

# SARAJI EAST MINING LEASE PROJECT

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Environmental Impact Statement

**Chapter 16**  
Cultural Heritage

**BHP**

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# Saraji East Mining Lease Project

## 16 Cultural Heritage

### 16.1 Introduction

This chapter presents the Aboriginal (Indigenous) and historical (non-Indigenous) cultural heritage assessment for the Saraji East Mining Lease Project (the Project).

This cultural heritage assessment seeks to:

- identify known and potential Aboriginal or historical cultural heritage values of the Project Site
- assess the significance of these values
- assess the Project's potential impacts on these values
- recommend measures to manage or mitigate impacts on cultural heritage values.

Aboriginal cultural heritage will be managed under a Cultural Heritage Management Plan (CHMP). A CHMP for the Project Site (including the existing Saraji Mine) was developed between BMA and the relevant Aboriginal Party in 2011 (CLH012020). This CHMP has been approved under the *Aboriginal Cultural Heritage Act 2003* (ACH Act) and consequently meets all the requirements for the identification, assessment and management of Aboriginal heritage under the Project's Terms of Reference (ToR). As such, this EIS defers to the CHMP in all matters related to the management of Aboriginal cultural heritage.

### 16.2 Legislation and policy

#### 16.2.1 Commonwealth legislation

##### **Environmental Protection and Biodiversity Conservation Act 1999**

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the key national heritage legislation and is administered by the Commonwealth Department of the Environment and Energy (DoEE). The main aim of the EPBC Act is to provide protection for the environment, specifically for Matters of National Environmental Significance (MNES). Under Part 9 of the EPBC Act, any action that is likely to have a significant impact on a MNES (known as a controlled action under the Act), must be approved by the DoEE before it can occur. An action is defined as a project, development, undertaking, activity (or series of activities), or alteration.

The EPBC Act defines 'environment' as both natural and cultural environments, and therefore includes Indigenous and non-Indigenous historical cultural heritage items. Under the EPBC Act, protected heritage items can be listed on the World Heritage List (WHL), National Heritage List (NHL) (items of heritage significance to the nation) or the Commonwealth Heritage List (CHL) (items with heritage value belonging to the Commonwealth or its agencies). These three lists replaced the Register of the National Estate (RNE). The RNE has been suspended and is no longer a statutory list; however, it remains as an archive.

There are no places listed on the WHL, CHL or NHL within, or adjacent to, the Project Site.

## Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (ATSIHP Act) provides for the preservation and protection of places, areas and objects of particular significance to Indigenous Australians. The stated purpose of the ATSIHP Act is the “*preservation and protection from injury or desecration of areas and objects in Australia and in Australian waters, being areas and objects that are of particular significance to Aboriginals in accordance with Aboriginal tradition*”.

For the purposes of the ATSIHP Act, an area or object is considered to have been be injured or desecrated if:

- *In the case of an area:*
  - *it is used or treated in a manner inconsistent with Aboriginal tradition;*
  - *by reason of anything done in, on or near the area, the use or significance of the area in accordance with Aboriginal tradition is adversely affected; and*
  - *passage through, or over, or entry upon, the area by any person occurs in a manner inconsistent with Aboriginal tradition; or*
- *In the case of an object:*
  - *it is used or treated in a manner inconsistent with Aboriginal tradition.*

The ATSIHP Act can override state and territory laws in situations where a state or territory has approved an activity, but the Commonwealth Minister prevents the activity from occurring by making a declaration to protect an area or object. However, the Commonwealth Minister can only make a decision after receiving a legally valid application under the ATSIHP Act and, in the case of long-term protection, after considering a report on the matter. Before making a declaration to protect an area or object in a state or territory, the Commonwealth Minister must consult the appropriate Minister of that state or territory (Part 2, Section 13).

In the case of the Project, this legislation would only be invoked if the Aboriginal Party(s) made an application to the Commonwealth Minister on the grounds that the heritage values of the Project Site were insufficiently protected under the state legislation. This situation is considered unlikely provided ongoing compliance with the terms of the existing CHMP (CLH012020).

### 16.2.2 State legislation

#### Aboriginal Cultural Heritage Act 2003

Section 4 of the ACH Act defines the main purpose of the Act as providing effective recognition, protection and conservation of Aboriginal cultural heritage. The ACH Act defines Aboriginal cultural heritage as anything that is either:

- a significant Aboriginal area in Queensland
- a significant Aboriginal object
- significant archaeological or historical evidence of Aboriginal occupation of an area of Queensland.

A significant Aboriginal area or object under the ACH Act is considered to be any area or object that is of particular significance to Aboriginal people because of Aboriginal tradition and/or the history, including contemporary history, of any Aboriginal party(s) for the area.

### *Duty of Care Guidelines*

Section 23 of the ACH Act states that “a person who carries out an activity must take all reasonable and practical measures to ensure the activity does not harm Aboriginal cultural heritage (the cultural heritage duty of care)”. The Duty of Care guidelines, gazetted under Section 28 of the ACH Act, identify reasonable and practicable measures for managing activities in order to avoid or minimise harm to Aboriginal cultural heritage.

The Duty of Care Guidelines (Department of Aboriginal and Torres Strait Islander Partnerships 2004) require a land user to make an assessment of their particular land use activity and the likelihood that it will cause harm to Aboriginal cultural heritage. In summary, the ‘Duty of Care’ categories are:

- **Category 1** activities involve **no surface disturbance**. Such activities are generally unlikely to cause harm to Aboriginal cultural heritage, meaning they may proceed without further cultural heritage assessment.
- **Category 2** activities cause **no additional surface** disturbance. Such activities will not result in additional harm to Aboriginal cultural heritage, meaning they may proceed without further cultural heritage assessment.
- **Category 3** activities are those that occur in **developed areas** (such as road and rail infrastructure). Activities that occur in these areas are generally unlikely to harm Aboriginal cultural heritage and may proceed without further cultural heritage assessment, provided they do not extend beyond current levels of ground disturbance.
- **Category 4** activities are those that occur in an area **already subject to significant ground disturbance**. In these circumstances, further activities are unlikely to harm Aboriginal cultural heritage and may proceed without further cultural heritage assessment. However, care should be taken lest residual Aboriginal cultural heritage values are impacted. The Aboriginal Party(s) should be contacted in the event that any feature of potential cultural significance is uncovered.
- **Category 5** activities are those that will create **additional surface disturbance**, and so have a high risk of harming Aboriginal cultural heritage. These activities cannot proceed without cultural heritage assessment, and it is generally necessary to notify the appropriate Aboriginal Party(s) to seek advice in relation to the cultural heritage values of the area.

### *Cultural Heritage Database*

Part 5 of the Act establishes a cultural heritage register and database, both of which are currently administered by the Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP). While the register contains publicly available information such as Aboriginal Party boundaries or cultural heritage studies, the database also contains confidential information related to specific cultural heritage sites. It should be noted, however, that the database is intended to be a planning and research tool only and does not guarantee that the entered “*information is up-to-date, comprehensive or otherwise accurate*”.

There are three DATSIP sites recorded within the Project Site: two artefact scatters (DATSIP IDs GG:A69 and GGA:70) and an isolated artefact (DATSIP ID GG:A68) see Section 16.4.1. It should be noted, however, that these sites were identified almost 20 years ago and, given the acknowledged inaccuracies of the DATSIP database, it is not possible to confirm their nature or extent, or even whether they remain in the Project Site.

