CULTURAL HERITAGE REPORT FOR THE ARROW BOWEN PIPELINE PROJECT INITIAL ADVISE STATEMENT

1. INTRODUCTION

Arrow Bowen Pipeline Pty Ltd (hereafter Arrow) is preparing an Initial Advise Statement (IAS) with regard to the proposed construction of a gas transmission line to link gas fields in the Bowen Basin with both Gladstone and other existing gas pipeline infrastructure such as the North Queensland Gas Pipeline. This project is known as the Arrow Bowen Pipeline (ABP).

The location and elements of ABP are depicted in Figure 1. With a mainline and several laterals, the ABP is approximately 620km in length. Commencing about 20km northwest of Glendon, Central Queensland (the Newlands mining area), the mainline runs in a generally southeasterly direction. Traversing southeast to Rockhampton (and running between Gracemere and Kabra) the ABP then runs to an area 9km southeast of Mt Larcom. The main line is almost 490km in length and has been designated as the 'Mainline to Bruce Highway' alignment. From this point, the route travels in a generally easterly direction a final 16km terminating 6km to the northwest of Gladstone, Central Queensland. This is known as the 'Mainline from Bruce Highway' alignment.

In the north around the Isaac River and west from the mainline, two connections with the NQGP (referred to as the 'Red Hill' and 'Goonyella' laterals) are proposed. These are both around 20km each in length. In the same area but to the northeast of the mainline a further connection (referred to as the 'Elphinstone Header') extends an additional 52km to the north. Further to the south in the Dysart area, are a further two proposed lateral pipelines (referred to as the 'Saraji' and 'Dysart' laterals) both extend westerly from the mainline some 13km and 12km respectively.

This report has been prepared by Central Queensland Cultural Heritage Management Pty Ltd (CQCHM) and provides an overview of the cultural landscape of the proposed Project area and preliminary constraints analysis based on the results of a variety of cultural heritage databases, lists and register searches. It also sets forth the processes with respect to cultural heritage that will be initiated in relation to the ABP.

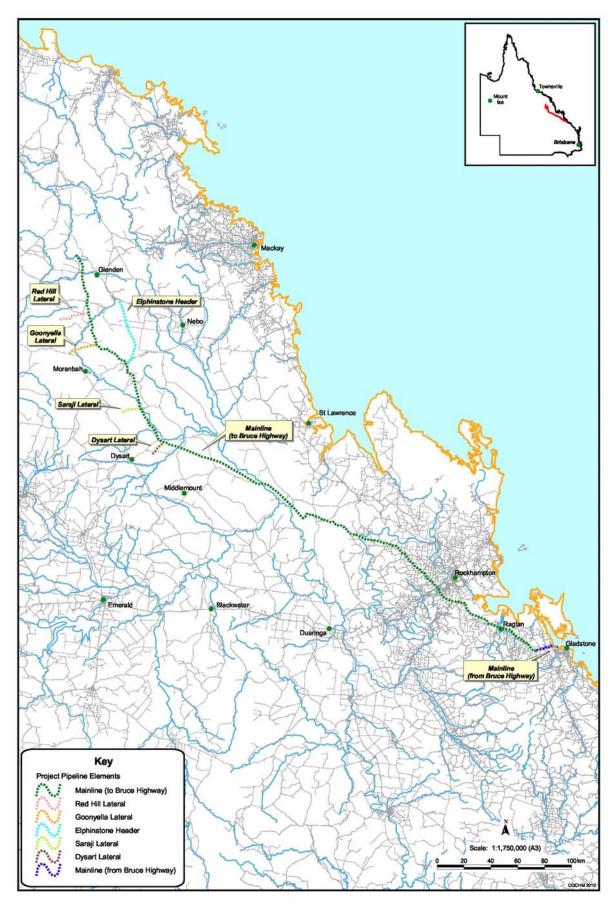


Figure 1: General location and elements of the Arrow Bowen Pipeline Project.

2. ABORIGINAL CULTURAL HERITAGE

2.1 Legislative Background and Management Strategy

A range of Commonwealth and State legislation exists to provide protection for Aboriginal cultural heritage (both Aboriginal and non-Indigenous). These include: the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (ATSIHP Act) (Commonwealth); and Queensland *Aboriginal Cultural Heritage Act 2003* (ACH Act) (State). The information provided within this report has been prepared with these in mind.

The dominant piece of legislation relating to Aboriginal cultural heritage in Queensland is the ACH Act. This legislation has been in place since April, 2004. This is a significant matter when reviewing engagement in the context of cultural heritage (see further below). At this point two particular questions will be explored:

- With whom is it necessary to engage?; and
- By what means will ABP meet its legislative obligations in relation to cultural heritage?

The ACH Act 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 claimants; claimants who were registered as of April 2004 but whose claims have subsequently failed are also Aboriginal Parties until such time as another claim is registered over the area, and noting that recent amendments establish the principle of 'last man standing' obviating any possibility of competing interests in this circumstance. If there are no persons meeting these categories then any person claims to meet the criteria specified in s35(7) of the ACH Act is an Aboriginal Party in the absence of any of the above categories.

Flowing on from this the ACH Act specifies that where a Cultural Heritage Management Plan (CHMP) is required, the CHMP must be developed with those Aboriginal Parties who nominate for the status of Endorsed Parties. This is done through a process of notification and response, the conditions of which are stipulated in the ACH Act. Arrow will, as and when necessary, take the necessary steps to notify and endorse the appropriate Aboriginal Parties for this purpose.

The ACH Act operates on the basis of a duty of care owed by development proponents and others to Aboriginal cultural heritage. The duty of care can be met in a variety of ways. However, where an EIS is a mandatory requirement for a license etc to operate a project or its necessary to comply with a limited range of regulatory processes (see ss87-89) then it is essential to develop a Cultural Heritage Management Plan (CHMP) under Part 7. The only caveat to this is that s86 allows the duty of care to

be met by settlement of a native title agreement of a specified form, being an ILUA, s31 agreement or by use of the Native Title Protection Conditions.

Failure to comply with the duty of care can result in a charge of 'Harm' being made against a project sponsor. Substantial fines can be levied where a party, individual or corporation, is found guilty of harming Aboriginal cultural heritage. Stop orders and injunctions can be sought against the project where there is a risk of harming Aboriginal cultural without complying with the duty of care. Arrow is aware that it is required to comply with the cultural heritage duty of care. It is also aware that to do so it must address this issue by one of the means specified in s23 of the ACH Act.

An EIS is required for this project. In these circumstances, there are two possible options available to Arrow to meet the Duty of Care as set out in the ACH Act:

- CHMP (mandatory)
- ILUA that does not exclude cultural heritage

It will be necessary to attempt to settle ILUAs with each of the Aboriginal Parties along the route of the mainline and laterals. Because of this, the option of using a native title agreement in place of a CHMP will be available. It is intended to make use of this option. Arrow is aware, however, that there are several hurdles to be overcome in making use of a native title agreement to manage cultural heritage issues. These are: the Aboriginal Party may be averse to this option; the ILUA may not be authorised; the ILUA may not be registered. In such circumstances, the duty of care would not be met and thus Arrow would be non-compliant and in breach with the ACH Act. Consequently, Arrow will first consult with the Aboriginal Party to determine interest in use of a native title agreement. If they are not supportive of this a CHMP will be settled. Where there is support, Arrow will adopt a dual approach that allows the development of both a CHMP and an ILUA that includes measures to manage cultural heritage, with the measures specified in each being identical. In this, even if the ILUA was not authorised or registered, Arrow would still be compliant with the ACH Act. Any CHMP settled in these circumstances would include a clause noting that it is subsidiary to an ILUA that includes cultural heritage measures and falls away once the ILUA is registered.

