Alpha Coal Project Environmental Impact Statement

Non Indigenous Cultural Heritage





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Section 19 Non-Indigenous Cultural Heritage

19.1 Introduction

This section addresses non-Indigenous cultural heritage issues in relation to the Project and is summarised from the Non-Indigenous Cultural Heritage Survey Report for the Alpha Coal Project (Mine) (Volume 5, Appendix L). The non-Indigenous cultural heritage assessment for the Project was undertaken over Mining Lease Application (MLA) 70426, the study area.

The key legislation frameworks relevant to non-Indigenous cultural heritage are:

- Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), administered by the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) and manages places of national heritage significance;
- Queensland Heritage Act 1992, administered by the Department of Environment and Resource Management (DERM) and manages places of state heritage significance; and
- Sustainable Planning Act 2009 (which replaces the Integrated Planning Act 1997), and the Jericho Shire Council Planning Scheme (2006), which manages local heritage places at Alpha.

The assessment of the Project has been carried out in accordance with the above-listed legislation.

19.2 Description of Environmental Values

19.2.1 Historical Background

An historical overview of the broad study area presents a platform for discussions regarding non-Indigenous cultural heritage significance and management strategies. An abridged version of the historical background is presented, a full description is provided in Volume 5, Appendix L.

19.2.1.1 Exploration

The first European to pass through the study area region was the explorer Thomas Mitchell. In 1845, he and an exploration party set off from Sydney to discover an overland route to Port Essington, a small settlement that was located near present-day Darwin. Mitchell was not the first to attempt such an expedition; Ludwig Leichhardt set off from Brisbane in 1844 for the same reason and successfully reached the port in December 1845. In 1846, Mitchell explored the Belyando River, naming it and several other notable landmarks in the Alpha district, including Mt. Mudge and Mt. Beaufort. Mitchell did not find a route to Port Essington; he and his party were eventually forced to turn back due to short supplies and conflict with Aborigines.

The area was explored on at least two other occasions prior to settlement. Nat Buchannan and William Landsborough crossed the Belyando River in 1859 whilst looking for grazing land. Frederick Walker also passed through the area in 1861 whilst attempting to locate the ill-fated Burke and Wills expedition, although he too was seeking grazing land on behalf of friends (Hoch, 1984). Much of the

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detailed exploration of the country in and around the study area was carried out by the early landowners following settlement (Cooper, 2005).

19.2.1.2 Early Settlement

The first European settlers in the region appeared in the late 1850s and early 1860s with the establishment of pastoral holdings, or 'runs'. The runs were typically stocked with sheep, as well as cattle. The first run, 'Carry Coates', was established in 1861. By 1863, runs were established across approximately 750 square miles of land located by the Belyando River and its southern tributaries and Native Companion and Alpha Creeks. Examples located in the study area (or in close proximity) in this period included Surbiton (Surbiton 1 was established in 1865) and Charlemont (1879). The closest town at the time was Clermont, which was established in 1862 following the discovery of gold in the area the previous year.

The early settlers experienced considerable hardship and isolation. The isolation was alleviated by the establishment of a network of roads and tracks between stations and larger settlements. A route was opened up between Clermont and Aramac in 1863 and it appears to have passed through the study area. A Cobb & Co service was also established between Clermont and Aramac in 1878 (Tranter, 1990). The Cobb & Co service relied on changing stations along the route or 'mail change' that were typically hotels (also referred to as 'inns') or homesteads. Mail changes along the Clermont to Aramac road were Clermont, Red Rock, Banchory, Surbiton, Doonan's Hotel and Spring's Hotel (Tranter, 1990). The Doonan's Hotel appears to have been located close to the bank of Sandy Creek. Kate Doonan (one of the hotel proprietors) is buried in the general vicinity of the former hotel.

Hotels other than those frequented by the Cobb & Co service were also built along the route. One in particular was located on a tributary of Little Sandy Creek in the north-west section of the study area. The hotel appears on an 1888 map and is referred to as the Burgess Hotel. In addition, O'Donnell refers to a hotel at Lagoon Creek owned by 'Mr. Baillie' on the route between Clermont and Aramac and he claims the hotel was not used by Cobb & Co (O'Donnell, 1989). A Queenslander journalist, who was travelling along the Clermont to Aramac route in 1878, wrote that he was 'astonished to find two hotels'. It is unclear just how close Bayly's hotel was to Doonan's, but it was on Lagoon Creek.

It appears that the majority of the roads in the study area were designated stock routes in the 19th and 20th centuries. The most prominent route is the Clermont-Aramac road, which was originally the coach route in the 1860s-1880s. However, given the economic activity of the area, most of the roads became stock routes, including the road on which Hobartville is located (travelling south-north). As with the coach route, the location of creeks and waterholes undoubtedly played an important role in the selection and designation of stock routes. Waterholes and suitable creek crossings would also have probably been used as camp sites since the 19th century, particularly for drovers guiding sheep and cattle to the Central Railway stations of Alpha and Jericho. Some stock routes fell into decline with the shift to road trains from the 1960s onward, but in many places remain in use.

The construction of a railway extending from Rockhampton to Longreach provided a further boost to the region. The line was built in stages, beginning from Westwood (west of Rockhampton) in 1873 and

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is referred to as the Central Railway. The towns of Alpha and Jericho were initially created as stations for the line (Kerr, 1998). Alpha was established in September 1884 and Jericho in June 1885. The line reached Longreach in 1892.

19.2.1.3 Frontier Conflict

European exploration and settlement brought about conflict with Aboriginal groups in the district. Mitchell recorded a number of instances of contact during his expedition along the Belyando River, including one confrontation (Hoch, 1984). There does not appear to be any official record of conflict between the first settlers and the local Aboriginal people (Hoch, 1984). Nonetheless, the appropriation of vast swathes of land by squatters did not go uncontested by the local Aboriginal population. In particular, the stocking of the land with sheep or cattle displaced traditional hunting grounds and the settlers' animals were considered appropriate compensation (French, 1989). Relations soon descended into violence: early oral history of Alpha tells of shepherds killed by natives south of Banchory. Their deaths are said to have been avenged by a shoot-out of 21 natives at a place called 'Rifle Creek' (Hoch, 1984). Rifle Creek is fed by the Belyando River and is located approximately 30 kilometres south-east of Hobartville Station.