### *Cultural Heritage Management Plans*

Part 7 of the ACH Act provides for the management of Aboriginal cultural heritage. A CHMP is a State-approved agreement between a land user and the Aboriginal Party(s) of an area that outlines how project activities may be managed to avoid harm to Aboriginal cultural heritage, or to minimise harm where avoidance is not reasonably practicable. A formal CHMP establishes a statutory process for addressing Aboriginal cultural heritage with certainty. The CHMP process involves a statutory notification period during which the land user must notify the Cultural Heritage Body(s) and/or Aboriginal Party(s) of their intention to develop a CHMP. Notification recipients are given 30 days in which to respond to the notification, followed by an 84-day consultation and negotiation period.

A CHMP is compulsory where an EIS is required, or else may be entered into voluntarily by a land user regardless of the legal requirements. BMA developed a CHMP with the Aboriginal Party for the Project Site in 2011 (CLH012020) see Section 16.4.1.

### **Queensland Heritage Act 1992**

The *Queensland Heritage Act 1992* (QH Act) provides the framework for assessing the significance of items and places of historical cultural heritage value in Queensland. It is administered by the Department of Environment and Science (DES), with advice from the Queensland Heritage Council (QHC). The QH Act provides for the conservation of Queensland's cultural heritage by protecting all places and areas listed on the State Heritage Register (SHR).

Broadly, a place is considered to be of state cultural heritage significance if *"its heritage values contribute to our understanding of the wider pattern and evolution of Queensland's history and heritage. This includes places that contribute significantly to our understanding of the regional pattern and development of Queensland"* (*Environment and Heritage Protection 2013a:6*).

Under Section 35(1) of the QH Act, a place may be entered on the SHR if it satisfies one or more of the following criteria:

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

Works with the potential to have more than a minor detrimental impact on the heritage values of a State heritage place require a development approval under the *Planning Act 2016*.

Part 9, Division 1 of the QH Act also provides protection for places that have potential archaeological significance. Section 89 of the QH Act requires a person to notify the DES chief executive of an archaeological artefact that is an important source of information about an aspect of Queensland's history. This notice must be given as soon as practicable after the person discovers the item.

Section 90 of the QH Act stipulates that it is an offence to interfere with an archaeological artefact once notice has been given of the artefact to the chief executive.

There are no listed SHR places within, or adjacent to, the Project Site.

### 16.2.3 Local legislation

Local heritage places are managed under Part 11 of the QH Act, local planning schemes and the *Planning Act 2016*. The QH Act provides a process for establishing a local heritage register and nominating places to be included on a local heritage register. As defined by the Department of Environment and Heritage Protection (DEHP) (2013a:6), a place is considered to be of local (rather than state) significance if *“its heritage values do not contribute significantly to our understanding of the wider pattern and evolution of Queensland’s history and heritage”*.

The Project Site is within the Isaac Regional Council (IRC) area and is covered by the legacy Belyando Shire Planning Scheme (2008) and Broadsound Shire Planning Scheme (2005). Both schemes aim to identify and protect places of cultural heritage significance. In the case of the Belyando Shire Planning Scheme, these places are identified in Division 7 of the scheme and consist of local cemeteries. The Broadsound Shire Planning Scheme does not appear to identify any places of local heritage significance.

There are no places of local heritage significance within, or adjacent to, the Project Site.

### 16.2.4 Burra Charter

Originally created in 1979 by the Australian branch of the International Council on Monuments and Sites (ICOMOS), the Charter for Places of Cultural Significance (or Burra Charter) provides the benchmark for cultural heritage management in Australia. It is the basis for the majority of Commonwealth, State and local heritage legislation and policy (ICOMOS (Australia), 2013).

The Burra Charter defines a place as being of cultural significance if it possesses aesthetic, historic, scientific or social value, and provides guidance on managing and conserving places in order to preserve this significance.

## 16.3 Methodology

### 16.3.1 Aboriginal heritage

It is understood that the requirements of the ToR – *“to identify, assess and manage Aboriginal cultural heritage within the Project Site”* – will be met under the existing CHMP (CLH012020). Due to confidentiality constraints, this document has not been made available for review. However, for the purpose of this EIS, it is assumed that, as a DATSIP endorsed CHMP, it meets all the necessary legislative and policy conditions required to satisfy the ToR.

In order to provide the wider community with an appreciation of the Aboriginal cultural heritage values of the Project Site, a review of publicly available information on heritage registers and in previous reports was undertaken. It is noted, however, that very few previous reports are readily accessible under current DATSIP policy (S. Nichols 2018 pers. comm.), which includes those completed for the Project Site in the mid-2000s (e.g. Gorecki 2006a, 2006d, 2006c).

Given these constraints, the following desktop cultural heritage assessment was undertaken for the Project:

- a search of the DATSIP Aboriginal and Torres Strait Islander Cultural Heritage Database and Register to identify:
  - Aboriginal Party(s) and/or Cultural Heritage Bodies for the Project Site
  - any registered Aboriginal cultural heritage within the Project Site
- a review of available historical and archaeological research in the area to identify:
  - any additional places of cultural heritage significance
  - previous land use and levels of ground disturbance
- identification of high sensitivity landforms.

### 16.3.2 Historical heritage

The desktop historical heritage assessment was informed by legislative requirements, as well as the guideline *Assessing cultural heritage significance: Using the cultural heritage criteria* (Environment and Heritage Protection 2013a), which provides a framework for identifying and managing historical significance under the QH Act. In keeping with this framework, the key elements of the assessment were:

- heritage register searches, including:
  - World, National and Commonwealth Heritage Registers
  - Queensland Heritage Register
  - Local Heritage Register
- a review of historical studies, historical documents and previous historical cultural heritage assessments of the Project Site and the surrounding region
- an assessment of potential Project impacts, and recommendation of management and mitigation measures.

## 16.4 Environmental values

Environmental variables such as topography, geology, hydrology and vegetation inevitably influence how a landscape is used. The following summary of the environmental setting is provided to contextualise the history and potential heritage values of the Project Site Table 16.1. For further detail, refer to **Chapter 5 Land Resources**, **Chapter 6 Terrestrial Ecology**, and **Chapter 8 Surface Water Resources**.