Arrow's preferred option is to settle agreements either as CHMPs or as ILUAs that include provisions for the management of Aboriginal cultural heritage. Arrow's preferred model is to develop what can be termed process agreements. As well as settling various general principles such as rights and responsibilities of parties to the agreement, ownership of cultural heritage, mechanisms for dispute resolution, and 'boilerplate' conditions, the agreements will stipulate the processes that will be adopted at each stage of the exercise: initial cultural heritage assessment (commonly called a survey)

but really needing to consider issues beyond a simple field inspection given the definition of cultural heritage in the ACH Act), agreement of necessary management measures; implementation of management measures prior to and during construction; post-construction requirements (if any).

It should be noted, however, that Arrow reserves to itself the full suite of options available to it under Part 7 of the ACH Act. It may, therefore, choose to adopt one option over another for various reasons. These will include compliance with general project timeframes, Arrow's assessment of the likelihood of securing a registered ILUA, and the general attitude of any Aboriginal Party to settling any particular form of agreement in a timely fashion. Ultimately, this may see a CHMP being referred to a court of suitable jurisdiction for approval of the CHMP without the agreement of the Endorsed Parties.

2.2 Aboriginal Parties

A range of searches of the register of native title claims maintained by the National Native Title Tribunal (NNTT) have been made for the purposes of identifying Aboriginal Parties. Various forms of data have been used including:

- Digital data of the native title claim boundaries as of April 2004 (the date of implementation of the ACH Act, and the relevant date for determining native title Aboriginal Parties), and, to the extent available, at roughly six monthly intervals thereafter until and including the most recent data set available at the time of preparing this report;
- Hard copy extracts of each native title claim identified for the ABP area from the above analysis;
- Review of published native title claim maps on the National Native Title Tribunal (NNTT) web site and information provided by relevant claim officers in the NNTT to ensure that no new claims have been excluded from the analysis.

This data has been used to determine which groups constitute the Aboriginal Parties for cultural heritage issues associated with the proposed Project and how much of it lies within their claim area. Figure 2 and Table 1 provides the outcomes of this analysis.

On the basis of criteria specified in ss34 and 25 of the ACHA, the following currently registered native title claims (in alphabetic order) have standing as exclusive Aboriginal Parties for that portion of the ABP that falls within their claim boundaries:

- Barada Barna (QC08/11, QUD380/08)
- Birri (QC98/12, QUD6244/98)
- Darumbal People (QC97/21, QUD6131/98)

- Darumbal #2 (QC99/1, QUD6001/99)
- Jangga (QC98/10, QG6230/98)
- Port Curtis Coral Coast (QC01/29, QUD6026/01)
- Wiri People Core Country Claim (QC06/14, QUD372/06)

It should be noted that they hold exclusive status notwithstanding the presence of any unregistered claim, irrespective of whether that claim was registered as of April 2004 or not. This extends over approximately 86% of the main line and laterals.

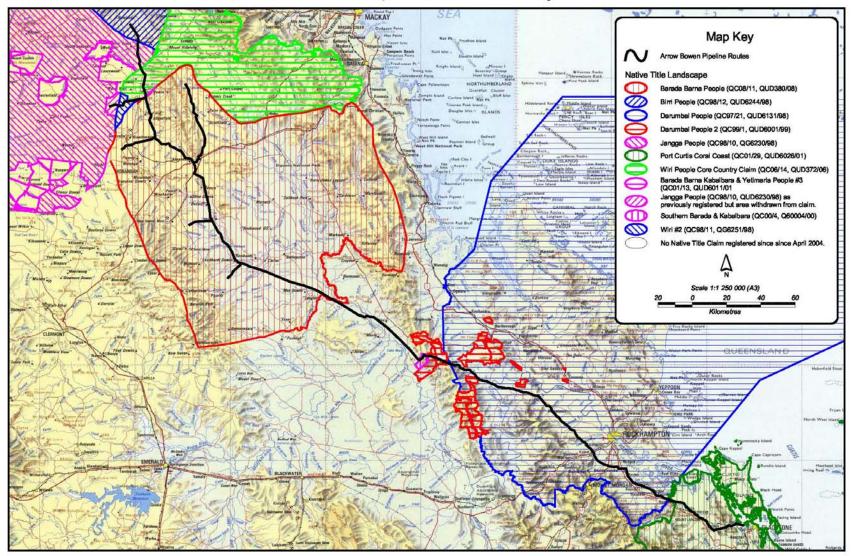
The following also have the status of exclusive Aboriginal Parties for that portion of the ABP that lies within their now unregistered claim but which does not overlap with any currently registered claim, with approximately 3.5% of the route falls into this category of Aboriginal Party:

- Jangga People (QC98/10, QUD6230/98) as previously registered but area withdrawn from claim
- Southern Barada & Kabalbara (QC00/4, Q60004/00)
- Wiri #2 (QC98/11, QG6251/98)
- Barada Barna Kabalbara & Yetimarla People (QC01/13, QUD6011/01)

The Jangga claim originally covered a slightly larger area in the past but was subsequently reduced in size. A small section of a lateral line extends across the now unclaimed area. However, no other claim has since been registered and that area was covered by the claim as of April 2004, making the Jangga People the Aboriginal Party for that area.

Barada Barna Kabalbara and Yetimarla People claim overlaps with a section of the Wiri #2 claim. The extracts for these claims indicate that the Barada Barna Kabalbara &Yetimarla People's claim was registered as of 12 January 2009 while the Wiri #2 claim was last registered as of 24 May 2007. In accordance with the principle of 'last man standing' the Barada Barna Kabalbara &Yetimarla People constitute the Aboriginal Party for that section of the mainline, being just less than 1km in length.

There is one section of the ABP where no native title claim is or ever has been registered. This extends for a distance of 63.4kms or just over 10% of the proposed route.



Arrow Bowen Pipeline Native Title Analysis

Figure 2:Aboriginal Parties for the ABP

Table 1:Native Title Claim analysis

Native Title Claim Group and number	Status of Claim	Main Line (to Bruce Highway) (km)	Main Line (from Bruce Highway) (km)	Dysart Lateral (km)	Elphinstone Header (km)	Goonyella Lateral (km)	Red Hill Lateral (km)	Saraji Lateral (km)	Total Pipeline/Group (km)
Barada Barna People (QC08/11, QUD380/08)	Registered	173.94	0.00	11.77	51.99	20.37	2.24	13.40	273.71
Birri People (QC98/12, QUD6244/98)	Registered	11.48	0.00	0.00	0.00	0.00	0.00	0.00	11.48
Darumbal People (QC97/21, QUD6131/98)	Registered	153.17	0.00	0.00	0.00	0.00	0.00	0.00	153.17
Darumbal People 2 (QC99/1, QUD6001/99)	Registered	12.04	0.00	0.00	0.00	0.00	0.00	0.00	12.04
Jangga People (QC98/10, QG6230/98) current claim	Registered	15.96	0.00	0.00	0.00	0.00		0.00	15.96
Port Curtis Coral Coast (QC01/29, QUD6026/01)	Registered	32.29	15.56	0.00	0.00	0.00	0.00	0.00	47.85
Wiri People Core Country Claim (QC06/14, QUD372/06)	Registered	16.84	0.00	0.00	0.00	0.00	2.00	0.00	18.84
									533.05
Jangga People (QC98/10, QUD6230/98) as previously registered but area withdrawn from claim	Unregistered		0.00	0.00	0.00	0.00	5.20	0.00	5.20
Southern Barada & Kabalbara (QC00/4, Q60004/00)	Unregistered	6.80	0.00	0.00	0.00	0.00	0.00	0.00	6.80
Wiri #2 (QC98/11, QG6251/98)	Unregistered		0.00	0.00	0.00	0.00	12.36	0.00	12.36
Barada Barna Kabalbara &Yetimarla People (QC01/13, QUD6011/01)	Unregistered	0.99							0.99
									20.15
Areas with no Native Title Claim registered since April 2004		63.09	0.30	0.00	0.00	0.00	0.00	0.00	63.39
			1	1	1	ı	1	I	63.39
Pipeline Route Total Lengths (km)		486.60	15.86	11.77	51.99	20.37	21.80	13.40	621.79

2.3 Preliminary Constraints Analysis

Searches of a series of databases, lists and registers maintained by both State and Commonwealth agencies were undertaken with respect to known Aboriginal cultural heritage areas and objects that may intersect with or be within defined proximity of the ABP. In affecting this, a 5,000m buffer was placed around the proposed centreline alignment of the pipeline (including its laterals and mainline options). It should be noted that the location of the project elements was refined after the search responses were received and, for some of these, there was not time available to have the responsible agency rerun these requests with the updated Project alignments. But this issue was obviated using means explained below.

