

Appendix Z

Pipeline development Aboriginal cultural heritage
and historic heritage assessment



Location of Sunny Corner OS-1 (AHIMS #44-3-0225) on an unsealed track.

ABORIGINAL CULTURAL HERITAGE & HISTORIC HERITAGE ASSESSMENT REPORT

MCPHILLAMYS GOLD PROJECT: PIPELINE DEVELOPMENT

LITHGOW, BATHURST AND BLAYNEY LGAS

JULY 2019

Report prepared by

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for Blakely's Environmental on behalf of LFB Resources NL (Regis)

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ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT COVER SHEET

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Acknowledgement

OzArk acknowledge Traditional Owners of the area on which this assessment took place and pay respect to their beliefs, cultural heritage and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

ABBREVIATIONS AND GLOSSARY

ACHAR	Aboriginal Cultural Heritage Assessment Report. As set out in the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> , all developments where harm to Aboriginal objects is likely must be assessed in an ACHAR.
ACHCRs	<i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> . Guidelines for conducting Aboriginal community consultation for developments where harm to Aboriginal objects is likely.
AHIMS	Aboriginal Heritage Information Management System. Administered by OEH, AHIMS is the central register of all Aboriginal sites within NSW.
BP	Years before present
Code of Practice	<i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> under Part 6 NPW Act. Issued by DECCW in 2010, the Code of Practice is a set of guidelines that allows limited test excavation without the need to apply for an AHIP. The test excavation program for this assessment was conducted under the Code of Practice.
DPE	NSW Department of Planning and Environment
EARs	Environmental Assessment Requirements issued by the NSW Department of Planning and Environment.
EIS	Environmental Impact Statement. A required document for major projects documenting all potential impacts to the environment, including heritage that may arise due to the development.
Holocene:	is the geological epoch which lasted from around 12,000 years ago (10,000 BCE) to the present. This period is generally warmer and wetter than the preceding Pleistocene period.
NPW Act	<i>National Parks and Wildlife Act 1974</i> . Primary legislation governing Aboriginal cultural heritage within NSW.
OEH	Office of the Environment and Heritage. Government department tasked with ensuring compliance with the NPW Act.
PAD	Potential archaeological deposit. Indicates the assessment that a particular location has potential to contain subsurface archaeological deposits.

Pleistocene is the geological epoch which lasted from about 2.5 million years ago to 10,000 BCE. This period spans the world's recent period of repeated glaciations. Aboriginal occupation of Australia occurs during the upper Pleistocene.

RAP Registered Aboriginal Party. An individual or group who have indicated through the ACHCR process that they wish to be consulted regarding the project.

EXECUTIVE SUMMARY

LFB Resources NL, a 100% owned subsidiary of Regis Resources Limited (Regis) is seeking development consent for the construction and operation of the McPhillamys Gold Project (the project), a greenfield open cut gold mine and water supply pipeline in the Central West of New South Wales (NSW).

OzArk Environment & Heritage (OzArk) has been engaged by Blakely's Environmental (the client), on behalf of Regis (the proponent) to complete an Aboriginal Cultural Heritage Assessment Report (ACHAR) and Historic Heritage Assessment (HHA) for the McPhillamys Gold Project water supply pipeline (the pipeline development). This report examines proposed works associated with the pipeline development. The pipeline development is situated within the Blayney, Bathurst and Lithgow Local Government Areas.

The assessment of the study area was undertaken by OzArk archaeologist Dr Alyce Cameron during a series of pedestrian surveys between August 2018 and March 2019. Representatives from several Registered Aboriginal Parties (RAPs) were present during the surveys. During the pedestrian survey, seven Aboriginal sites (AHIMS #44-3-0221, #44-3-0222, #44-3-0223, #44-3-0224, #44-3-0225, #44-3-0229 and #44-3-0228) were recorded. No historic sites were recorded during the survey.

Aboriginal Cultural Heritage

Recommendations concerning Aboriginal cultural values within the study area are as follows:

1. Should development consent for the project be granted, archaeological management strategies to manage and mitigate the impact of the proposed works are set out in **Section 9.2**. All sites within the impact footprint for the pipeline development should be salvaged by a surface collection of all visible artefacts (see **Section 9.2.2.1**).
2. The salvage works will include the mapping, analysis and collection of all surface artefacts at the affected sites. Results will be included in a report to preserve the data in a useable form and the relevant AHIMS site cards will be updated accordingly.
3. All land-disturbing activities must be confined to within the assessed study area. Should the parameters of the proposed work extend beyond this, then further archaeological assessment may be required.
4. Following development consent of the project, an Aboriginal Heritage Impact Permit (AHIP) will not be required for impacts to cultural heritage, so long as the impact accords with the terms and conditions of the consent. Instead, impacts on Aboriginal heritage would be managed through an Aboriginal Cultural Heritage Management Plan (ACHMP)

which is to be agreed to by the proponent, RAPs and the Department of Planning and Environment (DPE). The archaeological management recommendations within this report would normally be incorporated into the ACHMP that is usually formulated following development consent. The ACHMP will also include an unanticipated finds protocol, unanticipated skeletal remains protocol and long-term management of any artefacts.

Historic Heritage

Recommendations concerning the historic values within the study area are as follows:

5. Should development consent for the project be granted, archaeological management strategies to manage and mitigate the impact of the pipeline development component of the project are set out in **Section 13.2**.
6. To avoid the potential for harm to historic objects on unassessed adjacent landforms, all ground surface disturbing activities must be confined to the assessed study area.
7. Following development consent of the project, impacts on historical heritage would be managed through a Historic Heritage Management Plan (HHMP) which is to be agreed to by the proponent, local councils and DPE. The archaeological management recommendations within this report would normally be incorporated into the HHMP that is usually formulated following development consent. The HHMP will also include an unanticipated finds protocol.

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1 INTRODUCTION

This chapter provides the background and overview to the McPhillamys Gold Project and outlines the purpose and structure of this Aboriginal Cultural Heritage Assessment Report and the Historical Heritage Assessment for the pipeline development component of the Project.

1.1 OVERVIEW

LFB Resources NL, a 100% owned subsidiary of Regis Resources Limited, (herein referred to as Regis) is seeking development consent for the construction and operation of the McPhillamys Gold Project (the project), a greenfield open cut gold mine and water supply pipeline in the Central West of New South Wales (NSW). The project application area is illustrated at a regional scale on **Figure 1-1**.

The mine development component of the project (mine development) is approximately eight kilometres (km) northeast of Blayney within the Blayney and Cabonne Local Government Areas (LGAs). This locality has a long history of alluvial and hard rock mining, with exploration for gold and base metals occurring since the mid to late 19th century. The mine development project boundary covers the Mining Lease (ML) application area for the project as well as the parts of the project that do not require a ML. The mine development is in the upper reaches of the Belubula River catchment, within the greater Lachlan River catchment.

Water will be supplied to the mine via a pipeline approximately 90 km long, transferring surplus water from Centennial's Angus Place Colliery (Angus Place) and Springvale Coal Services Operations (SCSO), and Energy Australia's (EA) Mt Piper Power Station (MPPS) near Lithgow, to the mine. The supply of water from Angus Place, SCSO and MPPS will enable a beneficial use of otherwise surplus water and provide a reliable water source for the project. The alignment of the water supply pipeline (the pipeline development) is illustrated on **Figure 1-2**. The pipeline development traverses the LGAs of Lithgow, Bathurst and Blayney.

This Aboriginal and historical heritage assessment report for the pipeline development forms part of the Environmental Impact Statement (EIS). It documents the assessment methods, results and the initiatives built into the pipeline development design to avoid and minimise heritage impacts, and the additional mitigation and management measures proposed to address residual impacts which cannot be avoided. An Aboriginal and historical cultural heritage assessment for the mine development component of the project has been carried out in a separate study by Landskape Natural and Cultural Heritage Management (Landskape 2019).

1.2 PROJECT OVERVIEW

A full description of the project for which approval is sought, comprising both the mine and pipeline development, is provided in Chapter 2 of the EIS (EMM 2019). In relation to the mine development, the project is seeking approval for the development and operation of an open cut

gold mine and associated infrastructure, comprising one to two years of pre-development works and construction, approximately 10 years of mining and processing, and a closure period (including the final rehabilitation phase) of approximately two to three years, leading to a total project life of 15 years. The project will involve the extraction and processing of ore to produce up to 200,000 ounces per annum of product gold.

As explained in Section 1.1, this assessment relates to the pipeline development component of the project, which comprises the construction and operation of a water supply pipeline between the mine and the Western Coalfields. The pipeline development will include approximately four pumping station facilities, a pressure reducing system and communication system.

Approximately 13 ML/day (up to a maximum of 16 ML/day) will be transferred for mining and processing operations. An additional pipeline is required to transfer water from the MPPS Blowdown Pond to the pumping station facility No.3 (MPPS). This pipeline will be approximately 800 m in length with a nominal diameter between 300 mm to 650 mm.

Figure 1-1: Project application area – regional setting.

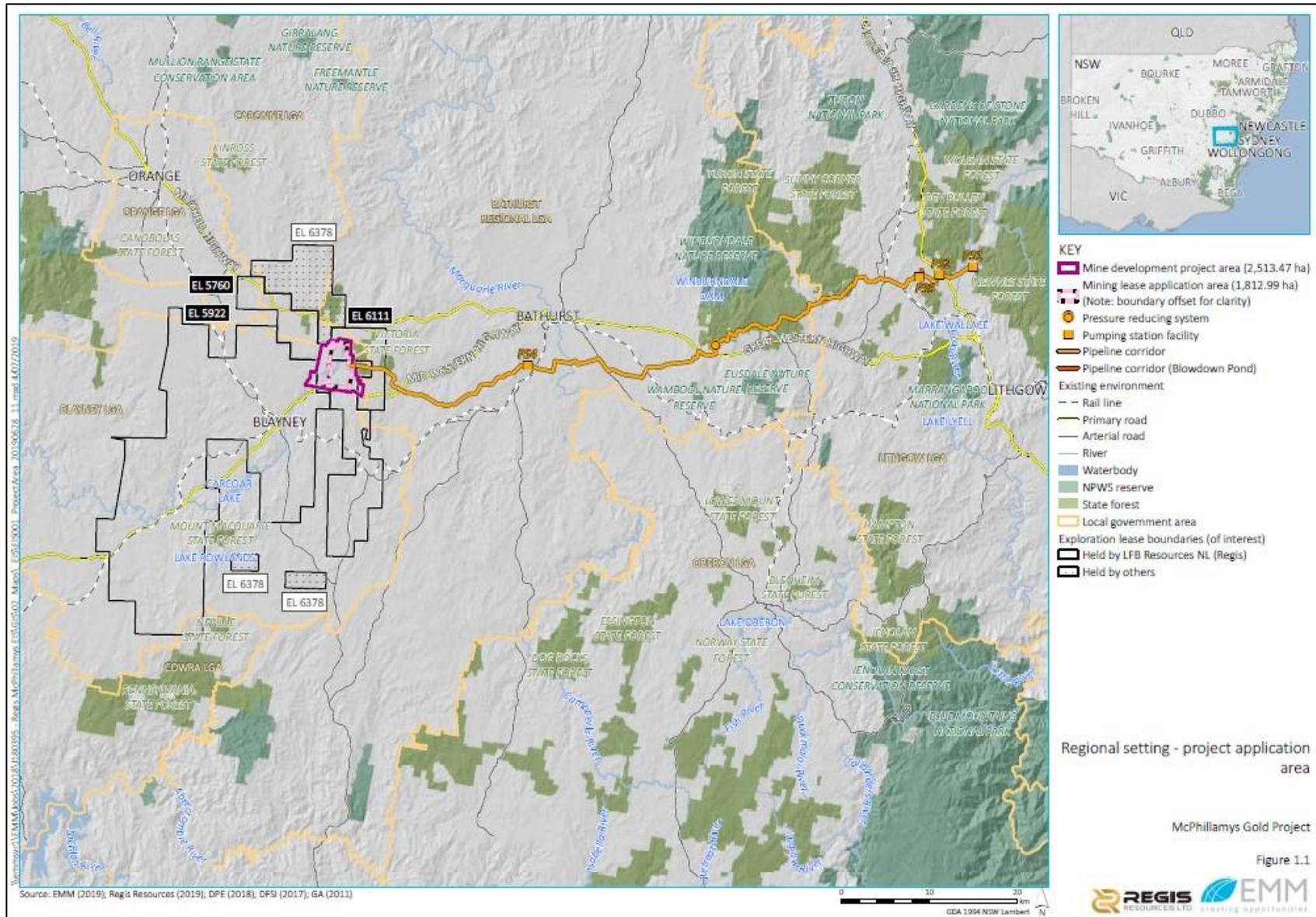


Figure 1-2a: Pipeline corridor section 1.



Figure 1-2b: Pipeline corridor section 2.

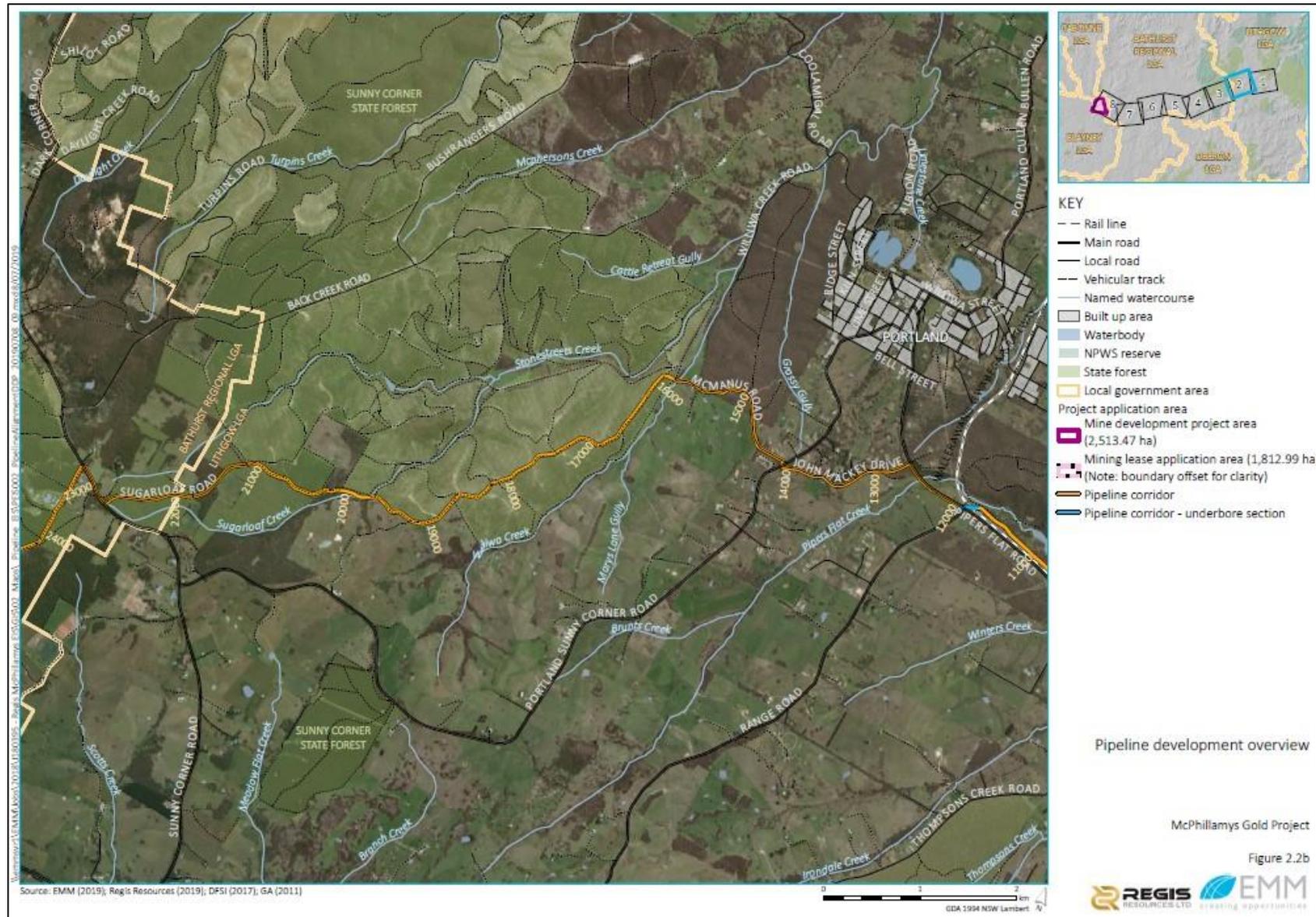


Figure 1-2c: Pipeline corridor section 3.



Figure 1-2d: Pipeline corridor section 4.

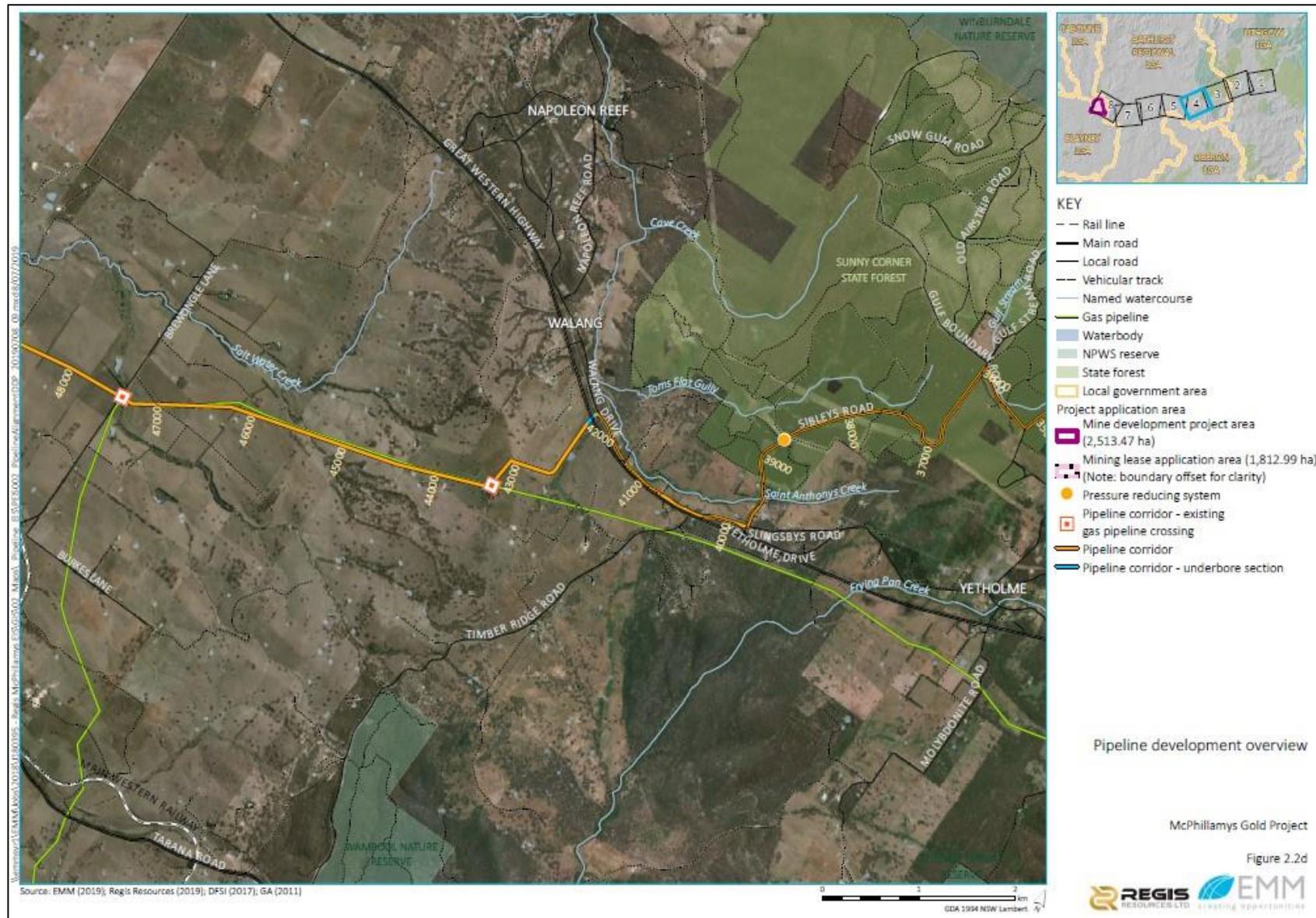


Figure 1-2e: Pipeline corridor section 5.