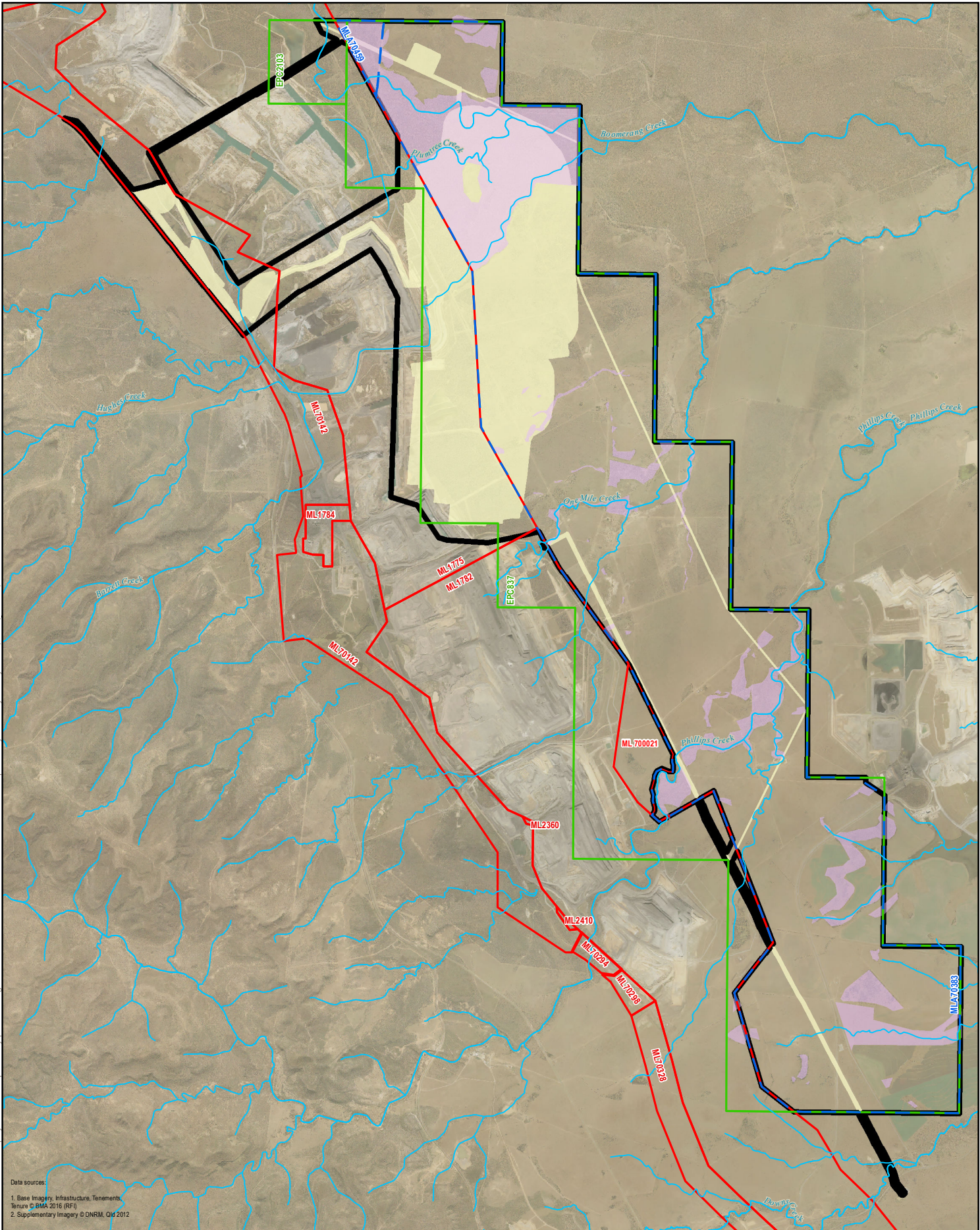
Table 16.1 Summary of the environmental setting

Environmental element	Description
Topography	<p>A review of contour data (Department of Natural Resources and Mines, 2016b) indicates that the majority of the Project Site is flat, with elevations ranging from 180 metres (m) Australian Height Datum (AHD) to 200 m AHD. This changes abruptly at the eastern side of the Project Site, where existing mining operations have created artificial elevations ranging from 90 m AHD to 270 m AHD.</p> <p>The generally flat terrain continues to the north, south and east of the Project Site; however, some three kilometres (km) to the west of the Project Site are the Harrow, Denham and Peak Ranges, with peaks reaching over 680 m AHD.</p>
Hydrology	<p>Eleven intermittent watercourses cross the Project Site, making their way from the ranges in the west to the downs in</p> <p>These include the fourth order Boomerang Creek in the north, into which runs the third order Plumtree Creek. A small oxbow lake has formed just to the south of this confluence. South of this is a section of the former Hughes Creek, a third order watercourse that has been diverted by the existing mines. Further south is the fourth order One Mile Creek and, at the southern end of the Project Site, the fourth order Phillips Creek. All of these watercourses ultimately drain into the sixth order Isaac River, which is 15 km east of the Project Site, and the major watercourse in the catchment area.</p> <p>All of these watercourses would have potentially provided living and resource extraction sites for Aboriginal people. In the case of the smaller streams, this use would likely have been seasonally based, limited to those periods in which water was available. Any more permanent or intensive occupation was likely limited to the Isaac River itself see Section 16.4.2.</p>
Geology and soils	<p>The geology of the Project Site and much of the area to the east is dominated by Late Tertiary - Quaternary alluvium. Soils are red-brown mottled, poorly consolidated sand, silt, clay and minor gravel with high-level alluvial deposits around current watercourses (Department of Natural Resources and Mines 2017). To the west of the Project Site is the Back Creek Group, which is typified by sandstone, siltstone and shale.</p> <p>There are no geological units in or around the Project Site that would offer raw materials suitable for the production of stone artefacts. The closest such outcrops are likely to be the Peak Range Volcanics, located some 35 km to the east, which offer a “a profusion of Chalcedony, and fine specimens of Agate” (Leichhardt 1847:140).</p>
Flora and fauna	<p>The Project Site and surrounding area has been extensively cleared for pastoral purposes, and is now vegetated with introduced grasses, and isolated or small clumps of trees including Coowarra box (<i>Eucalyptus cambageana</i>), poplar box (<i>Eucalyptus populnea</i>) and brigalow (<i>Acacia harpophylla</i>).</p> <p>This is consistent with the account of the pre-clearance environment offered by explorer Leichhardt (1847), who travelled through the Project Site along the erstwhile Hughes Creek in 1845. Leichhardt describes the flat country at the base of the sandstone ranges (Harrow Range) as being lightly timbered with ironbark (<i>Eucalyptus crebra</i>), blue gum (<i>Eucalyptus tereticornis</i>), and poplar-gum (<i>Eucalyptus populnea</i>). Other tree species noted include grass trees (<i>Xanthorrhoea sp.</i>) and grevillea on the ranges, as well as weeping paperbark (<i>Melaleuca leucodendron</i>), casuarinas, flooded gum (<i>Eucalyptus grandis</i>), bloodwood (likely <i>Corymbia intermedia</i>), and the small-leaved water vine</p>

Environmental element	Description
	<p>(<i>Clematicissus opaca</i>) in better watered areas (Leichhardt 1847). All of these species would have provided useful raw materials to Aboriginal people, including bark, wood, resin and edible fruits.</p> <p>Leichhardt also identifies a rich array of animal species in the area, including kangaroo (<i>Macropus giganteus</i>), emu (<i>Dromaius novaehollandiae</i>), ringtail possum (<i>Pseudocheirus peregrinus</i>), ducks (<i>Chenonetta jubata</i>), pheasant coucal (<i>Centropus phasianinus</i>), and honey-producing native bees, all of which were exploited by Aboriginal people (Leichhardt 1847).</p>
Past disturbance	<p>Known past land use activities include vegetation clearance and pastoral grazing. Analysis of historical imagery by Matthews (2012) suggests that less than 20 per cent of the Project Site has remained uncleared. The bulk of this is in the far north of the site, with smaller sections along watercourses in the remainder of the area.</p>