With the Commonwealth datasets being available on an Australia-wide basis and able to be rerun at any stage, this situation specifically applies to the Indigenous Cultural Heritage Register and Database (ICHR&D), Queensland Heritage Register (QHR) and Cultural Heritage Information Management System (CHIMS) (these last two largely relating to places of historic heritage), which are all administered by the Queensland Department of Environment & Resource Management (DERM).

It was ascertained that with the exception of around 30km of the Mainline to Bruce Highway alignment in the Rockhampton-Bouldercombe area, a reduced 1,000m buffer (i.e. a 2km wide corridor) of the revised Project alignment would be contained entirely within the original search buffer. As a result this subset has been used as the basis of analyses undertaken of these datasets.

A new 5,000m buffer of the revised Project was able to be utilised in the case of the Commonwealth lists and registers (see Section 4 below).

2.3.1 Indigenous Cultural Heritage Register and Database

The ICHR&D are the principle sources of Indigenous cultural heritage located across Queensland and have been established under provisions of the ACH Act. The initial search returned some 699 individual entries for Aboriginal cultural heritage areas or objects that have previously been recorded within the 5,000m buffer search area.

The results of this search, as provided by DERM, contains only minimal information regarding each of the registered places: listing only the State identification number (ID), the place-type in a broad classificatory sense, date recorded, locational information, and details regarding the Aboriginal Party for each place. Where any other additional information has been available from other sources regarding these places, this has been included within the tables and/or discussed within the text of this section.

A closer examination of the search result data indicated that, particularly in recent years, multiple records are present for the same place (based on the State ID field). In these cases they presumably represent a series of points that describe in some measure the extent of the place. When this is taken into account, the total number of places containing Aboriginal cultural heritage areas or objects present on the ICHR&D within the buffer search area is reduced to 484. For the analyses of proximity numbers of place-types provided below (Table 2) this reduced list has been utilised, while other proximity analyses (based on the 1,000m buffer) have utilised the full search results database (i.e. 699 entries).

Table 2:	Indigenous cultural heritage place types found within the original 5,000m search buffer of
	the ABP.

Place Type	Total	%
Burial / Contact / Massacre	1	0.2
Contact / Camp	1	0.2
Cultural Place	1	0.2
Hearth	1	0.2
Landscape Feature	2	0.4
Quarry	4	0.8
Resource Place	1	0.2
Scarred Tree	58	12.0
Scarred Tree / Landscape Feature	1	0.2
Shell Midden	2	0.4
Stone Arrangement	1	0.2
Stone Artefact/s	385	79.5
Stone Artefact/s / Contact	1	0.2
Stone Artefact/s / Cultural Place	1	0.2
Stone Artefact/s / Excavation	7	1.4
Stone Artefact/s / Hearth	5	1.0
Stone Artefact/s / Hearth / Camp	2	0.4
Stone Artefact/s / Quarry	3	0.6
Stone Artefact/s / Scarred Tree	3	0.6
Stone Artefact/s/ Shell Midden	3	0.6
Stone Artefact/s / Well	1	0.2
Total	484	

The distribution of these places is heavily skewed towards the portion of the ABP north from the Moranbah area, which accounts for 600 (86%) of the currently entries on the ICHR&D. This area has seen by far the greatest number and scale of development projects including open cut coal mining, potential mining areas, extensive gas fields, and a variety of supporting infrastructure such as roads, rail & powerlines. Intensive cultural heritage assessments have been undertaken in association with these projects from which a great range of places have been identified.

A diverse range of Aboriginal place-types have been identified from previous cultural heritage investigations undertaken in proximity to the ABP. This includes a number - including a burial, hearths, a well, places associated with the contact period, a stone arrangement & shell middens - that can be considered uncommon and/or rare. The general percentages that these comprise of the total

numbers, notably the predominance of places containing stone artefacts and/or relating to stone artefact manufacture, is highly consistent with both region-wide and catchment trends (L'Oste-Brown et. al. 1998:360-390).

However only eleven of these total 21 place-types have been identified as being present within 1,000m of the pipeline centrelines as most recently proposed (noting the section that falls outside of the original search buffer) (Table 3). Despite this, the range of place-types present speaks of a rich and diverse cultural landscape with elements of the pre and post-contact periods.

With the exception of a contact / camp (ICHR&D ID: JH:J08) relating to Leichhardt's February 1845 travels along the Isaac River (referred to as his 'Thunderstorm Waterhole Camp'), and subsurface stone artefacts found as a result of a test pitting program (HF:D90) the only other place-types located within the 0-500m proximity buffers, consist of stone artefacts (66.7%) and scarred trees (27%).

With the inclusion of multiple records for single State IDs, 98 individual entries were found to be located within the 1,000 buffer of the revised Project elements. Of these 6 were noted as being present across more than one Project element (Table 4). Notable exceptions to this are the Dysart and Saraji laterals (which contain no currently identified cultural heritage places), while the lake Elphinstone header has only four places along its length. It is viewed that these results reflect more a lack of comprehensive and systematic cultural heritage investigations within these areas rather than any true statement regarding cultural heritage which may be present in these areas. Further review of the places identified as being within the 0-100m proximity buffer observed that in fact all of these are located within a 50m buffer of the pipeline centrelines as currently proposed (i.e. a 100m wide corridor), and as such would seem to have a high likelihood of being impacted by the ABP if it were to proceed as currently conceived. These consist of four areas which contain stone artefact/s and four scarred trees. Further details of these places are provided in Table 5. It should be noted, however, that although previously identified and recorded on the ICHR&D, this data source does not contain any information regarding the current status of these places. With the majority of Aboriginal cultural heritage places included on the ICHR&D originating from surveys undertaken as part of development-related projects, it is unclear which, if any, of these places may still be extant.

The location of these places (which are labelled) along with all others identified from the results of the ICHR&D search is depicted on Figure 3. Further details of those places identified as being within the 1,000m buffer of the revised pipeline alignments are included in Attachment 1.

Place Type	0-100m	%	100-250m	%	250-500m	%	500-1000m	%	Total	%
Contact / Camp	-	-	1	25	-	-	-	-	1	1.3
Cultural Place	-	-	-	-	-	-	1	2.2	1	1.3
Landscape Feature	-	-	-	-	-	-	2	4.3	2	2.5
Quarry	-	-	-	-	-	-	1	2.2	1	1.3
Resource Place	-	-	-	-	-	-	1	2.2	1	1.3
Scarred Tree	4	50	-	-	5	23.8	7	15.2	16	20.3
Scarred Tree / Landscape Feature	-	-	-	-	-	-	1	2.2	1	1.3
Stone Artefact/s	4	50	3	75	15	71.4	31	67.4	53	67.1
Stone Artefact/s / Excavation	-	-	-	-	1	4.8	-	-	1	1.3
Stone Artefact/s / Hearth	-	-	-	-	-	-	1	2.2	1	1.3
Stone Artefact/s / Well	-	-	-	-	-	-	1	2.2	1	1.3
Total	8		4		21		46		79	

 Table 3:
 Indigenous cultural heritage place types by proximity classes to the revised pipeline centrelines from the ICHR&D search.

