mackenzie River of his way to the Isaac River, which runs north of the study area.

In 1845, Leichhardt arrived in proximity to the study area at the start of the Mackenzie River. He noted 'frequent traces' of Aboriginal peoples, who had 'burned the grass' (Leichhardt, 1845). Leichhardt spent 15 days in the immediate area, and had frequent contact with various Aborigines, and came across multiple camps. He notes the presence of plentiful food sources, that tracks were well worn and places that had 'evidently been used for corroborees'.

From Leichhardt's writing, the following conclusions are apparent:

1. There was a well-established and large Aboriginal population frequenting the area, at least during the summer months;
2. The camps were sited within the scrub, and next to suitable sources of water;
3. Food and other resources appear to have been plentiful;
4. The camps were well-equipped, and the people possessed a range of material culture; and
5. There was evidence of ceremonial activity in the area.

The rapid pace of European settlement and the accompanied displacement of Aboriginal groups soon resulted in violent clashes. Occasionally this violence was on a large scale, such as that at 'Cullin-laringo' Station to the north of Springsure where 19 Europeans were massacred in October 1861 (Bird, 1904:203; de Satge, 1901:153; Major, 1900:97-100; Reid, 1982). This was to inspire a series of punitive expeditions, during which hundreds of Aborigines were slaughtered (Lack and Stafford, 1964:124).

Isolated killings on both sides seem to have been more common, with Aboriginal tactics approaching those of guerrilla warfare. The killing of lone shepherds or stockman, and the stealing of stock was a frequent event.

Section 25 Indigenous Cultural Heritage

On the evidence available from areas adjacent to the current study area, the institutionalised violence of the Native Police appears to have been a crucial factor in the destruction of Aboriginal society, and its resistance to European settlement

As well as violence, introduced diseases also had a massive impact on Aboriginal populations. Smallpox, influenza, pneumonia, tuberculosis and venereal diseases are likely to have dramatically decreased Aboriginal populations, with the later diseases also decreasing birth rates amongst survivors.

By the late 1870s, interracial frontier-fighting had disappeared in this region and Aborigines were to some extent assimilated into the European economy. Numbers of Aborigines were employed on the stations in looking after stock and performing domestic duties. In later years, 'town camps' of dispossessed Aboriginal people were common in the region. These camps were often on the outskirts of town

25.3.4 Cultural Heritage Values

Godwin and L'Oste-Brown's (2002) study is the most comprehensive review of Aboriginal cultural heritage values within the Bowen Basin. Of the sites identified by Godwin and L'Oste Brown (2002), three fall within the study area. Godwin and L'Oste Brown (2002) categorised the places of heritage value as follows:

25.3.4.1 Early Contact locations

These places mark the earliest recorded instances of contact between Europeans and Aborigines. Leichhardt's (1847) journal provides the majority of detailed recording of first contact throughout the region, the details of which are found within Section 25.3.3. Further episodes of early contact may yet be uncovered in the diaries, records and reminiscences of pioneer settlers.

25.3.4.2 Sites of Massacres or Violent Incidents

These include places where Aboriginal people were killed by settlers and/or the Native Mounted Police. Detailed written accounts of Aboriginal dispersal by the Native Mounted Police are few and the degree of information provided is generally scant, as detailed within Section 25.3.3. However, there is cogent oral testimony within the Aboriginal community of Central Queensland.

25.3.4.3 Native Mounted Police Camps

These camps were the headquarters of the Native Mounted Police established in the various pastoral districts or where frontier circumstances required.

25.3.4.4 Historical Cemeteries or Burials

Historical cemeteries and burials include places where individuals, groups of people or repatriated skeletal material of Aboriginal persons are buried. The recent programs of repatriating human skeletal

Section 25 Indigenous Cultural Heritage

material from museums and other places have seen both the use of old burial places and the selection of new locations.

25.3.4.5 Yambas

Three different types of yambas were defined. These places are of great significance to the Aboriginal community as they were their homes at times when they were subject to great bureaucratic structures and economic and social privation. The three types are:

- **Town Camps** - most towns of any reasonable size had an Aboriginal camp on its outskirts;
- **Station Camps** - commonly found near the head station where Aboriginal people had a reasonable relationship with the Europeans. In other cases they were found on remote parts of properties; there is often evidence of pre-contact usage of these areas; and
- **Droving / Stockmen's camps** - commonly established at points where water was available.