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Data sources:

1. Base Imagery, Infrastructure, Tenements, Tenure © BMA 2016 (RFI)
2. Supplementary Imagery © DNRM, Qld 2012

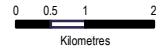
**LEGEND**

- Project Site
- Project Footprint
- Watercourse
- Potentially Uncleared Areas (Matthews 2011)
- Exploration Permit Coal (EPC)
- Mining Lease (ML)
- Mining Lease Application (MLA)



**Figure 16-1  
Hydrology and  
Potentially Uncleared Areas**

**Environmental Impact Statement  
Saraji East Mining Lease Project**



Scale: 1:110,000 (when printed at A4)  
Projection: Map Grid of Australia - Zone 55 (GDA94)



DATE: 5/08/2020 VERSION: 1



## 16.4.1 Aboriginal heritage context

### Ethnohistory

Ethnohistorical accounts of Aboriginal life in and around the Project Site are few. For the most part, they are limited to the 1845 observations of the explorer Leichhardt (1847). Leichhardt's route took him directly through the Project Site, following Hughes Creek and sections of what is now Boomerang Creek from the base of Harrow Range through to the Isaac River see also Section 16.4.2.

As Leichhardt's party made their way along Hughes Creek, their only contact with Aboriginal people would appear to be startling some swimmers in a waterhole just to the east of the Project Site. It was not until the party of explorers reached the Isaac River (13 km east of the Project Site) on 13 February 1845, that they had any interaction with the local people:

*"When we were approaching the river, the well-known sound of a tomahawk was heard, and, guided by the noise, we soon came in sight of three black women, two of whom were busily occupied in digging for roots, whilst the other, perched on the top of a high flooded-gum tree, was chopping out either an opossum or a bees' nest... Upon reaching the tree we found an infant swaddled in layers of tea-tree bark, lying on the ground; and three or four large yams. A great number of natives, men, boys, and children, who had been attracted by the screams of their companions, now came running towards us" (Leichhardt 1847:149-150).*

That night, the explorers heard Aboriginal people camped at several waterholes along the Isaac River and, the following day, relocated their camp to the river bank, at the junction of Hughes Creek (now Boomerang Creek) (Leichhardt 1847:151). Leichhardt describes that:

*"...following the course of the river, we saw numerous tracks of Blackfellows, of native dogs, of emus, and kangaroos, in its sandy bed; ... we came to a water-hole in the bed of the river, at its junction with a large oak tree creek coming from the northward... the natives had fenced it round with branches to prevent the sand from filling it up, and had dug small wells near it, evidently to obtain a purer and cooler water, by filtration through the sand (Leichhardt 1847:155)."*

The construction and maintenance of these wells also attracted plentiful wildlife, and Leichhardt and his party marvelled at the profusion of squatter pigeons (*Geophaps scripta*) pheasant pigeons (possibly *Macropygia amboinensis*) and cockatoos (*Cacatua sp.*). As the party made their way north, they came across several more artificial wells in the otherwise dry river bed, generally located where tributaries joined the main stream (Leichhardt 1847:156).

The information recorded by Leichhardt provides some useful insights into Aboriginal life in the region during the early colonial period. Chief among these is the importance of water, and the measures employed by Aboriginal people to curate this resource through the digging and maintenance of wells in the Isaac River.

These wells appear to have acted as the central locus for Aboriginal occupation. While people travelling across the landscape might establish small temporary camps where convenient – particularly in wet seasons when water was available in the intermittent streams – long term, intensive occupation, or the large congregations noted by Leichhardt, appear to have been limited to the river margins. This is consistent with Aboriginal settlement patterns noted elsewhere in the state (Lilley 1984). In the dry seasons, families would congregate near reliable water sources, creating large, semi-permanent camps, and exploiting the rich fish, bird and game resources. In the wet seasons, when water was readily available, the groups split into smaller, family units, moving across the landscape and exploiting more ephemeral water and food resources (Lilley 1984).

In the decade following Leichhardt's journey, settlers began to arrive in the area, taking up land to establish pastoral runs in what became known as the Leichhardt Pastoral District. Like Aboriginal people, the settlers initially stayed close to the water offered by the Isaacs River and major creek lines

(Chief Commissioner of Crown Lands 1872). Gradually, however, the pastoral runs expanded and, by the 1870s, much of the Project Site had been taken up (Queensland Government 1894).

Aboriginal people resisted these incursions into their land, leading one settler to describe the Isaac River as “*an immense brigalow scrub...and full of wild blacks*” (Fetherstonhaugh 1917 in Northern Archaeology Consultancies Pty Ltd 2008:30). Settler retribution swiftly followed, carried out either by landowners themselves, or by units of the Native Mounted Police, a specialist force of Aboriginal troopers and white officer created to ‘disperse’ troublesome Aboriginal people. Details of individual clashes are scant, but one settler noted in 1869 that “*about sixty Blacks were shot at Grosvenor last week*”, referring to the Grosvenor Downs station some 30 km north of the Project Site (Bottoms 2013).

By the end of the 1870s, the frontier violence was almost at an end. Aboriginal groups had been greatly reduced by the predations of the Native Police and introduced diseases, and the remaining population moved to settle in ‘fringe camps’ around large stations and townships. Such fringe camps offered protection from the police and other colonists, and saw Aboriginal labour increasingly appropriated for stock and domestic work. By the turn of the 20<sup>th</sup> century, these camps began to empty as Aboriginal people across the state were again moved on, this time taken to missions and reserves (Morwood and Godwin 1982).

## Language groups

Leichhardt did not identify how the Aboriginal people of the Isaac River referred to themselves, but anthropologist Tindale later identified this as the country of the Barna (or Parnabal) speaking peoples (Tindale 1974). This attribution is replicated in Hortons’ 1996 synthesis of Australian Aboriginal languages (Horton 1996).

## Previous reports

Although a number of Aboriginal cultural heritage assessments have been conducted in the area in and around the Project Site – predominately for other coal mines – very few of these are publically available (Gorecki 2006a, 2005, 2006b, 2006c, Hatte 2005b, 2005a). However, an Aboriginal cultural heritage overview provided in a report for the nearby Caval Ridge Mine (approximately 40 km north of the Project) (Northern Archaeology Consultancies Pty Ltd 2008) suggests the following:

- The most common Aboriginal heritage site types are artefact scatters or isolated artefacts, the vast majority of which are:
  - located within 100 m of a watercourse
  - generally located in disturbed, eroding environments, but still retain some archaeological context
  - often found in association with false sandalwood groves (*Eremophila mitchellii*) or cleared brigalow (*Acacia harpophylla*)
  - associated with hearths, quarries or other site types.
- Scarred trees are the second most common site type:
  - recorded on blue gum (*Eucalyptus tereticornis*), poplar box (*Eucalyptus populnea*), blackbutt (*Eucalyptus pilularis*), coolabah (*Eucalyptus microtheca*)
  - most likely in areas of remnant vegetation
  - possum or honey holes are the most common, although larger scars are also present, including possible canoe trees.

Like in the ethno-historical context Section 16.4.1 presented previously, these findings emphasise the importance of water in Aboriginal landscape use, and determining subsequent cultural heritage sensitivity.