A Native Mounted Police barracks was established on the Belyando River at Banchory in 1863 (located to the east of the study area). Native Mounted Police were used to patrol and police the frontier against Aboriginal attacks. The massacres of Europeans by Aborigines at Hornet Bank station on the Dawson River in 1857 and at Cullin-la-Ringo, near Springsure, in 1861 created an environment of fear amongst the new settlers as the frontier expanded north. The presence of the Native Mounted Police (and potential retaliatory raids by local landowners) appears to have wiped out Aboriginal resistance by the 1880s. According to Hoch (1984), 'survivors of the early conflict camped on waterholes near station homesteads and on town fringes'. Some Aborigines were employed on the stations, primarily for domestic labour and stock handling.

19.2.1.4 Consolidation

A large number of the runs were consolidated as a result of the *Crown Lands Act 1884*, including a number of runs located in the study area. The consolidated runs were broken into two parts; one part leased by the pastoralist and the other resumed by the government to encourage closer settlement (as 'grazing selections'). The two principal runs established as a result of consolidation in the study area were Hobartville and Surbiton. Nineteen runs were consolidated in 1884 to form Surbiton (Cooper, 2005). Hobartville was the consolidation of fourteen runs (including Charlemont) between 1884 and 1891.

The runs were centred on homestead complexes (also referred to as 'head stations'). The Hobartville run was centred around the homestead complex located on the former Lagoonville run. In the early 1890s the complex consisted of 'a slab/iron house, slab bark huts, a sapling/bark stable and outbuildings worth £160' (Cooper, 2005). Outstations were also established, consisting of 'a house or hut' for overseers as well as stockmen (Cooper, 2005). One such outstation can be identified in the Charlemont run and appears to be located on the site of the Burgess Hotel.

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In many cases, the lease holders did not actually live on the selection and therefore there were no substantial homes or homestead complexes built on the properties (although a rough iron or bark hut may have been built in some cases to satisfy the conditions of the lease). Some selectors did, however, settle on their selections. At least two of the grazing selections adjoining Hobartville and Surbiton (and partially within the study area) included houses and associated buildings.

The land resumed by the government following consolidation was thrown open to selection in the late 1890s. These selections were much smaller than the large pastoral holdings in the district. Interest in the selections was once more affected by external factors, this time a severe drought affecting Australia (lasting from 1895-1903). The state government attempted to provide some relief for lease holders with the passage of the *Land Acts Amendments Act* in 1927. The amendments were intended to provide relief from drought conditions and encourage pastoral development by providing concessions to leaseholders if they developed their holdings (Cooper, 2005). The conditions of the new lease included ringbarking significant portions of the runs and selections and erection of marsupial fencing (largely to prevent dingo attacks on livestock).

Hobartville and Charlemont were evaluated at the expiration of the lease and the review provides a snapshot of improvements carried out over a 30-year period (Queensland State Archives Item ID1306319 Hobartville Pt 2). At this time Hobartville was held by the Barcaldine Downs Pastoral Company. One hundred and forty square miles of the holding was considered 'useless'; 176 square miles had been fenced with netting, but was 'useful only for sheep as drought relief', the purpose to which it had been put for the previous 46 years. The report stated that the conditions of the original lease – fencing and ringbarking – had been met. The improvements present on the property included five water tanks, a dam and lagoon, five bores, 60 miles of netting fencing, 64 miles of internal fencing and two cattle yards. Buildings on the property consisted of a house, men's quarters, a hut at Horseshoe Lagoon (new as of 1950), electric light shed and plan and a refrigeration room. The only new development in the study area from the 1950s onward was the creation of Wendouree Station. Wendouree was created out of the northern section of Hobartville (including Charlemont) in 1963.

19.2.1.5 Mining

The pastoral industry defined the history of land use in the Alpha district (Cooper, 2005). The towns of Alpha and Jericho largely existed to support the pastoral industry. However, mining has come to play an important role in the region. Mining occurred around Clermont and Copperfield in the 19th century and later extended to places such as Blair Athol (a former pastoral property in Belyando Shire), but has only recently impacted the Alpha district. In 1978, Lang Hancock leased a large area north-west of Alpha, which takes in the current study area. Hancock undertook exploration for coal, but did not develop the site at the time (Hoch, 1984).

Coal mining boomed in Queensland from the 1960s onward, particularly open-cut mining in the Bowen Basin. Indeed, by 1976 'coal had surpassed wool as Queensland's leading export', a significant fact in the context of economic activities historically carried out in the Alpha district (Fitzgerald, 1984). Mining is now emerging as an important industry in an area historically dominated by pastoralism.

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19.3 Assessment Methodology

A two-stage approach was undertaken for the assessment and management of non-Indigenous historical heritage for the Project. The stages consisted of:

- Stage One Desktop Analysis; and
- Stage Two Field Survey and Technical Report.

The desktop analysis consisted of a background history of the study area and consultation of relevant statutory and non-statutory heritage registers and local historical societies, which defined all known historical sites and the potential for further historical heritage sites to exist within the study area. The desktop analysis was completed in June 2010.

The field survey and technical reporting tasks included:

- Undertake a field survey of the study area;
- Identify sites and places of cultural heritage significance within the study area;
- Determine the level of cultural heritage significance of those sites and places; and
- Provide strategies for the management of the heritage values of those sites and places and any other potential areas of cultural heritage significance.

The results of this assessment are summarised within this section and provided in full in the Non-Indigenous Cultural Heritage Survey Report (Volume 5, Appendix L).