Table 4: ICHR&D entries within the 0-1,000m proximity class for the various elements of the ABP.

		Project Element						
Place Type	Mainline (to Bruce Hwy)	Red Hill Lateral	Goonyella Lateral	Elphinstone Header	Saraji Lateral	Dysart Lateral	Mainline (from Bruce Hwy)	Total
Contact / Camp	-	-	1		-	-	-	1
Cultural Place	1	-	-		-	-	-	1
Landscape Feature	2	-	-		-	-	-	2
Quarry	-	-	-	1	-	-	-	1
Resource Place	1	-	-		-	-	-	1
Scarred Tree	13*	-	1	2*	-	-	1	17*
Scarred Tree / Landscape Feature	1	-	-		-	-	-	1
Stone Artefact/s	41*	10	22*		-	-	3	76*
Stone Artefact/s / Excavation	2	-	-		-	-	-	2
Stone Artefact/s / Hearth	1	-	-		-	-	-	1
Stone Artefact/s / Well	1	-	-		-	-	-	1
Total	63	10	24	3	0	0	4	104

(* has place/s associated with more than one element)

State ID	Place-Type	Project Element	Notes	Date Recorded
GH:F93	Stone Artefact/s	Red Hill Lateral	-	May 1996
GH:G88	Stone Artefact/s	Mainline (to Bruce Highway)	Single artefact	July 2000
GH:G96	Scarred Tree	Elphinstone Header & Mainline (to Bruce Highway)	-	July 2000
GH:I91	Scarred Tree	Mainline (to Bruce Highway)	-	January 2002
GH:J57	Stone Artefact/s	Goonyella Lateral	-	October 2003
JF:C68	Scarred Tree	Mainline (from Bruce Highway)		February 1999
JF:C71	Stone Artefact/s	Mainline (from Bruce Highway)	-	March 1998
JF:D51	Scarred Tree	Mainline (to Bruce Highway)	-	November 2001

 Table 5:
 Details of Indigenous cultural heritage places located within 50m of the pipeline centrelines

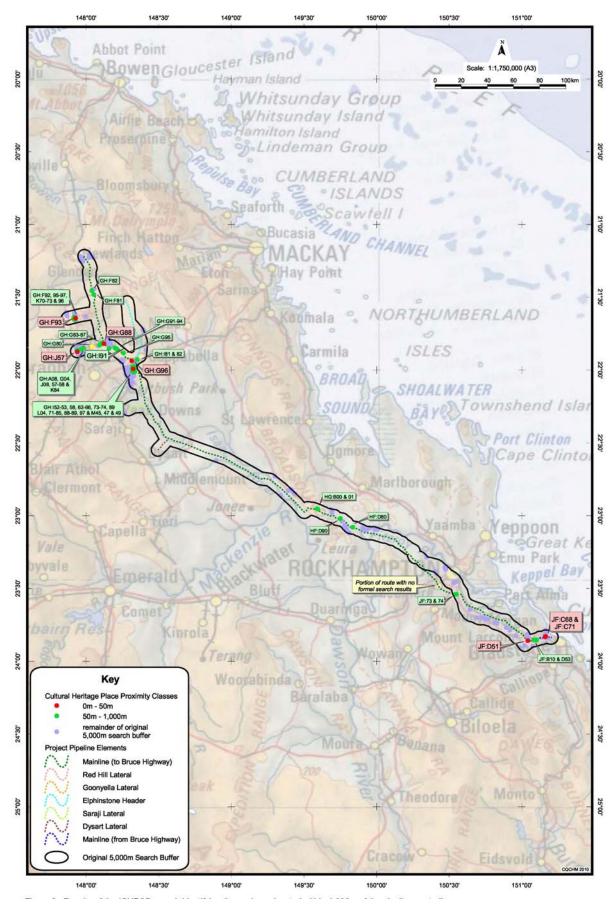


Figure 3: Results of the ICHR&D search identifying those places located within 1,000m of the pipeline centrelines.

2.3.2 Cultural Heritage Work in Arrow's Gas Tenements at the Northern End of the ABP

Woora Consulting Pty Ltd has been undertaking cultural heritage investigations across Arrow's gas field tenements in the Moranbah area for a considerable period. In that time they have maintained a database of capturing the results of that work which they have recently provided to Arrow. This has information regarding 192 Aboriginal cultural heritage places and has also been reviewed here. It should be noted that this dataset contains no datum and projection information and the results presented here should be viewed in this light. Despite this however, a review of the data it contains against a range of other base datasets (e.g. roads and waterways), along with comments internal to it, have lead to the conclusion that it is most likely in MGA Zone 55, GDA96.

Consistent with the results of the ICHR&D presented above, the results of this work is overwhelmingly dominated by places containing stone artefacts accounting for almost 80% of the total (Table 6). The dominant form of these is as isolated stone artefact/s (generally less than 3 in number) although a considerable number of what have been described as 'low density background scatters' have also been identified. Scarred trees being recorded in number is also highly consistent with the results of previous analyses of Aboriginal cultural heritage data for the region generally, but also for areas that are immediately proximal to the ABP (see 2.3.1 above), and particular.

Of particular note, however, is the identification of a large number of what are described as 'Natural Features' within the Woora database. A more detailed review of these indicates that to date these have consisted of examples or large and/or old trees. Several species are regularly identified in this way and include poplar box, bloodwood, blackbutt, bendee and an example of bauhinia scrub.

Only one of these places was determined to be located within the 1km buffer (i.e. a 2km corridor) of the ABP centrelines. As described, this place consisted of a single silcrete scraper. Although the grid references for this placed it some 170m to the west of the Elphinstone Header element of the ABP (Figure 4), it has also been noted that this has been relocated to another, currently unknown, location. With this area containing a range of work done in close proximity to Teviot Brook (a tributary of the Isaac River), several fragments of grindstone have been identified.

Extending out to the 1,000m - 5,000m proximity buffer, an additional eight cultural heritage places have been identified. Again, these are dominated by areas containing low density stone artefact scatters (in all cases containing less than eight artefacts at each). The only other place-type is a box tree that has a single scar measuring 165cm long and 21cm wide (Figure 4; Attachment 1).

Table 6:Summary of Indigenous cultural heritage place types as identified from Woora's work on
Arrow tenements in the Moranbah area.

Place Type	Total	%
Isolated Stone Artefact/s	78	40.6
Knapping Floor	2	1.0
Natural Feature/s	27	14.1
Scarred Tree	12	6.3
Stone Artefact Scatters (Low Density)	72	37.5
Stone Artefact Scatters (Medium Density)	1	0.5
Total	192	

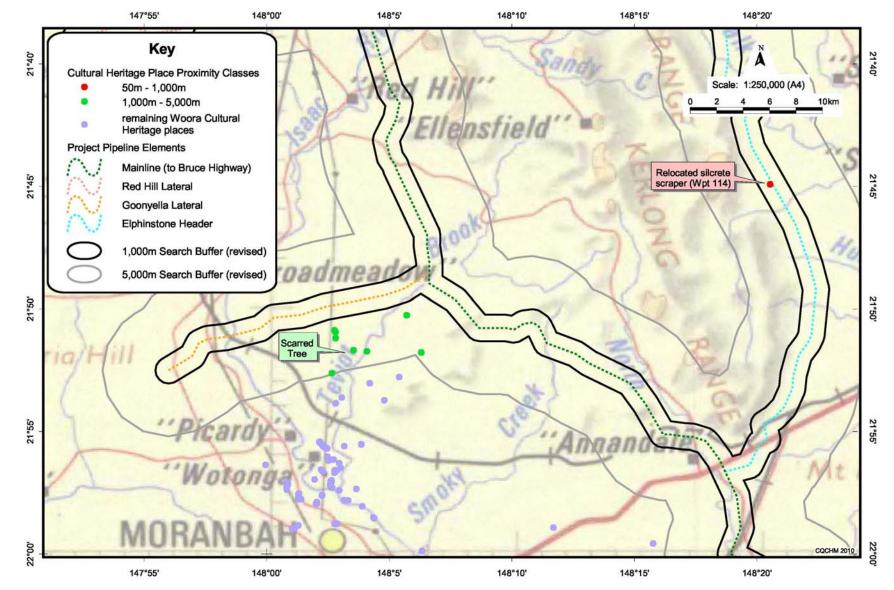


Figure 4: Woora Consulting Cultural Heritage Places and their relationship to elements of ABP.