## DATSIP database search

A search of the DASTIP Database on 22 June 2018 (Search ID 38625) returned the following details of the Aboriginal Party, cultural heritage body, and pre-existing CHMPs with BMA for the Project Site see Table 16.2, Table 16.3 and Table 16.4. There are currently six CHMPs relevant to the Project Site Figure 16-2. However, only one covers the entirety of the site (CLH012020). It is assumed that this CHMP will be the main document for managing Aboriginal cultural heritage during Project works. The remaining five cover only small sections of the Project Site, representing areas of overlap with other BMA works.

**Table 16.2 Aboriginal Party for the Project Site**

QC ref number	QUD ref number	Name	Contact details
QCD2016/007 DET	QUD380/2008	Barada Barna People	Barada Barna Aboriginal Corporation RNTBC Contact person: Graham Budby Lot 55 Johnson's Road NEBO QLD 4742 Mobile: 0447 005 471 Administration: Luarna Mitchell Email: luarna@baradabarna.com.au Mobile: +61 428 884 335

**Table 16.3 Cultural Heritage Body for the Project Site**

Name	Contact details
Winnaa Pty Ltd	Mr Graham Budby Lot 55 Johnson's Road NEBO QLD 4742 Mobile: +61 447 005 471

**Table 16.4 Cultural Heritage Management Plans with BMA**

CHL number	Sponsor	Party	Approved
CLH000351	BMA	Barada Barna Yetimarla #4	Jan 9, 2006
CLH000520	BMA Billiton Mitsubishi Alliance	Barada Barna Kabalbara Yetimarla people #4 QC01/25 Barada Barna Kabalbara Yetimarla people	Mar 5, 2007
CLH012022	BMA	Barada Barna People	Oct 8, 2012
CLH012021	BMA	Barada Barna People	Oct 8, 2012
CLH012020	BMA	Barada Barna People	Oct 28, 2011

The DATSIP search also indicates there are three recorded Aboriginal cultural heritage sites within the Project Site: two artefact scatters and one isolated find (DATSIP IDs GG:A68, GG:A69 and GG:A70 respectively). A search of the wider area (with a 5 km buffer around the Project Site), identified 24 sites in total, the majority of which are artefact scatters (see Table 16.5 and Figure 16-3).

Table 16.5 DATSIP sites within 5 km of the Project Site

Site type	Count	Per cent of the total
Artefact Scatter	16	66.67
Isolated Find	2	8.33
Painting(s)	1	4.17
Scarred/Carved Tree	5	20.83
<b>Total</b>	<b>24</b>	<b>100.00</b>

### Additional sites

Although it was not possible to access previous cultural heritage reports for the Project Site, BMA has provided spatial data for a number of cultural heritage sites identified during recent works (BHP Billiton Mitsubishi Alliance 2017). Little information is available about these sites, but it is understood that they were identified during geotechnical works rather than through systematic cultural heritage survey. This suggests that additional sites may be present.

In total, 40 cultural heritage sites have previously been identified in the Project Site during exploration activities Table 16.6 (BHP Billiton Mitsubishi Alliance 2017). Half of these sites are identified as potential scarred trees. However, it should be noted that 16 of these trees occur in areas that were cleared of vegetation in the mid-20th century (Matthews 2012) Figure 16-1 suggesting that they may not be of Aboriginal origin. These false positives highlight the importance of taking a conservative approach to the identification and recording of potential scarred trees.

The remaining sites consist of four isolated artefacts and 16 artefact scatters, 12 of which are within 100 m of a watercourse, once again demonstrating the important role of water in Aboriginal people's selection of living and working sites.

Of the 40 previously identified cultural heritage sites, 13 of the 16 artefact scatters have been salvaged or relocated, as have two of the 20 scarred trees, and all of the isolated artefacts. It is understood that sites that have been salvaged have been removed to a separate keeping place, while the relocated sites have been moved to a place within the Project Site Table 16.6.

Table 16.6 Cultural heritage sites previously identified in the Project Site

Site type	In situ	Relocated	Salvaged	Total
Artefact Scatter	3	2	11	16
Isolated Find	0	1	3	4
Scarred/Carved Tree	18	0	2	20
<b>Total</b>	<b>21</b>	<b>3</b>	<b>16</b>	<b>40</b>

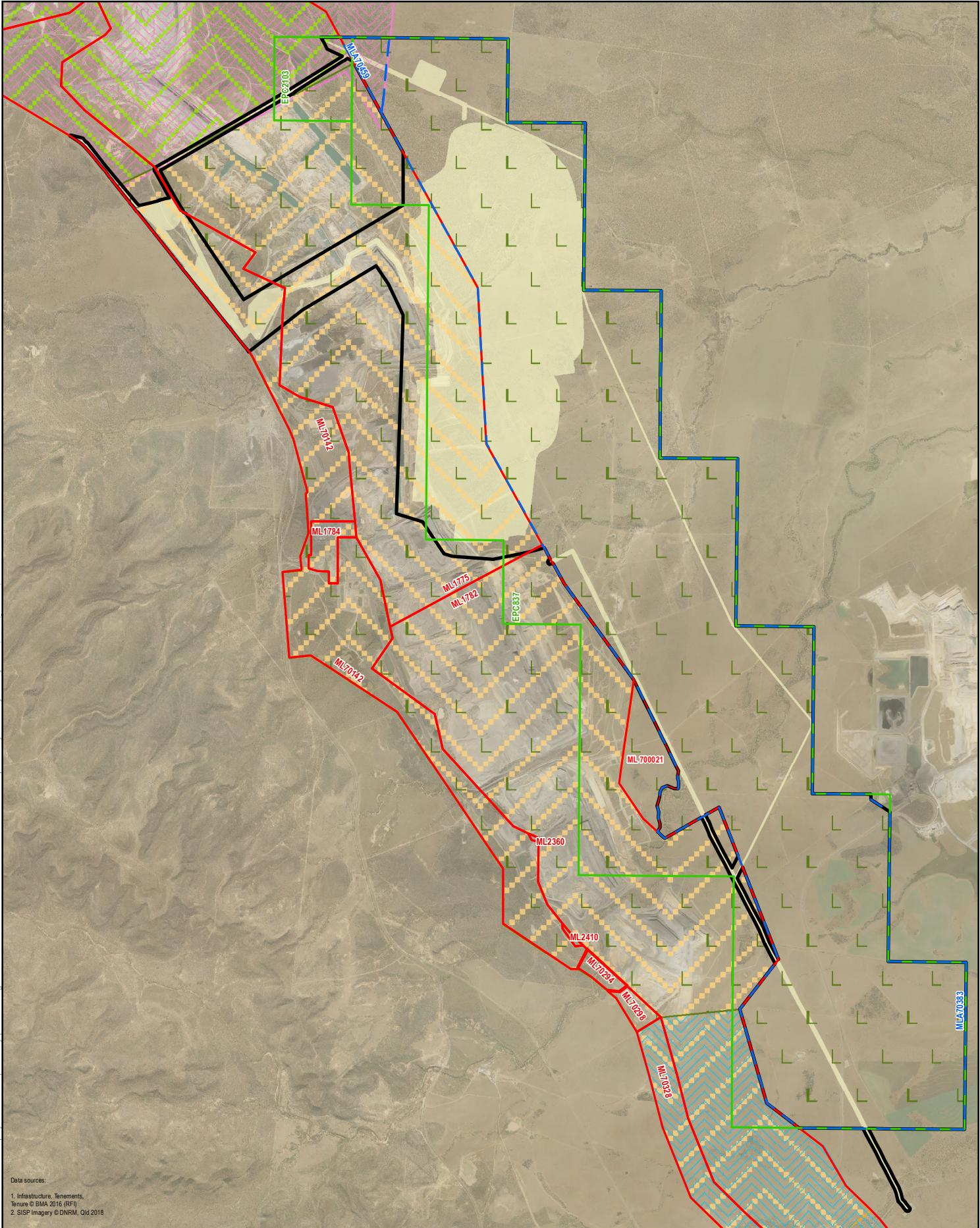
## Aboriginal cultural heritage sensitivity