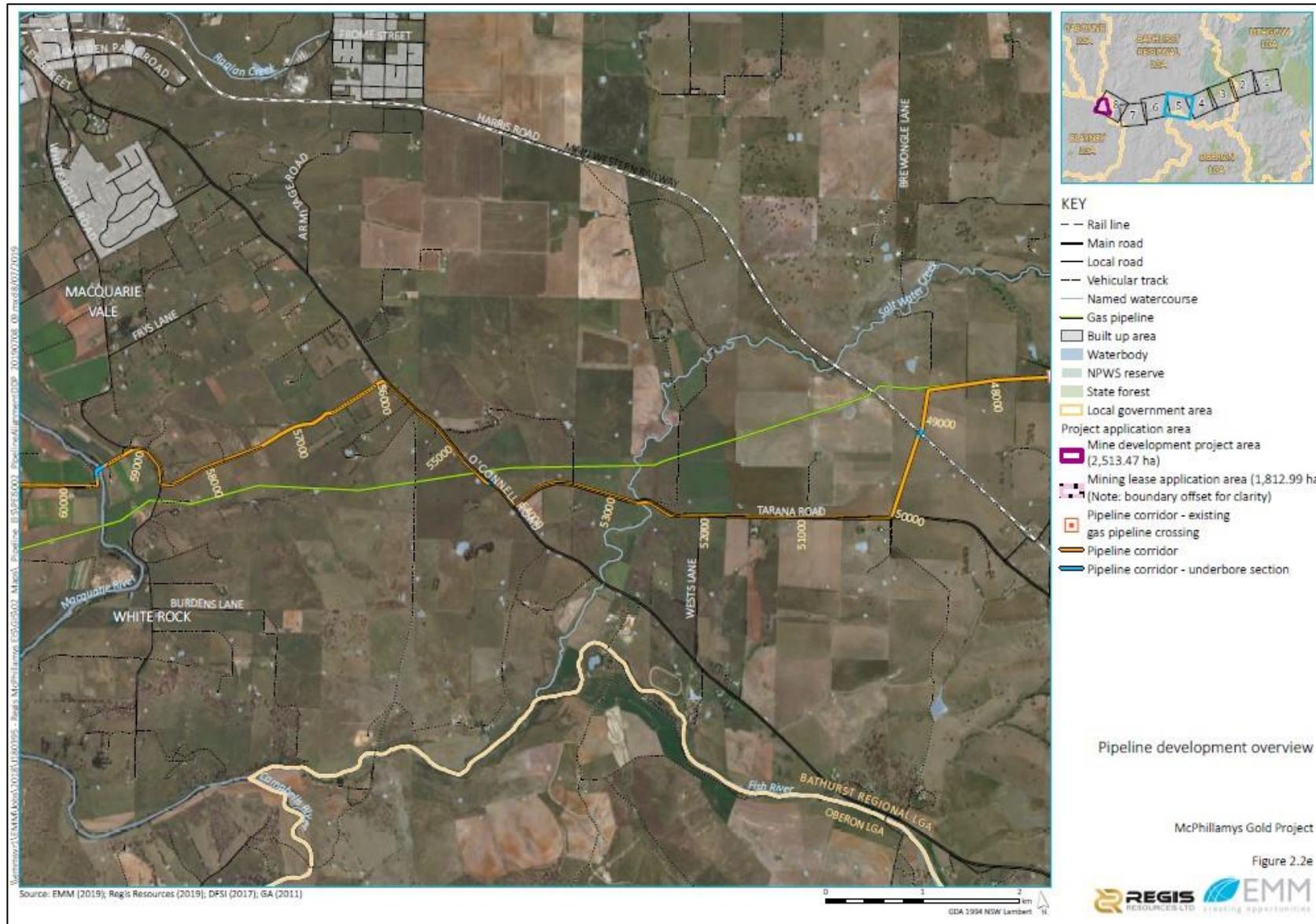


Figure 1-2f: Pipeline corridor section 6.

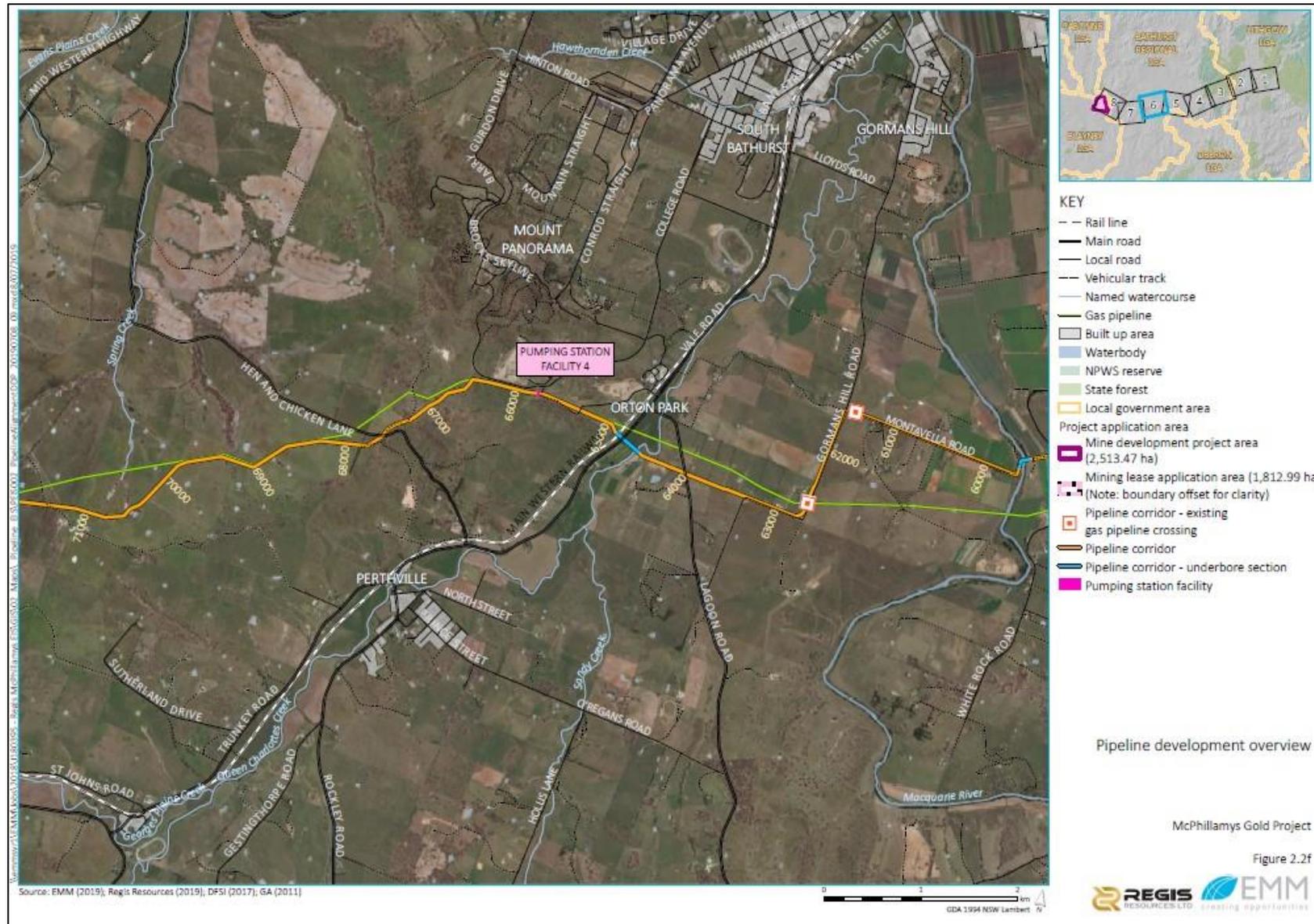
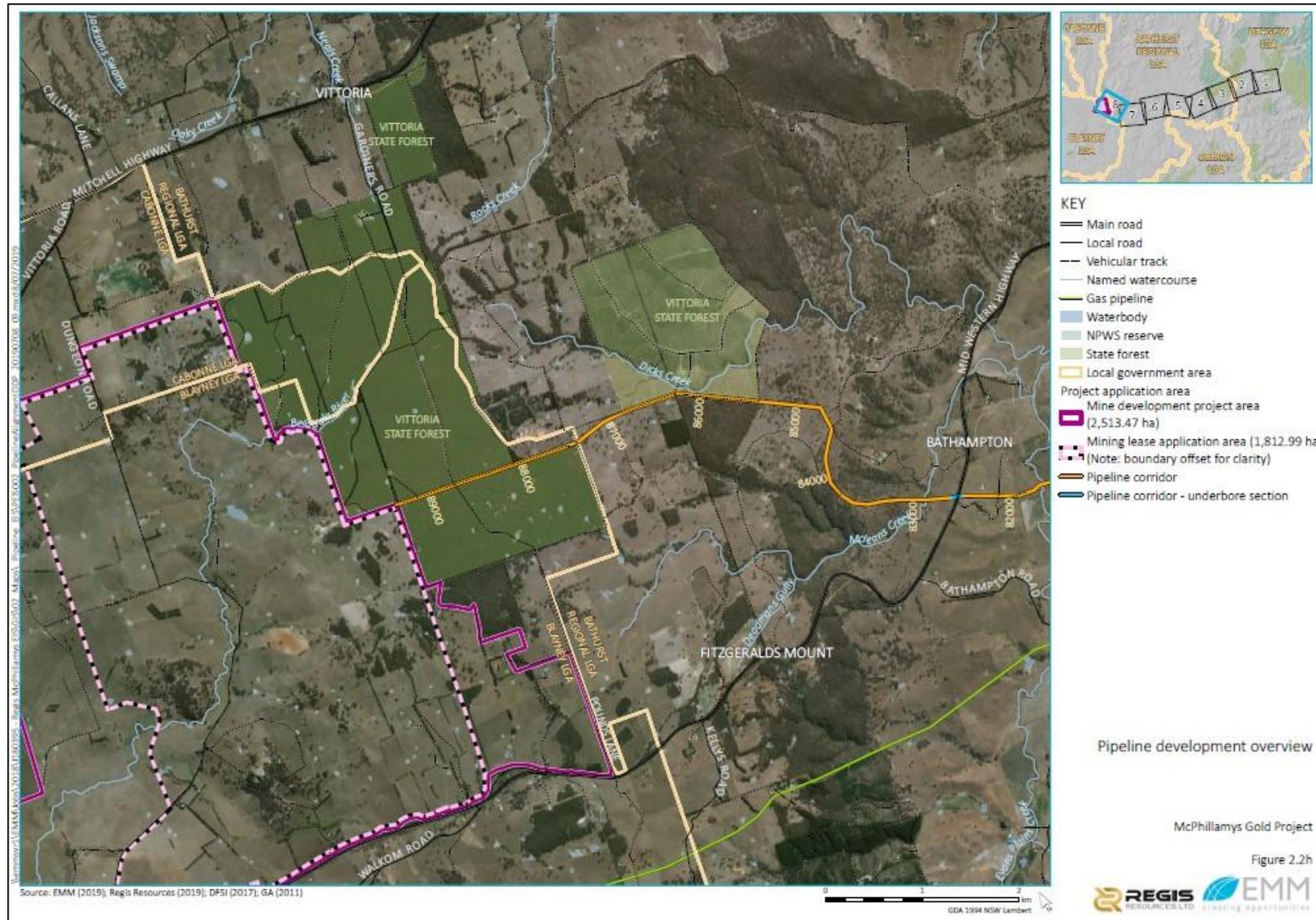


Figure 1-2g: Pipeline corridor section 7.



Figure 1-2h: Pipeline corridor section 8.



1.3 THE PIPELINE DEVELOPMENT

1.3.1 Pipeline corridor

The study area covers the 90 km proposed alignment of the pipeline corridor between Angus Place and the mine project area. The corridor will accommodate all components of the pipeline development including pumping station facilities and associated pipeline infrastructure as detailed in Section 1.3.3 below. The pipeline corridor also accommodates required construction ancillary areas such as compounds, laydown and stockpile areas as well as allowance for the movement of construction machinery, equipment delivery and personal vehicles along the corridor.

The pipeline corridor will traverse through various types of land including state forests, road reserves and private agricultural land. The corridor width varies from approximately 6 m up to approximately 20 m in width, excluding the four pumping stations facilities. At these facilities, the corridor width extends to an area of up to 75 m by 75 m to accommodate the construction and operation of these facilities. The width of the corridor has been carefully defined in consideration of property and environmental constraints. Where there are property constraints, such as the need to avoid an existing easement, or environmental constraints such as the presence of a listed endangered ecological community (EEC), the width of the corridor has been narrowed to avoid these constraints as far as practicable to a minimum width of 6 m. In areas where there are no identified constraints the pipeline corridor is up to 20 m wide to allow the flexibility to refine the pipeline alignment during detailed design as well as to accommodate ancillary areas, such as construction compounds, during the construction phase. The pipeline corridor also includes an additional pipeline required to transfer water from the MPPS Blowdown Pond to the pumping station facility No.3 (MPPS). This pipeline will be approximately 800 m in length with a 10 m wide corridor required for construction. In total, the pipeline corridor area is 127 ha.

1.3.2 Background

As part of the Preliminary Environmental Assessment (PEA) for the project, Navin Officer conducted a desktop assessment of the proposed pipeline route between the Angus Place and the mine project area. The desktop assessment identified that 54 Aboriginal sites were recorded on AHIMS within 800 m of the study area, and of these, 16 may be directly within the pipeline corridor. The assessment also identified 11 historic heritage items listed within 500 m of the study area, of which four are directly within the pipeline corridor.

The pipeline corridor has substantially changed since the PEA in light of environmental, technical and constructability considerations. As a result, many of the sites identified in the PEA are no longer applicable to the pipeline development.

Navin Officer also undertook the Stage 1 requirements of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (ACHCRs) (see **Appendix 1**).

1.3.3 Proposed pipeline development work

The development of the pipeline between Angus Place and the mine project area will include the following aspects:

- A water supply pipeline approximately 90 km long with a nominal diameter between 300 millimetres (mm) to 650 mm. Apart from the locations where the pipeline enters and exits pumping stations the pipeline will be buried for its entire length. The typical trench will be approximately 1 m wide and 1.5 to 2 m deep with a minimum cover of 300mm for pipe sections not subject road traffic to up to 750mm under an unsealed road.
- An additional pipeline is required to transfer water from the MPPS Blowdown Pond to the pumping station facility No.3 (MPPS). This pipeline will be approximately 800 m in length with a nominal diameter between 300 mm to 650 mm.
- Four pumping station facilities, including water storage tanks to be located at Angus Place, SCSO, MPPS, and near Bathurst Waste Management Centre
- Pressure reducing system
- A telemetry system

Key construction activities of the pipeline development include:

- Clearing vegetation and removing and stockpiling topsoil
- Excavation of trench and preparation for pipework installation
- Casting and pouring of concrete supports and installation of valves
- Excavation of footings for pumping station facilities and pressure reducing system
- Underboring of selected road, rail and river crossings
- Erecting the structures and installation of mechanical and electrical equipment
- Backfill trench and site restoration

Key operational activities of the pipeline development would include:

- Operation and maintenance of the pumping station facilities
- Maintenance of the pipeline, the pressure reducing system and valves
- Other infrequent maintenance of the pipeline (e.g. pigging to remove scaling or repairing of leaks).

Figure 1-2 illustrates the proposed pipeline corridor and impact footprint.

2 LANDSCAPE CONTEXT

An understanding of the environmental contexts of a study area is requisite in any Aboriginal archaeological investigation (DECCW 2010). It is a particularly important consideration in the development and implementation of survey strategies for the detection of archaeological sites. In addition, natural geomorphic processes of erosion and/or deposition, as well as humanly activated landscape processes, influence the degree to which these material culture remains are retained in the landscape as archaeological sites; and the degree to which they are preserved, revealed and/or conserved in present environmental settings.

2.1 TOPOGRAPHY

The landscape comprising the study area falls mostly within the South Eastern Highlands bioregion, which includes parts of the Murrumbidgee, Lachlan, Murray, Snowy, Shoalhaven, and Macquarie River catchments (NPWS 2013). A section of the pipeline at the eastern end is within the Sydney Basin bioregion.

The South Eastern Highlands bioregion is largely comprised of the plateau and dissected ranges of the Great Dividing Range, bounded by the Great Escarpment to the east and by the slopes of the abutting inland drainage basins to the west. This bioregion extends parallel to the NSW south coast through the ACT and into inland VIC (NPWS 2013). The study area intersects through several sub-bioregions of the South Eastern Highlands: Orange, Bathurst, and Hill End.

The Orange sub-bioregion has low hills and hilly plateaus with numerous volcanic features present. The Bathurst sub-bioregion is characterised by rounded hills in a granite basin with steep slopes on the contact margins, while the Hill End sub-bioregion has plateaus of hilly and mountainous slopes. The part of the pipeline development in the Sydney Basin bioregion is in the Capertee Uplands sub-bioregion, characterised by wide valleys and low-rolling hills (NPSW 2013).

The study area is situated within several different landscape units, including the Mullion Slopes, Rockley Plains, Bathurst granites, Upper Macquarie Channels and Floodplains, Mount Horrible plateau, Capertee Plateau and the Macquarie Valley Basalts (Mitchell 2002).

The study area consists mostly of gentle to moderate slopes or moderate to steep slopes, with flat areas being associated with either water courses or the top of slopes. **Figure 2-1** provides representative photographs of the study area's landforms. **Table 2-1** quantifies the extent of each landform within the study area.

Figure 2-1: Topography of the study area.**Table 2-1: Summary of key terrain features within the study area.**

Total study area	Gentle/moderate slope	Moderate/steep slope	Flat creek plains	Elevated flats
127 ha 90 km of pipeline and an additional 800 m for pipeline between MPPS Blowdown Pond to the pumping station facility No.3 (MPPS)	54 ha 39.3 km of pipeline	38 ha 27 km of pipeline	23 ha 16.5 km of pipeline	11 ha 8 km of pipeline

2.2 GEOLOGY AND SOILS

There is a variety of soil types throughout the study area. On the dissected and stepped plateau of rounded hilly terrains and steep valley side slopes the main soils are neutral and acid leached red earths, with yellow earths and hard neutral yellow mottled soils on the rolling to hilly areas. On the rounded and steep hills with scarps the soils are hard neutral and acidic red soils with some hard neutral and acidic yellow mottled soils. Sometimes there are also siliceous

sands and leached sands on or adjacent to the steeper portions of the areas. The rolling and hilly country have hard neutral red soils, sometimes in association with hard neutral yellow mottled soils. The river terraces and flood plains tend to be dark porous loamy soils with terrace remnants (ASRIS 2003).

2.3 HYDROLOGY

The study area crosses multiple watercourses. EMM (2019) identified 112 drainage line intersections, of which seven locations were associated with permanent streams. Most of the watercourses are minor streams and gullies which are non-perennial and only flow after large rainfall events. The permanent streams (east to west) crossed by the study area are:

- Piper Flat Creek
- Salt Water Creek
- Macquarie River
- Queen Charlottes Creek
- Evans Plains Creek
- McLeans Creek

2.4 VEGETATION

The study area has a variety of vegetation types along its length. A large majority of the vegetation along the pipeline corridor is classified as non-native. Other types of vegetation classes along the pipeline corridor include temperate montane grasslands, southern tableland grassy woodland, western slopes grassy woodlands, eastern riverine forests, southern tableland wet sclerophyll forests and southern tableland dry sclerophyll forests.

There are sections of the study area that have been cleared for agricultural cropping, as well as sheep and cattle grazing.

2.5 CLIMATE

Over the extent of the study area, there is a slight difference regarding climate between the eastern and western sections.

The western section around Blayney and Bathurst is characterised by temperate summer months (mean maximum temperature in January for the area is around 28°C) and cool winter months (mean minimum temperature in July is around 0.4°C). Average monthly rainfall tends to be highest in December and January (average of around 79 mm) and lowest in April and May (average around 41 mm).

The eastern section is characterised by a higher average monthly rainfall, with the highest in December (121 mm) and the lowest in September (68 mm). The summer months have a cooler

mean maximum temperature with the highest in January (23.5°C) and a colder mean minimum temperature over winter (-1.1°C in July).

2.6 LAND-USE HISTORY AND EXISTING LEVELS OF DISTURBANCE

Disturbance, historical or natural, potentially alters the archaeological record. It can do this in a variety of ways, directly or indirectly. For example, land clearing directly moves a particular site type: usually scarred trees or stone arrangements. Indirectly, land clearing accelerates soil erosion, potentially resulting in previously buried occupation and activity sites being exposed and altered or damaged.

The study area has moderate to high levels of disturbance mostly consisting of impacts related to the various types of land use (**Figure 2-2**). Disturbances across the study area are summarised below:

- Agriculture and pastoralism. Farming and grazing are fundamental to the local economy and dominate land-use throughout the area. The study area traverses through many paddocks which are or have been used for farming and grazing which has had the following impacts:
 - Vegetation removal. The study area has been subject to significant levels of vegetation removal. Culturally modified trees may have been removed during the land clearance phase across the area, thereby distorting the archaeological landscape by removing this site type
 - Cultivation. Sections of the study area has been subjected to cultivation. Repeated cultivation since the commencement of European settlement will have altered soil profiles and potentially disturbed subsurface archaeological deposits
 - Grazing. Large section of the study area has and is being used for low-intensity livestock grazing. The presence of hooved livestock is likely to have resulted in trampling and compaction of the ground surface which accelerates soil loss
 - Farm infrastructure and remediation works. The study area has a moderate level of disturbance generated by the construction of dams, contour banks, agricultural buildings and fencing. Earthworks associated with contour banking and dams can reveal lithic artefacts which may have been other concealed by low ground surface visibility (GSV).
- Transport. Numerous unsealed roads and tracks intersect the study area, as well as public sealed roads:
 - Unsealed tracks. This disturbance tends to provide exposures, thus enabling the identification of otherwise obscured artefacts
 - Sealed roads. The high disturbance to the ground surface within the road corridor due to earthworks during construction generally obscures and destroys any archaeological material which may have been present

- Unsealed roads. Unsealed roads such as those through forestry plantations or mining areas, which are maintained frequently through grading and remediation works such as gravel, also destroy, remove or obscure the original ground surface and any archaeological deposits which may have been present.
- Erosion. Erosion includes sometimes severe gully erosion and widespread sheet wash erosion, primarily adjacent to waterways. Varying scales of erosion on the archaeological landscape as the capacity to completely remove archaeological sites. However, in the process of erosion, many archaeological sites can become freshly exposed.

Figure 2-3 shows examples of the varying types of land-use and levels of disturbance along the pipeline corridor.

2.7 CONCLUSION

Across the study area, the pipeline passes through a wide range of landforms which have undergone differing types of past and current land use applications and disturbances. It is likely these prior disturbances would have impacted any PADs. Erosion of the topsoil, partly due to vast land clearing, agricultural and grazing practices, especially around creek banks, suggests objects are likely to be revealed by erosional processes.

The topographic features which would be conducive to retention of archaeological deposits within the study area are terraces overlooking sources of permanent or semi-permanent water, and to a lesser degree, the elevated flats.

Figure 2-2: Land use of the study area.