2.3.3 Known Cultural Heritage Information Regarding the Section of the ABP outside the Original 5,000m Search Area – the Kabra Realignment

Some information is available regarding the Aboriginal cultural heritage values of that portion of the revised Project that fell outside of the original 5,000m buffer area submitted as part of the agency searches (referred to in this section as the 'Kabra realignment') from a range of other data sources. It is fortunate that a cultural heritage assessment and management program undertaken by the Darumbal People for a powerline between Bouldercombe and Pandoin (to the north of Rockhampton) in 2008 included a considerable, although thin swathe, portion of this area. Additionally, three other cultural heritage places from earlier work, all of which have been included on the ICHR&D, also fall within this area.

In May 2008, the Darumbal People (Darumbal and CQCHM 2008) undertook a cultural heritage assessment of a 100m corridor along the proposed Pandoin powerline. A total of 77 Aboriginal cultural heritage places were identified along its 36km length. These included 76 areas containing stone artefacts and a single scarred tree. Of these, 40 were identified and recorded along a 14km stretch that traverses the central and southern portions of the Kabra realignment (Figure 5) and lie within the 1km buffer of this section of the ABP. All of these were recorded as isolated stone artefact/s and while 15 of these contained single artefacts at each, the remainder contained 13 or less at each location. These were spread across areas up to 30m in diameter.

The nearest of these to the to the Kabra realignment is a cluster of three places (Pandoin 17-19; see Attachment 1 for additional details) which, at their closest, are at least 250m south of the Mainline centreline as currently proposed. Five unmodified stone artefacts were recorded.

During the conduct of management activities associated with this project, a series of small shovel pits were also dug to test for the possible existence of sub-surface cultural heritage material. This test pitting program was undertaken in an area that had a notable concentration of cultural heritage material which included 11 (Pandoin 20-29 and 77) of the 40 places identified within the Kabra realignment buffer. It is located some 500m to the northeast of the Mainline centreline (see Figure 5). A series of seven 50 by 50cm test pits were excavated to between 160 and 300mm below the ground surface. Two artefacts (unmodified chert flakes) were identified during this work, with both being found immediately below the present ground surface.

While all of these cultural heritage places were mitigated and removed from the powerline project area, the results of this work serves as a fair estimation of the types of cultural heritage places that could be expected to be identified during cultural heritage assessments associated with the ABP.

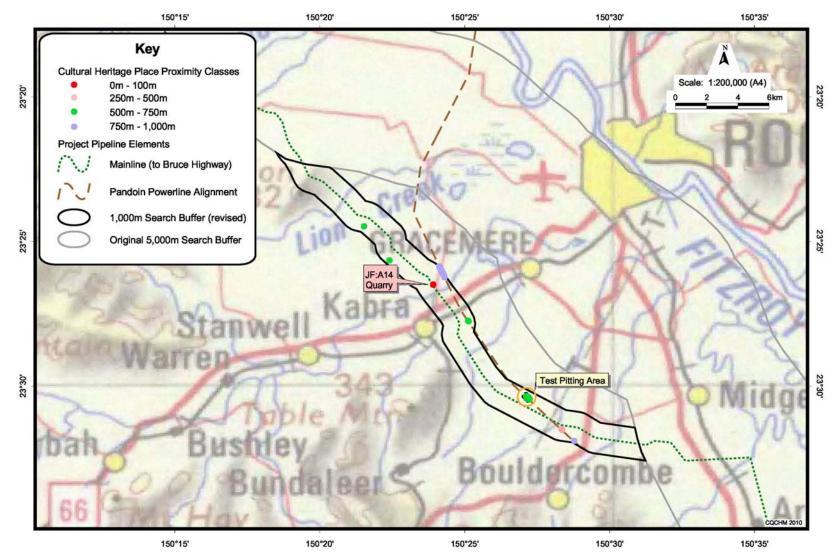


Figure 5: Aboriginal cultural heritage places identified within the Kabra Realignment 1,000m buffer.

Three other cultural heritage places have been identified within the 1km buffer of the Kabra realignment. All of these have been previously identified as being on the ICHR&D. Importantly, all of these are located in the northern portion of the realignment that was not sampled as part of the Pandoin investigations.

In early 1979, Jeff Pratt, a Department of Aboriginal and Islander Affairs ranger based in Rockhampton for a short time, recorded two areas (JF:A10 & JF:A14) that he described as quarries. These were noted as being in close proximity to a newly proposed powerline. While it is somewhat unclear, at least one of these quarries (JF:A14) seemed to cover an area of about 1,600m² and consisted of an outcrop of what he describes as black slate. Slate is generally poor quality for flaking but numerous outcrops of basaltic and andesitic material are common throughout the general area. The available grid reference for this quarry (presumably a centre point), places it around 40m to the northeast of the Mainline alignment and as such likely to be directly impacted by any pipeline corridor through this area.

The remaining two places (JF:D01 & JF:A15) are located some 600m and 700m to the southwest of the Mainline centreline respectively and as such there would seem little chances of impact to them from the ABP as currently proposed. Further details regarding all of these places are provided in Attachment 1.

3. HISTORIC (NON-INDIGENOUS) HERITAGE

3.1 Legislative Background

While at the Commonwealth level the EPBC Act also applies, the principal piece of legislation in Queensland for the consideration of historic heritage is the *Queensland Heritage Act 1992* (QH Act). This legislation protects all those places included on the Queensland Heritage Register (QHR), being those places that have met the criteria specified in the Act for listing. The QH Act also protects archaeological places where there is an expectation of sub-surface material that can provide information regarding the history of Queensland.

3.2 Preliminary Constraints Analysis

A formal search was also undertaken for any places that may be included on the QHR that may be present within the vicinity of the ABP area. Of the 52 places listed within the full 5,000m buffer of the pipeline centrelines, only 1 fell within the 1,000m buffer of the revised pipeline alignments (Figure 6). This is Raglan Homestead (QHR ID: 600389), the closest point of which is located some 160m to the southwest of the Mainline (to Bruce Highway) alignment. As such it would not seem likely that this place would be impacted.