A review of historical and archaeological information suggests that Aboriginal cultural heritage sensitivity is highest in areas within 100 m of a watercourse. As discussed in the previous sections, watercourse margins were prime living and working locations, and may retain cultural heritage sites including hearths, artefact scatters, middens and grinding grooves. The largest and most complex sites are likely to be found along the Isaac River, which is outside of the Project Site, but there is the potential for smaller, more temporary sites in the Project Site. This potential will be highest in areas have not been subject to vegetation clearance or other ground disturbing works, but some potential remains even in previously disturbed areas (Northern Archaeology Consultancies Pty Ltd 2008).

A second area of cultural heritage sensitivity exists around the currently recorded sites. There is the potential that these sites are a part of wider site complexes or are associated with other sites that have not yet been identified. It should also be noted that the locations provided for the DATSIP sites are often inaccurate, depending on the age and method of recording. As the DATSIP sites in the Project Site were identified in the late 1990s, likely using map grids, their coordinates should be treated as approximate.



AECOM does not warrant the accuracy or completeness of information displayed in this map and any person using it does so at their own risk. AECOM shall bear no responsibility or liability for any errors, faults, defects, or omissions in the information.



Data sources:  
 1. Infrastructure, Tenements, Tenure © BMA 2016 (RF1)  
 2. SISIP Imagery © DNRM, Qld 2018

**LEGEND**

- Project Site
- Project Footprint
- Exploration Permit Coal (EPC)
- Mining Lease (ML)
- Mining Lease Application (MLA)

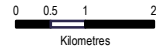
**Cultural Heritage Management Plan**

- CLH000351
- CLH012020
- CLH000520
- CLH012021
- CLH012022



**Figure 16-2**  
**Cultural Heritage**  
**Management Plans**  
**relevant to the Project Site**

Environmental Impact Statement  
 Saraji East Mining Lease Project



Scale: 1:110,000 (when printed at A4)

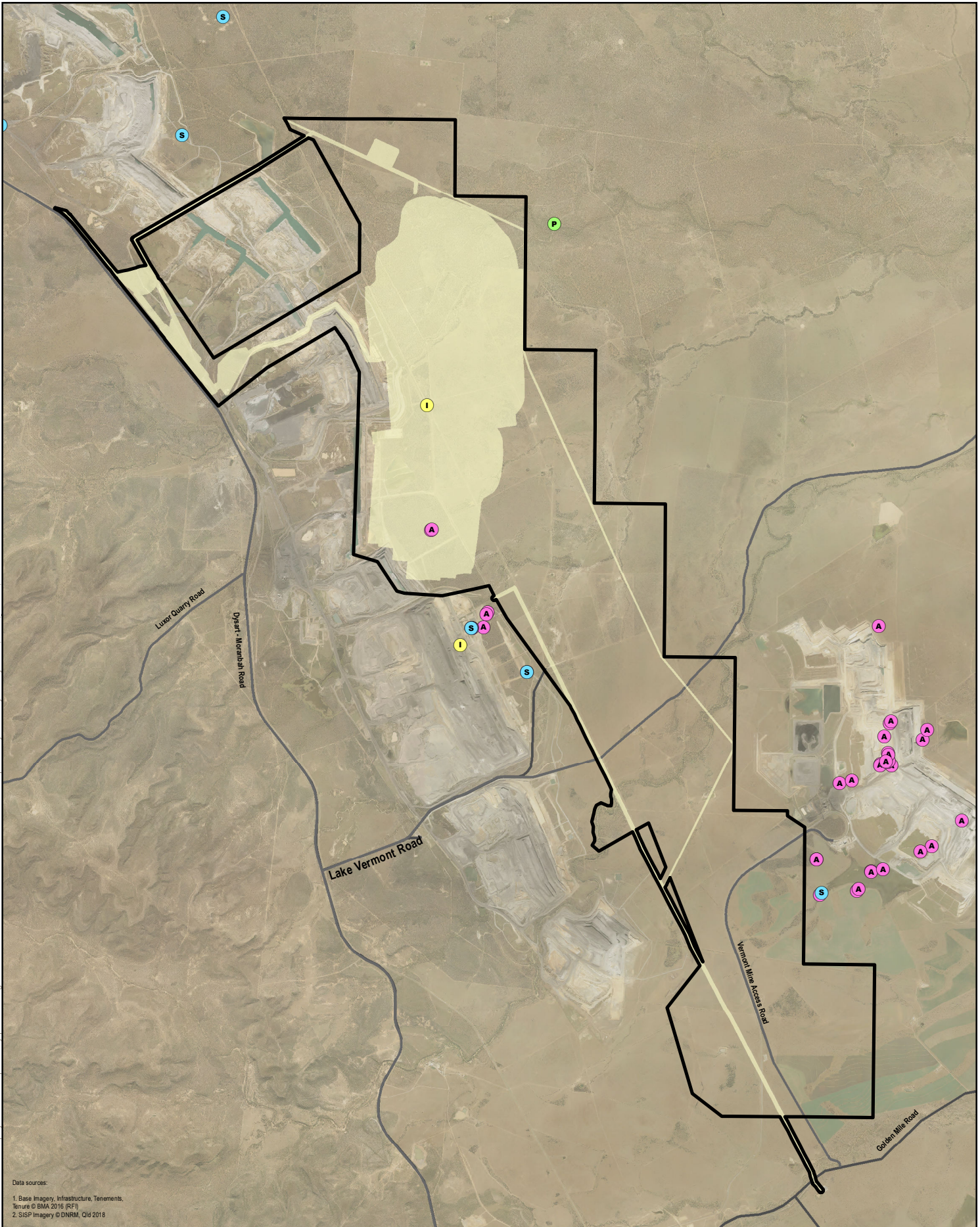
Projection: Map Grid of Australia - Zone 55 (GDA94)



DATE: 5/08/2020 VERSION: 1



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Data sources:  
 1. Base Imagery, Infrastructure, Tenements, Tenure © BMA 2016 (RFI)  
 2. SiSP Imagery © DNRM, Qld 2018

<b>LEGEND</b>	
Project Site	<b>Aboriginal Cultural Heritage Site</b>
Project Footprint	Artefact Scatter
Public Road	Isolated Find
	Painting(s)
	Scarred/Carved Tree

**Figure 16-3**  
 Recorded DATSIP Aboriginal Cultural Heritage Sites within 5km of the Project Site

**Environmental Impact Statement**  
 Saraji East Mining Lease Project

0 0.5 1 2  
 Kilometres

Scale: 1:120,000 (when printed at A4)  
 Projection: Map Grid of Australia - Zone 55 (GDA94)





## 16.4.2 Historical heritage context

### Historical background

Historical accounts of the Project Site commence with the Leichhardt expedition in 1845 (Leichhardt 1847). Seeking a route from Moreton Bay, Queensland, to Port Essington in what is now the Northern Territory, Leichhardt travelled directly through the Project Site, following Hughes Creek from the base of Harrow Range to the Isaac River. Leichhardt's initial opinion was that the land at the base of the ranges 'did not look promising' but, as he made his way towards the river, he commented on the emergence of 'fine openly timbered flats' (Leichhardt 1847:143, 149). The party made camp at four locations between the range and the river, all on what Leichhardt referred to as Hughes Creek, although the easternmost sections are now referred to as Boomerang Creek. Of these, the camp of 11 February 1845 has the potential to be in the Project Site. However, this location is likely now in the centre of the existing Saraji Mine.

