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15.1 INTRODUCTION

The purpose of this chapter is to describe the potential effects of construction and operation of the mine on non-Indigenous cultural heritage, and identify suitable management and mitigation measures to minimise impacts. The detailed non-indigenous cultural heritage assessment is provided in Volume 5, Appendix 23.

15.2 ASSESSMENT METHODS

The method adopted for this non-indigenous cultural heritage assessment of the mine involved a six stage process. The steps are briefly discussed below.

15.2.1 DESKTOP ASSESSMENT

The first task was to examine existing heritage registers and inventories and other relevant studies and reports as to places of significance within the proposed project areas. The principal registers included the Australian Heritage Places Inventory and the Queensland Heritage Register, as well as local government registers if they exist within the project area.

15.2.2 HISTORICAL OVERVIEW – KEY THEMES

In order to understand the type of places of cultural heritage significance that may exist within the project area, key historical themes were identified and discussed to provide a context for understanding what types of places with cultural heritage values may be present.

15.2.3 CONSULTATION WITH COMMUNITY GROUPS AND INTERESTED PARTIES

Consultation was undertaken with several stakeholders from the project area who have an interest in the history of the region and knowledge of historic sites. It was proposed to also consult local historical organisations that have an understanding of the history of the region, where considered necessary. However, the Alpha Historical Society has produced an excellent publication of relevance to the project area and, as such, it was considered unnecessary to consult further.

15.2.4 FIELD SURVEY

A field survey of the proposed mine site was undertaken over a period of two days. The survey was undertaken with the assistance of Kelvin Sypher, project manager for Waratah Coal. Kelvin resides at Kiaora (a pastoral holding within the mine area) and has an in-depth knowledge of the area and current land use. The mine area was surveyed by inspecting the main homesteads (with the exception of Glen Innes) and other facilities including dams, tanks and windmills.

15.2.5 CULTURAL HERITAGE ASSESSMENT

The approach to assessing cultural heritage significance is broadly similar at a local, regional, state and national level. Standard criteria were used to identify the cultural heritage values of a place depending on the level of significance. The difference is a question of threshold and whether a place is significant at a local, regional, state or national level. The criteria for assessing cultural heritage significance are:

- the place is important in demonstrating the evolution or pattern of history of a locality, region, state or Australia;
- the place demonstrates rare, uncommon or endangered aspects of cultural heritage of a locality, region, state or Australia;
- the place has potential to yield information that will contribute to an understanding of the history of a locality, region, state or Australia;
- the place is important in demonstrating the principal characteristics of a particular class of cultural places in a locality, region, state or Australia;
- the place is important because of its aesthetic significance in a locality, region, state or Australia;
- the place is important in demonstrating a high degree of creative or technical achievement at a particular period in a locality, region, state or Australia;
- the place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons in a locality, region, state or Australia; or
- the place has a special association with the life or work of a particular person, group or organisation of importance in the history of a locality, region, state or Australia.

15.2.6 POTENTIAL IMPACT AND MITIGATION STRATEGIES

Potential impacts and mitigation strategies were considered in three ways, these being:

- permanent impacts – impacts on places that were unavoidable and strategies recommended to minimise or compensate the impact if possible;
- temporary impacts – impacts on places during construction that could be reversed at the completion of the project or inadvertent impacts of places in the vicinity of the project area; and
- artifacts – the potential exists that artifacts may be discovered during construction. The possibility of a find, however, cannot be discounted. The *Queensland Heritage Act 1992* (QH Act) contains provisions relating to the discovery of archaeological artefacts and it is vital that appropriate procedures are established in the event of the discovery of an artifact of heritage significance.

15.3 DESCRIPTION OF EXISTING ENVIRONMENT

15.3.1 REVIEW OF REGISTERS

15.3.1.1 Australian Heritage Places Inventory

The Australian Heritage Places Inventory (APHI) contains summary information about places listed in State, Territory and Commonwealth Heritage Registers and Lists. It includes the Register of National Estate which is a list of places established under the *Australian Heritage Comission Act 1975* AHC Act and that are protected by provisions in the EPBC Act. The AHPI also includes the National Heritage List, which is a list of places with outstanding heritage value to the nation, and the Commonwealth Heritage List which is a list of places owned or managed by the Commonwealth and considered to have Commonwealth heritage values. Places on these lists are protected under provisions of the EPBC Act

No places were identified in the AHPI within or in close proximity to the mine area.