25.3.4.6 Post-contact Archaeological Places

This category includes places that have evidence of post-contact Aboriginal usage such as flaked glass, trees scarred with steel axes, and post-contact items depicted in rock art. There are also places where there is an interleaving of both pre-contact and post-contact material culture.

25.3.4.7 Ceremonial, Spiritual and Story Places

These include places associated with increase rituals, initiations or various other rites of passage. There is often no material evidence of their use for these purposes. Sometimes these places are associated with some kind of spiritual belief or specific entity.

25.3.4.8 Resource or Good Food Places

These include places used or known about during the historic period where resources were, or still are, obtained either by hunting, fishing or collecting. Resources can include foods, medicines, and other useful materials.

25.3.4.9 Travel Routes

Travel routes constitute well-defined and well-known lines for traversing country. Sometimes there were particular points on such routes that were well-known camping places, or that marked the point where one would enter a neighbouring clan's country.

25.3.4.10 Birthplaces

Birthplaces, particularly of key elders and ancestors, hold special significance to Aboriginal people. They are also an extremely important means of demonstrating association with country.

Section 25 Indigenous Cultural Heritage

25.3.4.11 Miscellaneous

There are sites that do not fit easily into any specific category. They include cattle yards built by particular Aboriginal men, cultural sites where people have asserted a direct management involvement by way of fencing or impact mitigation, a murder site, and a place where a suicide occurred.

Springs hold particularly high cultural heritage values. They are often linked to major creator beings, rituals, and stories of great significance. Recent work undertaken of the springs across the Great Artesian Basin did not identify any within the Project area. However, it is likely that such places are within the study area and have not yet been identified.

Arrow recognises that it is likely that more sites than those currently identified are within the study area and that increased activity in the area, including Arrow's, is likely to encounter additional places of value to Aboriginal peoples.

25.4 Potential Impacts

The potential direct and indirect impacts of the Project on environmental values have been assessed using one of three impact assessment methods: significance assessment, risk assessment and compliance assessment; this study has used compliance assessment. For further details see the Impact Assessment Method chapter (Section 6) of this EIS.

The environmental protection objectives for Indigenous cultural heritage are to:

- Avoid or minimise adverse impacts from Project activities on known and unknown Indigenous cultural heritage sites and objects.
- Retain a documented record of the Indigenous cultural heritage that is found through the course of the Project so that the history of the area is preserved for future generations.

What follows is a discussion of the possible impacts given the present knowledge of the environment. The specific impacts will be informed by future comprehensive cultural heritage studies undertaken in the study area by the relevant Aboriginal parties.

25.4.1 Known Indigenous Sites

The study area constitutes a rich and varied cultural landscape that is of particular significance to the local Aboriginal communities. The cultural signature of this landscape has expression in two separate but intrinsically linked spheres: that relating to traditional and spiritual association with a number of specific places within that overall landscape; and that resulting from the everyday use and occupation of that landscape. The study area has places from both of these spheres known to exist.

Within the study area, the watercourses and waterholes of a number of substantial waterways, areas with the potential to contain springs, and a number of other specific landscape features, all form part of the living traditional knowledge-base of the Aboriginal communities of those areas. Additionally, there are likely to be a substantial number of places of historical significance existing in the study area.

From an archaeological perspective, a wide range of sites have been identified. Clearly dominating the body of material are stone artefacts, commonly in the form of scatters as well as isolated finds. These

Section 25 Indigenous Cultural Heritage

are made of a wide variety of raw materials, obtained both from what would be described as quarries as well as from sources such as gravel beds in creeks and watercourses and silcrete floaters. They include numerous formal types such as backed blades and other microliths, demonstrating that these open sites can be of considerable antiquity, and possibly date back up to 4,500 years ago. The presence of grinding equipment indicates that these sites are also likely associated with various activities including processing of foods such as grass seeds.