Almost a decade after Leichhardt's expedition, a pastoral district was created in his name covering the area from Nebo in the north, to Wandoan in the south, west to Clermont, and east to Duaringa. By the end of the 1860s, the land to the east of the Project, on the Isaac River, had been taken up as Leichhardt Downs, the land to the west as Logan Downs, and to the north as Grosvenor Downs (Chief Commissioner of Crown Lands 1872) Figure 16-4. The marginal 'unpromising' land of the Project Site remained unclaimed until the late 19th century, when it became part of Cotherstone and Iffley runs (Queensland Government 1894).

The Project Site was divided again in the early 20<sup>th</sup> century, becoming part of the freehold properties of Lake Vermont and Carfax, but there is little evidence of clearing or other development to this time. Mapping from the 1940s shows a dam in the far north of the site, near Hughes Creek, but no bores, windmills, yards, houses or other structures Figure 16-5. Vegetation coverage in the far south was noted to be 'dense timber' suggesting that it had not been cleared at this point, while the remainder was 'dense undergrowth', suggesting it may have been partly cleared in the past, but was now revegetated (L.H.Q (Aust) Cartographic Company 1944).

Analysis of historical aerial photography indicates that small section of land south of Phillips Creek was cleared in the early 1960s, but that the remainder of the Project Site was vegetated until the 1970s (Matthews 2012). At this time, the Saraji Mine and ancillary infrastructure such as power lines were in development (Aerial Imagery QAP3619595, QAP3619605).

### Historical heritage register searches

A search of relevant Commonwealth, State and local heritage registers was conducted on 22 June 2018 Table 16.7. These searches indicated that there are no registered historical heritage places within or adjacent to the Project Site.

Table 16.7 Summary of historical heritage register searches undertaken for the Project

Register	In Project Site
World Heritage List	None
National Heritage List	None
Commonwealth Heritage List	None
Register of the National Estate (non-statutory)	None
State Heritage Register	None
Cultural Heritage Information Management System (non-statutory)	None
Belyando Shire Planning Scheme and Broadsound Shire Planning Scheme	None