15.3.1.2 Queensland Heritage Register

The Queensland Heritage Register is administered by the Queensland Heritage Council under provisions in the QH Act. The register contains approximately 1,600 places throughout Queensland that are of heritage significance to the state.

No places were identified within the mine area or immediately adjacent.

15.3.1.3 Local Government Registers

Under the QH Act, local government authorities are required to establish and maintain a register of places of local cultural heritage significance and include policies for the protection of such places in their planning schemes. The mine area is within BRC. At the time of the assessment, the BRC did not have a heritage register or provision for the protection of heritage places in their planning scheme.

15.3.2 HISTORICAL OVERVIEW

15.3.2.1 Identified Historical Themes

While many parts of inland Australia share a similar history, each has a distinctive story. The purpose of this historical overview is not to provide an appreciation of the key historical themes. The identified themes assist in identify places of cultural heritage significance that may exist in the area covered by this study. The identified historical themes in the mine area are Exploring and Knowing the land and Pastoral development.

15.3.2.1.1 Exploring and knowing the land

For the indigenous inhabitants of the region, knowledge of the land was intimate, profound and encyclopedic: the movement and behaviour of animals, the flowering of trees and shrubs, the sources of water in an often dry landscape, what plants, grasses and fruits were edible, the medicinal properties of plants, the appropriate time to regenerate the land through burning, and the timing of the seasons.

For Europeans the region remained unknown, uncharted, and a mystery until the 1840s. In 1841, John Lort Stokes had explored the Gulf of Carpentaria in the *Beagle*. He briefly explored the land beyond the Gulf and reportedly in highly favourable terms of the country, calling it the 'Plains of Promise'. The NSW Legislative Council was impressed and in 1843 resolved to establish an overland route to Port Essington (near Darwin) from NSW. In May 1844, Ludwig Leichhardt and a small party left the Darling Downs to investigate such a route. They travelled northwards through central Queensland following rivers and creeks in the Fitzroy River system,

and then journeyed through the Peak Downs region and followed the Suttor River northwards through to the Burdekin River system. Leichhardt reported favourably on the prospects along the Burdekin River, but in the Peak Downs district and along the Suttor River he was more circumspect. He wrote in 1848:

> *"But they are a country which must be well examined, before stock should be taken to it. There is very little encouragement for those who are going to establish stations and to bring into bearing new and perhaps remote country (in O'Donnell, 1989)."*

Leichhardt's words were indeed most prescient. Unlike other explorers, politicians and advocates for unlimited development of the continent, Leichhardt foreshadowed that pastoral development along the Suttor River and adjacent regions would not be easy – and pastoralists even today would probably agree with Leichhardt.

Just 12 months after Leichhardt and his party had travelled through the region, Surveyor General Sir Thomas Mitchell and his party reached the Belyando River after exploring the northern tributaries of the Darling River system, including the Balonne River, with the intention of also finding a route to Port Essington.

While Leichhardt and Mitchell's expedition pointed to the potential of the Belyando Downs and lower Burdekin regions for pastoral development, the influx of pastoralists did not begin until the early 1860s.

15.3.2.1.2 Pastoral Development

The slowness of pastoralists to move into the region was due in part to the remoteness and also because other areas were initially more accessible and attractive. The gold rushes in NSW and Victoria also dampened pastoral expansion in the early 1850s. As more and more runs were taken up, pastoralists began seeking out what were previously less desirable areas. The discovery of a fine harbour at Port Denison (Bowen) provided an entry point into north Queensland and the interior. Indeed, pastoralists quickly took up land along the Burdekin River and its tributaries. But pastoralists also moved into the area from the south from Peak Downs and into the Belyando Downs from the south-west. Oscar De Sagte, a pastoralist in the Peak Downs region, noted that in the early 1860s that 'the number of stock on the road was hardly to be credited'.

By the mid-1860s, pastoral runs had been established throughout the region. But the viability and long-term future of many runs was highly uncertain. The initial confidence and triumphalism about quickly subduing the land was soon checked by a multitude of problems: drought, flood, resistance by indigenous groups, disease, shortage of labour, lack of capital and uncertainty over land tenure. Runs were abandoned, re-occupied and then abandoned again. Between 1866 and 1870, 175 runs were abandoned in the North and South Kennedy pastoral districts.