In a number of rock shelters, which are primarily located in the study area, rock art of a form consistent with that seen across the Central Queensland Sandstone Belt has been recorded. This consists of stencils that are of several colours (red and white), with the possibility of dating from the mid-Holocene to the very recent past. These rockshelters also likely contain other cultural material in the sediments found within them, notably stone artefacts and charcoal.

Numerous scarred trees have also been recorded across the study area. Functions offered for these trees range from the extraction of resources (possums and honey) through the prosaic (coolamons for carrying food stuffs, parrying shields, etc.) to ritual (birthing trees, providing bark for burials) purposes.

With dates extending back to the mid-Holocene, heaths and related cultural material provide the opportunity to explore Aboriginal occupation of the region using open sites, which could provide data that offers a wide range of insights that might stand at odds with those based on the results of excavations of rockshelters.

Stands of vegetation containing a range of flora that was known to be of traditional importance to Aboriginal people were found in many areas. These included edible food stuffs, plants of medicinal value and other flora that featured in ceremony. Knowledge of these plants, and their continued use, is widespread in the Aboriginal community of the region. These, then, constitute another important element in cultural landscape of the region, one that is fast succumbing to increased development pressures from pastoralism, mining and other land uses that require extensive clearing of the landscape. Similarly, numerous animals, fish and insects remain of cultural significance both because they are valued food resources (e.g. echidna, scrub turkeys, macropods of various species) or because of social or ritual significance (such as those which constitute *yuri* – totemic species of people).

With regard to identified registered sites, potential impacts on known Aboriginal sites of significance could arise through accidental direct destruction, damage or disturbance of objects of physical heritage in the landscape, or encroachment upon or disturbance of places of cultural significance to Aboriginal persons. Accidental disturbance may potentially occur if construction crews are not aware of a site's location. Disturbance to or encroachment upon known sites of significance prior to mitigation is therefore possible. The consequence of this to the environmental values will be major with stakeholder concern. The potential impact on these Aboriginal heritage sites prior to mitigation is high.

25.4.2 Unknown Aboriginal Sites

Further Aboriginal cultural heritage may be found throughout the Project area. Prior to implementing mitigation measures, accidental destruction, damage or disturbance of objects of physical heritage in the landscape, or encroachment upon or disturbance of places of cultural significance to Aboriginal persons may occur if construction crews are not aware that a site exists. Disturbance to unknown sites

Section 25 Indigenous Cultural Heritage

(either on the surface or beneath the surface), or encroachment upon unknown sites prior to mitigation is therefore possible. The consequence of this to the environmental values will be major with stakeholder concern. The impact to these Aboriginal heritage sites prior to mitigation is high.

25.5 Compliance with the ACH Act Duty of Care

Arrow recognises that the Aboriginal parties will retain a strong interest in ensuring that the cultural heritage areas, objects and values identified throughout the Project area are protected or managed in a culturally appropriate fashion and with their direct input. It is anticipated that the Aboriginal parties will require the implementation of a management process that embodies culturally appropriate measures for the protection of management of their cultural heritage.

Arrow is required to meet the Aboriginal cultural heritage duty of care. In the current circumstances, this is to be done by compliance with Part 7 of the ACH Act. This part of the ACH Act either requires a proponent to negotiate and settle a cultural heritage agreement of a specified form (including but not limited to an ILUA or a s31 agreement) as provided by s86 and that does not expressly exclude management of cultural heritage, or to develop a CHMP. In the normal course of events, Arrow's preferred approach to compliance with the provisions of Part 7 of the ACH Act is to settle an ILUA that expressly provides a set of arrangements for the management of Aboriginal cultural heritage. Ideally, Arrow would hope to do this as a global exercise for the entirety of the study area. There are, however, a range of factors that can affect such an approach. There are three conditions that must be met with regards to the use of a Native Title agreement of the type contemplated in s86 of the ACH Act:

1. The condition of an agreement, including the benefits associated with the same, must be settled between the Parties to the Agreement;
2. The Native Title parties must then be able to have the agreement authorised or certified; and
3. The agreement must then be registered. Part of this process is an independent assessment of the circumstances in which the agreement has been negotiated and then authorised or certified.

If the process fails any of these hurdles, then it would be impossible to meet the duty of care by this means, due to the absence of a registered Native Title agreement. It should also be noted that this settlement, authorisation / certification, and registration process can take anything up to 18 months.