19.3.1 Limitations and Constraints of the Assessment

At approximately 65,000 hectares (ha), the size and scale of the study area are very large and present obvious limitations. The results of the field survey must also be considered within the context of the following limitations: access to properties, and landform and disturbance, which affected ground visibility and site integrity.

19.3.1.1 Access to Properties

Requests were made to visit all properties comprising the study area (Wendouree, Hobartville, Surbiton South, Burtle, Tressillian, Monklands, Spring Creek and Kia Ora) during the scheduled field survey. Access to several properties along the eastern and southern margins of the study area was not considered appropriate at this time due to sensitivities around mining lease negotiations.

The properties of Burtle, Tressillian, Monklands, Spring Creek and Kia Ora were not surveyed on foot. However, the landowners of Burtle, Tressillian, and Kia Ora were consulted via phone. No areas of heritage interest were flagged by landowners during these conversations, and it was stated by other landowners (A. Donaldson, Surbiton South, pers. comm. 30 June 2010) that these areas were non-productive, and had no heritage remains. Furthermore, no areas of heritage potential were flagged

through the desktop study, and the properties did not yield any sites of interest visible from the public road.

19.3.1.2 Landform and Disturbance

The entire study area has been subject to varying levels of disturbance, from vegetation clearing, agricultural activities and erosion, medium-scale landform modification resulting from road construction, levelling for pastoral-related complexes (homestead sites), and water management systems (stock dams, boreholes, irrigation). Extensive areas have been subject to clearing, blade-ploughing and stock grazing over the years.

19.3.1.3 Ground Surface Visibility

Assessments of ground surface visibility (GSV) provide an indication of how much of the ground surface can actually be seen. Ground surface visibility is most commonly inhibited by vegetation, but other inhibitors may include gravel and bitumen. Levels of ground surface visibility were determined using a percentage scale in that 0% represents zero visibility and 100% represents maximum visibility (bare ground). Therefore: Zero - 0%; Poor - 1-25%; Moderate - 26-50%; Fair - 51-75%; Good - 76-85%; Excellent - 86-100%. The better the visibility, the more potential there is for locating historical/archaeological material.

Whilst the field survey revealed the study area to have variable GSV across the area, much of the study area demonstrated low GSV, largely as a result of dense grass cover in most locations. For this reason it is possible that elements of certain sites may have been obscured and not located. The field inspections focused largely on areas where ground surface was exposed. These areas comprised areas of cleared ground, riparian erosion zones, vehicular tracks, stock paths, and fence lines.

19.3.2 Desktop Results

19.3.2.1 Register and Database Searches

A series of register and database searches for the study area was undertaken in an effort to locate any non-Indigenous cultural heritage sites previously identified as possessing a level of significance within or proximate to the study area. These register searches included:

- Australian Heritage Places Inventory, including the National Heritage List, Commonwealth Heritage List and former Register of the National Estate;
- Barcaldine Regional Council Heritage Register, including the Jericho Shire Council Planning Scheme;
- Interactive Resource Tenure Map (IRTM);
- · Queensland Heritage Register; and
- Queensland National Trust Register.

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No known sites or places of non-Indigenous cultural heritage for the study area are listed on a statutory or non-statutory register. Nonetheless, this report considers there are a number of heritage places within the study area that will be impacted by the proposed Project, including places of potential non-Indigenous heritage and/or archaeological potential, requiring further assessment under the provisions of the *Queensland Heritage Act 1992*.

The IRTM was consulted in relation to the likelihood of historic mining tenures across the area. No sites of historical mining significance were noted during the review.

19.3.2.2 Consultation

19.3.2.2.1 Local Historical Societies

Consultation with the following local historical societies was conducted as part of the research and methodology development for this assessment. Their assistance is acknowledged with gratitude.

- · Clermont and District Historical Society Museum; and
- · Alpha Historical Society.

Key historical themes were confirmed during consultation. No additional historical themes were identified. No specific sites or places of potential heritage significance were identified in addition to those noted in the register searches and described further in the sections below.

19.3.2.2.2 Landowners

Consultation with the following local community residents was conducted as part of the research and methodology development for this assessment. Their assistance and contribution to this report is acknowledged with gratitude.

- · Landowners, Wendouree;
- · Resident and Manager, Hobartville; and
- Landowner, Surbiton South.

Consultation provided additional information on historical remains across three properties that form part of the study area and clarified the nature of sites in proximity to Doonan's Hotel site (Wendouree), early 20th century pastoral-related built remains (sheep trough and borehole – Wendouree; Greentree Dam and yards – Hobartville), early homestead sites (Wendouree and Hobartville), and additional coach route hotel sites (Wendouree and Surbiton South).

19.3.3 Field Survey Results

19.3.3.1 Field Survey Methodology

The survey methodology adopted for this study incorporated a vehicular and pedestrian survey inspection of the study area. A purposive sampling strategy was generally employed, where specific areas are targeted, as is done with predictive modelling. It is estimated that approximately 40% of the

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study area was surveyed. Historical contextual research, review of historical plans and aerial imagery, review of heritage listings, and consultation with local leaseholders enabled a comprehensive survey of areas known to be of historical interest.

19.3.3.2 Non-Indigenous Sites and Places Located within the Study Area

Non-indigenous sites and places of cultural heritage significance are those that contain suitable heritage value to warrant a significance and impact assessment. These sites within the study area were identified using contextual research conducted prior to the field survey, consultation with relevant stakeholders, and other best practice cultural heritage assessment techniques. Eleven non-Indigenous cultural heritage sites were identified during the field survey of the study area. A summary description of these sites is presented in Table 19-1.