Most pastoralists initially brought sheep, but within a decade many in north Queensland realised that cattle were more suited to the conditions. Sheep were more prone to diseases such as footrot and lungworm, and grasses such as speargrass damaged the wool on the sheep's back. The initial impediment to cattle was lack of markets. However, the emergence of a number of large goldfields in the north provided a market for local beef. More important for the beef industry was the introduction of technology for canning meat and then freezing meat. The Central Queensland Meat Preserving Company opened a canning factory in 1870 at Rockhampton and provided an outlet for central Queensland meat producers for almost a decade until it went into liquidation. The Central Queensland Meat Export Company was formed in 1880 to process and export meat using recently developed freezing technology. A meat works was opened at Lakes Creek, Rockhampton in 1883 and was instrumental in developing the beef cattle industry in central Queensland (McDonald, 1988). Similarly in north Queensland, the establishment of a meat works at Ross Creek, Townsville provided an outlet for north Queensland beef producers (May, 1984).

Despite more certainty with markets and the development of the railway to transport stock to the meat works, pastoralists still faced ongoing challenges and obstacles in developing viable cattle properties. Some of the larger runs were considerable reduced in size as leases expired, and the government was keen to open up land for smaller selections. For example, in the 1890s, more than a quarter of the total area of the five largest runs in the Alpha district was resumed, with the intention of subdividing for smaller selections and agricultural farms (Cooper, 2005).

Regardless of the reduction in size, drought was a major periodic problem for pastoralists. The great drought of 1898-1902 was particularly devastating. The Surbiton run in the Alpha district had 19,295 head of cattle in 1900 but by 1904 the number had declined to just 500

(Cooper,2005) the loss was mirrored on other properties not only in the immediate region but throughout Queensland. Less severe, but still major droughts occurred in 1915, 1926, the mid-1930s and the mid-1960s.

Another battle pastoralists faced with cattle was disease, most notably tick or redwater fever. The cattle tick, *Boophilus microplus*, was probably introduced into Australia at Darwin in 1872 with cattle brought from Indonesia. The tick spread to Queensland, reaching Burketown in 1894 and quickly spread south and became a major problem for the cattle industry (Blake, 2001). Dipping in arsenic was introduced as a relatively successful method of killing ticks and reducing the impact of the tick on cattle. Dipping had to be undertaken on a regular basis to keep cattle 'clean'.

Yet another problem pastoralists faced was the presence of poisonous plants. In parts of the Alpha district, poison bush (*Gastrolobium grandiflorum*) was, and is, a major problem that affected both sheep and cattle. An 1890 report on the Surbiton run in the Alpha district noted that the poison bush was so 'thoroughly scattered' that it severely limited the potential for pastoral development. (QSA LAN, 1890). The only solution (and one which remains) was simply to fence off the area to exclude stock.

Various improvements after World War II improved the viability of the cattle industry. Mechanisation of land clearing made possible more areas for grazing in the brigalow scrub. Mechanisation also made possible the sinking of tanks for water storage easy and increasing water facilities on properties. Undoubtedly, the most significant change was the introduction of *Bos indicus* (Indian / African) breeds in favour of the *Bos taurus* (European / British) breeds. Since the beginning of the cattle industry in Queensland the main breeds were Herefords and Shorthorns but they were not well suited for the arid conditions of inland Queensland. Many pastoralists were initially sceptical of the value of *Bos indicus* but with extensive breeding and cross breeding, breeds such as Brahman, Droughmaster and Santa Gertrudis now dominate and have proved to be well suited for the environment.

15.3.3 FIELD INVESTIGATION

The open cut mine and associated facilities extends over 120 km². This area extends over three pastoral properties: Kiaora, Glenn Innes, and Monklands. A further area of underground mining will be below Cavendish, Spring Creek and Lambton Meadows.

These properties were originally part of the Hobartville run, which was consolidated from a series of smaller runs in the 1880s. With the consolidation, Hobartville became one of the largest runs in the Alpha district comprising 2,200 km². In the 1890s; however, the Queensland government began resuming parts of Hobartville under provisions of the *Crown Lands Act of 1884*. The blocks Hobartville No 3 and No 5 were part of the resumption. By the 1920s, the area had been subdivided into a number of grazing farm and grazing homestead leases including Cavendish, Kiaora, Monklands and Hazelbush. These blocks have remained substantially unchanged, although for periods some blocks have been amalgamated into larger holdings. Cavendish, for example, included Kiaora and Glen Innes, while Monklands and Saltbush have been worked as a single property for an extended period. Until the 1960s these properties, like most other in the Alpha district, principally carried sheep.