Arrow further observes that for a significant portion of the study area, the Native Title landscape is unsettled. Over one portion, the section south of Mackenzie River, it is currently the case that there are no registered Native Title claims,

Due to the lack of Native Title claims mentioned above, Arrow's proposed strategy is to settle ILUAs with groups who have an interest in the study area but who do not have currently registered Native Title claims.

Where an ILUA cannot be successfully finalised or Arrow concludes that an ILUA will not be registered within the required Project timeframe, Arrow will move to develop a CHMP. The trigger for the necessary notices will float in that they may be issued at any of the three points in the ILUA exercise where the ILUA may fail: during negotiation; at authorisation; and at registration. Where an ILUA

Section 25 Indigenous Cultural Heritage

cannot be concluded and a CHMP is required, the terms of a CHMP will be consistent with those provisions in the proposed ILUA dealing with the management of cultural heritage.

All ILUAs will include cultural heritage procedures agreed between the parties. In some cases those procedures have already been implemented for parts of the study area or for related projects.

25.6 Mitigation and Management Measures

Arrow is committed to adopting a range of avoidance, mitigation and management measures to cultural heritage management within the Project area. The following outlines those principles that are to be adopted by Arrow for the Project:

1. Where the parties are seeking to negotiate an ILUA, and agree that it is appropriate to do so, they will include cultural heritage management provisions as a separate schedule within the ILUA.
2. Arrow may act to the strict timelines of the ACH Act with respect to the development of a CHMP where Arrow decides to develop a CHMP. Where it decides to do so, Arrow will inform the endorsed parties of its intention to do so.
3. Arrow will develop and implement the CHMP through negotiation with the Aboriginal parties, or (on provision of appropriate authorisation) the nominees of the endorsed parties as per s102(2) of the ACH Act.
4. Arrow is conscious that this Project may potentially be the catalyst for tensions and stresses within Aboriginal communities. To minimise any potential for this, Arrow will not act in a partisan fashion (and avoid the perception of this to the extent it can), and will not enter into group or intergroup politics.
5. Arrow will use current best practice in the measures implemented as against base compliance and will work with the Aboriginal ILUA or endorsed parties to develop key performance indicators to ensure that it is best practice.
6. Arrow will seek agreement of Aboriginal ILUA or endorsed parties on the core and subsidiary principles that influence the design of the process and its implementation.
7. Arrow will initially draft agreements in accordance with the agreed principles, and these will then be negotiated between the parties.
8. Arrow accepts as a base principle underwriting the entire cultural heritage exercise is the recognition of the different imperatives and interests of the parties, and their roles in relation to cultural heritage. This can be encapsulated as follows:
 - The core business of Arrow is the supply of energy (gas and associated services) to their customers, with those tasks to be undertaken in a commercially feasible and environmentally responsible fashion.
 - The core business of Aboriginal ILUA or endorsed parties is to manage their cultural heritage in a culturally appropriate fashion in the context of the proposed developments proceeding.
9. Arrow accepts that the selection of technical advisers to assist in conducting field investigations and preparing reports on same lies with the Aboriginal ILUA or endorsed parties. A process will be developed that will allow the endorsed parties to nominate technical advisers with their appointment to be subject to Arrow's agreement.