Table 19-1: Summary table of identified non-Indigenous cultural heritage sites within study area

Site No.	Name	Description
A-1	Lagoon Creek Bush Camp	High concentration of artefacts, likely a stock route camp, although in proximity to coach route and hotel site.
A-2	Kate Doonan's Grave	Gravesite of the wife of proprietor of Doonan's Hotel (1885).
A-3	Bottle Dump	Likely dates to late 19th century, likely association with Doonan's Hotel or another inn site on coach route.
A-4	Old Paddock Fence line	Remnant split post, three (or four?) barb fence, although no wire remains. Posts approximately 110 cm tall. Landowner identified fence on site, apparently old paddock, likely to have been associated with Doonan's Hotel.
A-5	Hotel Site	High concentration of 19th century artefacts, as well as structural remains, likely a traveller's inn site along coach route. High degree of site integrity.
A-6	Cart ruts	In situ remnant wagon/cart ruts along 19th century coach route.
A-7	Wendouree Homestead	Homestead complex circa 1960.
A-8	Hobartville Homestead	House (circa 1895) relocated from Mt. Morgan; original complex features remaining include gravesites (1884), artefact scatter.
A-9	Greentree Dam	Improvement feature, evidence of pastoral activity, Hobartville, circa 1902.
A-10	Marsupial Fence	Improvement and condition of lease, early 20th century. Varying degrees of integrity.
A-11	Murdering Lagoon	Water management feature, Hobartville, early 20th century.

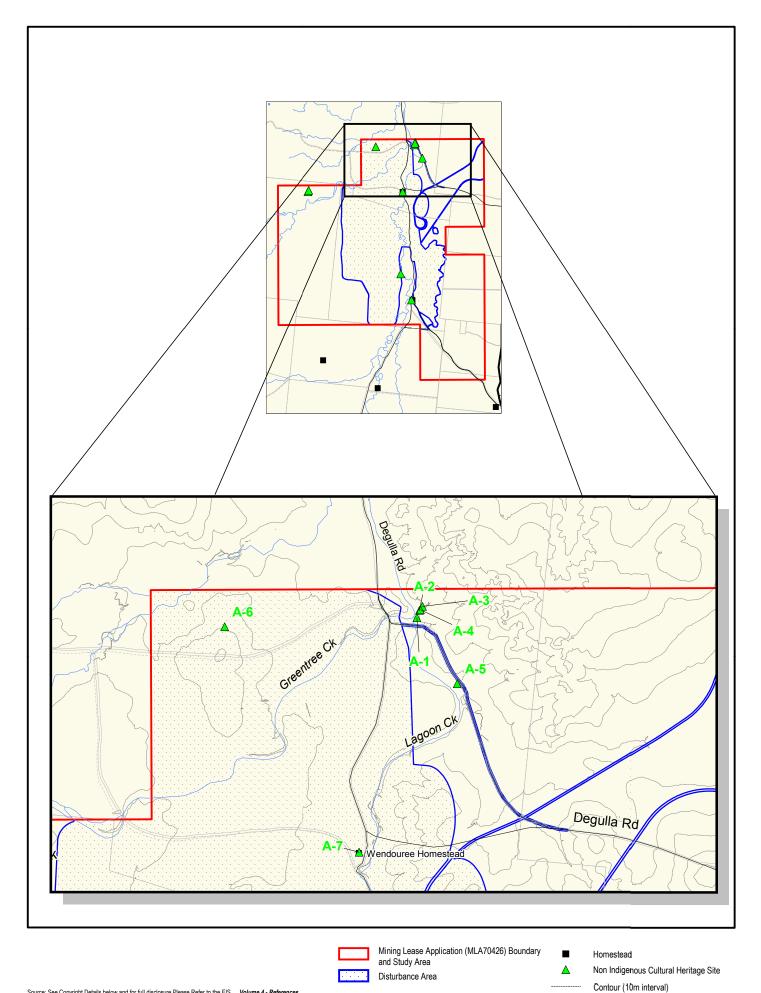
These eleven identified sites can be considered temporally and thematically within three categories, as follows:

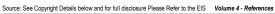
• Five sites directly associated with the late 19th century coach route network;

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- Two sites indirectly associated with the late 19th century coach route network and one likely to be associated with the late 19th and early 20th century stock route network; and
- Four sites relating to 20th century pastoral activity and improvements, with no identified association with the coach route network.

No sites of historical mining heritage were located during the field survey. Site locations are indicated on Figures 19-1 and 19-2, and again in relation to the proposed mine development in Figure 19-3.





Datum: GDA94, MGA Zone55



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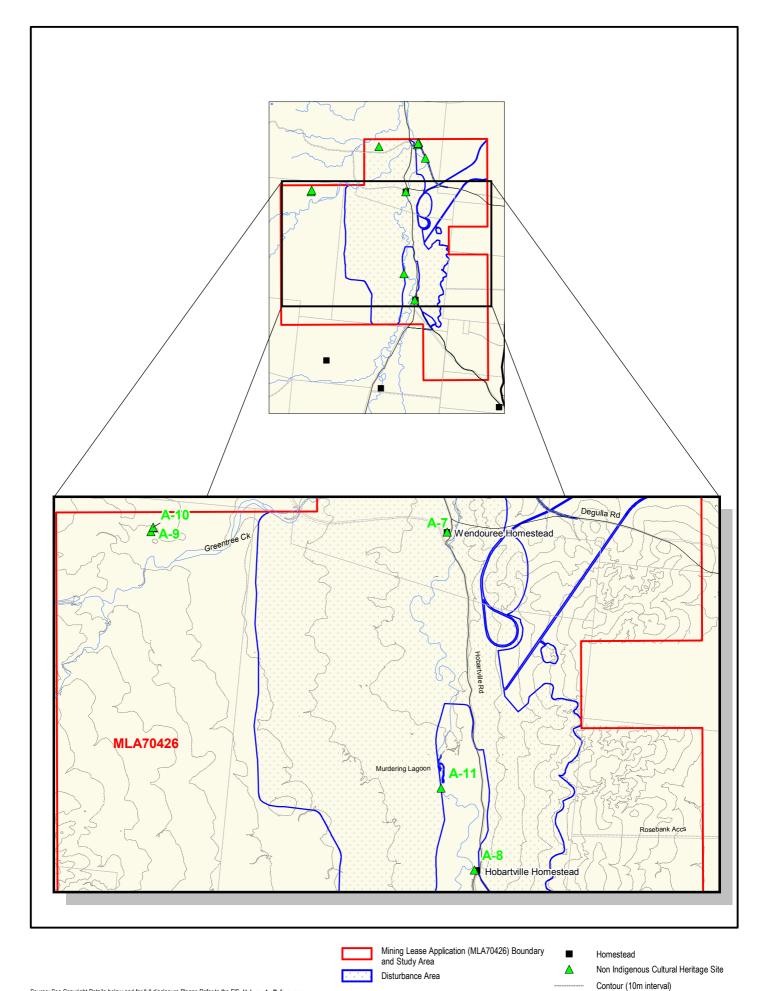
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SITE LOCATIONS ON WENDOUREE PROPERTY