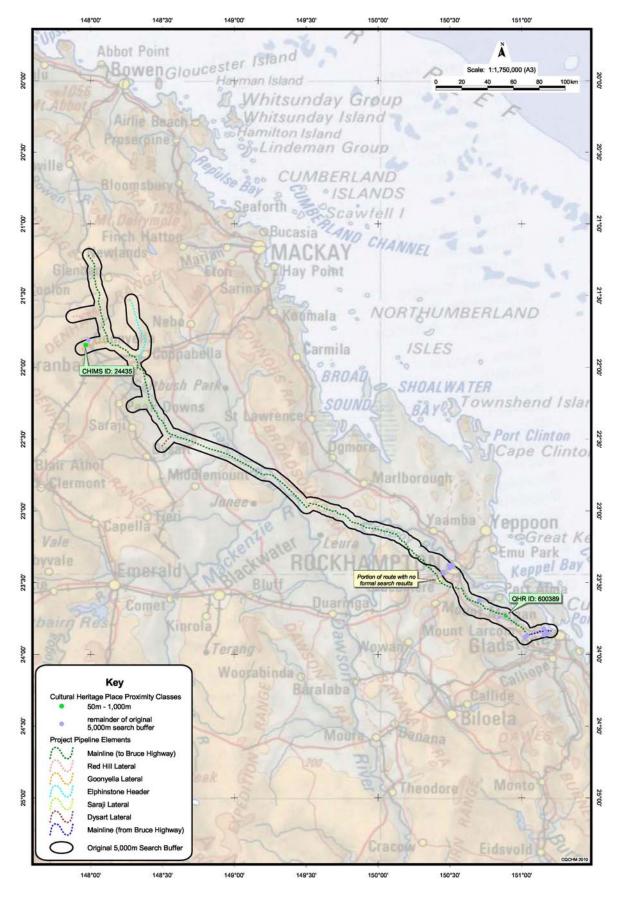


Figure 6: Results of the QHR & CHIMS searches identifying those places located within 1,000m of the pipeline centrelines.

Separate to the QHR, DERM has also compiled a substantial range of information regarding historic heritage places and incorporated this into its Cultural Heritage Information Management System (CHIMS). At the moment this database is largely for information purposes as a summary of reported places and is intended to be used as a source of heritage information to support both possible future listings and to feed into Local Government Authority development control planning schemes. Entries in CHIMS derive from a great variety of sources, but come principally from heritage reports. It has not (at this stage although is proposed) been the subject of a systematic audit and as a result is an incomplete record both of known places and the specific information about places that have been entered.

An additional ten places were returned from the original 5,000m buffer search. Again, only one of these was found to be located within 1,000m of any of the revised pipeline centrelines. This place (CHIMS ID: 24435) is located on the western side of the Isaac River and to the south of Goonyella. It is described as being a portion of the rim of a shepherd's pot. At its closest, the Goonyella lateral passes in excess of 850m to the south of this place. Again, it would seem unlikely that this place would be impacted by the ABP.

As a general point, it should be noted that a number of places within CHIMS do not have any locational attributes that allow for the kind of analysis that has been undertaken within this report. Irrespective, CHIMS listings have no current statutory management requirements.

Places identified as being located within 1,000m of the pipeline centrelines along with all others identified from the results of the QHR & CHIMS searches are depicted on Figure 6. Attachment 1 also contains further details of those places within the 1,000m buffer of the revised pipeline alignments.

4. COMMONWEALTH HERITAGE LIST AND REGISTER SEARCHES

Searches were conducted of a range of other Commonwealth heritage lists and registers regarding identified and inscribed places that may be located within the ABP search area. These searches included the World Heritage List, the Commonwealth Heritage List, the National Heritage List and the Register of the National Estate. Datasets made available through the Heritage Division of the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (previously the Department of Environment, Water, Heritage and the Arts (DEWHA)) were used in this analysis.

In all, 6 places were identified as being located within the ABP search area (i.e. a 5,000m buffer of the revised Project alignments): one each from the World Heritage and National Heritage lists (in both

cases the Great Barrier Reef area); and 4 from the Register of the National Estate. Of these, only one (the Great Barrier Reef Region as registered on the RNE – ID 8320) is located within 1,000m of the currently conceived pipeline centrelines. At its closest, the most recent Mainline (from Bruce Highway) alignment is at least 750m to the south of any portion of this area.

Places identified as being located within the 1,000m buffer of the revised pipeline centrelines are depicted on Figure 7, with further details of all identified within the extended 5,000m buffer available in Attachment 1.

5. MANAGEMENT OF CULTURAL HERITAGE PLACES AND VALUES

5.1 Aboriginal

Arrow will, through its CHMPs or ILUAs, be commissioning comprehensive cultural heritage assessments of the entirety of the final pipeline alignment that constitutes the ABP. Its preferred management strategy will be site avoidance using tactical realignment, with mitigation by relocation an option of last resort. Arrow will also subsequently resource sub-surface investigations involving test pitting and excavation where this is considered appropriate. Monitoring of surface disturbing activities will be countenanced where results of the initial field assessments (including any test pitting and excavations) indicate this is warranted.

5.2 Historic

Arrow will commission an assessment of the historic heritage of the entirety of the pipeline alignment. Where any places containing historic heritage values which have the potential to meet the criteria for listing under the QH Act are identified, the results of this will be discussed with the Heritage Branch, DERM. Again, Arrow's preferred management strategy will be based on site avoidance using tactical realignment, with mitigation by relocation as an option of last resort. Any such management program will be discussed with the Heritage Branch, DERM prior to the commencement of construction activities associated with the ABP.

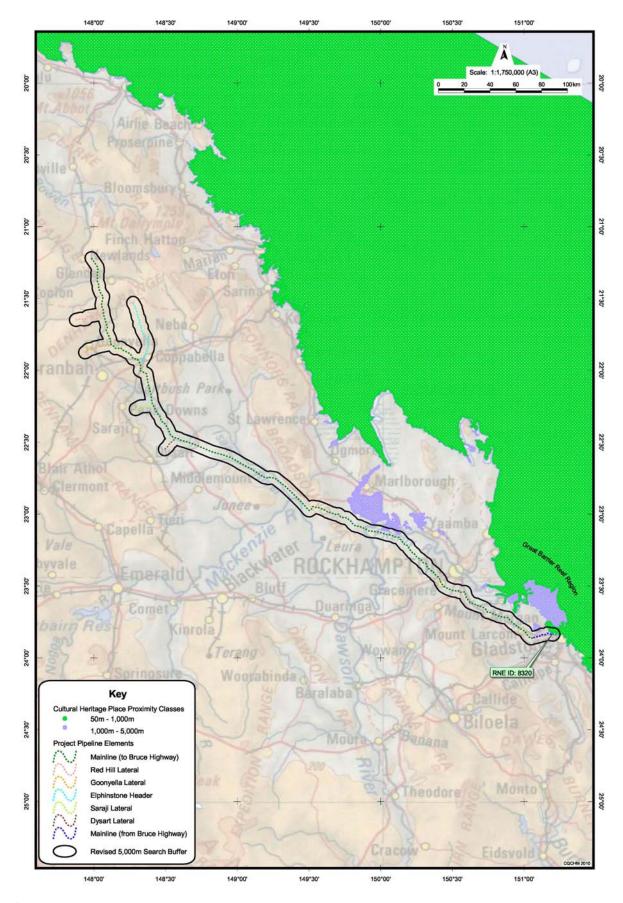


Figure 7: Results of the searches of the Commonwealth list and register searches identifying those places located within 1,000m of the pipeline centrelines.

References

- Darumbal People with the assistance of Central Queensland Cultural Heritage Management. 2008. Cultural Heritage Investigation, Assessment and Management Program of the proposed Bouldercombe to Pandoin Powerline Project, Central Queensland. Report prepared for Powerlink Queensland.
- L'Oste-Brown, S., L. Godwin and C. Porter. 1998. *Towards an Indigenous Social and Cultural Landscape of the Bowen Basin*. Bowen Basin Aboriginal Cultural Heritage Project. Cultural Heritage Monograph Series, Volume 2. Queensland Department of Environment, Brisbane.