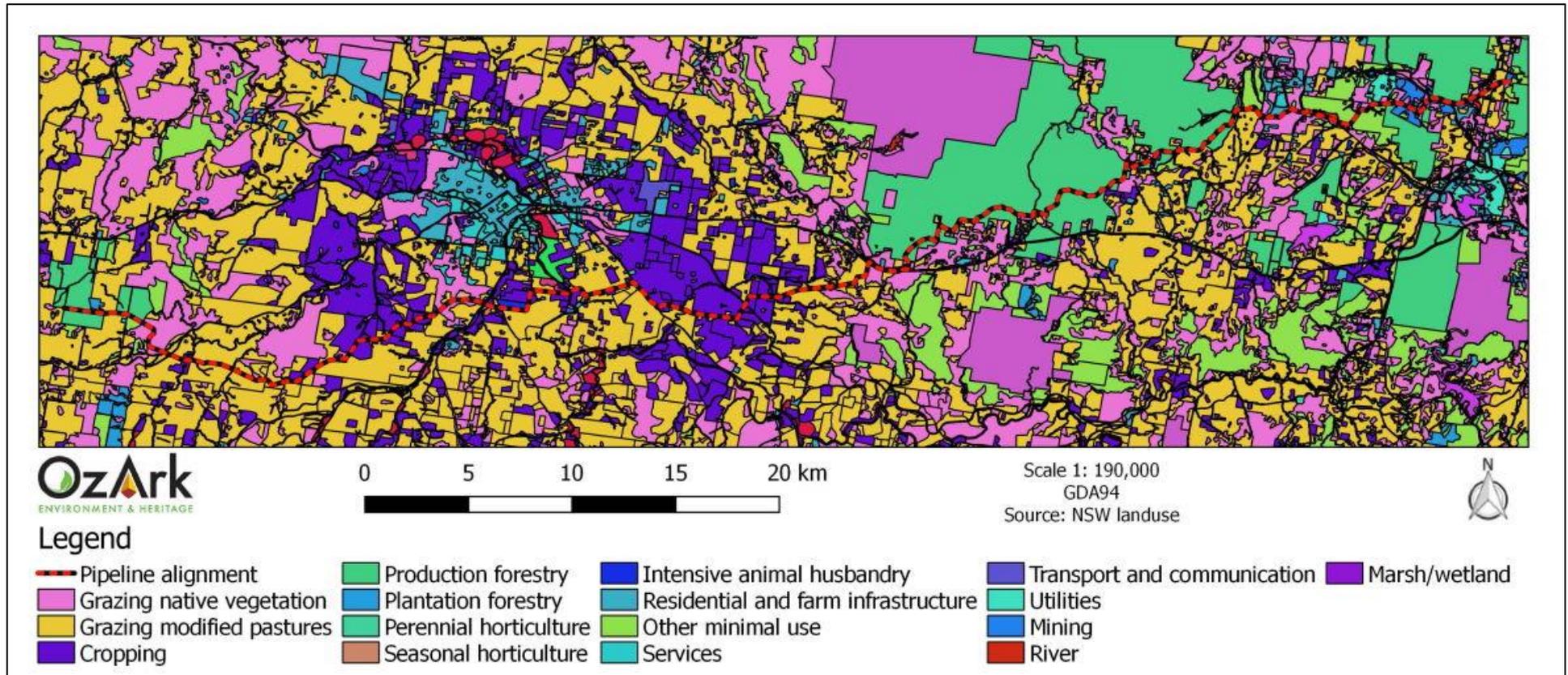


Figure 2-3: Land-use and levels of disturbance of the study area.

	
<p>1. View of a grazed paddock within the study area.</p>	<p>2. View of a ploughed paddock within the study area.</p>
	
<p>3. View of a sealed road reserve within the study area.</p>	<p>4. View of an unsealed road through a State Forest.</p>
	
<p>5. View of a rehabilitated mine area (formerly an open cut mine) within the study area.</p>	<p>6. View of an unnamed tributary with widespread disturbance from erosion.</p>

ABORIGINAL CULTURAL HERITAGE ASSESSMENT

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3 ABORIGINAL CULTURAL HERITAGE ASSESSMENT: INTRODUCTION

3.1 DATE OF ABORIGINAL CULTURAL HERITAGE ASSESSMENT

The fieldwork component of this assessment was undertaken by OzArk on the following dates:

- Wednesday 1 August and Thursday 2 August 2018
- Wednesday 29 August and Thursday 30 August 2018
- Monday 26 November and Tuesday 27 November 2018
- Tuesday 11 December 2018
- Monday 4 April to Thursday 7 April 2019.

3.2 OZARK INVOLVEMENT

3.2.1 Field assessment

The fieldwork component of the heritage assessment was undertaken by:

- Archaeologist: Dr Alyce Cameron (OzArk Project Archaeologist, BA [Hons] and PhD [Archaeology & palaeoanthropology] Australian National University).

3.2.2 Reporting

The reporting component of the heritage assessment was undertaken by:

- Report Author: Dr Alyce Cameron
- Background research: Tom Dooley (OzArk Project Archaeologist BA [Hons])
- Reviewer: Ben Churcher (OzArk Principal Archaeologist; BA [Hons], Dip Ed).

3.3 RELEVANT LEGISLATION

Cultural heritage is managed by several state and national acts of parliament. Baseline principles for the conservation of heritage places and relics can be found in the *Burra Charter* (Australia ICOMOS 2013). The *Burra Charter* has become the standard of best practice in the conservation of heritage places in Australia, and heritage organisations and local government authorities have incorporated the inherent principles and logic into guidelines and other conservation planning documents. The *Burra Charter* generally advocates a cautious approach to changing places of heritage significance. This conservative notion embodies the basic premise behind legislation designed to protect our heritage, which operates primarily at a state level.

Several acts of parliament provide for the protection of heritage at various levels of government.

3.3.1 State legislation

Environmental Planning and Assessment Act 1979 (EP&A Act)

This Act established requirements relating to land use and planning.

The framework governing environmental and heritage assessment in NSW is contained within the following parts of the EP&A Act:

- Part 4: Local government development assessments, including heritage. May include schedules of heritage items
- Division 4.7: Approvals process for state significant development
- Part 5: Environmental impact assessment on any heritage items which may be impacted by activities undertaken by a state government authority or a local government acting as a self-determining authority
- Division 5.2: Approvals process for state significant infrastructure.

In accordance with section 4.41 of the EP&A Act an Aboriginal heritage impact permit (under section 90 of the National Parks and Wildlife Act 1974) is not required for State Significant Development (SSD) that has received development consent.

National Parks and Wildlife Act 1974 (NPW Act)

Amended during 2010, the NPW Act provides for the protection of Aboriginal objects (sites, objects and cultural material) and Aboriginal places. Under the Act (Part 6), an Aboriginal object is defined as: any deposit, object or material evidence (not being a handicraft for sale) relating to indigenous and non-European habitation of the area that comprises NSW, being habitation both prior to and concurrent with the occupation of that area by persons of European extraction and includes Aboriginal remains.

An Aboriginal place is defined under the NPW Act as an area which has been declared by the Minister administering the Act as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects.

As of 1 October 2010, it is an offence under Section 86 of the NPW Act to 'harm or desecrate an object the person knows is an Aboriginal object'. It is also a strict liability offence to 'harm an Aboriginal object' or to 'harm or desecrate an Aboriginal place', whether knowingly or unknowingly. Section 87 of the Act provides a series of defences against the offences listed in Section 86, such as:

- The harm was authorised by and conducted in accordance with the requirements of an *Aboriginal Heritage Impact Permit* (AHIP) under Section 90 of the Act
- The defendant exercised 'due diligence' to determine whether the action would harm an Aboriginal object; or

- The harm to the Aboriginal object occurred during the undertaking of a 'low impact activity' (as defined in the regulations).

As noted above, under section 4.41 of the EP&A Act, an Aboriginal heritage impact permit (under section 90 of the National Parks and Wildlife Act 1974) is not required for State Significant Development that has received development consent.

Under Section 89A of the NPW Act, it is a requirement to notify the OEH Director-General of the location of an Aboriginal object. Identified Aboriginal items and sites are registered on Aboriginal Heritage Information Management System (AHIMS).

3.3.2 Commonwealth legislation

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act, administered by the Commonwealth Department of the Environment and Energy, provides a framework to protect nationally significant flora, fauna, ecological communities and heritage places. The EPBC Act establishes both a National Heritage List and Commonwealth Heritage List of protected places. These lists may include Aboriginal cultural sites or sites in which Aboriginal people have interests. The assessment and permitting processes of the EPBC Act are triggered when a proposed activity or development could potentially have an impact on one of the matters of national environment significance listed by the Act. Ministerial approval is required under the EPBC Act for proposals involving significant impacts to National/Commonwealth heritage places.

Other

The *Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act 1984* is aimed at the protection from injury and desecration of areas and objects that are of significance to Aboriginal Australians. This legislation has usually been invoked in emergency and conflicted situations.

The *Commonwealth Protection of Movable Cultural Heritage Act 1986* includes legislation that prevents objects of cultural heritage significance, such as those that are sacred to Aboriginal peoples' heritage, from being exported out of Australia.

The *Native Title Act 1993* administers processes relating to the recognition, protection and determination of native title and dealings with native title land. Native title is concerned with the rights and interests of Aboriginal and Torres Strait Islander peoples in relation to land and water in Australia and its territories. The Act is administered by the National Native Title Tribunal.

3.3.3 Applicability to the pipeline development

The current project will be assessed as an SSD under Division 4.7 of the EP&A Act.

However in accordance with section 4.41 of the EP&A Act an Aboriginal heritage impact permit (under section 90 of the National Parks and Wildlife Act 1974) is not required for SSD that has received development consent.

It is noted there are no Commonwealth or National Aboriginal heritage listed places within the study area, and as such, the heritage provisions of the EPBC Act and other commonwealth acts do not apply.

3.4 ABORIGINAL CULTURAL HERITAGE ASSESSMENT OBJECTIVES

The current assessment will apply the Code of Practice in the completion of an Aboriginal archaeological assessment to meet the following objectives:

Objective One: Undertake background research on the study area to formulate a predicative model for site location within the study area

Objective Two: Identify and record objects or sites of Aboriginal heritage significance within the study area, as well as any landforms likely to contain further archaeological deposits

Objective Three: Assess the likely impacts of the proposed work to Aboriginal cultural heritage and provide management recommendations.

3.5 REPORT COMPLIANCE WITH THE CODE OF PRACTICE

The Code of Practice establishes requirements that should be followed by all archaeological investigations where harm to Aboriginal objects may be possible. **Table 3-1** tabulates the compliance of this report with the requirements established by the Code of Practice.

Table 3-1: Report compliance with the Code of Practice.

Code of Practice Requirement	Context of the Requirement	Concordance in this report
Requirement 1	Review previous archaeological work	
• Requirement 1a	Previous archaeological work	Section 5.2
• Requirement 1b	AHIMS searches	Section 5.3.1 and Appendix 2
Requirement 2	Review the landscape context	Section 2
Requirement 3	Summarise and discuss the local and regional character of Aboriginal land use and its material traces	Section 5.2 and Section 5.3.2
Requirement 4	Predict the nature and distribution of evidence	
• Requirement 4a	Predictive model	Section 5.4
• Requirement 4b	Predictive model results	Section 5.4
Requirement 5	Archaeological survey	
• Requirement 5a	Survey sampling strategy	Section 6.1
• Requirement 5b	Survey requirements	This Requirement was fulfilled during the undertaking of the survey
• Requirement 5c	Survey units	Section 6.3

Code of Practice Requirement	Context of the Requirement	Concordance in this report
• Requirement 6	Site definition	Section 5.4.6
Requirement 7	Site recording	
• Requirement 7a	Information to be recorded	Section 6.1
• Requirement 7b	Scales for photography	All artefact photographs employed a centimetre scale bar.
Requirement 8	Location information and geographic reporting	
• Requirement 8a	Geospatial information	All artefact locations were logged using a non-differential handheld GPS.
• Requirement 8b	Datum and grid coordinates	All coordinates are provided in GDA94 Zone 55 or Zone 56.
Requirement 9	Record survey coverage data	Section 6.3
Requirement 10	Analyse survey coverage	Section 6.3
Requirement 11	Archaeological Report content and format	This report adheres to this Requirement.
Requirement 12	Records	OzArk undertakes to maintain all survey records for at least five years.
Requirement 13	Notifying OEH and reporting	
• Requirement 13a	Notification of breaches	Not applicable
• Requirement 13b	Provision of information	Not applicable
• Requirement 14	Test excavation which is not excluded from the definition of harm	Not applicable.
Requirement 15	Pre-conditions to carrying out test excavation	
• Requirement 15a	Consultation	Consultation has included the ACHCRs, see Section 4 and Appendix 1 .
• Requirement 15b	Test excavation sampling strategy	Not applicable.
• Requirement 15c	Notification	Not applicable.
Requirement 16	Test excavation that can be carried out in accordance with this Code	
• Requirement 16a	Test excavations	Not applicable.
• Requirement 16b	Objects recovered during test excavations	Not applicable.
Requirement 17	When to stop test excavations	Not applicable.

3.6 ASSESSMENT REQUIREMENTS

This Aboriginal cultural assessment has been prepared following the appropriate guidelines, policies and industry requirements, and following consultation with stakeholders including community members and relevant government agencies.

Guidelines and policies referenced are as follows:

- *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010b)

This assessment has been prepared in accordance with requirements of the NSW Department of Planning and Environment (DPE). These were set out in DPE's Environmental Assessment Requirements (EARs) for the Project, issued on 24 July 2018 and revised on 19 December 2018. The EARs identify matters which must be addressed in the EIS and essentially form its terms of reference. **Table 3-2** lists individual requirements relevant to this Aboriginal cultural heritage and historic heritage assessment and where they are addressed in this report.

Table 3-2: Technical assessment (heritage) related EARs.

Requirement	Section addressed
Aboriginal cultural heritage and archaeological assessment	Section 2 to Section 9
Historical heritage and archaeological assessment	Section 10 to Section 13
Consultation with Aboriginal stakeholders having regard to the <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i>	Section 4
Assessment of the impact on Environmental heritage in accordance with the <i>NSW Heritage Manual</i> , including heritage conservation areas and State and local heritage items within and near the site, and detailed mitigation measures to offset potential impacts on Heritage values.	Section 12 to 13

To inform the preparation of the EARs, DPE invited other government agencies to recommend matters to be address in the EIS. These matters were considered by the Secretary for DPE when preparing the EARs. Copies of the government agencies' advice to DPE were attached to the EARs.

Heritage Council of New South Wales and the Office of Environment and Heritage (OEH) raised matters relevant to the Aboriginal cultural heritage and historical heritage assessment. The matters raised concerning Aboriginal cultural heritage are listed in **Table 3-3** and have been considered in preparing this assessment, as indicated in the table. Specific assessment recommendations for historic heritage are covered in **Section 10.3**.

Table 3-3: Agency project specific assessment recommendations.

Requirement	Section addressed
Aboriginal cultural heritage	
The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the McPhillamys Gold Project and document these in the EIS. The identification of cultural heritage values should be guided by the <i>Guide to investigation, assessing and reporting on Aboriginal Cultural Heritage in NSW</i> and consultation with OEH regional officers.	Section 2 to Section 9
Where Aboriginal cultural heritage values are identified, consultation with Aboriginal people must be undertaken and documented in accordance with the <i>Aboriginal cultural heritage consultation requirements for proponents 2010-</i> . The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the EIS.	Section 4
Impacts on Aboriginal cultural heritage values are to be assessed and documented in the EIS. The EIS must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the	Section 2 to Section 9

Requirement	Section addressed
EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.	

3.7 REPORT FRAMEWORK

The current assessment follows the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010).

Field assessment and reporting followed the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011).

The ACHAR is presented in **Sections 3 to 9** of this report while the historic heritage assessment is presented in **Sections 10 to 13** of this report. The project background and environmental context of the study area presented in **Sections 1 and 2** are applicable to both assessments. Recommendations regarding Aboriginal cultural heritage and historic heritage are provided in **Section 14**.

4 ABORIGINAL COMMUNITY CONSULTATION

4.1 ABORIGINAL COMMUNITY CONSULTATION

The Aboriginal cultural heritage assessment of the pipeline development has followed the ACHCRs (DECCW 2010b). A log and copies of correspondence with Aboriginal community stakeholders is presented in **Appendix 1**.

The ACHCRs include four main stages and these will be detailed in the following sections.

4.1.1 ACHCRs Stage 1

The aim of Stage 1 is to identify the Registered Aboriginal Parties (RAPs) who wish to be consulted about the pipeline development.

Stage 1 was undertaken by Navin Officer. See **Appendix 1** for the advertisement Navin Officer placed and their correspondence log. **Table 4-1** lists the RAPs who registered for the project.

Table 4-1: Registered Aboriginal Parties and dates registered.

Registered Aboriginal Party name	Date registered as RAP
Bathurst Local Aboriginal Land Council (LALC)	19/09/2017
Gundungurra Aboriginal Heritage Association Inc	26/09/2017
Dhuuluu-Yala Aboriginal Corporation	27/09/2017
Gundungurra Tribal Council Aboriginal Corporation	27/09/2017
Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC)	28/09/2017
Wiradjuri Traditional Owners Central West Aboriginal Corporation	28/09/2017
Neville and Region Landcare	28/09/2017
Gunjeewong Cultural Heritage Aboriginal Corporation	28/09/2017
Muragadi Heritage Indigenous Corporation	28/09/2017
Murra Bidgee Mullangari Aboriginal Corporation	28/09/2017
Warrabinga	13/10/2017
Orange Local Aboriginal Land Council	20/06/2018

4.1.2 ACHCRs Stages 2 & 3

The aim of Stages 2 and 3 is provide information about the pipeline development to the RAPs and to acquire information regarding Aboriginal cultural values associated with the pipeline development either through consultation and/or field work. Often these two stages are run together, and the detailed project information is provided in the assessment methodology that is issued to all RAPs for their consideration.

On 4 June 2018 all RAPs were sent the pipeline development overview and survey methodology (**Appendix 1**). Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC) provided feedback regarding the survey methodology on 19 June 2018. A reply by OzArk addressing the points raised by WVWAC was sent to WVWAC on 18 June 2018 (**Appendix 1**).

A meeting and fieldwork induction were held on Friday 15 June 2018 at the Regis Resources office in Blayney, NSW. The minutes of the meeting are included in **Appendix 1**. The purpose of the meeting was to provide the RAPs who attended with updated information regarding the pipeline development and ask whether the RAPs had additional cultural information regarding site locations and the study area. A fieldwork induction was included following the meeting.

No further feedback regarding Stage 2/3 development overview or survey methodology was provided to OzArk by any RAPs.

4.1.3 ACHCRs Stage 4

Stage 4 involves the production of a draft ACHAR that is issued to all RAPs for their consideration. The ACHAR will document the results of the assessment, outline opportunities for the conservation of Aboriginal cultural values, and suggest recommendations for the management of Aboriginal objects should impacts to these objects be unavoidable.

The draft ACHAR was sent on 21 May 2019 to all RAPs. A 28 day review period was provided closing on 18 June 2019. Due to minor amendments of the pipeline route and corridor, the draft ACHAR was re-sent on 27 May 2019 to all RAPs.

Four RAPs provided feedback on the report. Feedback was received from the Murra Bidgee Mullangari Aboriginal Corporation on 28 May 2019 and the Muragadi Heritage Indigenous Corporation on 31 May 2019. Both RAPs indicated they did not have any problems with the ACHCR or the minor amendments to the pipeline route and corridor (see **Appendix 1**).

Feedback was received from the Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC) on 12 June 2019. The WVWAC have requested that the information they provided remain private, so the letter has not been included in **Appendix 1**. The recommendations provided from WVWAC in relation to the pipeline development are as follows:

- Supportive of the modification and minor adjustments to the pipeline alignment to follow a greater amount of existing roadway and tracks.
- Supportive of the pipeline corridor being approximately 127 ha which means less impact to any habitat areas
- Any artefacts that will be impacted must be collected, recorded and photographed by archaeologists prior to the construction phase and replaced back on-site post construction to mitigate any accidental damage to the artefacts
- All artefacts that are close to the construction but not being impacted are to have visible barriers with a minimum of a 5 m buffer zone to mitigate accidental damage to artefact during the construction phase

Orange LALC provided feedback on the report on 27 June 2019. A copy of the letter sent by Orange LALC is provided in **Appendix 1**. The main points raised by Orange LALC concerning the pipeline development are as follows:

- The pipeline development and mine development should consider the collective impact on the location of the two Aboriginal clans of the Kings Plains and Belubula area. This includes taking into consideration the high level of significance of the Kings Plains area to Aboriginal people and other Australians in relation to European settlement of NSW and Australia.
- Concerned about the environmental impacts of the mine project area and pipeline development to the Belubula River Headwaters as related to cultural heritage significance connected to spirituality, community and social wellbeing from the impacts to Cultural water flows to and from the Belubula River Headwaters.
- Request examination of the Aboriginal and Cultural heritage and Spiritual connections to the Kings Plains area in relation to the Belubula River and Elders past and determination of this relevance and any information related to the Elders past on the protection of the Aboriginal Cultural Heritage of Belubula River.
- A Cultural mapping exercise should be undertaken to map tangible and intangible heritage on the Country, including the pipeline corridor and mine project area. This should involve interviewing and including Elders and other Traditional Owners about important places and stories and mapping those sites.
- Feel that the information provided in the assessment is inadequate and does not allow an accurate response to the recommendations, nor does it take into consideration the high level of significance of the Kings Plains area to Aboriginal people and other Australians in relation to European settlement of NSW and Australia.

It is noted by OzArk archaeologist, Alyce Cameron, that the creeks or tributaries intersecting with the pipeline alignment do not consist of any which make up the Belubula River Headwaters. However, the cultural importance of water flow and existing creeks and rivers has been taken into consideration during the assessment. Though the pipeline development is north of the Kings Plains area, the importance of the Kings Plains area is noted and has been expanded on in **Section 5.1**.