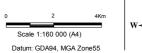
(A-1 - A7) (CONVERGE 2010)

Job Number | 4262 6580 Revision | A | Date | 24-09-2010

Figure: 19-1



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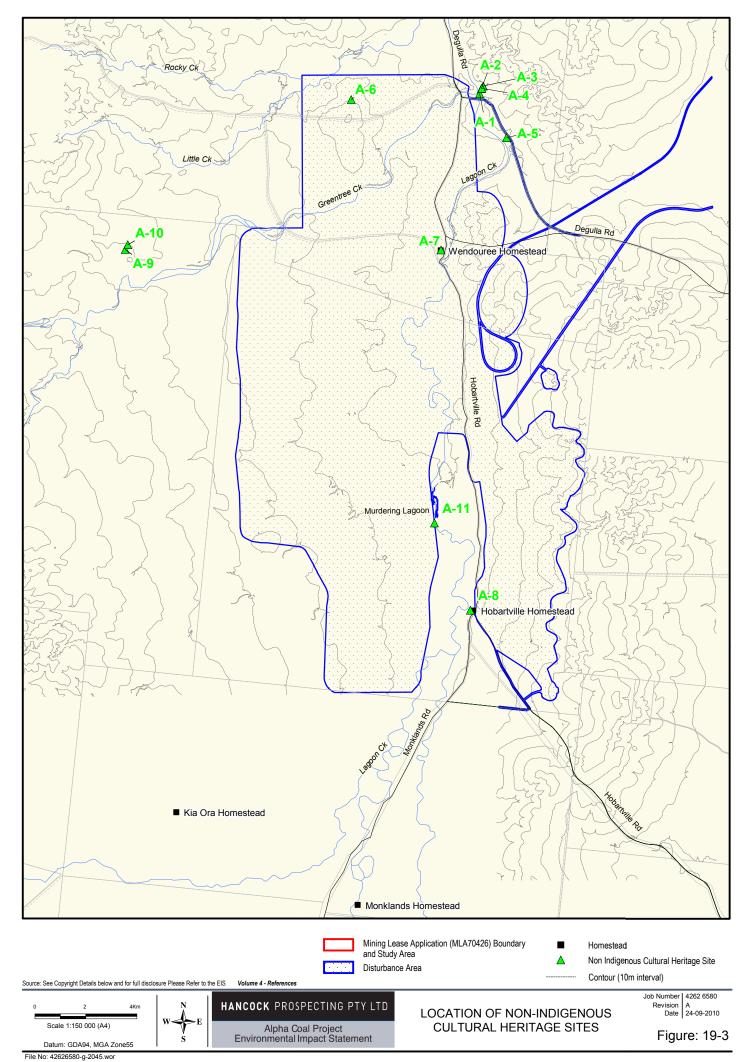




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Alpha Coal Project Environmental Impact Statement SITE LOCATIONS ON HOBARTVILLE PROPERTY (A-8 – A-11) (CONVERGE 2010) Job Number | 4262 6580 Revision | A Date | 24-09-2010

Figure: 19-2



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19.3.3.2.1 Sites Directly Associated with the 19th Century Coach Route Network

The five sites identified as having direct association with the late 19th century coach route network, including the Clermont – Aramac road used by Cobb & Co from 1878 – 1884, are predominantly archaeological in nature. These include a potential hotel site (A-5) (refer to Plate 19-1), a bottle dump (A-3) (refer to Plate 19-4), Kate Doonan's gravesite (A-2) (refer to Plate 19-2), a fence line (old paddock likely related to Doonan's or an adjacent hotel site (A-4), and in situ cart ruts (A-6) (refer to Plate 19-3). Remnant fencing and a possible hearth are the only remaining built heritage features.

The fence line (A-4) suggests the location of an old paddock that may have been related to Doonan's Hotel. The locations of Kate Doonan's grave, as well as the bottle dump, are further indicators of what has been recorded on contemporary maps as a travellers' inn site. No remains or features suggesting the location of the hotel structure were identified during the survey. Of the five coach route-related sites, A-5 is of greatest interest. Whilst Doonan's Hotel is shown on sourced historical maps, A-5 is not. The site was described by the landowner as a 'camp site' but upon site investigation it was determined to be a previously unknown hotel site along the coach route. A-5 represents the best example of an 'intact' hotel site yet identified in the study area. The frequency of complete artefacts indicates that it has not been rigorously pilfered by relic-collectors.





Plate 19-1: Potential hotel site (A-5)

Plate 19-2: Kate Doonan's gravesite (A-2)

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Plate 19-3: In situ cart ruts (A-6)

Plate 19-4: Bottle dump (A-3)

For site-specific information, refer to the detailed site inventory provided in Volume 5, Appendix L of this EIS.