ABP Bowen Pipeline Cultural Heritage Report for IAS - 20110107

Attachment 1

Cultural Heritage Search Result Details

Place ID	Place Type	Latitude	Longitude	Proximity Class
GH:A88	Stone Artefact/s	-21.85799	147.96213	250-500m
GH:F63	Stone Artefact/s	-21.85317	148.15157	500-1000m
GH:F63	Stone Artefact/s	-21.85316	148.15167	500-1000m
GH:F81	Stone Artefact/s / Well	-21.48311	148.04853	500-1000m
GH:F82	Resource Place	-21.45532	148.03278	500-1000m
GH:F92	Stone Artefact/s	-21.64366	147.92133	100-250m
GH:F93	Stone Artefact/s	-21.64583	147.92161	0-100m
GH:F95	Stone Artefact/s	-21.64855	147.92093	250-500m
GH:F96	Stone Artefact/s	-21.64988	147.92057	250-500m
GH:F97	Stone Artefact/s	-21.65349	147.92059	500-1000m
GH:G04	Stone Artefact/s	-21.87059	147.93030	500-1000m
GH:G04	Stone Artefact/s	-21.86415	147.93595	500-1000m
GH:G04	Stone Artefact/s	-21.86665	147.93683	500-1000m
GH:G80	Stone Artefact/s	-21.84151	148.03669	500-1000m
GH:G83	Stone Artefact/s	-21.83039	148.08665	500-1000m
GH:G84	Stone Artefact/s	-21.83021	148.08717	500-1000m
GH:G85	Stone Artefact/s	-21.82478	148.09337	500-1000m
GH:G85	Stone Artefact/s	-21.81908	148.10237	250-500m
GH:G87	Stone Artefact/s	-21.81495	148.10741	250-500m
GH:G87	Stone Artefact/s	-21.81426	148.10733	250-500m
GH:G87	Stone Artefact/s	-21.81381	148.10728	250-500m
GH:G87	Stone Artefact/s	-21.81374	148.10723	100-250m
GH:G87	Stone Artefact/s	-21.81328	148.10722	100-250m
GH:G87	Stone Artefact/s	-21.81444	148.10716	250-500m
GH:G87	Stone Artefact/s	-21.81464	148.10700	250-500m
GH:G87	Stone Artefact/s	-21.81380	148.10694	100-250m
GH:G87	Stone Artefact/s	-21.81603	148.10605	250-500m
GH:G87	Stone Artefact/s	-21.81633	148.10578	250-500m
GH:G87	Stone Artefact/s	-21.81657	148.10507	250-500m
GH:G88	Stone Artefact/s	-21.82003	148.11685	0-100m
GH:G91	Stone Artefact/s	-21.84943	148.19394	500-1000m
GH:G92	Stone Artefact/s	-21.85513	148.20298	500-1000m
GH:G93	Stone Artefact/s	-21.86108	148.20958	250-500m
GH:G94	Stone Artefact/s	-21.86193	148.21142	250-500m
GH:G95	Stone Artefact/s	-21.88365	148.25156	250-500m
GH:G96	Scarred Tree	-21.93744	148.30899	0-100m
GH:I52	Scarred Tree	-21.98395	148.32476	250-500m
GH:I53	Scarred Tree	-21.98353	148.32511	250-500m
GH:I58	Scarred Tree	-21.98401	148.31685	500-1000m
GH:I62	Scarred Tree	-21.98942	148.31223	500-1000m
GH:I63	Stone Artefact/s	-21.98923	148.31359	500-1000m
GH:I64	Stone Artefact/s	-21.98879	148.31406	500-1000m
GH:I65	Stone Artefact/s	-21.98880	148.31507	250-500m
GH:I66	Stone Artefact/s	-21.98814	148.31201	500-1000m
GH:I73	Scarred Tree	-21.98035	148.32582	250-500m

Queensland Indigenous Cultural Heritage Register & Database (State) - within 1km

Place ID	Place Type	Latitude	Longitude	Proximity Class
GH:I74	Scarred Tree	-21.97645	148.32752	500-1000m
GH:I81	Scarred Tree	-21.92899	148.34626	500-1000m
GH:I82	Quarry	-21.92897	148.34641	500-1000m
GH:I89	Scarred Tree	-21.99070	148.31600	250-500m
GH:I91	Scarred Tree	-21.99296	148.31799	0-100m
GH:J08	Contact / Camp	-21.84978	147.97563	100-250m
GH:J57	Stone Artefact/s	-21.87499	147.93308	0-100m
GH:J58	Stone Artefact/s	-21.87077	147.93137	500-1000m
GH:K70	Stone Artefact/s	-21.63686	147.91103	500-1000m
GH:K71	Stone Artefact/s	-21.63750	147.91168	500-1000m
GH:K72	Stone Artefact/s	-21.63796	147.91223	500-1000m
GH:K72 GH:K73	Stone Artefact/s	-21.65150	147.91022	500-1000m
GH:K84	Scarred Tree	-21.86910	147.93232	500-1000m
GH:K96	Stone Artefact/s	-21.64171	147.92233	250-500m
GH:L04	Stone Artefact/s / Hearth	-21.97574	148.31513	500-1000m
GH:L04 GH:L71	Stone Artefact/s	-22.00731	148.32354	250-500m
GH:L71 GH:L72	Stone Artefact/s	-22.00731	148.32334	250-500m
GH:L72	Stone Artefact/s	-22.00740	148.32349	250-500m
GH:L72	Stone Artefact/s	-22.00750	148.32345	250-500m
GH:L73	Scarred Tree	-22.00310	148.32728	250-500m
GH:L74	Landscape Feature	-22.00974	148.32093	500-1000m
GH:L75	Stone Artefact/s	-22.01068	148.32074	500-1000m
GH:L76	Stone Artefact/s	-22.01078	148.32076	500-1000m
GH:L77	Stone Artefact/s	-22.01101	148.32074	500-1000m
GH:L78	Stone Artefact/s	-22.01107	148.32074	500-1000m
GH:L79	Stone Artefact/s	-22.01118	148.32025	500-1000m
GH:L79	Stone Artefact/s	-22.01032	148.32051	500-1000m
GH:L80	Landscape Feature	-22.01070	148.32037	500-1000m
GH:L81	Scarred Tree	-22.01016	148.32030	500-1000m
GH:L82	Scarred Tree / Landscape Feature	-22.01212	148.31993	500-1000m
GH:L83	Stone Artefact/s	-22.01164	148.32093	500-1000m
GH:L83	Stone Artefact/s	-22.01157	148.32088	500-1000m
GH:L84	Stone Artefact/s	-22.01115	148.32081	500-1000m
GH:L85	Stone Artefact/s	-22.01177	148.32099	500-1000m
GH:L85	Stone Artefact/s	-22.01173	148.32072	500-1000m
GH:L88	Stone Artefact/s	-22.00738	148.31438	500-1000m
GH:L89	Stone Artefact/s	-22.00802	148.31495	500-1000m
GH:L97	Stone Artefact/s	-22.00820	148.31235	500-1000m
GH:M45	Stone Artefact/s	-22.00825	148.31287	500-1000m
GH:M47	Scarred Tree	-22.00406	148.31162	500-1000m
GH:M49	Stone Artefact/s	-22.01555	148.32617	500-1000m
HF:D80	Stone Artefact/s	-23.07920	149.83022	250-500m
HF:D90	Stone Artefact/s / Excavation	-23.02097	149.74437	250-500m
HF:D90	Stone Artefact/s / Excavation	-23.02041	149.74397	500-1000m
HG:B00	Cultural Place	-22.95309	149.58456	500-1000m
HG:B01	Stone Artefact/s	-22.95543	149.59021	500-1000m
JF:A73	Stone Artefact/s	-23.54141	150.53754	250-500m
JF:A74	Stone Artefact/s	-23.54152	150.54439	100-250m
JF:B10	Stone Artefact/s	-23.85500	151.09538	250-500m
JF:C68	Scarred Tree	-23.82950	151.15908	0-100m

Place ID	Place Type	Latitude	Longitude	Proximity Class
Place ID	Place Type	Latitude	Longitude	Proximity Class
JF:C71	Stone Artefact/s	-23.83308	151.15417	0-100m
JF:D51	Scarred Tree	-23.85974	151.03463	0-100m
JF:D53	Stone Artefact/s	-23.85420	151.07578	100-250m