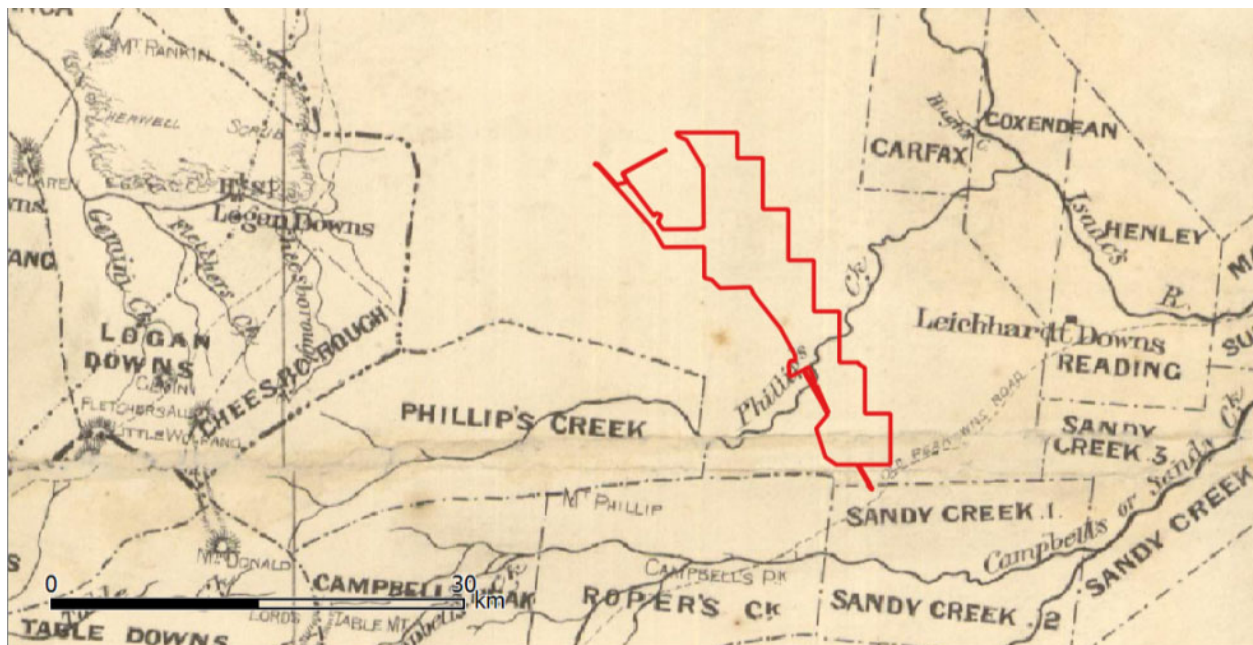


Figure 16-4 Detail of 1872 run map showing the Project Site

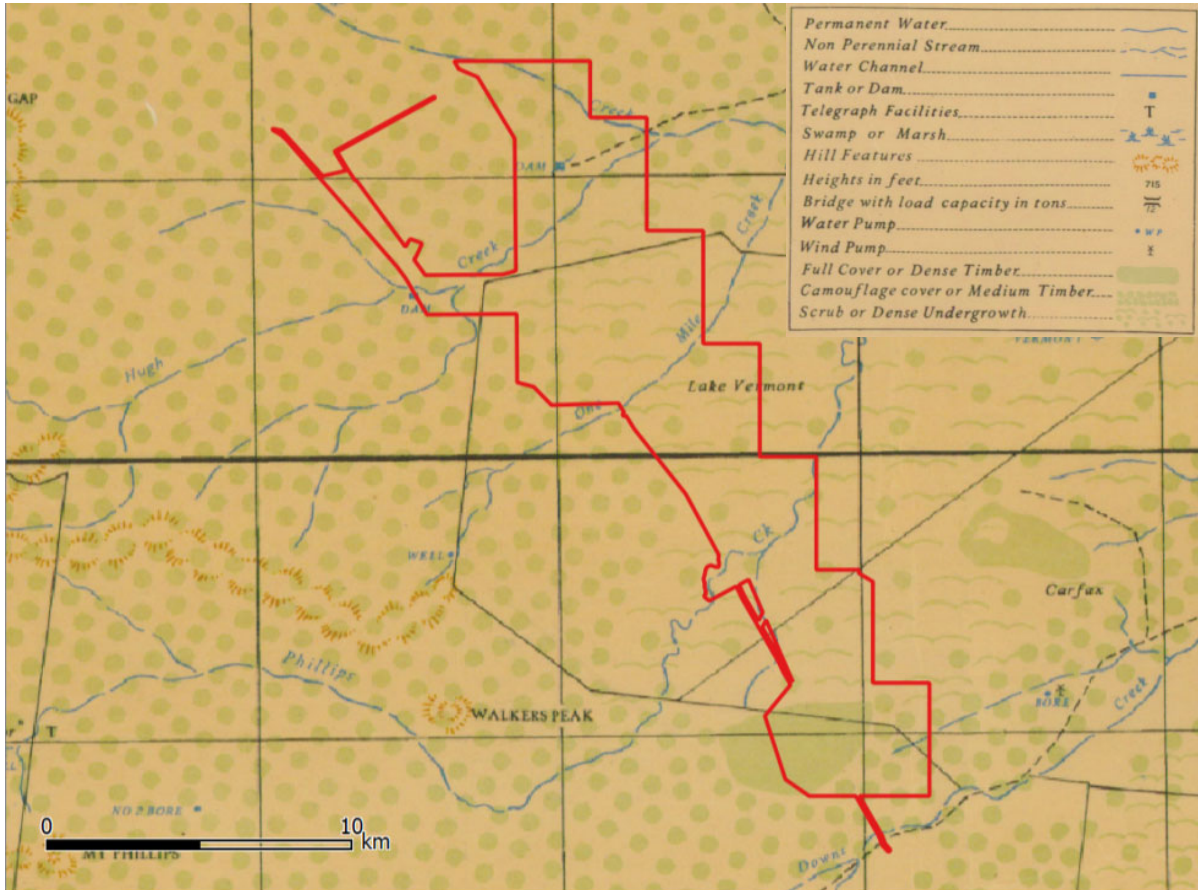


Figure 16-5 Detail of 1944 topographic map showing vegetation on the Project Site

## Historical archaeological sensitivity

The historical information presented in the previous section suggests only one area of potential historical heritage sensitivity: the Leichhardt camp on Hughes Creek at the western edge of the Project Site. However, the physical remains of such a camp are likely to be highly ephemeral – limited perhaps to a blazed tree and a small scatter of artefacts – and any such deposits will have been destroyed by the existing Saraji Mine workings.

Other than the Leichhardt camp, there is no evidence of any historical heritage objects or places on the Project Site. The site was ostensibly used for pastoral purposes from the late 19<sup>th</sup> century and it is possible that unrecorded early infrastructure exists. Such infrastructure might occur across the Project Site, and might be archaeologically represented by:

- building remains (such as fireplaces, posts, post holes)
- rubbish dumps (such as discarded bottles, crockery, metal and bone)
- yards and fencing (such as posts or post holes)
- water infrastructure (such as bores, windmills, tanks, dams, wool scours and irrigation channels).

## 16.5 Impact assessment

Potential impacts to heritage sites can be divided into two main types: direct and indirect. Direct impacts occur if a heritage place or site is located directly in a development area and/or would be physically impacted by development. Such impacts include the demolition or substantial alteration of a building, or the disturbance of an archaeological site. Indirect impacts are those that alter the surrounding physical environment in such a way that a heritage place or site is affected. Indirect impacts might include extra vibration from construction activities or subsequent traffic load, as well as additional water runoff or sediment deposition due to changing hydrology.

In this case, any Project impacts to heritage values are anticipated to be direct impacts associated with the clearing of land during the pre-construction phase.

### 16.5.1 Project activity

This Project includes a greenfield underground coal mine, associated coal handling and preparation plant (CHPP), a rail loop and coal load out facility, and a mine infrastructure area (MIA) (see **Chapter 3 Project Description** for further information). The design of the surface and subsurface works for the mine is still being finalised. Therefore, for the purpose of this assessment, it was conservatively assumed that the entirety of the Project Site will potentially be subject to ground disturbing works.

### 16.5.2 Impacts to known heritage

There are 43 known Aboriginal cultural heritage sites in the Project Site which includes a combination of DATSIP recorded places and sites identified during exploration works (18 artefact scatters, five isolated finds and 20 scarred trees) Section 16.4.1. Thirteen artefact scatters, two scarred trees and three isolated finds have been relocated or salvaged. It is understood that the place to which artefacts were relocated is also within the Project Site.

The 23 sites that remain in situ consist of five artefact scatters, one isolated find and 18 scarred trees, plus the relocation site. However, as discussed previously, the vast majority (15) of the identified scarred trees are located in previously cleared areas, and so are unlikely to be of Aboriginal origin Section 16.4.1. Therefore, based on the available information, the Project has the potential to impact five artefact scatters, one isolated find, at least three (and possibly up to 18) scarred trees, and the relocation site.

The only known potential historical heritage place within the Project Site is the Leichhardt camp. However, this location has already been significantly disturbed by the existing Saraji Mine, and it is unlikely that any remnants of the camp are extant Section 16.4.2. It is not anticipated that this site will be further impacted by the Project.

### 16.5.3 Impacts to unknown heritage

There is some potential for the Project to impact currently unidentified Aboriginal heritage places. As discussed in Section 16.4.1, any such unidentified places are most likely to be located on watercourse margins, or near previously identified places, and to consist of artefact scatters associated with small camps.

There is some limited potential for impact on unidentified historical heritage places. Given the history of the Project Site Section 16.4.2, any such places are most likely to relate to the early pastoral industry.

## 16.6 Management and mitigation measures

### 16.6.1 Aboriginal cultural heritage

This EIS assumes that any Project impacts to Aboriginal cultural heritage will be identified and managed under the existing CHMP between BMA and the Aboriginal Party (CLH012020).

### 16.6.2 Historical cultural heritage

The Project will not impact on any known historical cultural heritage values. There is, however, some potential for the Project to impact on currently unrecorded cultural heritage values. This risk will be managed by:

- cultural heritage inductions for all Project personnel engaged in ground breaking works
- implementation of procedures in the case of unexpected finds, including:
  - cease all works in the vicinity of the find
  - inform supervisor or cultural heritage coordinator
  - a qualified archaeologist will make an assessment and recommend management measures.

## 16.7 Residual impacts

With the implementation of measures outlined in Section 16.6, it is anticipated that any residual impacts to cultural heritage will be minimal.

## 16.8 Summary and conclusions

A review of historical, archaeological and register information indicates that there are at least 43 Aboriginal heritage sites within the Project Site and the potential for additional sites within areas of cultural heritage sensitivity, principally around the margins of watercourses. The impacts on these known sites, as well as the identification of any additional sites, will be managed under BMA's existing CHMP with the Aboriginal Party (CLH012020).

There is only one known historical heritage place in the Project Site: a camp established by explorer Leichhardt on 11 February 1845. However, this place has already been significantly disturbed, and the Project is not anticipated to cause any further impact. There is also some limited potential that the Project Site retains evidence of early pastoral activities. Any potential impacts to such places will be managed under a chance finds procedure.