A log and copies of correspondence with RAPs is presented in **Appendix 1**.

4.2 ABORIGINAL COMMUNITY INVOLVEMENT IN THE ASSESSMENT

The following RAPs or representatives of RAPs participated in the fieldwork program:

- 1–2 August 2018 and 4–7 April 2019: Brad Bliss (Wellington Valley Wiradjuri Aboriginal Corporation)

- 1–2 August, 30 August 2018, 27 November and 11 December 2018: Colleen Fisk (Bathurst LALC)
- 29 August 2018: Ian (Doug) Sutherland (Orange LALC)
- 29–30 August 2018: Jodie Polanski (Murra Bidgee Mullangari Aboriginal Corporation).
- 26 November 2018 and 4–7 April 2019: Tyler Johnson (Warrabinga Native Title Claim Group)
- 26–27 November and 11 December 2018: Shaun Carroll (Muragadi Heritage Indigenous Corporation)

4.2.1 Comments arising from the assessment

During the survey, each time an Aboriginal site was recorded, a brief discussion between the RAPs present during the survey and the OzArk archaeologist was conducted regarding the RAP's thoughts about the site, whether they thought the site has associated archaeological deposits and possible avoidance or mitigation options. Additional cultural information was also shared between the RAPs and to the archaeologist throughout the survey. Specifics of this are outlined in **Table 4-2**.

Table 4-2: Discussions during survey.

Date	Individuals involved in discussion	Results of discussion
1/08/2018	Brad Bliss (Wellington Valley Wiradjuri Aboriginal Corporation) Colleen Fisk (Bathurst LALC)	Bathurst Bike Park IF-1 (AHIMS #44-3-0221): Brad and Colleen agreed that it was unlikely for the site to have intact potential archaeological deposits (PAD).
2/08/2018	Brad Bliss (Wellington Valley Wiradjuri Aboriginal Corporation) Colleen Fisk (Bathurst LALC)	Sunny Corner IF-1, Sunny Corner IF-2 and Sunny Corner IF-3 (AHIMS #44-3-0222, #44-3-0223 and #44-3-0224): Brad and Colleen agreed that it was unlikely for any of these sites to have intact PAD and that the isolated artefacts were in a secondary context based on location. Sunny Corner OS-1 (AHIMS #44-3-0225) Brad and Colleen agreed that it was unlikely for this site to have intact PAD and that the artefacts were in a secondary context based on location. Brad shared the information that crystal quartz artefacts are often used in relation to male initiation ceremonies.
29/08/2018	Ian Sutherland (Orange LALC) Jodie Polanski (Murra Bidgee Mullangari Aboriginal Corporation)	Ian shared the information with Alyce that raw quartz was often used for trading. He also said that shale was not a good material for artefacts.
27/11/2018	Colleen Fisk (Bathurst LALC) Shaun Carroll (Muragadi Heritage Indigenous Corporation)	Bald Hill IF-1 and IF-2 (AHIMS #44-3-0229 and #44-3-0228): Colleen and Shaun agreed that it was unlikely for these two isolated artefact sites to have intact PAD and that the artefacts were in a secondary context based on location. There was some discussion about whether the artefacts had washed down from higher points outside the study area from the northeast.

5 ABORIGINAL ARCHAEOLOGY BACKGROUND

5.1 ETHNO-HISTORIC SOURCES OF REGIONAL ABORIGINAL CULTURE

According to Tindale's (1974) and Horton's (1994) maps of tribal or ethno-linguistic boundaries, the Wiradjuri occupied the northern parts of the South Eastern Highlands bioregion near Orange and Bathurst. As such, most of the study area falls within the Wiradjuri ethno-linguistic group, while the eastern-most section of the study area is along the eastern limits of the lands occupied by the Wiradjuri tribe. However, due to the location of this area at the western base of the mountains it has often been referred to as zone of interaction between the Wiradjuri, the Dharug to the east and the Gundungurra to the south (Bowdler 1983).

Although tribal boundaries still retain some uncertainty, it is thought that the Wiradjuri people were the largest language group in New South Wales, with dialects spoken from Coonabarabran in the north, the Murray River to the south, western Blue Mountains in the east and Condobolin in the west.

Although separate tribes, all three language groups were neighbours and shared certain similarities with other Aboriginal groups in south-eastern Australia. Plants were used for food, as well as in the manufacture of practical items, decorative items and medicines, with some species providing more than one resource. Grass stalks could be used for weaving or producing baskets. Large trees were useful in providing bark and fibres used for the manufacture of tools, containers and possibly the construction of watercraft. The resin obtained from Grass Trees, for example, were an adhesive that could be used in hafting processes. Bark fibres were twisted into twine which could then be woven into traps, containers or baskets and a variety of wooden tools. Stone was also used for tools (RPS 2014).

The Blue Mountains offered a variety of resources to Aboriginal people, including flora, fauna and stone material. Gunyahs or bark huts were usually made from the broad-leafed paperbark, box or stringy bark trees and were constructed mostly by women. They were generally located close to a reliable water source or opportunistically situated on trade routes. Rock shelters are common in the Blue Mountains region and would likely have been occupied periodically as shelter or in association with camp sites. Camp sites were places commonly used for sleeping, eating, tool making, social activity and as a base for hunting and gathering (RPS 2014).

The Wiradjuri are typically described as a large language group or tribal nation extending over a considerable area of New South Wales, comprising many individual groups. Pearson (1981: 81) suggests that one Wiradjuri clan occupied the Wellington area, another occupied the Bathurst region and another the Mudgee–Rylstone locale. It is acknowledged that use of the term 'tribe' and the delineation of 'tribal boundaries' on maps is problematic; however, distinctive ethno-linguistic groups are known to exist. Wiradjuri people travelled to the alpine regions of the South

Eastern Highlands and Australian Alps bioregions for annual summer feasts of Bogong moths (Flood 1980).

Early accounts of contact between European and Aboriginal people in the Macquarie River area were provided by Oxley (1820) and Sturt (1834), and later by Garnsey (1942) who was born in Dubbo in 1874 (Whitehead 2003). Early references to Aboriginal people in the Orange and Wellington regions are provided by John Oxley, who passed by Limestone Creek, south of Mt Canobolas, on 12 April 1817, describing the area as “a beautiful picturesque country of low hills and fine valleys well-watered” (Whitehead 2003: 351). Further southwest, at the Lachlan River, Oxley met Aboriginal people carrying stone hatchets and possum skin cloaks. Oxley then returned to Bathurst along the Bell and Macquarie Rivers north of Orange in late August, passing near Wellington on 25 August 1817. Oxley noted the abundant natural resources in areas adjacent to the Macquarie River—including emus, ducks, swans, fish and freshwater muscles—and that the country had an abundance of running water, with a spring on every hill (Rawson 1997: 8).

Garnsey’s interest in local Aboriginal culture led him to record information gleaned from his father and from Wiradjuri Aboriginal elders in the Dubbo area. His work remains a useful account of everyday life and religious/ceremonial practices. Garnsey’s (1942: 6) description of camp life suggests that many activities were performed communally, for the benefit of the mob. Campsites comprised a series of bark or bush shelters arranged in a semi-circle opening to the east, arranged around a central fire, with men occupying shelters to the north, women in the centre, and children to the south. Camps moved frequently over short distances due to alterations in social relations and weather, and in response to hygiene concerns, among other factors. Longer distance movements tended to be linked to participation in large-scale gatherings (e.g. ceremony or warfare) or alterations in resource availability. Garnsey (1942: 6–23) also provides detailed descriptions of ceremonial practices related to alterations in social status and passages from infancy to adulthood. These descriptions of are a composite of various verbal accounts, the accuracy of which is difficult to ascertain. Garnsey (1942: 14) suggests that the ‘mob’ structure began to break down during the 1890s, by which time only older men appeared to retain the tribal markings and knowledge associated with ceremonial practice. Oral histories provided by traditional custodians are likely to elaborate upon and refute aspects of these early accounts.

In the early colonial period, relationships between Europeans and Aboriginal people were relatively amicable while there were few colonists. By the early 1820s the European population had increased and, in 1824, open war erupted between the Wiradjuri, under the leadership of Windradyne, including the government settlement in Bathurst and surrounding settlements (e.g. Orange, Wellington and Mudgee). The conflict between the Wiradjuri and European settlers culminated in the death of two convict stockmen at Kings Plains. Windradyne was

arrested and imprisoned for one month at Bathurst and it was reported that six men were needed to arrest Windradyne. Martial law was declared by Governor Brisbane soon after (Roberts 1995: 618–624). With civil law suspended, violence was officially sanctioned, and Governor Brisbane transmitted a proclamation to London that: “*It hath been found that Mutual Bloodshed may be stopped by the Use of Arms against the Natives beyond the ordinary Rule of Law... and for this End resort to summary justice has become necessary*” (cited in Roberts 1995: 622). On 14 October 1824 the *Sydney Gazette* reported that: “*Bathurst [and] its surrounding district is engaged in an exterminating war*” (cited in Roberts 1995: 623) and by October and November reports of Aboriginal people surrendering in groups of up to sixty were reaching Sydney. Martial law was repealed on 11 December 1824. Shortly after, relatively friendly relationships were established with the Wiradjuri, although subsequent history swayed between amenable and violent interactions (Kabaila 1998: 13–17).

5.2 REGIONAL ARCHAEOLOGICAL CONTEXT

Useful as a guide for generalised patterns of prehistoric Aboriginal occupation in the central west is a study undertaken by Pearson (1981) in the upper Macquarie region. The western boundary of Pearson’s subject area was Wellington. Most of Pearson’s field coverage was directed by information from informants and was thus skewed toward large or obtrusive sites, which had been recognised by local residents. Pearson excavated three rock shelter sites (Botobolar 5, and Granites 1 and 2) which provided a regional record of Aboriginal occupation dating back to around 5,000 BP (years before present). Pearson’s analysis of the patterns of Aboriginal occupation involved an examination of site location characteristics in four sample areas.

According to Pearson, archaeological sites could be divided into two main categories, occupation sites and non-occupation sites (which included grinding grooves, scarred or carved trees, ceremonial and burial sites etc.). An analysis of the location of these sites led him to build a model for site prediction along the following lines (Pearson 1981: 101 as quoted in Koettig 1985: 47):

- Site distance to water varied from 10 to 500 metres, but in general larger sites are found closer to water
- Good soil drainage and views over watercourses are important site location criteria
- Most sites were in contexts which would originally have supported open woodlands
- Burial sites and grinding grooves were situated as close to habitation areas as geological constraints would allow
- Ceremonial sites such as earth rings (“bora grounds”) were located away from campsites

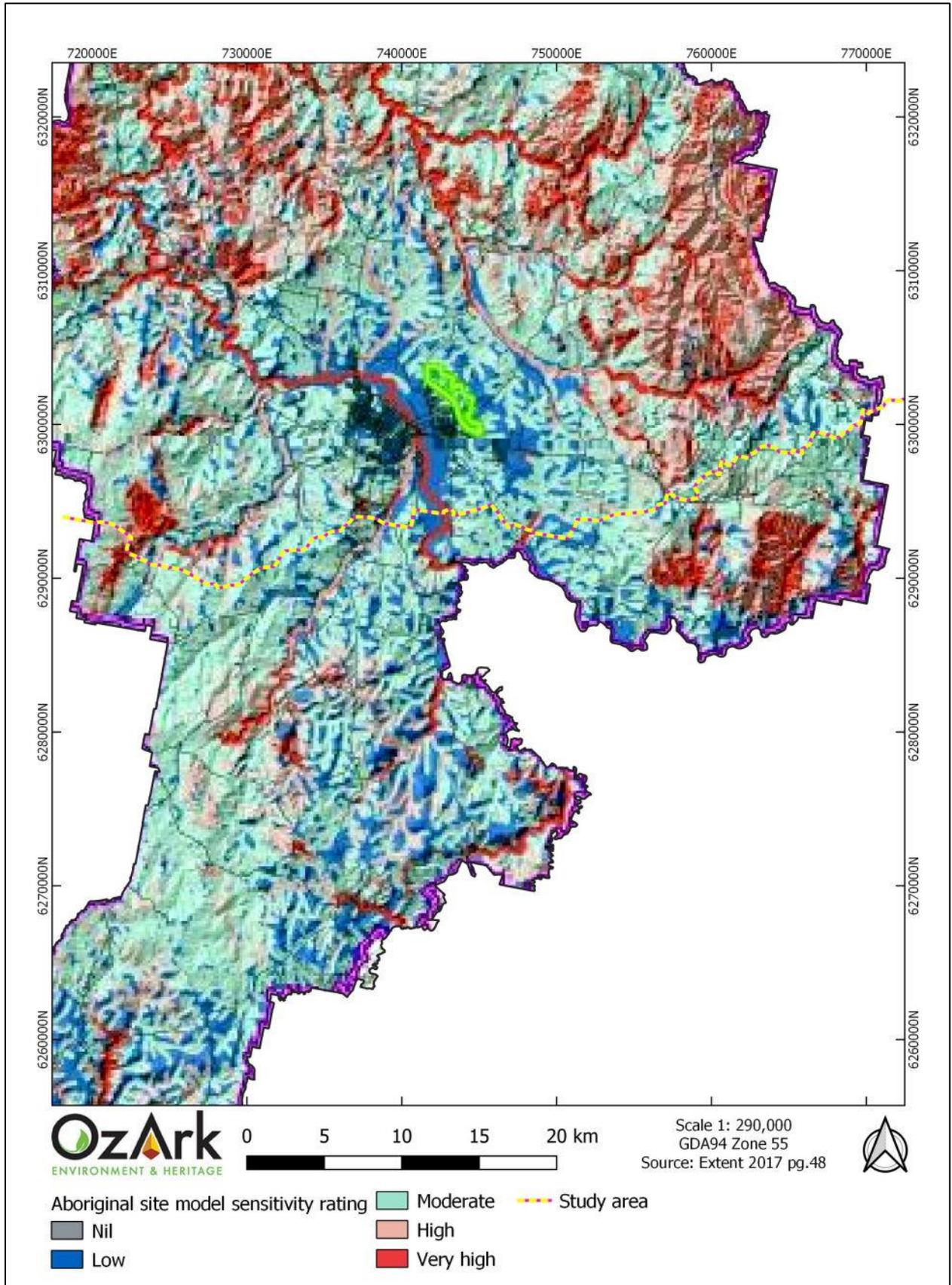
- Stone arrangements were also located away from campsites in isolated places and tended to be associated with small hills or knolls or were on flat land
- Quarry sites were located where stone outcrops with desirable working qualities were recognised and were reasonably accessible.

Based on ethno historic information, Pearson suggests that Aboriginal campsites were seldom used for longer than three nights and that large archaeological sites probably represent accumulations of material over a series of short visits. The location of non-occupation sites was dependent on various factors relating to site function. For example, grinding grooves only occur where there is appropriate outcropping sandstone, but as close to the occupation site as possible. Scarred trees were variably located with no obvious patterning, other than proximity to watercourses, where camps were more frequently located.

In 2017, Extent Heritage conducted a regional Aboriginal heritage study for Bathurst LGA on behalf of Bathurst Regional Council (Extent 2017). This study found that 222 sites were registered on the AHIMS database as being located within Bathurst LGA, 216 (98%) of which were recorded as open sites. Extent found that artefact sites (artefact scatters and isolated finds) together constituted over half (55%) of all sites recorded, and that these were distributed throughout the entirety of the LGA (Extent 2017: 38–39). Other noteworthy observations include that stone arrangement sites have been recorded exclusively on elevated terrain above the valley of the Macquarie River in the central north of the LGA, and that culturally modified trees were relatively common in this area (15% of sites).

This study further conducted a program of predictive modelling to assess the likelihood of areas to contain archaeological sites based on landform characteristics and the proximity of significant landscape features. This modelling was then applied to divide the landscape of the LGA into categories of archaeological sensitivity, from 'nil to very high'. The landscape surrounding the study area has been assessed by the predictive modelling of Extent (2017) to be of varying archaeological sensitivity. Most of the study area is through low and moderate sensitivity areas, though some short sections are in high to very high sensitivity areas (**Figure 5-1**). These high or very high sensitivity areas are in conjunction with larger water sources, such as the Macquarie River, or the small hill range to the southwest of Vittoria State Forest.

Figure 5-1: The study area in relation to Extent’s sensitivity mapping of Bathurst LGA (2017: 48).



5.3 LOCAL ARCHAEOLOGICAL CONTEXT

5.3.1 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any potential previously-recorded heritage within the Study Area. The results of this search are summarised in **Table 5-1** and presented in detail in **Appendix 2**.

Table 5-1: Aboriginal cultural heritage: desktop-database search results.

Name of Database Searched	Date of Search	Type of Search	Comment
Commonwealth Heritage Listings	14 November 2018	Blayney LGA Bathurst LGA Lithgow LGA	No places listed on either the National or Commonwealth heritage lists are located within the study area or within 1km of it.
National Native Title Claims Search	14 November 2018	NSW	The Warrabinga-Wiradjuri #7 (Tribunal No NC2017/001 and NC2018/002) have a claim over part of the study area.
OEH AHIMS	19 July 2018	1.5 km area around pipeline corridor	89 sites within the search area.
Local Environment Plan (LEP)	28 August 2018	Blayney LEP 2012 Bathurst LEP 2014 Lithgow LEP 2014	None of the Aboriginal places noted occur near the study area.

As per **Table 5-1**, it is noted that the study area includes land currently subject to Native Title Claim (NC2018/002, NSD857/2017, Warrabinga-Wiradjuri #7).

A search of the OEH administered AHIMS database returned 89 records for Aboriginal heritage sites within the designated 1.5 km search area around the pipeline corridor (**Table 5-2**). **Figure 5-2 to Figure 5-4** shows the location of the AHIMS sites that have been recorded near the study area. Of these 89 sites, five have been destroyed. There are 84 valid or partially destroyed sites remaining. Artefact scatters are the most common site type (54%), followed by isolated artefacts (21%) and Aboriginal ceremony & dreaming sites (7%).

Table 5-2: Site types and frequencies of AHIMS sites near the study area.

Site Type	Number	% Frequency
Artefact scatter	45	53.6
Isolated artefact	18	21.4
Aboriginal ceremony & dreaming site	6	7.1
Stone arrangement	4	4.8
Scarred Tree	4	4.8
Restricted site	1	1.2
Isolated artefact & PAD	1	1.2
Grinding grooves	1	1.2
Burial	1	1.2
Artefact scatter, art & grinding grooves	1	1.2

Site Type	Number	% Frequency
Artefact scatter & PAD	1	1.2
Artefact scatter & grinding grooves	1	1.2
Total	84	100

Figure 5-2: Location of previously recorded AHIMS sites in relation to the study area.

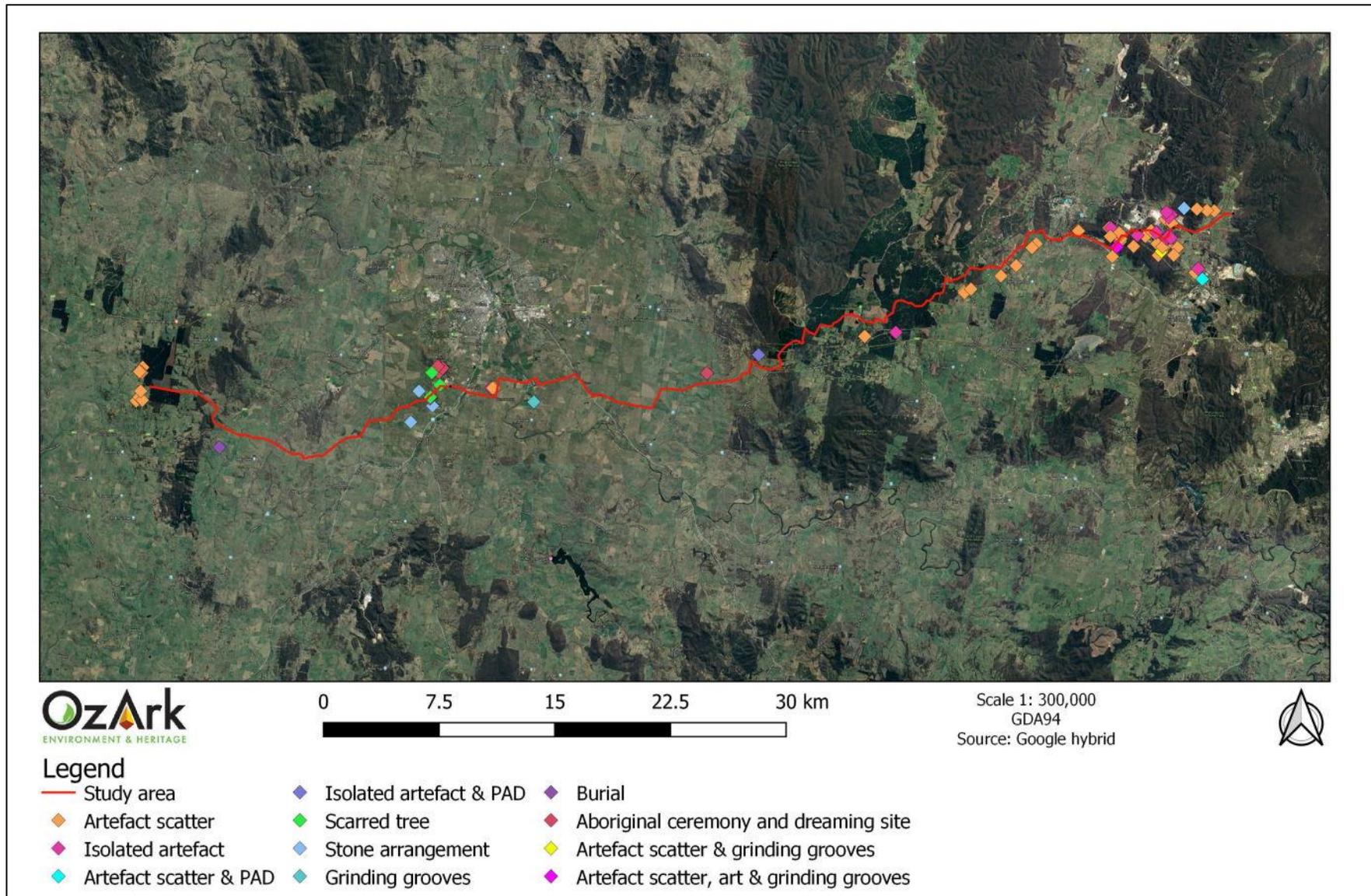


Figure 5-3: Location of previously recorded AHIMS sites in relation to the study area – Bathurst region.