19.3.3.2.2 Sites Indirectly Associated with the 19th Century Coach Route Network

Two sites have been identified as having indirect association with the late 19th century coach route network. Stock routes and trails have traversed the study area since the 1860s and bush camps would be expected along these routes. The development of hotels and inns along an evolving coach route network may have affected bush camp selection sites – a nearby hotel or the possibility of a wagon en route may have proved too great a temptation for stockmen.

Artefactual material at A-1, which includes metal remnants of harnesses, a camp stove and shot shells, suggests a stock route bush camp (refer to Plate 19-5). However, the diversity of glass and ceramics (including 'luxury' items such as condiments and liniments) may indicate a different economic and social dynamic than the 'typical' bush camp (refer to Plate 19-1). The proximity of Doonan's Hotel (and perhaps a second inn) to A-1 may account for this. It is impossible without further research and analysis to determine (and indeed may never be conclusively established) whether the bush camp site was frequented during the period the hotels were in operation, or was taken up after the Doonan hotel site was abandoned.

The Hobartville homestead complex (A-8) (refer to Plates 19-6, 19-7 and 19-8) has also been identified as having indirect association with the coach route network, as it was not a fundamental component of the route (i.e. not a traveller's inn, nor staging post). However, the residents of Hobartville from its establishment in the 1880s (and any earlier settlement) would have depended on the coach route network for the delivery of news, goods, and visitors. Little is known about the original homestead complex at Hobartville, but the presence of subsurface remains and gravesites have flagged it as having high archaeological potential (refer to Plate 19-8).

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Plate 19-5: Lagoon Creek Bush Camp (A-1)



Plate 19-6: Hobartville homestead (A-8)



Plate 19-7: Interior of front verandah, Hobartville homestead (A-8)



Plate 19-8: Gravesite, Hobartville homestead (A-8)

For site-specific information, refer to the detailed site inventory provided in Volume 5, Appendix L.

19.3.3.2.3 Sites Associated with Pastoral Activities and Improvements

Four sites have been identified as relating to 20th century pastoral activity and improvements, with no identified association with the coach route network. These are: Greentree Dam (A-9), Murdering Lagoon (A-11), Marsupial fencing (A-10), and Wendouree Station (A-7). Whilst these sites are representative elements of a rural cultural landscape, they represent common built features and have little heritage value at present (refer to Plates 19-9 through 19-12).



Plate 19-9: Greentree Dam (A-9)



Plate 19-10: Marsupial fencing (A-10)



Plate 19-11: Murdering Lagoon (A-11)



Plate 19-12: Wendouree Station (A-7)

For site-specific information, refer to the detailed site inventory provided in Volume 5, Appendix L.

19.3.3.2.4 Archaeological Potential

The term 'archaeological potential' is defined as the likelihood that a site may contain physical evidence related to an earlier phase of occupation, activity or development. There is a generally high potential for archaeological remains to exist across the majority of the identified sites within the study area, as presented in Table 19-2:

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Table 19-2: Archaeological potential within the Project study area

Site No.	Name	Archaeological Potential
A-1	Lagoon Creek Bush Camp	High potential – surface scatter.
A-2	Kate Doonan's Grave	High potential – human remains, possible grave goods.
A-3	Bottle Dump	High potential – surface scatter as well as subsurface remains.
A-5	Hotel Site	High potential – surface scatter, structural remains, subsurface remains such as postholes, dumps, wells, privies.
A-6	Cart ruts	Moderate.
A-8	Hobartville Homestead	High potential – human remains and potential grave goods, surface scatter, subsurface remains such as postholes, dumps, wells, privies.

Furthermore, there is high potential for archaeological remains in the form of artefactual surface scatter and possible 'rest stop' areas between hotel sites to exist along the entire coach route alignment(s).

19.3.4 Significance Assessment

19.3.4.1 Significance Levels for the Study Area

The study area has a layered history reflected in a variety of physical and intangible elements and embodies a range of values that vary in their levels of significance. Assessing cultural heritage significance against set criteria is a widely recognised method of achieving consistent, rational and unbiased assessments. A range of standards and criteria are available to assist with determining cultural heritage significance. The cultural heritage significance of the Project site was evaluated using recognised benchmarks such as The Burra Charter: The Australia ICOMOS Charter for the Places of Cultural Significance (1999), and the *Queensland Heritage Act 1992*. These findings are summarised in Table 19-3 below.

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Table 19-3: Summary table of heritage values of study area, through application of the Queensland Heritage Act 1992 significance criteria.

Queensland Heritage Act 1992 Criteria	Supportive information	Conclusion	
Criterion (a) – The place is important in demonstrating the evolution or pattern of Queensland's history.	The study area is important in the course or pattern of Queensland's history, being a place associated with pastoral expansion and early settlement in difficult country, when sometimes faltering attempts were made at the introduction and development of pastoralism in previously unsettled and only recently explored areas.	Specified aspects of the study area are considered to demonstrate this criterion at State level.	
	The coach route network in central Queensland was of historic importance as it facilitated the critical flow of people, goods, and information from population centres to rural outstations. These physical roads were a dynamic system of continuous and reciprocal exchanges of goods, news, ideas and knowledge. Whilst these networks were at their zenith during the last decades of the 19th century, and diminished in importance after the development of the railway and introduction of the motor car, they should be viewed as the means by which the state was first settled.		
	Remnant features of the coach route cultural route that exist within the study area provide a variety of site types, such as: sites of 'exchange' in the form of travellers' inns (hotel sites), discard sites (bottle dumps), gravesites, and evidence of transportation (cart rut sites). There is high archaeological potential for further components of this cultural complex to be identified – including stone creek crossings, bridges, further inn sites, surface scatters, etc.		