Section 25 Indigenous Cultural Heritage

10. Arrow will retain the right to commission expert review of reports, as well as for any proposed management strategy in advance of its implementation with their appointment to be subject to consultation with the Aboriginal ILUA or endorsed parties.
11. Arrow proposes to adopt, to the greatest extent possible, an agreement-based process between the parties for authorisation of all Project activities where such material may harm cultural heritage. This will be given expression such that any ground disturbing activities may require the issue of a formal permit to undertake ground disturbing activities issued within Arrow and that may require independent assessment in advance by the Aboriginal ILUA or endorsed parties. The primary authority for the permit will be the CHMS negotiated after the ICHA has been completed. The permit process will be linked to the Project's GIS to allow auditing of the process.
12. Arrow will maintain a GIS database of sites of Indigenous cultural heritage that are known or found during the course of investigations and works (where Aboriginal parties allow the listing of the sites [B558]. The GIS will be developed in a fashion that recognises and gives expression, to the extent practical, to the other principles included herein.
13. Arrow accepts that the Aboriginal ILUA or endorsed parties are the owners of all cultural heritage areas and objects that may exist in the areas to be affected by these developments, and will use all reasonable endeavours to give effect to this, and the implications arising from it, to the extent possible under existing legislation.
14. Arrow accepts that all cultural information generated or collated (other than that which is already in the public domain), and subsidiary documents relating to the cultural heritage program (other than agreements or management strategies) produced in the course of these projects will remain the property of the Aboriginal ILUA or endorsed parties.
15. Arrow accepts that it may not be necessary for Arrow to hold any primary or 'raw' cultural heritage information. Rather, Arrow requires data that makes clear the constraints or management requirements with which Arrow must comply to implement the agreed management strategy.
16. Arrow must be guaranteed access to such information and it must be available in a timely fashion. To that end, Arrow will only agree to data management processes that Arrow considers will guarantee this access in the format Arrow considers necessary and provide it in a timely fashion.
17. Arrow may, where the parties consider it necessary, enter into access and use protocols with the Aboriginal ILUA or endorsed parties relating to the cultural heritage data generated or collated as part of this Project.
18. A dispute resolution processes will constitute a component of the ILUA Cultural Heritage Schedule (ICHS) or CHMP and, other than in exceptional circumstances, the steps in this process will be exhausted before any party makes any use of any other legal mechanisms although neither party will be precluded from making use of all avenues available to them.
19. Arrow expects, once agreement is reached with the Aboriginal ILUA or endorsed parties, that the Aboriginal ILUA or endorsed parties will assist Arrow where third parties challenge the agreed process and will not support any claims made by the third parties.
20. Arrow believes the ICHS or CHMP should provide a formal mechanism for investigation of alleged breaches of the ICHS or CHMP and subsidiary agreements, and should make provision for appropriately graded sanctions for those who breach the ICHS or CHMP.
21. Arrow accepts that there is a requirement for a formal cultural heritage induction process that makes reasonable provision for all Project personnel to be made aware of the cultural heritage values associated with the Project, and of their responsibilities under terms of the ICHS or CHMP

Section 25 Indigenous Cultural Heritage

and subsidiary agreements and that Arrow ensures that, wherever possible, Aboriginal ILUA or endorsed parties or their nominees should assist in the development of, and participate in, any cultural heritage induction process and that this will include a component on cultural awareness.

22. Provision will be made in the ICHS or CHMP for review or variations if there is variation of any of the existing Project components or if additional Project elements emerge that were not anticipated in the original Project concept.

23. Provision will be made in the ICHS or CHMP to allow parties have a right to review and vary provisions of the ICHS or CHMP at regular intervals (probably on an annual basis) for the duration of the ICHS or CHMP or if particular issues arise at any time.

25.6.1 Limitations

The application of the CHMP's will avoid impacts on, or reduce the likelihood or consequence of, known and unknown Indigenous cultural heritage sites. In both instances, it is noted that estimating residual impacts is limited by the following:

- The environment is difficult to define. The baseline data set is not sufficiently described to completely define the number of all sites, all their location and all associated values. This is a reflection of the fact that the study area has not been subject to a comprehensive and systematic survey yet.
- Determining the critical threshold of environmental values is ambiguous and complex. There is no set of quantitative measurements that delineate what level of loss is acceptable or unacceptable. Further, heritage places typically have a number of stakeholders (i.e. Aboriginal community, archaeological community, statutory body) whom may delineate these measures differently for different places.
- Finally, for Aboriginal people, the cultural landscape is continuously coming into being. New phenomena are experienced, new things encountered, and these are then incorporated in the cultural landscape. As a result, establishing quantitative thresholds against which we can measure the acceptability of a loss becomes increasingly difficult. Aboriginal people are in the best position to make these determinations and assessments, which is the principle of Arrow's CHIMS, which mitigates these limitations,

25.7 Residual Impacts

25.7.1 Unknown Indigenous Sites

Where clearing and ground disturbance works are proposed, the proactive implementation of the cultural heritage arrangements within the ILUA or CHMP will lower the potential for accidental disturbance to previously unknown sites. Given the proactive assessment, the potential for accidental direct destruction, damage or disturbance to previously unknown sites associated with planned activities is unlikely. Where disturbance is necessary, it will be conducted in accordance with the CHMP that will have been agreed with the Aboriginal parties; therefore, if accidental disturbance were to occur, the consequence will be serious and include public concern.