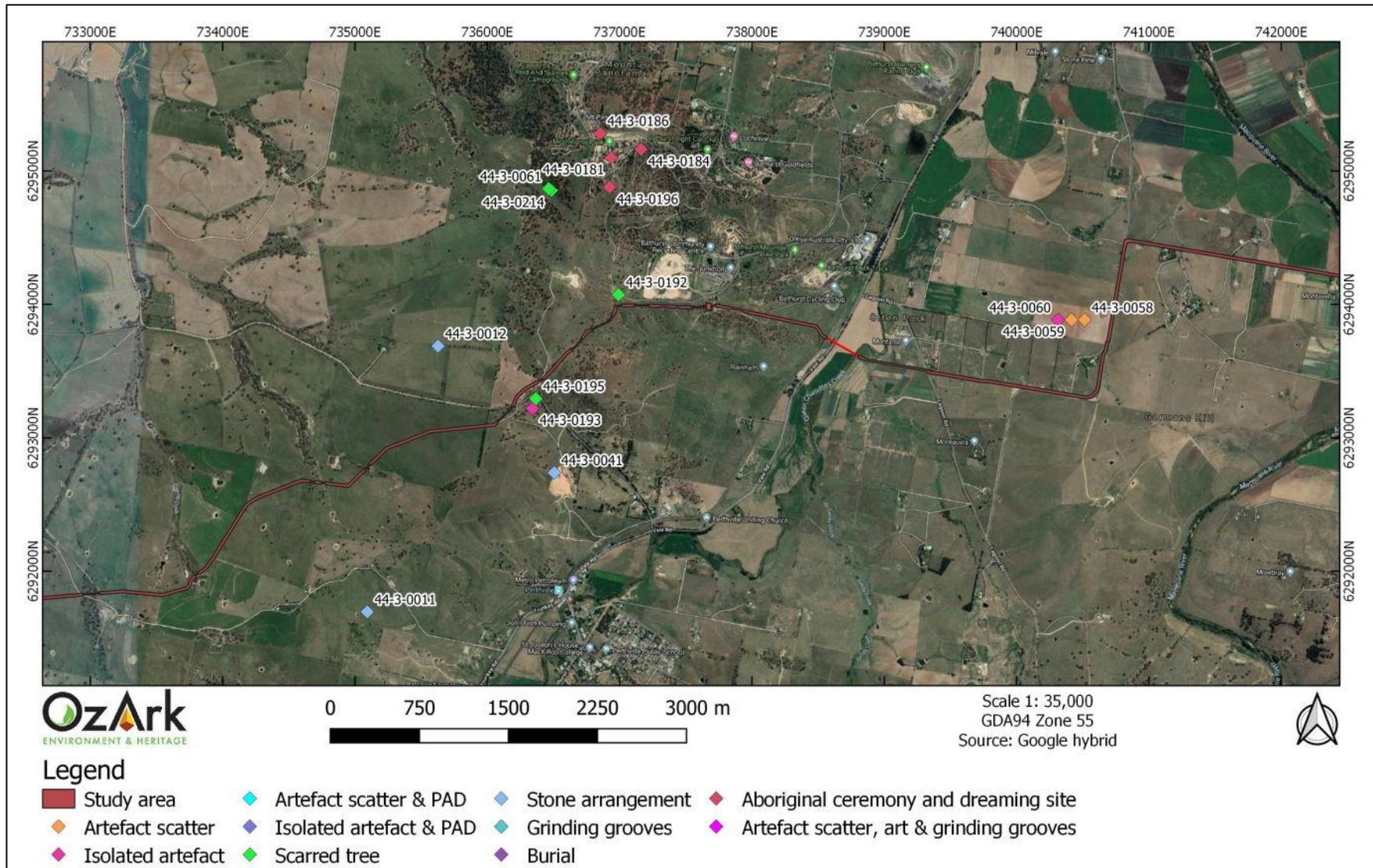
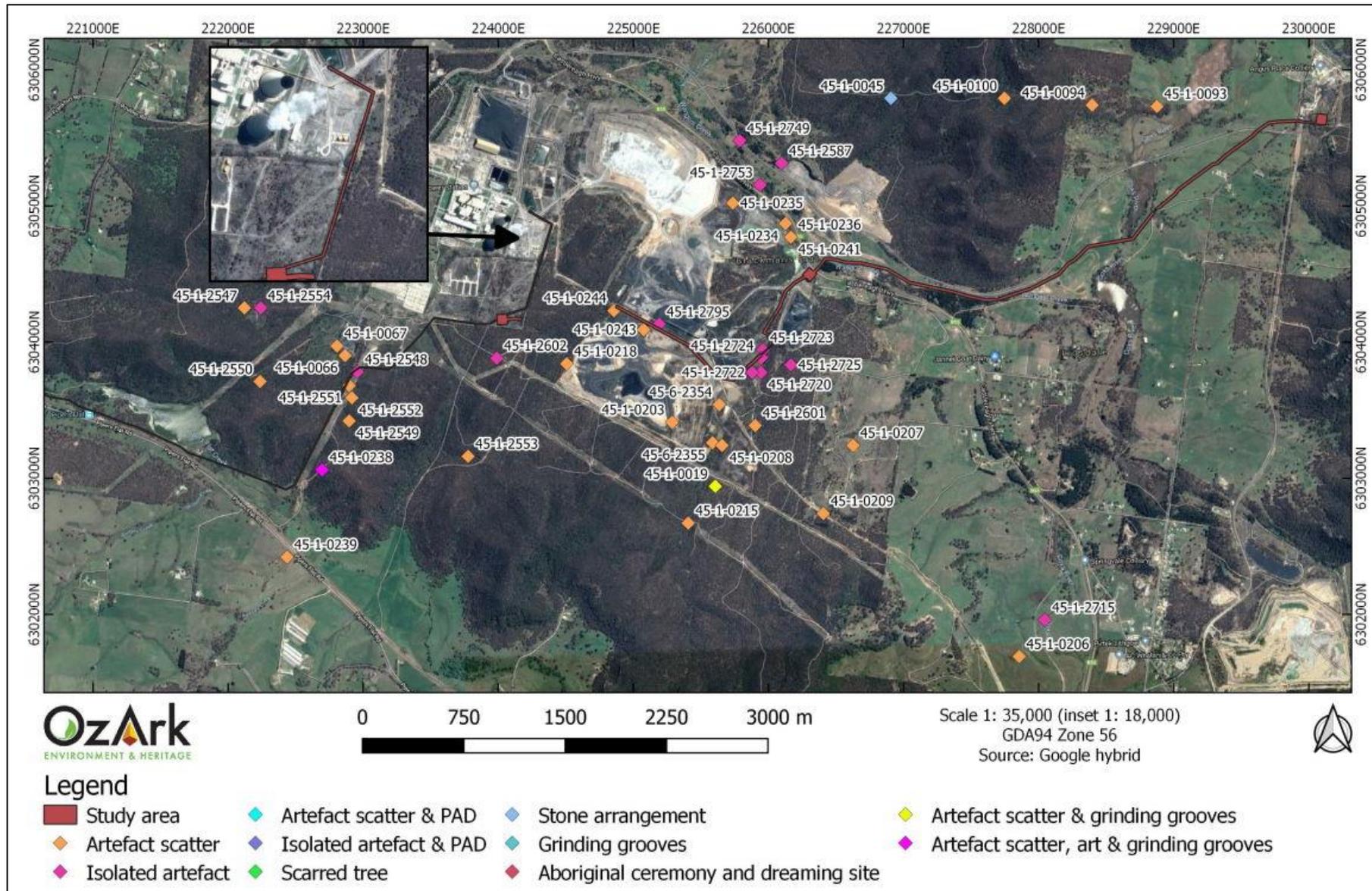


Figure 5-4: Location of previously recorded AHIMS sites in relation to the study area – eastern area.



5.3.2 Local archaeological studies

There have been a number of development driven assessments conducted in the Blayney, Bathurst and Wallerawang areas. Only those assessments which are close or related to the current study area have been summarised.

5.3.2.1 *Western and central sections of study area (Blayney/Bathurst)*

Landscape (2019) conducted the Aboriginal cultural heritage assessment for the mine development component of the project, located at the western end of the study area near Blayney. During this assessment nineteen stone artefact scatters and eighteen isolated finds of stone artefacts were recorded in addition to one previously recorded stone artefact scatter (AHIMS #44-2-0122). This assessment concluded that the Aboriginal cultural heritage sites that would be impacted by the mine development are not of high scientific or cultural significance.

Pickering (1980) surveyed a proposed electricity easement between Bathurst, Raglan and Mount Panorama. Seven sites were recorded including several isolated finds, a lithic scatter and a possible scarred tree. The artefacts recorded were made from a range of materials: quartzite, quartz, fine grained silcrete and fine-grained basalt. In addition, Pickering attempted to locate five previously identified stone arrangements recorded by Gresser but found all of them had been destroyed via agricultural activities, or by campers.

In 2012, Navin Officer undertook an archaeological assessment for the proposed Macquarie River Pipeline from the Macquarie River to Orange. During the assessment, 17 Aboriginal sites were recorded (three artefact scatters, seven artefact scatters with PAD, four isolated finds, two isolated finds with PAD and one scarred tree). Five areas of PADs were also identified. In addition, two previously recorded sites were located.

Navin Officer (2014) conducted an archaeological assessment of the Line 944 Wallerawang to North Orange 132kV transmission line. During the survey 33 Aboriginal sites were recorded and consisted of eight surface artefact scatters, 17 surface artefact scatters with PAD, one Aboriginal scarred tree and seven PADs. Line 994 intersects with the study area 650 m north of the Great Western Highway. The artefact types recorded during the assessment included mostly flakes, flaked pieces and retouched flakes. Cores, hammer stones and grinding stones were also recorded; but at a much lower frequency. The raw materials of the artefacts included tuff, volcanic material, silcrete, quartz and chert. Navin Officer recommended that sites be avoided, and where avoidance was not possible, that further assessment be undertaken, including obtaining an AHIP prior to any development works to destroy or harm any sites.

A due diligence assessment was conducted by Insite Heritage (2017) for the low span remediation of the 132kV Line 94X Wallerawang to Panorama. Line 94X intersects with the pipeline corridor several times: at 1 km southwest of where the pipeline corridor crosses the

Great Western Highway; where the pipeline corridor crosses the Macquarie River; and along Gormans Hill Road. During the assessment, 63 locations along Line 94X were visually assessed. No Aboriginal sites were recorded during the assessment, though one water crossing near Structure 46 was identified as being archaeologically sensitive. OzArk (2019) recently conducted an updated assessment of Line 94X. During the visual inspections, three sites (AHIMS #44-3-0232, #44-3-0231 and #44-3-0233) were recorded on the southern bank of Salt Water Creek next to Structure 129 and Structure 130. These sites are 350 m north of the study area.

In 2018, OzArk conducted an Aboriginal and historic archaeological assessment for derelict mine remediation work at Big Hill, Sunny Corner, approximately 3.5 km north of the current study area. During this assessment, no Aboriginal sites were recorded. It was concluded that the moderately steep gradient within the study area were unlikely locations for Aboriginal occupation.

Although fewer archaeological studies have been conducted in the central or western sections of the study area (i.e. around Blayney and south of Bathurst), the results indicate that, despite the negative impacts of agricultural practices in these areas, Aboriginal sites are still likely to be located on landforms next to a permanent water source.

5.3.2.2 Eastern section of study area (Wallerawang/Portland)

There have been several studies conducted around the eastern section of the study area. Brayshaw and Haglund undertook a survey for the proposed construction of a haul road between Angus Place and MPPS (1992a). The area assessed included a portion of the Boulder Road Coal Mine (Kelton 2002), through which the haul road runs. Three sites were recorded, two open camp sites and one isolated find. During his 2002 study for the Boulder Road Coal Mine, Kelton attempted to locate these sites and was unsuccessful, concluding that AHIMS #45-2-0217 must have been destroyed during the construction of the electricity easement immediately south of the haul road (Kelton 2002: 32). Although not located, AHIMS #45-2-0216 was predicted to be intact and situated within approximately 300 m of the haul road.

In 2002 Kelton undertook survey of the proposed Boulder Road Coal Mine, which comprises the western extent of the current Neubecks Creek area between the Castlereagh Highway and Ben Bullen State Forest. During this 2002 survey, Kelton identified one isolated find (#45-1-2582) and one open camp site (#45-1-2581). OzArk attempted to ground truth these sites in 2005 but was only able to locate the open camp site. This open camp site (#45-1-2581) consisted of seven artefacts in a disturbed context next to the transmission line easement immediately west of the Boulder Road Coal Mine. The isolated find (#45-1-2582) was apparently situated on a high flat spur overlooking the tributary into Neubecks Creek, and although the exact location was surveyed (according to photos in Kelton 2002) this artefact was not located.

In 2013 OzArk undertook a survey in the Neubecks valley, on the property between Pinedale and Boulder, for a proposed open cut coal mine. The Aboriginal heritage component of that assessment recorded five sites. Two sites were open camp sites with PAD (#45-1-2588, #41-1-0239), a further two were small open camp sites (#45-1-2589 and #45-1-2590) and the last was an isolated find (#45-1-2591). It was determined that site #45-1-2588 was, in fact, a previously recorded site, #45-1-0216, identified by Brayshaw and Haglund during their haul road survey in 1992 (summarised above). Both open camp sites with PAD were recorded on knolls / elevated spurs while the remaining sites were located on the colluvial / alluvial terraces adjacent to Neubecks Creek.

In 1982, Haglund undertook a survey for Ivanhoe # 4, located southwest of MPPS and encompassing part of the current study area. This assessment was a sample survey covering many areas between Portland Cullen Bullen Road and the Wallerawang railway line. Haglund recorded total of seven open camps sites (Haglund 1982 as reported in Mills 1998:11). Test excavations were carried out at AHIMS #45-1-0067, revealing shallow deposits of no greater than 10 centimetres (cm), with 30 artefacts being recovered from three test pits measuring 1 x 0.5 m. Because of the excavations, Haglund concluded that the archaeological deposits were shallow and unlikely contain archaeological features such as hearths.

In 1998 Mills undertook further survey for the proposed Stage 4 of the Ivanhoe Mine (Mills 1998). A total of six open camp sites, two isolated finds and eight PADs were recorded (Mills 1998). Of these, only the sites and isolated finds were registered on AHIMS (AHIMS #45-1-2547 to #45-1-2554).

In 1992 a survey for Springvale Colliery and the proposed Springvale to Mt Piper coal conveyer by Rich & Gorman (1992) recorded 26 sites, 13 along the coal conveyer route, washery and pit top areas and 13 in the location of the underground mining activities (Rich & Gorman 1992: 4). Part of the current study area crosses through Lamberts Gully located inside the Springvale Colliery. Overall, the assessment found that sites were located in the lesser disturbed parts of the survey area, mostly occurring on spurs adjacent to creek lines, with the larger sites close to streams. Bipolar technology was evident at many sites and the largest recorded a maximum artefact density of 25 per square metre.

In 1993, Rich produced two further reports for the same project; the first report describing inadvertent impacts to two sites (Rich 1993a), and the second report documenting impacts relating to the realignment of the conveyer belt route to what is now the corridor of land between Lamberts South and North (Rich 1993b). This second survey by Rich, which covers part of the current study area, recorded three additional sites, two open camp sites (AHIMS #45-1-0243 and #45-1-0244) and an isolated find (IF2 never registered on the AHIMS database).

Also in 1992, Haglund & Brayshaw undertook a survey for Western Main colliery for the Lamberts Gully open cut mine (Haglund & Brayshaw 1992b). Six Aboriginal sites were recorded because of this survey, predominantly located at the southern end of Lamberts Creek. Later that year test excavations were carried out at two PADs, one having been recorded during their Lamberts Gully survey (POS A), and the second being a PAD recorded by Rich and Gorman in 1992 (POS2). The latter site came to be known as Lamberts Creek 6 (AHIMS #45-6-2355), while POS A came to be known as Lamberts Creek 7 (AHIMS #45-6-2354). Test excavation of these locations revealed them to be open sites, used once or for short periods of time and likely to date within the last 3,000 years due to the presence of a backed blade and bipolar knapping technology (Brayshaw 1993: 8).

In 1993, further assessment was undertaken by Brayshaw and Haglund for the Western Main Colliery. At this time three open camp sites were recorded (Brayshaw and Haglund 1993), Western Main Sites 1–3 (AHIMS #45-6-0234, #45-1-0235 and #45-6-0236).

In 1998 Mills undertook survey of the proposed Ivanhoe Stage 4 project. The survey identified six open sites, two isolated artefacts and eight other areas of potential archaeological deposit. Mills concluded that the presence of high quality milky white quartz flakes and debitage at all sites may indicate that it was a procurement place for the raw material, however, no source for the material was located.

In 2005, OzArk undertook survey over the Lamberts Gully ML1448, recording one additional open camp site, # 45-1-2601 (OzArk 2005).

OzArk (2010) also conducted an assessment for the MPPS Ash placement project. The assessment involved ground-truthing the expected levels of disturbance and the locations of the two extant sites (AHIMS #45-1-0218 and #45-1-0261). This visual inspection confirmed that disturbance over the site was complete, but that the areas of the two sites remained intact and beyond the limits of mining or mining related disturbance. No new Aboriginal sites were recorded within the project areas and it was assessed that due to the heavy prior disturbance there is a low probability of locating further archaeological sites within the Lamberts North or South.

The additional section of pipeline between MPPS Blowdown Pond to the pumping station facility No.3 (MPPS) is inside the area assessed for part of the Springvale Water Treatment Project EIS (GHD 2017, RPS 2016). Part of the project area for the Springvale water treatment project is adjacent or aligns with the McPhillamy's pipeline corridor south of the MPPS. During the assessment for the Springvale Water Treatment Project, there were no new Aboriginal sites identified. Eleven Aboriginal sites recorded on AHIMS were within 30 m of the project area, seven which were located during the assessment. The located sites consisted of three artefact scatters, three isolated finds and one scarred tree. AHIMS #45-1-0209, an artefact scatter of

two artefacts was ground-truthed during the assessment, though the artefacts were unable to be located. Due to the highly modified area the site was recorded in, it was recommended that the site be deregistered and the AHIMS database updated with 'not a site' following salvage. Further archaeological investigations were undertaken in May 2017 in accordance with Centennial Coal's Western Holdings Aboriginal Cultural Management Plan. During this investigation, AHIMS #45-1-0209 was re-examined, and as the site was outside the project area the RAPs were satisfied that there was no proposed works in this area and there was no risk of harm to the site. One site was identified during the additional investigations (AHIMS #45-1-2795) and consisted of an isolated artefact (quartzite flake). The isolated artefact was outside the project area. Following design modifications for the Springvale Water Treatment Project, all sites are outside the project area and would not be impacted by the project.

5.4 PREDICTIVE MODEL FOR SITE LOCATION

Across Australia, numerous archaeological studies in widely varying environmental zones and contexts have demonstrated a high correlation between the permanence of a water source and the permanence and/or complexity of Aboriginal occupation. Site location is also affected by the availability of and/or accessibility to a range of other natural resources including plant and animal foods; stone and ochre resources and rock shelters; as well as by their general proximity to other sites/places of cultural/mythological significance. Consequently, sites tend to be found along permanent and ephemeral water sources, along access or trade routes or in areas that have good flora/fauna resources and appropriate shelter.

In formulating a predictive model for Aboriginal archaeological site location within any landscape it is also necessary to consider post-depositional influences on Aboriginal material culture. In all but the best preservation conditions very little of the organic material culture remains of ancestral Aboriginal communities survives to the present. Generally, it is the more durable materials such as stone artefacts, stone hearths, shell, and some bones that remain preserved in the current landscape. Even these, however, may not be found in their original depositional context since these may be subject to either (a) the effects of wind and water erosion/transport—both over short- and long-time scales—or (b) the historical impacts associated with the introduction of European farming practices including grazing and cropping, land degradation, and farm related infrastructure. Scarred trees, due to their nature, may survive for up to several hundred years but rarely beyond.

5.4.1 Settlement strategies

The number of archaeological studies undertaken within the vicinity of the study area provides information to obtain a sound understanding of the nature and distribution of archaeological sites within the area. Although there is some conjecture about the relationship between stream

order, site numbers and densities, the general pattern is that most sites representing occupation, such as artefact scatters, are present close to permanent water sources.

There are cultural and ritual sites (such as initiation and birthing sites, and bora rings) which do not necessarily correlate to environmental data and a predictive model. These types of sites are determined more due to cultural choice than environmental situation.

5.4.2 Past land use

Crucial for the preservation of archaeological deposits is the history of past land use in an area. The study area has had several different types of land use ranging from mining, agricultural, grazing and transport corridors. Previous archaeological studies conducted at the eastern portion of the study area, predominately due to either mining or energy purposes, have highlighted the disturbed context of these areas and the difficulties in locating previously recorded Aboriginal sites.