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Queensland Heritage Act 1992 Criteria	Supportive information	Conclusion	
Criterion (b) – the place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.	A number of coach route-related sites have been heritage-listed in Queensland. However, the majority of these sites are specifically 'place-based' and except in the case of the Laura to Maytown Coach Road, do not represent the fundamental dynamic nature of a cultural route. The Laura to Maytown Coach Road in Far North Queensland is the only heritage-listed stretch of coach road with a diverse complex of associated historical places that reflect the essence of movement, and lists travellers' inns, staging posts, Chinese gardens and mining workings as component elements.	Specified aspects of the study area are considered to demonstrate this criterion at State level.	
	The coach road cultural route network identified within the study area would be considered a rare heritage resource for Central Queensland (and would make a strong comparative linear site for the Laura to Maytown cultural route) uncommon in terms of an intact (not scavenged by relic-collectors) coach route hotel site and in situ cart ruts. All of the remnant cultural route features are considered endangered.		
Criterion (c) – the place has potential to yield information that will contribute to an understanding of Queensland's history.	The study area has considerable potential to yield information that will contribute to an understanding of how the site developed, which in turn has the potential to inform research about the settlement of the central Queensland region. This potential derives in part from the nature of the remnant coach route cultural routes that traverse the site, and principally derives from the known and potential archaeological resource associated with the coach route network.	demonstrate this criterion at State level.	
	The heritage significance of archaeological remains will vary according to their ability to contribute to our understanding of the culture and history of the state and local area, and the site itself. On the whole, more intact deposits and archaeological resources that can be used to address important research questions, or which can reveal information about little known aspects of history, will have the highest heritage significance. Further research would be needed before any level of the significance of the archaeological resource could be determined.		
Criterion (d) – the place is important in demonstrating the principal characteristics of a particular class of cultural places.	The coach route represents a class of transportation networks, and the predominant means by which people, goods, ideas, news and knowledge moved across vast transects of the country. The coach route network represents a particular class of 'linear sites' or cultural routes that facilitated early settlement and development of Queensland.	Specified aspects of the study area are considered to demonstrate this criterion at a local and potentially State level.	

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Queensland Heritage Act 1992 Criteria	Supportive information	Conclusion
Criterion (e) – the place is important because of its aesthetic significance.	No information provided.	The study area was not considered to contain elements representing this criterion at a local or State level.
Criterion (f) – the place is important in demonstrating a high degree of creative or technical achievement at a particular period.	No information provided.	The study area was not considered to contain elements representing this criterion at a local or State level.
Criterion (g) – the place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.	No information provided.	The study area was not considered to contain elements representing this criterion at a local or State level.
Criterion (h) – If the place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.	No information provided.	The study area was not considered to contain elements representing this criterion at a local or State level.

19.3.4.2 Significance Levels of Individual Sites

The following sites and places within the study area have been identified by this assessment to have the following levels of non-Indigenous cultural heritage significance (including archaeological significance) (Table 19-4).

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Table 19-4: Significance levels of individual sites

Site No.	Name	Individual Site Significance Grading	Revised Associative Significance 1
A-1	Lagoon Creek Bush Camp	Moderate	-
A-2	Kate Doonan's Grave	Low - Moderate	Moderate - High
A-3	Bottle Dump	Low - Moderate	Moderate - High
A-4	Old Paddock Fence line	Low	Moderate - High
A-5	Hotel Site	Moderate - High	Moderate - High
A-6	Cart ruts	Low - Moderate	Moderate - High
A-7	Wendouree Homestead complex	Low	-
A-8	Hobartville Homestead	Moderate	-
A-9	Greentree Dam	Low	-
A-10	Marsupial Fence	Low	-
A-11	Murdering Lagoon	Low	-

Site A5 has been assessed as having the potential to satisfy entry onto the Queensland Heritage Register as an 'Archaeological Place' under section 60 of the *Queensland Heritage Act 1992*, as it has been found to contain an archaeological artefact that is an important source of information about Queensland's history.

19.4 Potential Impacts and Mitigation Measures

19.4.1 Potential Impacts

Potential impacts on recognised and potential cultural heritage sites by the Project will generally be in the nature of removal of the ground surface and sub-surface disturbance, vegetation clearance related to the mine's expansion and the development of associated infrastructure, and the consequent destruction and/or removal of the structures/features that form the non-Indigenous cultural heritage of

¹ Sites A2-A5 have 'direct' association with the 19th century coach route network and form a 'suite' or complex of sites assessed in Table 19-3 as having Historic Value; Uncommon, Rare or Endangered Aspects; Potential to Yield Information (High Archaeological Potential) and Representative Value - all at a local, and/or potentially State, level of significance. Their level of individual significance has been subsequently revised to represent the 'Associative Significance' relating to the coach route.

the area. Table 19-5 provides analysis of the proposed Project's impact on identified sites of non-Indigenous cultural heritage noted in Figures 19-1, 19-2 and 19-3 above.

Table 19-5: Project impact on sites and places of non-Indigenous cultural heritage significance within the study area

Site No.	Name	Significance Grading ²	Impact Assessment
A-1	Lagoon Creek Bush Camp	Moderate	Not impacted
A-2	Kate Doonan's Grave	Moderate - High	Not impacted
A-3	Bottle Dump	Moderate – High	Not impacted
A-4	Old Paddock Fence line	Moderate – High	Not impacted
A-5	Hotel Site	Moderate – High	Not impacted –
			(but in close proximity to disturbed area)
A-6	Cart ruts	Moderate - High	Directly impacted
A-7	Wendouree Homestead complex	Low	Directly impacted
A-8	Hobartville Homestead	Moderate	Not impacted –
			(but in close proximity to disturbed area)
A-9	Greentree Dam	Low	Not impacted
A-10	Marsupial Fence	Low	Not impacted
A-11	Murdering Lagoon	Low	Directly impacted

19.4.2 Mitigation Measures

This assessment has identified eleven non-Indigenous cultural heritage sites, of which three are directly impacted by the Project, along with the likelihood for further potential sites of cultural heritage significance to exist within the study area. Assuming the strategies below are suitably implemented, the nature and level of impact by the Project can become acceptable.