Kiaora has been operated as a separate block for more than 20 years. Most of the current infrastructure on Kiaora has been erected in this period and includes a house, sheds, dams, tanks, yards, windmills and fencing.

The infrastructure on Monklands / Saltbush has been developed from the early 20th century, and includes houses, sheds, yards, shearing shed, tanks, dams and fences.

The shearing shed possibly dates from the 1920s or earlier when the property was first established. It is a relatively small shearing shed with two stands and associated yards. The wool press remains although shearing has long ceased.

15.3.4 ASSESSMENT OF SIGNIFICANCE

On Kiaora, none of the infrastructure has heritage significance as it has all been erected in the past 20 years.

The Monklands homestead complex comprising two houses, sheds and shearing shed could potentially have local significance as an example of a small-scale pastoral property in the Alpha district that was developed in the early in the 20th century. The shearing shed, in particular, is intact with some machinery in situ and also the wool press. Monklands is a typical and good

example of a smaller holding that was developed following the resumption of the larger runs in the late 19th century.

15.4 POTENTIAL IMPACTS

The survey and assessment of the mine area revealed that the project will have only a minimal impact on places of non-indigenous cultural heritage significance. The approach in the survey was to identify all cultural sites in the mine area and assess for significance. The only site identified as potentially significant was Monklands homestead. This site would potentially meet the threshold for local significance. The development of the mine and associated infrastructure will require the demolition or removal of the Monklands homestead complex. Monklands has local significance as a former sheep property with evidence of this use in the shearing shed and wire-netting fence.

15.5 MITIGATION AND MANAGEMENT

15.5.1 KNOWN CULTURAL HERITAGE SITES

The development of the mine will result in direct impacts on Kiaora, Glen Innes and Monklands homesteads and surrounding landscapes. The only area currently identified that may contain heritage significance is Monklands homestead which contains local significance as a former sheep property with evidence of use in the shearing shed and wire netting fence.

An archival recording will be undertaken to include photographs and plans as specified by the DERM for heritage places. The recording will be undertaken for Kiaora, Glen Innes and Monklands homesteads and surrounding landscape. Copies of the photographic record will be deposited with the State Library of Queensland and the local Alpha library. Significant objects associated with the pastoral industry that the owners may wish to dispose of will be assessed and consideration given to donating to a local or regional museum.

The history and significance of the properties will be incorporated in interpretative facilities associated with the project mine or in the local area. This will be undertaken prior to the commencement of mine construction works.

15.5.2 CONSTRUCTION AND OPERATION

This assessment has focused on assessing places that have potential cultural heritage significance. During construction, it is possible that non-indigenous artifacts may be discovered. The history of land use suggests that significant archaeological finds are unlikely to be discovered.

The possibility of a find, however, cannot be discounted. The QH Act contains provisions relating to the discovery of archaeological artefacts. Waratah Coal will develop a project specific EMP for the mine. The EMP will:

- outline statutory obligations for all parties involved;
- provide for an induction for all construction personnel regarding non-indigenous cultural heritage management procedures;
- outline procedures to be implemented in the case of the find on non-indigenous heritage material during construction. This will include:
  - notification of heritage consultant to assess significance of find;
  - Stop/redirection of-work requirements and establishment of buffer zone;
  - Procedures for informing DERM;
  - documentation and recording of site *in-situ*;
  - if required, removal and conservation of find if assessed as significant; and
  - management and deposition of find in an appropriate museum or interpretative facility.

15.6 CONCLUSIONS

15.6.1 ASSESSMENT OUTCOMES

The assessment of non-indigenous heritage in the mine area involved a comprehensive review of publically available information together with significant stakeholder consultation and field assessment. The proposed mine will have a minimal impact on places of cultural heritage significance. Development of the mine will require the removal of the Monklands homestead which includes a shearing shed of potential local significance. The measures outlined in Section 15.5 of this chapter will be implemented to mitigate impacts on this site. A project specific strategy will be developed and implemented to manage impacts on potential non-indigenous heritage sites that have not identified within the proposed mine area.

15.7 COMMITMENTS

Waratah Coal commits to implementing procedures during site activities that aim to identify, assess and record undetected non-Indigenous heritage sites, including appropriate induction of relevant project personnel.