The results of past archaeological investigations near the study area indicate that the most common site type will be artefact scatters or isolated artefacts generally located on flat terraces or gentle slopes near higher order watercourses. Aboriginal ceremony and dreaming sites have also been recorded in locations around the study area, most prominently at Mount Bathurst. Stone arrangements have also been recorded around Bald Hill (to the south of Mount Panorama) and scarred trees have also been recorded in proximity to these Aboriginal ceremony and dreaming sites and stone arrangements.

Based on the previously recorded sites in vicinity to the study area, the most likely site type to be located inside the study area are artefact scatters and isolated artefacts.

5.4.3 Landform modelling

A consideration of the landforms within the study area enables a prediction regarding the type and distribution of sites to be made. As the study area is linear and narrow, it traverses a range of central tablelands landforms from steep hills to flat landforms: all of which are dissected by a variety of waterways.

The Macquarie River is the highest order waterway intersected by the study area, and this will be under bored. The tributary systems of lower order streams (e.g. first and second order streams) would have only provided ephemeral water sources, and hence have a lower likelihood for Aboriginal site presence.

There are a variety of topographic features within the pipeline corridor that would have encouraged past Aboriginal occupation; namely:

- The ridges and spurs would have provided good views along the creek valleys and would have been used as vantage points

- Terraces have the capability of providing elevated landforms adjacent to water: a landform type recognised in the area as having archaeological sensitivity.

5.4.4 Previous studies

Previous archaeological studies indicate that artefact scatters and isolated finds will possibly be recorded within the study area, especially on well drained landforms adjacent to permanent water sources. Previous studies have recorded a variety of artefact types including flakes, cores, flaked pieces, and hammer stones. The main types of raw materials for artefacts recorded during archaeological assessments are chert, quartz, silcrete, volcanics and tuff.

5.4.5 Conclusion

Based on the knowledge of the environmental contexts of the study area and a desktop review of the known local and regional archaeological record, the following predictions are made concerning the probability of those site types being recorded within the study area:

- Isolated finds may be indicative of: random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or sub-surface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in the same topographies as open artefact scatters.
 - As isolated finds can occur anywhere, particularly within disturbed contexts, it is predicted that this site type could be recorded within the study area.
- Open artefact scatters are defined as two or more artefacts, not located within a rock shelter, and located no more than 50 m away from any other constituent artefact. This site type may occur almost anywhere that Aboriginal people have travelled and may be associated with hunting and gathering activities, short- or long-term camps, and the manufacture and maintenance of stone tools. Artefact scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of a background scatter rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'.

Artefact scatters are most likely to occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands. Larger sites may be expected in association with permanent water sources.

Topographies which provide effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites which are evidenced by open artefact scatters.

- As the study area traverses a wide range of landforms, this site type has potential to occur. Artefact scatters are most likely to be located within landforms of a gentle gradient associated with permanent / semi-permanent waterways as these are likely to have been attractive camping areas. Smaller sites containing low density and low complexity assemblages are predicted near less permanent watercourses. Moderate to steeply sloping landforms are unlikely to have been utilised with lower gradient ridges and spurs being more attractive for camping. The lack of water in these elevated landforms would suggest, however, that camping would have been short-term and that sites would be smaller and contain low complexity assemblages. The high degree of impact from past agricultural practices along the creek flats or gentle slopes, i.e. cultivation, will probably mean that surface scatters and archaeological deposits are likely to have become displaced. It would be expected that most sites located would date to the late Holocene (i.e. less than 4,000 years old), the age attributed to the A-Horizon artefact bearing deposits. Although Pleistocene sites contained within B-Horizon sediments may also occur but must be considered a rare eventuality.
- Aboriginal scarred trees contain evidence of the removal of bark (and sometimes wood) in the past by Aboriginal people, in the form of a scar. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed in the process of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any example of bark removal. Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal cultural heritage items can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginal people for both their own purposes and for roofing on early European houses. Consequently, the distinction between European and Aboriginal scarred trees may not be clear.
 - Due to the near-total clearance of trees from within the study area, this site type is predicted to be very rare. It is also noted that this site type is very rare at a regional level.
- Quarry sites and stone procurement sites typically consist of exposures of stone material where evidence for human collection, extraction and/or preliminary processing has survived. Typically, these involve the extraction of siliceous or fine grained igneous and meta-sedimentary rock types for the manufacture of artefacts. The presence of quarry/extraction sites is dependent on the availability of suitable rock formations.
 - This site type could be recorded within the study area should suitable rock outcroppings be available.
- Burials are generally found in soft sediments such as aeolian sand, alluvial silts and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally

only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them.

- Although it is possible that this site type could be found within the study area, it is considered a rare site type especially given the disturbance that has occurred within the study area.

6 RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT

6.1 SAMPLING STRATEGY AND FIELD METHODS

Standard archaeological field survey and recording methods were employed in this study (Burke & Smith 2004). The Aboriginal cultural heritage assessment of the study area followed the Code of Practice. The field inspection followed standard archaeological field survey and recording methods (Burke & Smith 2004) as well as the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH 2011).

The methodology is based on the understanding that:

- Some portions of the study area have been significantly disturbed, such as those through mining sites
- Some portions have been moderately disturbed, such as those through pine plantations, along modified road corridors, transmission line easements etc.
- Some portions have undergone low levels of disturbance, possibly only from land clearing.

Survey effort was apportioned according to the likelihood of Aboriginal sites being present and with regards to disturbance. It should be noted that the aim of any archaeological survey is not to locate every artefact in a landscape but to undertake investigations so that the archaeological potential and archaeological characteristics of all landforms within the study area are known.

The survey was completed in geographical sections, not necessarily undertaken sequentially, with one team of surveyors consisting of one archaeologist and two RAP representatives. The order and length of sections was determined with respect to logistics, RAP knowledge areas and access arrangements.

When recording a site, the following details were noted:

- GPS location/s of site features (i.e. stone artefact locations, etc.)
- Site type
- Site extent
- Landform and context of site
- Details for each artefact (size, type, raw material, etc.)
- Whether site had potential for PAD
- Notes on discussion from RAPs regarding possible mitigation measures and their views concerning the site

These details were used to register the site on AHIMS and compile the information in

Section 6.4.

6.2 PROJECT CONSTRAINTS

There were no significant constraints in completing the archaeological assessment of the study area. Ground surface visibility (GSV) posed the greatest constraint during field inspection (**Section 6.3**), however, not to the extent that the efficacy of the survey was unduly diminished. A further constraint was the progressive refinement of the pipeline corridor, resulting in the survey being conducted in different sections of the study area and over several different mobilisations. This also resulted in returning to fill in areas which had been previously inaccessible due to access agreements.

6.3 EFFECTIVE SURVEY COVERAGE

Two of the key factors influencing the effectiveness of archaeological survey are GSV and ground surface exposure (GSE). These factors are quantified to ensure that the survey data provides adequate evidence for the evaluation of the archaeological materials across the landscape. For the purposes of the current assessment, these terms are used in accordance with the definitions provided in the Code of Practice.

GSV is defined as:

... the amount of bare ground (or visibility) on the exposures which might reveal artefacts or other archaeological materials. It is important to note that visibility, on its own, is not a reliable indicator of the detectability of buried archaeological material. Things like vegetation, plant or leaf litter, loose sand, stone ground or introduced materials will affect the visibility. Put another way, visibility refers to 'what conceals' (DECCW 2010: 39).

GSE is defined as:

... different to visibility because it estimates the area with a likelihood of revealing buried artefacts or deposits rather than just being an observation of the amount of bare ground. It is the percentage of land for which erosion and exposure was sufficient to reveal archaeological evidence on the surface of the ground. Put another way, exposure refers to 'what reveals' (DECCW 2010: 37).

Table 6-1 calculates the effective survey coverage within the study area, while **Figure 6-1** demonstrates the pedestrian survey coverage. The pedestrian survey was undertaken using a 20 m wide corridor. Since the survey was conducted, there have been minor refinements in the pipeline alignment and corridor, meaning the total study area has gone from 180 ha to 127 ha. For the purposes of calculating effective survey coverage, the original 180 ha study area was used as at the time of the survey.

In general, **Table 6-1** presents an approximation of the amount of ground surface able to be seen at any location within landform units. For example, the unsealed road or tracks in each

landform type had the highest amount of ground surface that could be seen. Exposure along unsealed road and tracks was high, including along the edges of the track. Exposure was limited in sealed road reserves despite differing landscapes, with the ground surface often covered in leaf litter, long grass and rubbish. The amount of visible ground (outside roads or tracks) was highest within the moderate to steep slopes and ridges as these were generally cleared with less ground cover than the flat landforms. Visibility within the creek flats was hampered by leaf litter and dense grasses.

Table 6-1: Effective survey coverage within the study area.

Survey Unit	Landform	Survey Unit Area (sq m)	Visibility %	Exposure %	Effective Coverage Area (sq m) (= Survey Unit Area x Visibility % x Exposure %)	Effective Coverage % (= Effective Coverage Area / Survey Unit Area x 100)
1a	Gentle/moderate slope: not a road or track	348500	50	60	104550	30
1b	Gentle/moderate slope: sealed road reserve	40040	30	40	4804.8	12
1c	Gentle/moderate slope: unsealed road/ track	170000	60	80	81600	48
2a	Moderate/steep slope: not a road or track	156000	50	65	50700	32.5
2b	Moderate/steep slope: sealed road	5420	30	40	650.4	12
2c	Moderate/steep slope: unsealed road/track	156160	60	80	74956.8	48
3a	Creek flats: not a road or track	100000	40	50	20000	20
3b	Creek flats: sealed road	51040	30	40	6124.8	12
3c	Creek flats: unsealed road/track	72700	60	80	34896	48
4a	Elevated flats: not a road or track	56000	60	70	23520	42
4b	Elevated flats: sealed road	4000	30	40	480	12
4c	Elevated flats: unsealed road/track	66800	60	80	32064	48

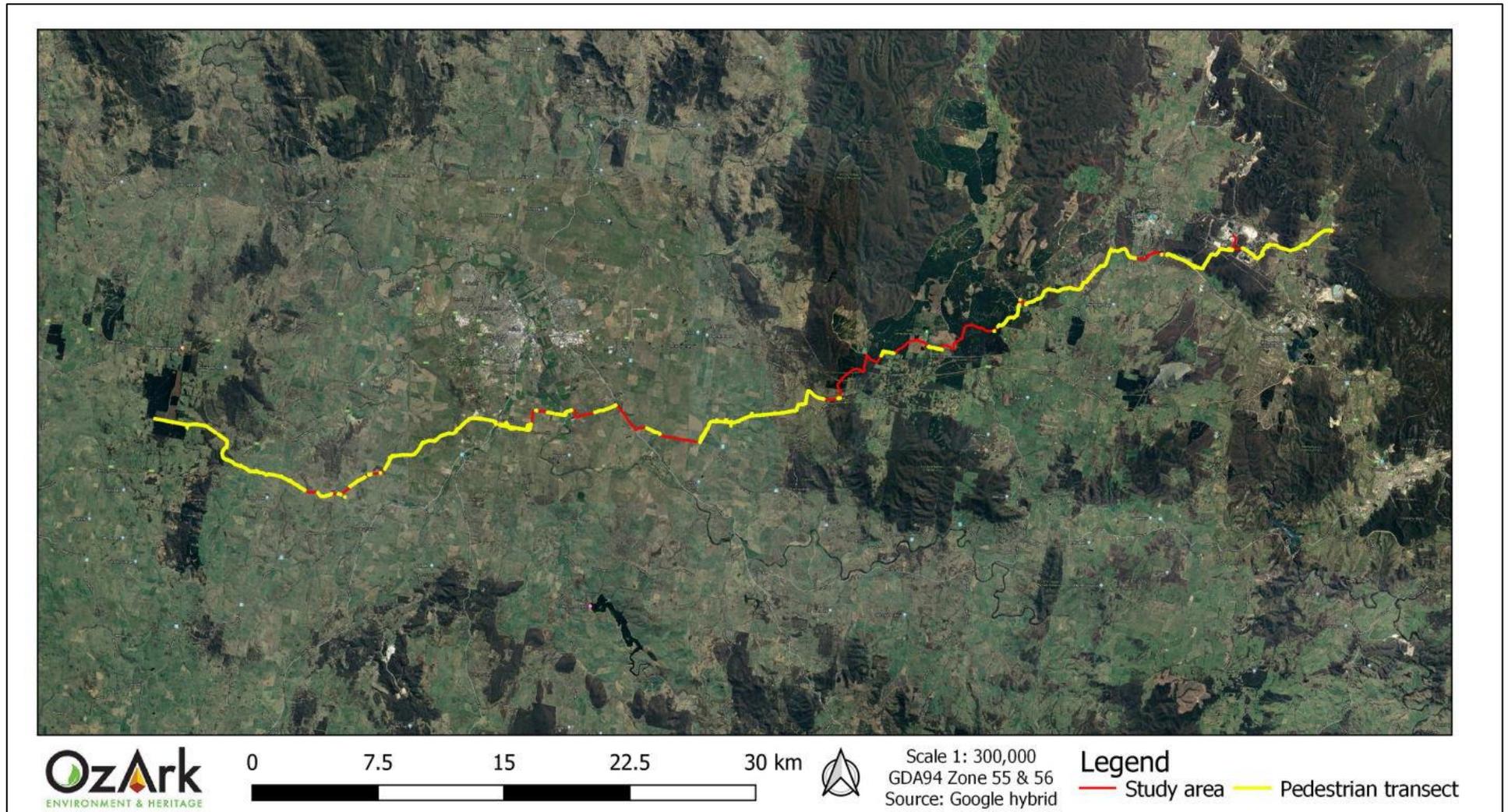
Table 6-2 demonstrates that the survey efficacy was lowest in all landforms within the sealed road reserves. The highest survey efficacy was along the unsealed roads or tracks on elevated flats. Most sites were recorded along unsealed roads or tracks in the gentle/moderate slope, moderate/steep slope or creek flat landforms. The unsealed tracks or roads provided good GSV and GSE along the tracks or roads as well as along the edges where larger exposures were present. The remainder of the sites were recorded in the gentle/moderate sloped landform within ploughed or grazed paddocks, which while variable in visibility across the study area, on

average allowed reasonable survey efficiency. The most archaeologically sensitive areas (i.e. along the banks of waterways in the creek flat landform) were the second lowest type of landform represented in the study area and were, overall, affected by gully erosion, trampling or earthworks.

Table 6-2: Effective survey coverage and incidences of site recording.

Landform	Landform area (sq m)	Area Effectively Surveyed (sq m) (= Effective Coverage Area)	% of Landform Effectively Surveyed (= Area Effectively Surveyed / Landform x 100)	Number of Sites	Number of Artefacts or Features
Gentle/moderate slope: not a road or track	478000	104550	22	3	3
Gentle/moderate slope: sealed road reserve	54000	4804.8	9		
Gentle/moderate slope: unsealed road/ track	238000	81600	34	1	2
Moderate/steep slope: not a road or track	264600	50700	19		
Moderate/steep slope: sealed road	10800	650.4	6		
Moderate/steep slope: unsealed road/track	264600	74956.8	28	1	1
Creek flats: not a road or track	148500	20000	13		
Creek flats: sealed road	75900	6124.8	8		
Creek flats: unsealed road/track	105600	34896	33	2	2
Elevated flats: not a road or track	70400	23520	33		
Elevated flats: sealed road	4800	480	10		
Elevated flats: unsealed road/track	84800	32064	38		

Figure 6-1: Pedestrian survey.



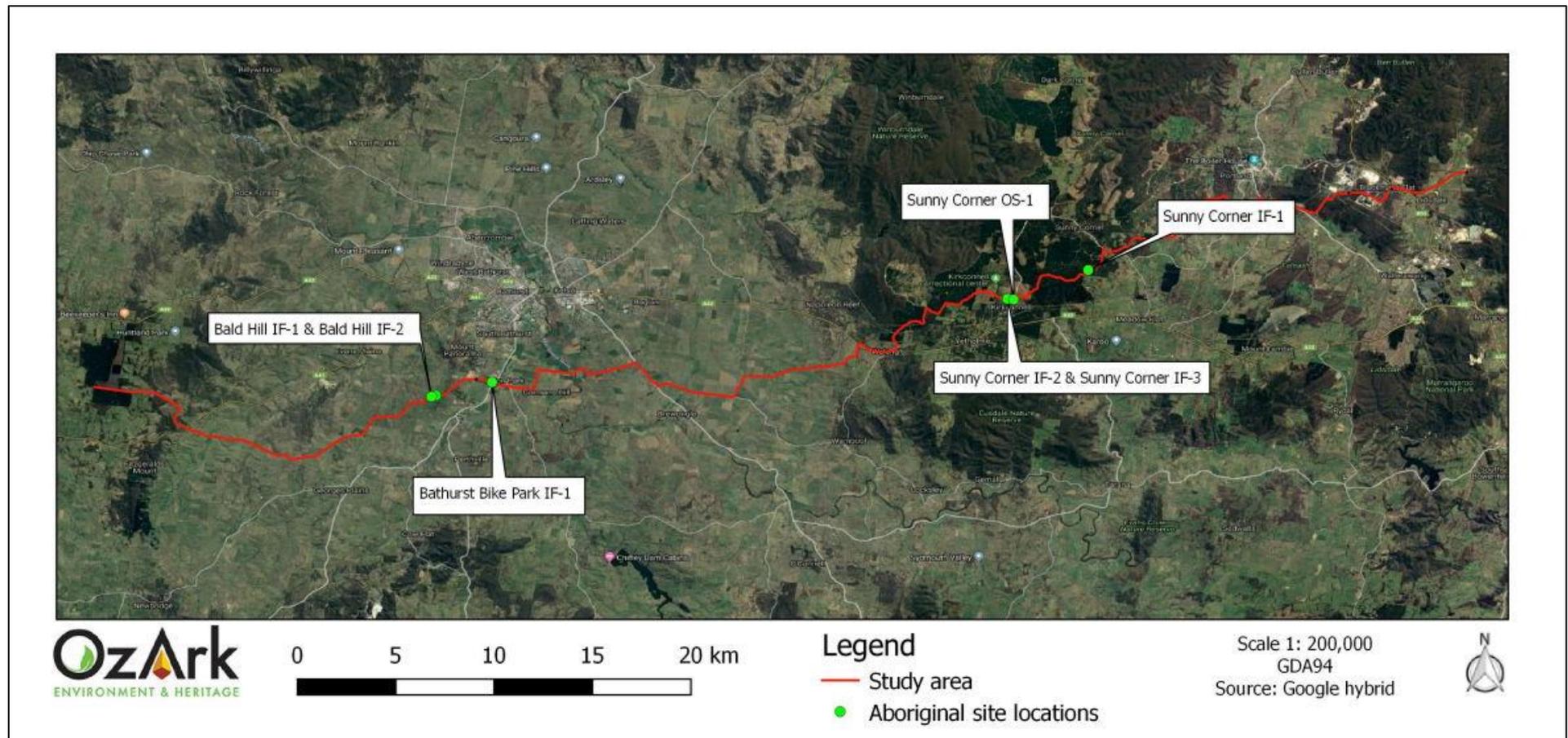
6.4 ABORIGINAL SITES RECORDED

Table 6-3 summarises the Aboriginal cultural heritage sites recorded during the survey of the study area. Further details on each site follows. **Figure 6-2** illustrates the location of the Aboriginal sites recorded during the survey.

Table 6-3: Aboriginal cultural heritage sites recorded during the survey.

Site Name	Site Number	GPS Coordinates	Feature(s)	Survey Unit	Landform
Bathurst Bike Park IF-1	44-3-0221	738495 E / 6293770 N (GDA94 Zone 55)	Isolated artefact	1a	Gentle/moderate slope: not a road or track
Sunny Corner IF-1	44-3-0222	769007 E / 6299750 N (GDA 94 Zone 55)	Isolated artefact	2c	Moderate/steep slope: unsealed road/track
Sunny Corner IF-2	44-3-0223	764957 E / 6298103 N (GDA94 Zone 55)	Isolated artefact	3c	Creek flats: unsealed road/track
Sunny Corner IF-3	44-3-0224	764843 E / 6298127 N (GDA94 Zone 55)	Isolated artefact	3c	Creek flats: unsealed road/track
Sunny Corner OS-1	44-3-0225	765147 E / 6298067 N (GDA94 Zone 55)	Artefact scatter (2 artefacts)	1c	Gentle/moderate slope: unsealed road/ track
Bald Hill IF-1	44-3-0229	735361 E / 6292969 N (GDA94 Zone 55)	Isolated artefact	1a	Gentle/moderate slope: not a road or track
Bald Hill IF-2	44-3-0228	735600 E / 6293057 N (GDA94 Zone 55)	Isolated artefact	1a	Gentle/moderate slope: not a road or track

Figure 6-2: Aboriginal sites recorded.