Section 25 Indigenous Cultural Heritage

As initial cultural heritage assessments will be undertaken only on the surface, there is potential for Project activities to impact upon artefacts or skeletal remains buried beneath the surface. However, due to the existing disturbance within the Project area, these finds are expected to be unlikely. The extent of impact will depend on whether the Indigenous cultural heritage site is identified before coming into contact with machinery. In the event that contact with machinery does occur, Arrow's actions will be in accordance with the cultural heritage arrangements under the ILUA or approved CHMP that will have been agreed with the Aboriginal parties. Based on compliance with these arrangements, the impact to the local community will be serious due to a reduction in the value of the artefact or skeletal remains.

25.7.2 Known Indigenous Sites

Where location details are available, known cultural heritage sites will be stored in Arrow's GIS for planning purposes. Known Indigenous sites will be avoided, where practicable, through the application of site selection procedures. Where development occurs in the vicinity of known Indigenous cultural heritage sites, mitigation measures such as flagging of agreed buffer zones around sites will be implemented to ensure that accidental destruction, damage or disturbance of objects of physical heritage in the landscape does not occur. Similarly, agreement of the buffer zones around sites of known Indigenous cultural value will ensure that encroachment upon these places will be avoided. Where it is not physically possible to avoid Indigenous cultural heritage, it is intended that disturbance that is necessary will be conducted in accordance with the agreements with the Aboriginal ILUA or endorsed parties. Given the application of mitigation measures, it is unlikely that Project activities will adversely affect the value of the sites. If sites are disturbed or destroyed (in an uncontrolled manner) the consequence would be major. This produces a medium residual impact.

25.8 Conclusion

Arrow fully appreciates that the management of Indigenous cultural heritage is an issue that requires ongoing management throughout the course of implementing the Project. Arrow anticipates that most Aboriginal ILUA or endorsed parties have a desire to exercise a primary role in the management of this heritage. Arrow is determined to give this desire the greatest expression in its management process.

The following can be concluded from the analyses undertaken to this point:

- The data and information that have been used in the preceding description of the Aboriginal cultural heritage landscape cannot be construed as definitive. They certainly are not of an order whereby a firm opinion as to how proposed development activities within the study area should be modified at this stage of Project development. This is simply a result of the inherent limitations of this data.
- There are clearly a large number of significant Aboriginal areas and objects that are both scientifically and culturally significant in the study area. It is therefore a reasonable prospect that additional Aboriginal cultural heritage will be found.

Section 25 Indigenous Cultural Heritage

- The specific locations for development activities proposed to occur within the study area are not known at this time. Given that these specific locations are, to a degree, flexible, opportunities exist for their establishment in such a way as to avoid impacts upon Indigenous cultural heritage.

Taking note of this, Arrow intends to take the following actions:

1. Initiate an ongoing process of engagement to settle outstanding formal cultural heritage agreements of the types specified in Part 7 of the ACH Act with the Aboriginal parties, these being either an ILUA or an approved CHMP;
2. Move to conduct a comprehensive Indigenous Cultural Heritage Assessment (ICHA) for the study area, noting that this will be staged in line with proposed development schedule, with these to be undertaken with the direct input of the relevant Aboriginal ILUA or endorsed parties;
3. Based on the results of the ICHA, Arrow will, in collaboration with the Aboriginal ILUA or endorsed parties, develop a comprehensive program for the management of all significant Aboriginal areas and objects to be affected by the Project. This will cover any management actions required in advance of the commencement of construction, measures to be implemented during construction, and measures deemed appropriate once construction has been completed and for the life of the Project; and
4. Arrow also has commissioned high order constraints papers from Aboriginal ILUA or endorsed parties to identify places of outstanding Aboriginal cultural heritage significance of which Arrow should be immediately aware so that it can design its operations to give effect to the Avoidance Principle as enunciated in the ACH Act.