19.4.2.1 Avoidance of Sites

The best form of cultural heritage management is to avoid impact on sites and places of significance. Where possible the Project design will take into account each of the significant heritage sites and places identified within the study area, and, where possible, avoid impacting these sites. If avoidance of these areas is not possible, the Proponent will implement relevant mitigation measures.

² Sites A2-A6 have direct association with the 19th century coach route network and form a 'suite' or complex of sites. The coach route network is assessed as having moderate to high heritage significance, which will need to be managed with due regard to its associative significance.

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19.4.2.2 Further Assessment of the 19th Century Coach Route

The coach route network is assessed as having high potential for further sites and archaeological remains associated with its historic nature to exist within its proximity. One archaeological place (A-5 Hotel site) directly associated with the coach route has been assessed to be potentially of State significance.

Due to the size of the study area and access restrictions, it was neither possible nor practical to provide a comprehensive survey of the coach route within the study area. The Proponent will develop a Cultural Heritage Management Plan (CHMP) for the coach route network prior to ground disturbing activities taking place in the vicinity. The CHMP will consider including:

- Further and focussed contextual research of the coach route between Clermont-Aramac, to identify further potential for sites and places to exist within the study area;
- Further comparative research to determine other examples of coach route networks that might survive within Central Queensland, so that further conclusions can be made in respect to the exact nature of the coach route network within the study area;
- Brief survey of targeted sections of the Clermont-Aramac coach road (outside of the study area) to
 determine the likelihood of sites and places to survive of comparative nature and context to those
 in the study area;
- Further site inspection to record key features/sites within the study area that are considered to be associated with the route;
- On completion, provide a CHMP Report to the Proponent that provides clear and achievable mitigation and management measures to protect and conserve cultural heritage values associated with the coach route network within the study area for the life of the Project, including:
 - Record any sites located within the proposed disturbance area of the Project in detail to an archival standard by a qualified cultural heritage professional and in line with the draft DERM Guidelines for Archival Recording; and
 - Obligations for any sites which might be considered an Archaeological Place, under the provisions of Section 60 of the QHA, including liaison with DERM; and
- Consider the potential for archaeological excavation or further research opportunities for sites that
 exhibit archaeological values important to the region or to Queensland, which might be impacted by
 the Project.

Until such time that the CHMP has been completed, this report suggests that no ground disturbing activities be undertaken within 500 m either side of the coach route alignment.

19.4.2.3 Protection of Archaeological Places of State Significance (A-5 Hotel Site)

This assessment has found the former Hotel site (A-5) to be an Archaeological Place of potential State significance. State significant archaeological sites require special consideration under the provisions of the *Queensland Heritage Act 1992*, as they represent a heritage asset that has potential to contain an

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archaeological artefact that is an important source of information about Queensland's history. Obligations under Section 60 of the Act require the person (the Proponent) who finds the 'archaeological place' to report the find to the Chief Executive Officer of the DERM.

In addition, avoidance of these sites will be practised and all site personnel made aware of relevant obligations to avoid the area. If a place is registered on the Queensland Heritage Register (QHR), development at that place will fall under Queensland's Integrated Development Assessment System (IDAS). As a result, DERM may require an archaeological investigation to be conducted on an archaeological place as part of the consent conditions, particularly if the proposed development may damage or impact the significance of the site.

19.4.2.4 Mitigation of Sites A-7 and A-11

Site A-7 (Wendouree Homestead) and Site A-11 (Murdering Lagoon) are directly impacted by the Project. Considered each to exhibit low levels of cultural heritage significance, it is therefore proposed that prior to any development or ground disturbance takes place the following will occur:

- Briefly further research the history, including oral history, of the homestead complex;
- Record the complex in detail to an archival standard by a qualified cultural heritage professional and in line with the draft DERM Guidelines for archival recording;
- Consideration will be given to reuse of some buildings within the complexes; outside of the Project area of disturbance; and
- Provide an archival report to appropriate local organisations such as the Barcaldine Regional Council, DERM, and the John Oxley Library.

19.4.2.5 Unexpected Finds

The study area has the potential to contain non-Indigenous cultural heritage material, particularly in the vicinity of the 19th century coach route and homestead complexes. Accordingly, the Project Environmental Management Plan (EM Plan) (Volume 5, Appendix P of this EIS) includes a procedure for managing unexpected cultural heritage material or sites that may be encountered.

19.4.2.6 Archaeologist 'On-Call'

A historical archaeologist will be appointed during construction phases of the Project, so that a callout can be made if potential archaeological material is noted..

19.4.2.7 Regular Monitoring

The Proponent will undertake a bi-annual survey of all heritage items identified in the study area. Any damage to items can be catalogued and actions taken to ensure that the process that caused the damage is not repeated and that training material for site personnel can be updated with current information. The Project will develop forms and databases, similar to those it has for Indigenous heritage, to monitor the condition, management and protection of the non-Indigenous heritage sites.

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19.5 Conclusion

Eleven non-Indigenous cultural heritage sites were identified during the field survey of the study area.

These eleven identified sites can be considered temporally and thematically within three categories, as follows:

- Five sites directly associated with the late 19th century coach route network;
- Two sites indirectly associated with the late 19th century coach route network and one likely to be associated with the late 19th and early 20th century stock route network; and
- Four sites relating to 20th century pastoral activity and improvements, with no identified association with the coach route network.

No sites of historical mining heritage were located during the field survey.

Potential impacts on recognised and potential cultural heritage sites by the Project will generally be in the nature of removal of the ground surface and sub-surface disturbance, vegetation clearance related to the mine's expansion and the development of associated infrastructure, and the consequent destruction and/or removal of the structures/features that form the non-Indigenous cultural heritage of the area.

The Proponent will put in place suitable mitigation measures to reduce the potential impact on the identified non-Indigenous cultural heritage sites and educate the Project workforce in how to identify and manage future possible heritage finds.