Bathurst Bike Park IF-1 (#44-3-0221)

Site Type: Isolated find

GPS Coordinates: 738495 E / 6293770 N (GDA94 Zone 55)

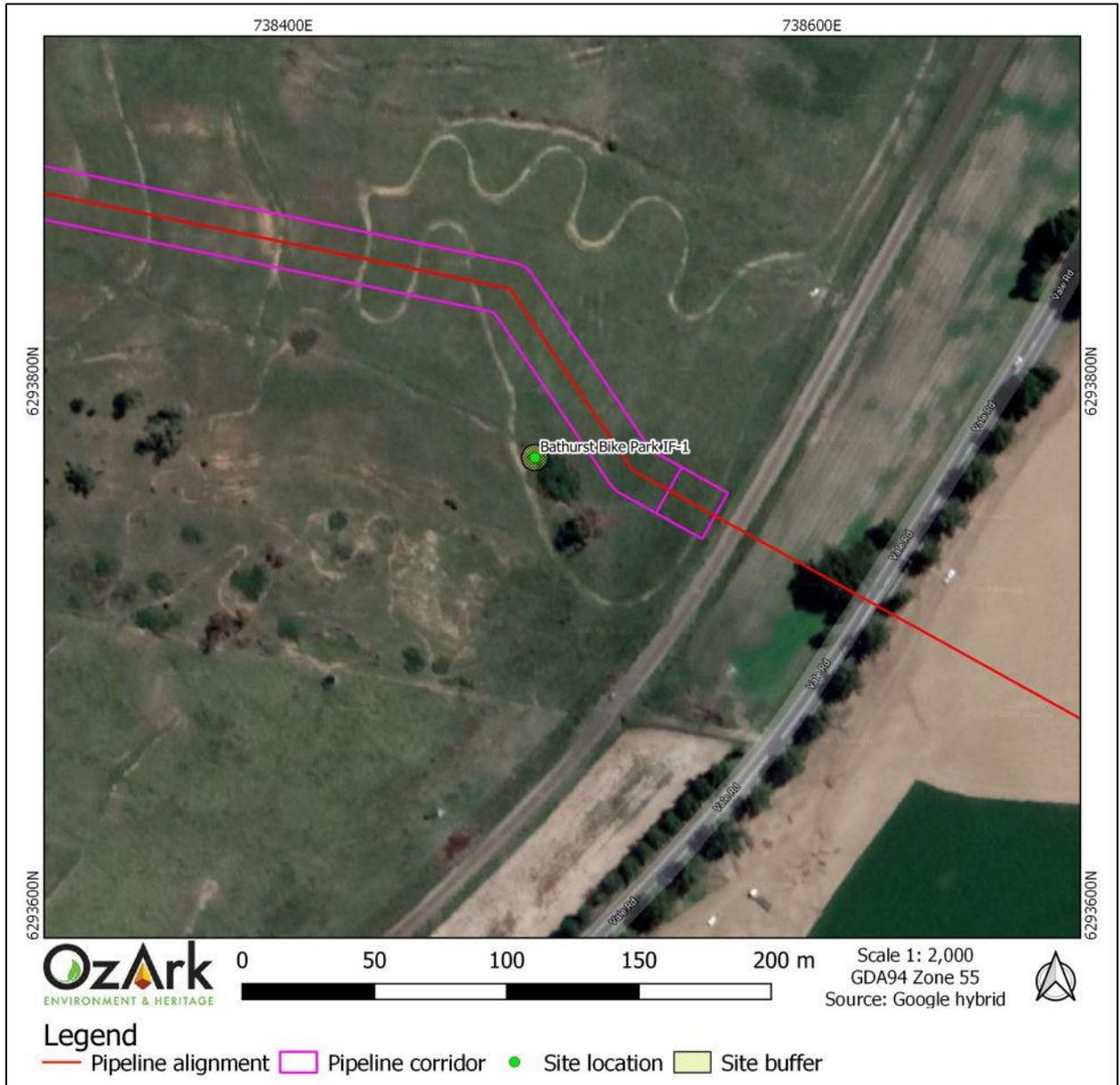
Location of Site: Site is located 140 m east of Vale Road and 225 m south of the Bathurst Cycling Club track. The site is located on the lower slope of a gentle hill declining west to east towards the railway tracks and Vale Road.

Description of Site: The site consists of one fine grained silcrete complete flake (**Figure 6-3**). The artefact has a length of 45 mm, width of 40 mm and thickness of 25 mm. The site is situated 2 m north of a dirt track and on the edge of a small constructed drainage gully where hawthorn trees are currently growing (**Figure 6-4**). The area has been previously disturbed by water erosion and the construction of the drainage gully. There are small gravels present over the surface of the area. The site does not have potential for *in situ* subsurface deposits.

Figure 6-3: Bathurst Bike Park IF-1. View of site and recorded artefact.



Figure 6-4: Bathurst Bike Park IF-1 site location in relation to study area.



Sunny Corner IF-1 (#44-3-0222)

Site Type: Isolated find

GPS Coordinates: 769007 E / 6299750 N (GDA 94 Zone 55)

Location of Site: The site is located approximately 2.8 km north of the Great Western Highway and 1.5 km southwest of the intersection of Sunny Corner Road and Sugarloaf Road. The site is in the Sunny Corner State Forest and is 370 m north along an unnamed track from the dog-leg bend in Kelly Boundary Road. The closest water source is Tindales Flat Creek approximately 85 m northwest of the site.

Description of Site: The site consists of one chert complete flake (**Figure 6-5**). The artefact has a length of 45 mm, width of 30 mm and thickness of 20 mm. The site is situated in the middle of an unnamed dirt track within the Sunny Corner State Forest (**Figure 6-6**). The track is approximately 10 m wide and the surrounding forest consists of pine trees being grown for logging purposes. The site does not have potential for *in situ* subsurface deposits.

Figure 6-5: Sunny Corner IF-1. View of site and recorded artefact.



Figure 6-6: Sunny Corner IF-1 site location in relation to study area.



Sunny Corner IF-2 (#44-3-0223)

Site Type: Isolated find

GPS Coordinates: 764957 E / 6298103 N (GDA94 Zone 55)

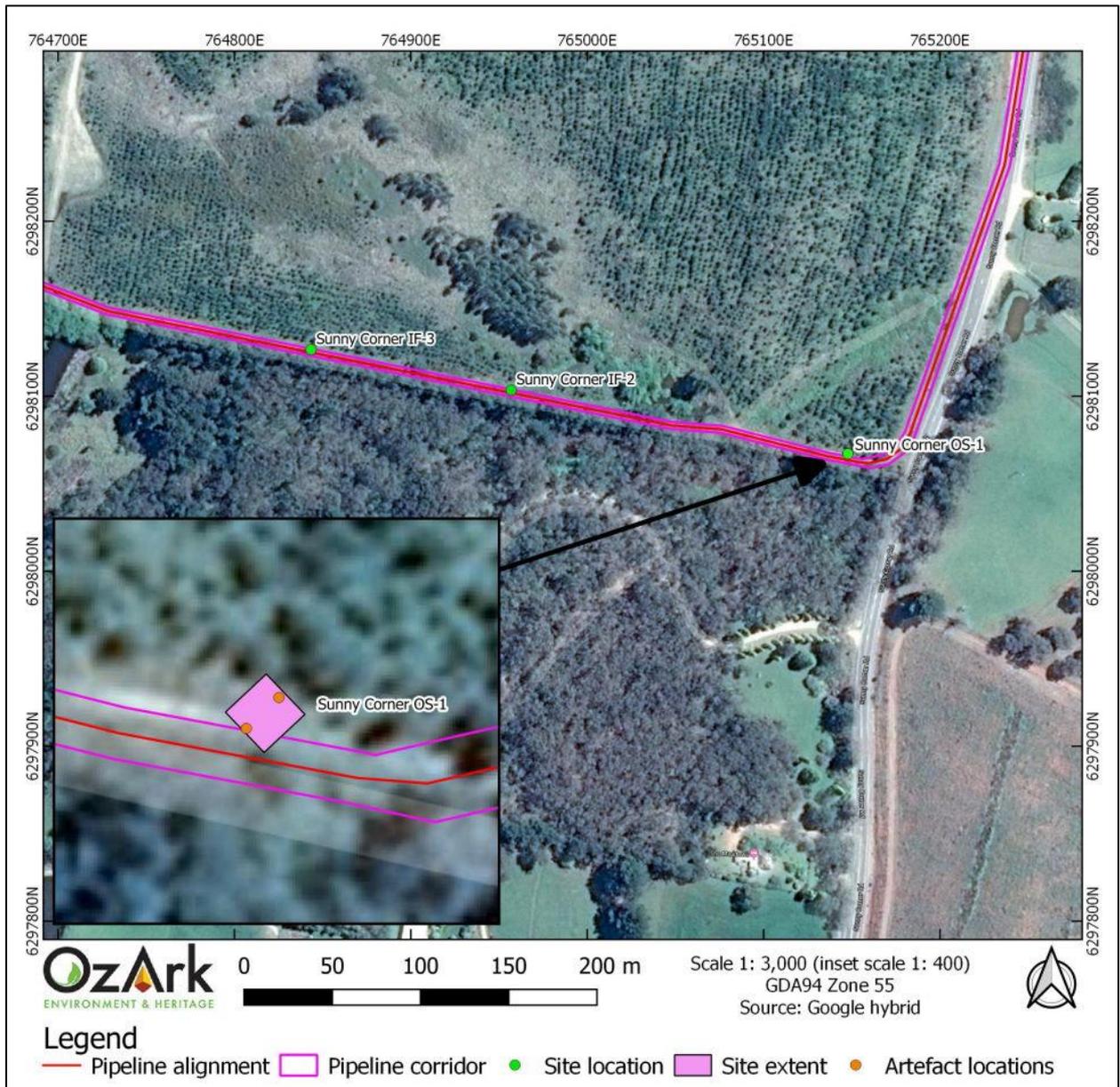
Location of Site: The site is located on a dirt track marking a southern extent of the Sunny Corner State Forest. The site is 233 m west along the track from Sunny Corner Road and 1.6 km north of the intersection of the Great Western Highway and Sunny Corner Road. The closest water source is a series of small tributaries of the Kirkconnell Creek. The closest tributary is approximately 92 m east of the site location.

Description of Site: The site consists of a single chert core located on a sloping dirt track (**Figure 6-7**). The artefact has a length of 25 mm, width of 45 mm and thickness of 30 mm. The core is opportunistic with five flake scars and is unidirectional. The dirt track is unnamed and slopes east to west from its intersection with Sunny Corner Road (**Figure 6-8**). The track is heavily eroded down to base clay with rocks beginning to erode from sections of the track. Due to the lack of suitable soils and the high amount of disturbance due to erosion and vehicle use there is no potential for *in situ* subsurface archaeological deposits at the site location.

Figure 6-7: Sunny Corner IF-2. View of site and recorded artefact.



Figure 6-8: Sunny Corner IF- 2, IF-3 and OS-1 site locations in relation to study area.



Sunny Corner IF-3 (#44-3-0224)

Site Type: Isolated find

GPS Coordinates: 764843 E / 6298127 N (GDA94 Zone 55)

Location of Site: The site is located on a dirt track marking a southern extent of the Sunny Corner State Forest. The site is 360 m west along the track from Sunny Corner Road and 1.6 km north of the intersection of the Great Western Highway and Sunny Corner Road. The closest water source is a series of small tributaries of the Kirkconnell Creek. The closest tributary is approximately 200 m east of the site location.

Description of Site: The site consists of a single crystal quartz core located on a sloping dirt track (**Figure 6-9**). The artefact has a length of 22 mm, width of 25 mm and thickness of 20 mm. The core has six flake scars and is multidirectional. The dirt track is unnamed and slopes east to west from its intersection with Sunny Corner Road (**Figure 6-8**). The track is heavily eroded down to base clay with rocks beginning to erode from sections of the track. Due to the lack of suitable soils and the high amount of disturbance due to erosion and vehicle use there is no potential for *in situ* subsurface archaeological deposits at the site location.

Figure 6-9: Sunny Corner IF-3. View of site and recorded artefact.



Sunny Corner OS-1 (#44-3-0225)

Site Type: Artefact scatter

GPS Coordinates: 765147 E / 6298067 N (GDA94 Zone 55)

Location of Site: The site is located on a dirt track marking a southern extent of the Sunny Corner State Forest. The site is 34 m west along the track from Sunny Corner Road and 1.6 km north of the intersection of the Great Western Highway and Sunny Corner Road. The closest water source is a series of small tributaries of the Kirkconnell Creek. The closest tributary is approximately 100 m west of the site location.

Description of Site: The site consists of two chert flakes located on a sloping dirt track (**Figure 6-10**). Both flakes were proximal fragments. One artefact has a length of 20 mm, width of 15 mm and thickness of 10 mm, and the other artefact has a length of 20 mm, width of 30 mm and thickness of 15 mm. The dirt track is unnamed and slopes east to west from its intersection with Sunny Corner Road (**Figure 6-8**). The site extent measures 4 m by 4 m centred on the centroid GPS coordinate provided above. The artefacts were 3.5 m apart from each other. The track is heavily eroded down to base clay with rocks beginning to erode from sections of the track. Due to the lack of suitable soils and the high amount of disturbance due to erosion and vehicle use there is no potential for *in situ* subsurface archaeological deposits at the site location.

Figure 6-10: Sunny Corner OS-1. View of site and selection of recorded artefacts.



1. View east of Sunny Corner OS-1.



2. One of the artefacts recorded at Sunny Corner OS-1.

Bald Hill IF-1 (#44-3-0229)

Site Type: Isolated find

GPS Coordinates: 735361 E / 6292969 N (GDA94 Zone 55)

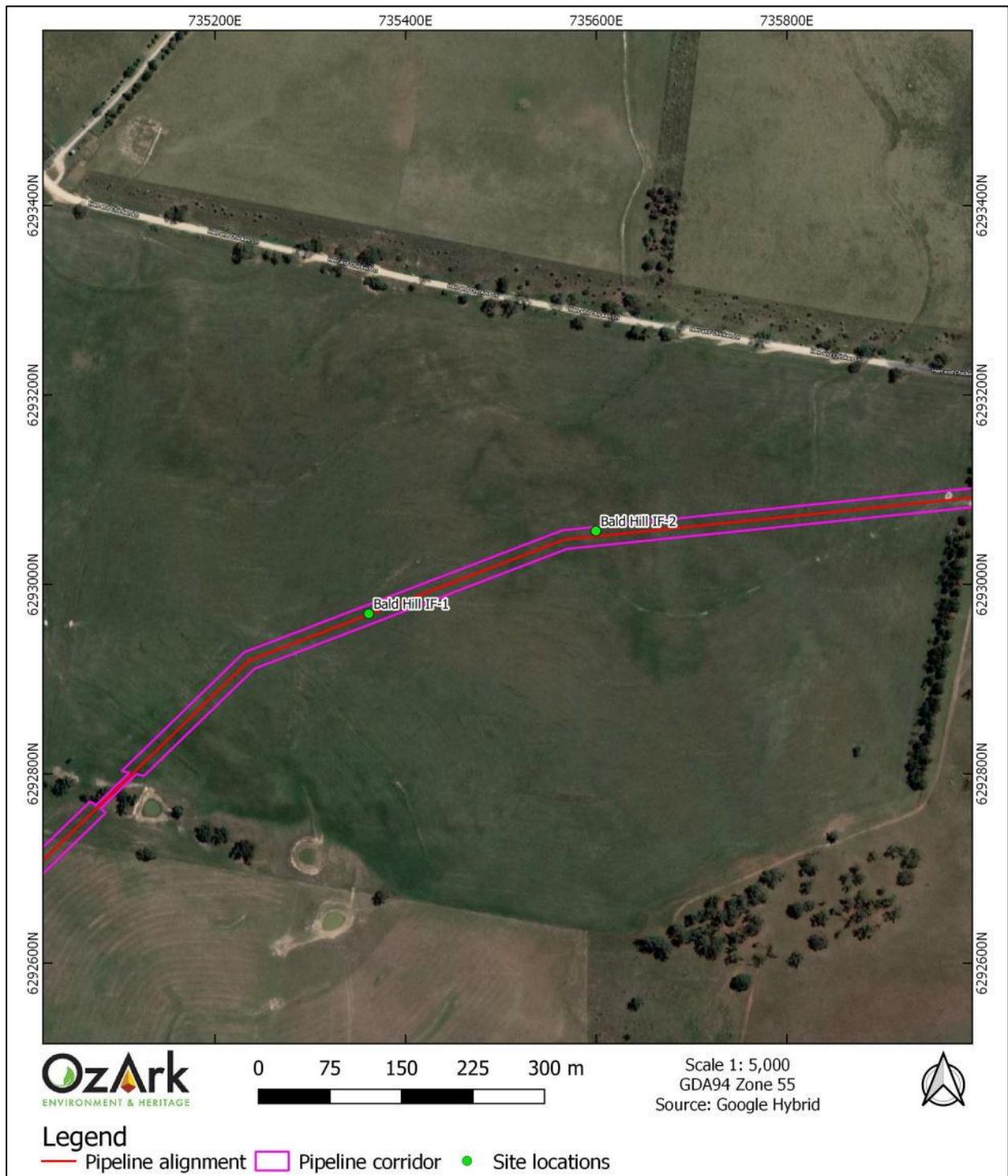
Location of Site: The site is located on the northwest lower slope of Bald Hill. The site is 360 m south of Hen and Chicken Lane and 2 km northwest of the intersection of Hen and Chicken Lane and Vale Road. The closest water source is Queen Charlottes Creek approximately 1.7 km southeast of the site.

Description of Site: The site consists of a single milky quartz flake located on the lower slope of Bald Hill (**Figure 6-11**). The artefact is a complete flake, with use wear along one margin, and a maximum size of 60 mm in length, 30 mm in width and 10 mm in thickness. The site is 255 m southwest of Bald Hill IF-2 (**Figure 6-12**). The site extent covers a 2 m radius around the artefact. The site is situated in a paddock used for agricultural crop cultivation and grazing, which is also disturbed by soil erosion. To the southeast and further up the same slope, a contour bank has been created to help stop the soil erosion through water wash. Due to the long-term and high amount of disturbance there is limited potential for *in situ* subsurface archaeological deposits at the site location.

Figure 6-11: Bald Hill IF-1. View of site and recorded artefact.



Figure 6-12: Bald Hill IF-1 and IF-2 site locations in relation to study area.



Bald Hill IF-2 (#44-3-0228)

Site Type: Isolated find

GPS Coordinates: 735600 E / 6293057 N (GDA94 Zone 55)

Location of Site: The site is located on the northwest lower slope of Bald Hill. The site is 225 m south of Hen and Chicken Lane and 1.8 km northwest of the intersection of Hen and Chicken Lane and Vale Road. The closest water source is Queen Charlottes Creek approximately 1.7 km southeast of the site.

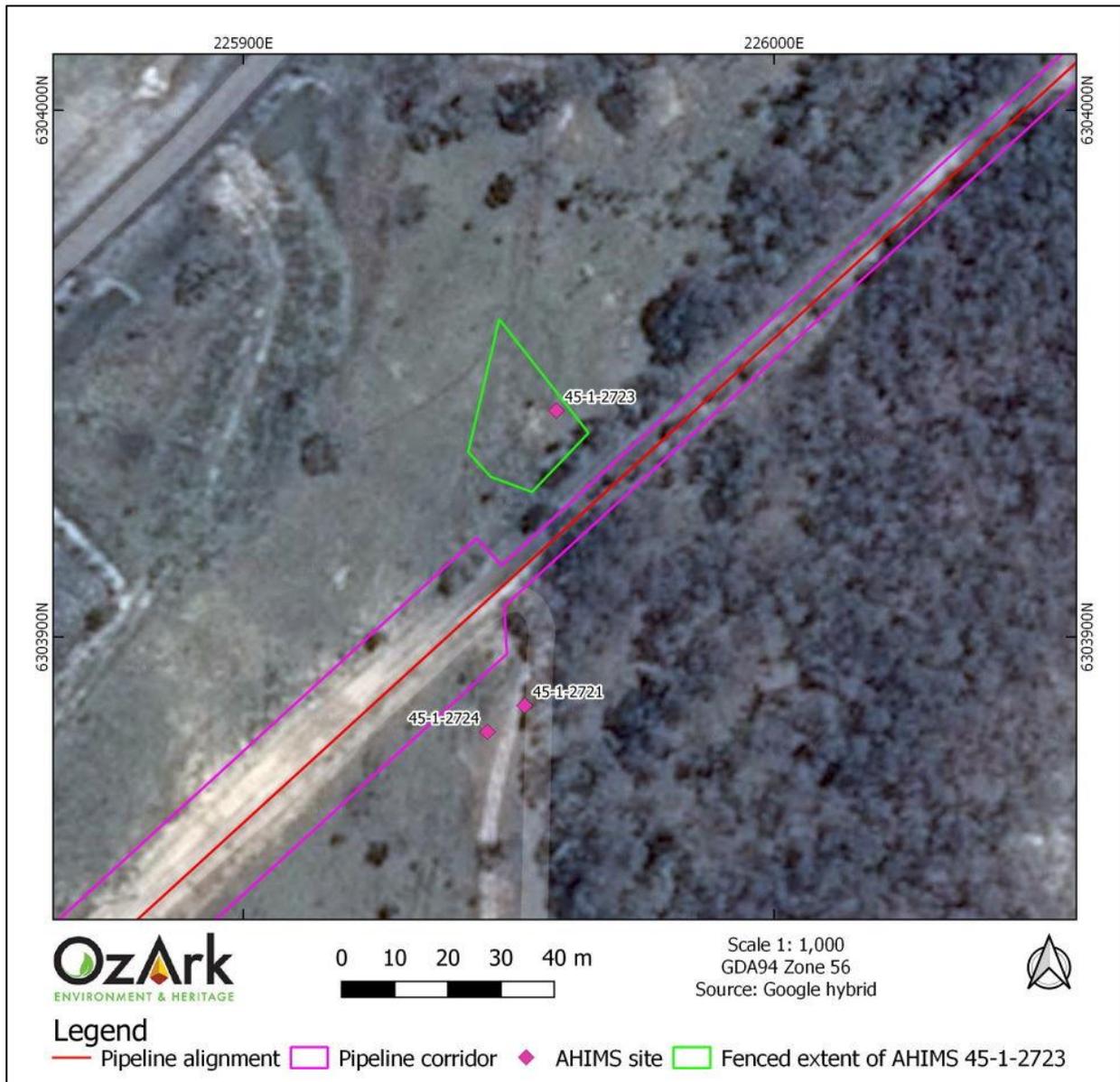
Description of Site: The site consists of a single quartz proximal flake fragment located on the lower slope of Bald Hill (**Figure 6-13**). The artefact has a maximum size of 40 mm in length, 32 mm in width and 10 mm in thickness. The site is 255 m northeast of Bald Hill IF-1 (**Figure 6-12**). The site extent covers a 2 m radius around the artefact. The site is situated in a paddock used for agricultural crop cultivation and grazing, which is also disturbed by soil erosion. To the southeast and further up the same slope, a contour bank has been created to help stop the soil erosion through water wash. Due to the long-term and high amount of disturbance there is limited potential for *in situ* subsurface archaeological deposits at the site location.