Woora Consulting Pty Ltd Cultural Heritage Results Database - within 5km

Place ID	Place Type	Cultural Material Recorded	Mitigated	Proximity Class
Wpt 114	Stone Artefact Scatter (Low Density)	1 silcrete scraper	Yes	50-1000m
n/a	Stone Artefact Scatter (Low Density)	3 scrapers (2 silcrete & 1 petrified wood) & 4 flakes	Unknown	1000-5000m
n/a	Stone Artefact Scatter (Low Density)	1 silcrete scraper, 1 silcrete flake & 2 sandstone grindstones (1 a fragment)	Unknown	1000-5000m
n/a	Stone Artefact Scatter (Low Density)	2 silcrete flakes, 1 silcrete scraper & 2 silcrete single platformed cores	Unknown	1000-5000m
n/a	Scarred Tree	Live but dying box, single scar measuring 165cm long & 10cm high. The tree was noted as being about 10m high and having a girth of 20cm	Unknown	1000-5000m
n/a	Stone Artefact Scatter (Low Density)	1 silcrete flake & 1 petrified wood scraper	Unknown	1000-5000m
n/a	Stone Artefact Scatter (Low Density)	2 multi-platformed cores	Unknown	1000-5000m
n/a	Stone Artefact Scatter (Low Density)	1 fragment of a sandstone top grindstone	Unknown	1000-5000m

Kabra Realignment Aboriginal Cultural Heritage Places - within 1km

Place ID	Place Type	Cultural Material Recorded	Mitigated	Proximity Class
Pandoin 16	Isolated Stone Artefact/s	Single silcrete flake	Yes	750-1000m
Pandoin 17	Isolated Stone Artefact/s	Single mudstone flake	Yes	250-500m
Pandoin 18	Isolated Stone Artefact/s	Single quartz flake	Yes	250-500m
Pandoin 19	Isolated Stone Artefact/s	3 flakes (2 silcrete & 1 chert)	Yes	250-500m
Pandoin 20	Isolated Stone Artefact/s	1 silcrete blade & 1 multi- platformed core	Yes	500-750m
Pandoin 21	Isolated Stone Artefact/s	3 flakes, 1 chert adze & 3 cores	Yes	500-750m
Pandoin 22	Isolated Stone Artefact/s	10 flakes & 2 cores	Yes	500-750m
Pandoin 23	Isolated Stone Artefact/s	2 flakes (1 silcrete & 1 chert)	Yes	500-750m
Pandoin 24	Isolated Stone Artefact/s	2 flakes (1 silcrete & 1 mudstone) & 1 single platformed core	Yes	500-750m
Pandoin 25	Isolated Stone Artefact/s	1 silcrete flake & 1 single platformed core	Yes	500-750m
Pandoin 26	Isolated Stone Artefact/s	4 flakes (2 chert, 1 basalt & 1 mudstone)	Yes	500-750m
Pandoin 27	Isolated Stone Artefact/s	4 silcrete flakes & 1 single platformed core	Yes	500-750m
Pandoin 28	Isolated Stone Artefact/s	2 silcrete flakes	Yes	500-750m
Pandoin 29	Isolated Stone Artefact/s	10 flakes (9 silcrete & 1 mudstone) & 1 single platformed core	Yes	500-750m

Place ID	Place Type	Cultural Material Recorded	Mitigated	Proximity Class
Pandoin 30	Isolated Stone Artefact/s	Single basalt flake	Yes	500-750m
Pandoin 31	Isolated Stone Artefact/s	Single silcrete flake	Yes	500-750m
Pandoin 32	Isolated Stone Artefact/s	4 flakes & 2 cores	Yes	750-1000m
Pandoin 33	Isolated Stone Artefact/s	Single mudstone flake	Yes	750-1000m
Pandoin 34	Isolated Stone Artefact/s	2 flakes (1 silcrete & 1 chert)	Yes	750-1000m
Pandoin 35	Isolated Stone Artefact/s	1 silcrete multi-platformed core	Yes	750-1000m
Pandoin 36	Isolated Stone Artefact/s	4 flakes & 1 core	Yes	750-1000m
Pandoin 37	Isolated Stone Artefact/s	5 flakes & 1 core	Yes	750-1000m
Pandoin 38	Isolated Stone Artefact/s	2 silcrete flakes	Yes	750-1000m
Pandoin 39	Isolated Stone Artefact/s	1 silcrete multi-platformed core	Yes	750-1000m
Pandoin 40	Isolated Stone Artefact/s	Single silcrete flake	Yes	750-1000m
Pandoin 41	Isolated Stone Artefact/s	3 silcrete flakes	Yes	750-1000m
Pandoin 42	Isolated Stone Artefact/s	1 multi-platformed core	Yes	750-1000m
Pandoin 43	Isolated Stone Artefact/s	5 silcrete flakes	Yes	750-1000m
Pandoin 44	Isolated Stone Artefact/s	5 flakes including 2 silcrete ones that had been used	Yes	750-1000m
Pandoin 45	Isolated Stone Artefact/s	Single silcrete flake	Yes	750-1000m
Pandoin 46	Isolated Stone Artefact/s	Single silcrete flake	Yes	750-1000m
Pandoin 47	Isolated Stone Artefact/s	Single silcrete flake	Yes	750-1000m
Pandoin 48	Isolated Stone Artefact/s	1 silcrete flake & 1 single platformed core	Yes	750-1000m
Pandoin 49	Isolated Stone Artefact/s	Single mudstone flake	Yes	750-1000m
Pandoin 50	Isolated Stone Artefact/s	Single silcrete flake	Yes	750-1000m
Pandoin 51	Isolated Stone Artefact/s	1 flake 7 2 cores	Yes	750-1000m
Pandoin 53	Isolated Stone Artefact/s	2 silcrete flakes	Yes	750-1000m
Pandoin 54	Isolated Stone Artefact/s	2 silcrete flakes	Yes	750-1000m
Pandoin 55	Isolated Stone Artefact/s	2 basalt flakes	Yes	750-1000m
Pandoin 77	Isolated Stone Artefact/s	6 silcrete flakes including 1 that has been used	Yes	500-750m
JF:A14	Tropic of Capricorn Quarry	Recorded by J. Pratt 1979. Covered a 40m ² area.	Unknown	0-100m
JF:A15	Malchi Creek Stone Artefact/s & Possible Hearth	Originally Recorded by J. Pratt in 1979, rerecorded by M. Morwood 1984 who does not identify a heath.	Unknown	500-750m
JF:D01	AMC Slurry Pipeline Flaked Glass	A single example of flakes green bottle glass identified by Darumbal & CQCHM in 2001.	No	500-750m

Queensland Heritage Register (State) - within 1km

Place ID	Place Name	Area (m2)	Proximity Class
600389	Raglan Homestead	587492	100-250m

DERM Cultural Heritage Information & Management System (State) - within 1km

Place ID	Place Name	Latitude	Longitude	Proximity Class
24435	Portion of the rim of a shepherd's pot	-21.845720	147.960380	500-1000m

World Heritage List (Commonwealth) – within 5km

Place ID	Place Name	Listing Status	Listing Value/s	Proximity Class
105060	Great Barrier Reef	Declared	Natural	1000-2500m

National Heritage List (Commonwealth) - within 5km

Place ID	Place Name	Listing Status	Listing Value/s	Proximity Class
105	Great Barrier Reef	Listed	Natural	1000-2500m

Register of the National Estate (Commonwealth) – within 5km

Place ID	Place Name	Listing Status	Listing Value/s	Proximity Class
8320	Great Barrier Reef Region	Registered	Natural	500-1000m
8829	Gracemere Homestead	Registered	Historic	2500-5000m
14674	Mount Larcom Range	Indicative Place	Natural	2500-5000m
102290	Capricornia Serpentinite Landscape	Indicative Place	Natural	1000-2500m