Figure 6-13: Bald Hill IF-2. View of site and recorded artefact.



6.5 PREVIOUSLY RECORDED ABORIGINAL SITES

One previously recorded Aboriginal site was located during the survey: AHIMS #45-1-2723. The site is located on the northwest edge of the pipeline corridor inside SCSO. The AHIMS coordinates for this site are correct and the site extent and buffer has already been fenced off to avoid any impacts to it (**Figure 6-14**).

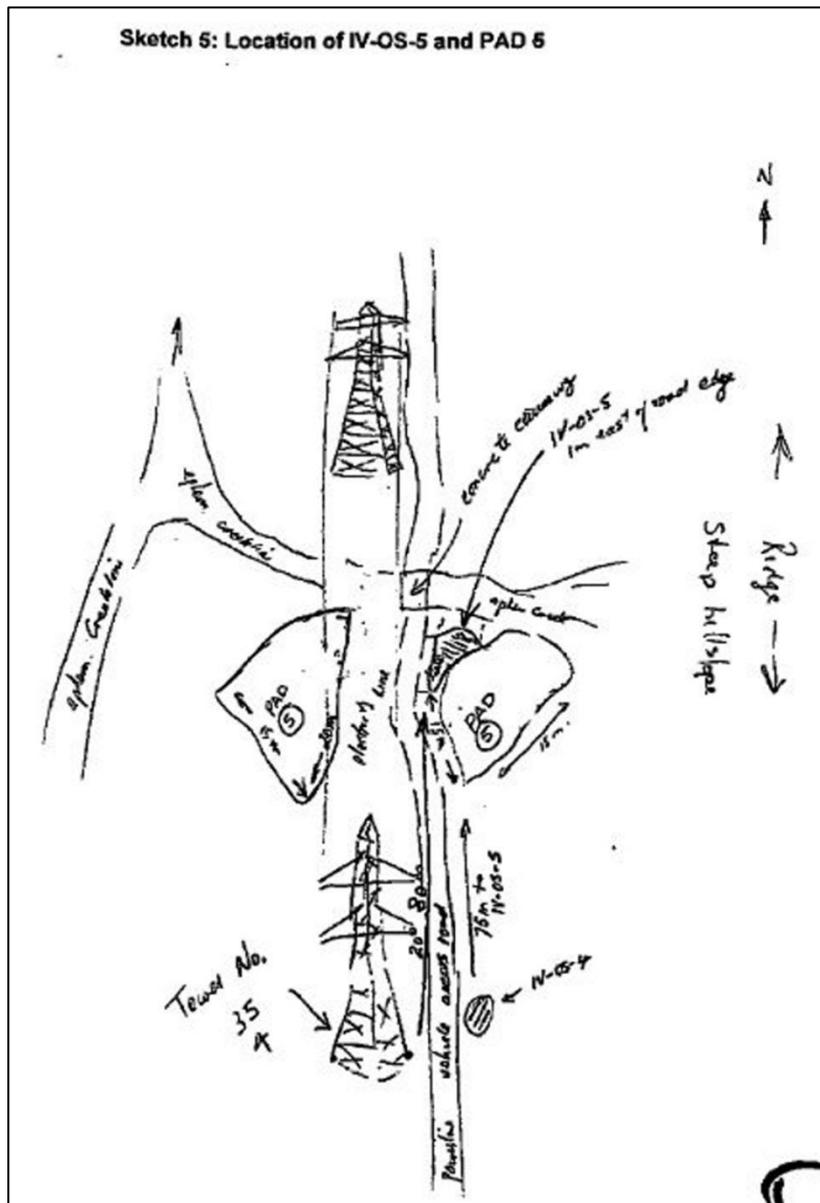
Figure 6-14: Location and fencing of AHIMS #41-1-2723 in relation to pipeline corridor.

Two other previously recorded Aboriginal sites (AHIMS #45-1-2548 and #45-1-2551) were unable to be located during the survey. According to the GPS coordinates provided by AHIMS, these sites were expected to be found inside the pipeline corridor. These sites are recorded as being within an electricity line easement for 500kV steel powerline structures from Energy Australia's MPPS southwest to Pipers Flat Road.

AHIMS #45-1-2551 is an artefact scatter recorded in 1998 for an archaeological assessment concerning the extension of the Ivanhoe Mine (Mills 1998). There is discrepancy between the location of this site as described and illustrated in the site card compared to where the GPS coordinates plot the site centroid (**Figure 6-15**). This can be attributed to the conversion of the GPS coordinates provided by AHIMS from AGD into GDA. Based off the site location map and description, #45-1-2551 is likely further east towards the access track and underneath the 500kV electricity line, though the concrete causeway included on the map was unable to be

identified (**Figure 6-16**). There were no artefacts or possible PAD locations located where the AHIMS coordinate plots the site.

Figure 6-15: Site map from AHIMS #45-1-2551 site card.



AHIMS #45-1-2548 is an isolated artefact recorded in 1998 during the same survey for the extension of the Ivanhoe Mine. As with #45-1-2551, there is also a discrepancy between where the AHIMS coordinates place the site, compared to the information in the site card. The artefact is described as located on a side track which runs eastwards from the electricity easement to the south of Structure 35/3 (**Figure 6-16**). Both locations were surveyed for the isolated artefact, as they were within the study area, but the site was unable to be located. **Figure 6-17** shows the locations of AHIMS #45-1-2551 and #45-1-2548 based on the AHIMS coordinates and where the site is likely located based on the site card information and maps.

Figure 6-16: Location of #45-1-2548 and #45-1-2551

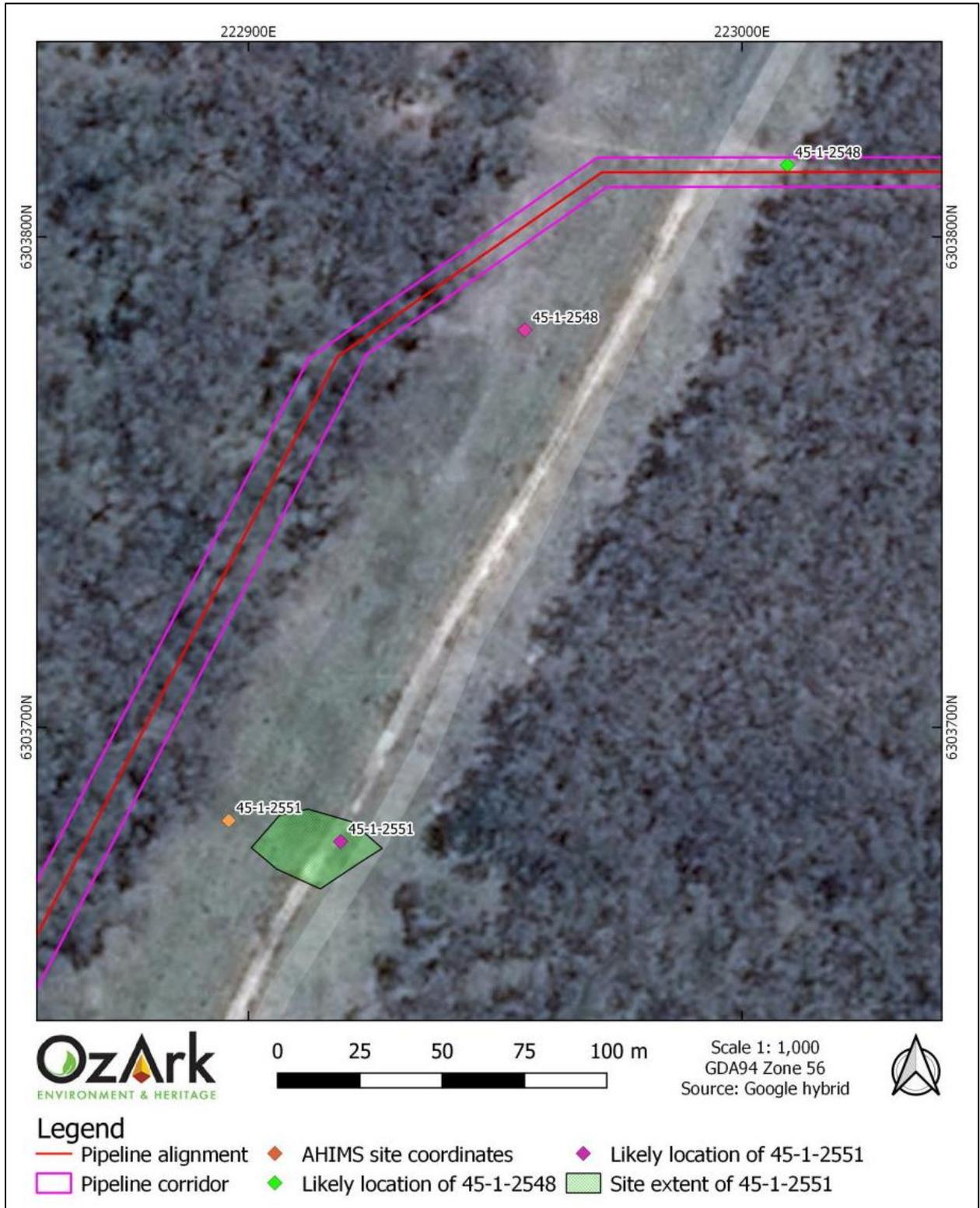


Figure 6-17: View of location where the AHIMS sites were unable to be located.



1. View north of GPS location of AHIMS #45-1-2548.



2. View north of GPS location of AHIMS #45-1-2551.

7 DISCUSSION

7.1 DISCUSSION OF SURVEY RESULTS

7.1.1 Summary of survey results

The survey of the study area resulted in seven Aboriginal sites being recorded (#44-3-0221, #44-3-0222, #44-3-0223, #44-3-0224, #44-3-0225, #44-3-0229 and #44-3-0228), one AHIMS site was located (AHIMS #41-1-2723) and two AHIMS sites were unable to be located (AHIMS #45-1-2548 and #45-1-2551).

The results from the current survey are:

- The seven Aboriginal sites consisted of six isolated artefacts and one low density artefact scatter of two artefacts. All sites recorded were without associated archaeological deposits (**Section 6.4**)
- The raw materials of the artefacts recorded are chert, different types of quartz (crystal, milk), and fine grained silcrete.
- Two previously recorded sites are outside of the pipeline corridor (#AHIMS #41-1-2723 and #45-1-2551). Of these two sites, only #41-1-2723 was able to be located.
- One previously recorded site is located inside the pipeline corridor (AHIMS #45-1-2548) and was unable to be located.

7.1.2 Discussion

The results of the survey conform to the predictive model (**Section 5.4**):

The regional studies and predictive model suggested that artefact scatters and isolated finds would be the most common site type recorded and this is supported by the survey results. Most of the study area has been cleared of vegetation, and any remaining stands of mature native vegetation did not have any scarred trees present. The absence of stone quarries and grinding grooves is attributable to the absence of suitable rock outcropping within the study area.

Isolated finds were the most common site types recorded and the location of these sites was varied across different landforms within the study area matching the predictive model. These sites were identified to be in disturbed contexts and did not have any associated PADs. The single artefact scatter recorded is located within 100 m of a small tributary, though on a slope with a moderate gradient. The low density of artefacts and sites recorded inside the study area is reflective of the study area with high levels of prior disturbance due to land use. Regional studies show that most sites will include quartz and chert and that most artefacts recorded were unmodified flakes or proximal fragments of flakes.

The main landforms within the study area which were likely to be associated with Aboriginal sites were the creek flats and the elevated flats (see **Section 6.3**). Both these landforms were

also the least represented, especially compared to the gentle/moderate gradient slopes or moderate/steep gradient slopes within the study area. The sections of the study area which were creek flats were also affected by either gully wash, trampling or earthworks. On the elevated flats there was wind and water erosion present and the study area predominately aligned with unsealed roads or tracks.

There has been a moderate to high level of previous disturbance to most of the study area. In portions of the study area which are not sealed/unsealed roads/tracks there is evidence that the study area has been subject a variety of land use disturbances. This includes the widespread clearance of native vegetation, extensive ploughing practices, long-term grazing, ground disturbance due to soil erosion, and coal mining (including open cut and underground).

The sites recorded during the survey are representative of sites recorded in the region. In terms of site size, artefact density, raw materials and artefact types these complement the archaeological context highlighted in **Sections 5.2** and **Section 5.3**. In the past, sites such as isolated finds and artefact scatters would not have been rare and on a state-wide scale, low density artefact scatters and isolated finds would remain the most common site type recorded. Although the sites recorded during this assessment are in no way remarkable, their presence alone, in albeit a much-modified landscape, remains a memory of the past in a landscape that is fast changing (or has changed). The results of the survey conclude that the general site integrity is low. As noted, the study area has been subject to wide range of past and current land uses.

8 SIGNIFICANCE AND IMPACT ASSESSMENT

8.1 ASSESSMENT OF SIGNIFICANCE

8.1.1 Introduction

The appropriate management of cultural heritage items is usually determined based on their assessed significance, as well as the likely impacts of any proposed developments. Cultural, scientific, aesthetic and historical significance are identified as baseline elements of significance assessment, and it is through the combination of these elements that the overall cultural heritage values of a site, place or area are resolved.

Social or Cultural Value

This area of assessment concerns the importance of a site or features to the relevant cultural group: in this case the Aboriginal community. Aspects of social value include assessment of sites, items, and landscapes that are traditionally significant or that have contemporary importance to the Aboriginal community. This importance involves both traditional links with specific areas, as well as an overall concern by Aboriginal people for their sites generally and the continued protection of these. This type of value may not be in accord with interpretations made by the archaeologist: a site may have low archaeological value but high social value, or vice versa.

Archaeological/Scientific Value

Assessing a site in this context involves placing it into a broader regional framework, as well as assessing the site's individual merits in view of current archaeological discourse. This type of value relates to the ability of a site to answer current research questions and is also based on a site's condition (integrity), content and representativeness.

The overriding aim of cultural heritage management is to preserve a representative sample of the archaeological resource. This will ensure that future research within the discipline can be based on a valid sample of the past. Establishing whether a site can contribute to current research also involves defining 'research potential'. Questions regularly asked when determining significance are: can this site contribute information that no other site can? Is this site representative of other sites in the region?

Aesthetic Value

This refers to the sensory, scenic, architectural and creative aspects of the place. It is often closely linked with the social values. It may consider form, scale, colour, texture and material of the fabric or landscape, and the smell and sounds associated with the place and its use (Australia ICOMOS 2013).

Historic Value

Historic value refers to the associations of a place with a historically important person, event, phase or activity in an Aboriginal community. Historic places do not always have physical evidence of their historical importance (such as structures, planted vegetation or landscape modifications). They may have 'shared' historic values with other (non-Aboriginal) communities.

Places of post-contact Aboriginal history have generally been poorly recognised in investigations of Aboriginal heritage. Consequently, the Aboriginal involvement and contribution to important regional historical themes is often missing from accepted historical narratives. This means it is often necessary to collect oral histories along with archival or documentary research to gain enough understanding of historic values.

8.2 ASSESSED SIGNIFICANCE OF THE RECORDED SITES

Table 8-1 presents a summary of the significance assessment of Aboriginal cultural heritage sites recorded during this assessment. Further details of each of the assessment criteria are provided below.

Social or Cultural Value

The assessment of cultural or social value concerns the importance of a site or features to the relevant cultural group – in this case the Aboriginal community. Aspects of social value include assessment of sites, items, and landscapes that are traditionally significant or that have contemporary importance to the Aboriginal community. This importance involves both traditional links with specific areas, as well as an overall concern by Aboriginal people for their sites generally and the continued protection of these. This type of value may not be in accord with interpretations made by the archaeologist: a site may have low archaeological value but high social value, or vice versa.

A copy of this ACHAR was sent to the RAPs on 21 May 2019. Due to minor amendments of the pipeline route and corridor, the draft ACHAR was re-sent on 27 May 2019 to all RAPs (**Appendix 1**). Discussions in the field with RAP representatives (**Section 4.2.1**), indicated that the artefacts recorded may have been part of initiation ceremonies (crystal quartz) or trade items (quartz).

The feedback provided by RAPs is that high cultural values are placed on all artefacts regardless of whether the site is an isolated find or a rock shelter with art and archaeological deposits. All sites have the same high cultural significance and value as Ancestors created them and the sites are links to the past. Additionally, all sites are historic and add to the collective anthropological information and story of Aboriginal people whether pre- or post-European contact. The RAPs also stated that cultural significance has higher priority as it shows the collective cultural landscape use rather than archaeological scientific value.

Archaeological/Scientific Value

The scientific significance of AHIMS #44-3-0221, #44-3-0222, #44-3-0223, #44-3-0224, #44-3-0225, #44-3-0229 and #44-3-0228 is assessed as low. These sites are described as having low scientific/archaeological significance based on the following values:

- Sites represent artefacts in secondary contexts
- Low density of artefacts
- No formal tool types
- No associated archaeological deposits
- Widespread past and current disturbance through either ploughing practices or use of existing unsealed roads or tracks.

The determination of low scientific values is also because all sites have little or no research potential and a very limited ability to inform researchers about the nature and extent of Aboriginal occupation in the area. All sites are highly representative of other sites in the region.

Aesthetic Value

AHIMS #44-3-0221, #44-3-0222, #44-3-0223, #44-3-0224, #44-3-0225, #44-3-0229 and #44-3-0228 have been assessed as having low aesthetic value. None of the Aboriginal sites recorded have significant aesthetic value as the integrity of the sensory landscape has been altered in historic and modern times. Additionally, the artefacts themselves are generally not remarkable.

Historic Value

None of the Aboriginal sites recorded have an apparent direct relationship to known historical Aboriginal sites (such as missions or massacre sites). It is possible that the area saw some of the earliest contact between Aboriginals and non-Aboriginal settlers, however, none of the recorded Aboriginal sites display evidence that they constitute 'contact' or 'post-contact' Aboriginal sites (i.e. flaked glass, etc). To that end, all recorded sites are assessed as having no historic value. Please note that this determination is only based on archaeological and known historic evidence. The RAPs consider all Aboriginal sites to be historic and add to the collective anthropological information and story of their people whether its pre- or post-European contact.

Table 8-1 summarises the significance assessment of sites recorded during this assessment.

Table 8-1: Aboriginal cultural heritage: significance assessment.

Site Name	Site number	Social or Cultural Value	Archaeological / Scientific Value	Aesthetic Value	Historic Value
Bathurst Bike Park IF-1	44-3-0221	High	Low	Low	None
Sunny Corner IF-1	44-3-0222	High	Low	Low	None

Site Name	Site number	Social or Cultural Value	Archaeological / Scientific Value	Aesthetic Value	Historic Value
Sunny Corner IF-2	44-3-0223	High	Low	Low	None
Sunny Corner IF-3	44-3-0224	High	Low	Low	None
Sunny Corner OS-1	44-3-0225	High	Low	Low	None
Bald Hill IF-1	44-3-0229	High	Low	Low	None
Bald Hill IF-2	44-3-0228	High	Low	Low	None

8.3 LIKELY IMPACTS TO ABORIGINAL HERITAGE FROM THE PIPELINE DEVELOPMENT

Table 8-2 presents a summary of potential impacts to Aboriginal cultural heritage associated with the pipeline development following slight modifications to the proposed alignment.

Table 8-2: Aboriginal cultural heritage: impact assessment.

Site Name	Site number	Type of Harm (Direct/Indirect / None)	Degree of Harm (Total/Partial / None)	Consequence of Harm (Total/Partial/No Loss of Value)
Bathurst Bike Park IF-1	44-3-0221	None	None	No loss of value
Sunny Corner IF-1	44-3-0222	Direct	Total	Total
Sunny Corner IF-2	44-3-0223	Direct	Total	Total
Sunny Corner IF-3	44-3-0224	Direct	Total	Total
Sunny Corner OS-1	44-3-0225	Direct	Total	Total
Bald Hill IF-1	44-3-0229	Direct	Total	Total
Bald Hill IF-2	44-3-0228	Direct	Total	Total
CS SU4-A2	45-1-2723	None: with management	None	No loss of value
IV-IF-2	45-1-2548	Direct	Total	Total
IV-OS-5	45-1-2551	None: with management	None	No loss of value

8.4 ECOLOGICAL SUSTAINABLE DEVELOPMENT PRINCIPLES

The goal of ecological sustainable development (ESD) is:

Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

The core objectives of ESD are:

- To enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations
- To provide for equity within and between generations
- To protect biological diversity and maintain essential ecological processes and life-support systems.

As such, the ESD principles have limited applicability to cultural heritage although the notion of inter-generational equity is relevant. This is understood to refer to future generations being able

to enjoy, interact with and study aspects of cultural heritage that are available to current generations.

8.4.1 Applicability to the pipeline development

The development adds to the cumulative impact on the region's Aboriginal cultural heritage as seven sites will be harmed. However, the heritage impact value of this loss is low as the sites consist of isolated finds and low-density artefact scatters. Additionally, it will be recommended here that the artefacts be removed from harm and relocated in the landscape close to where they originated; but outside of any project impacts. As all recorded artefacts are currently in secondary contexts, moving the already displaced artefacts a short distance out of harm's way constitutes a very minimal loss of heritage value as the artefacts remain associated with the landscape in which they were recorded.

9 MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE SITES

9.1 GENERAL MANAGEMENT PRINCIPLES

Appropriate management of cultural heritage items is primarily determined based on their assessed significance as well as the likely impacts of the proposed development. **Section 8.2** and **Section 8.3** describe, respectively, the significance / potential of the recorded sites and the likely impacts of the pipeline development. The following management options are general principles, in terms of best practice and desired outcomes, rather than mitigation measures against individual site disturbance.

- Avoid impact by altering the pipeline development or in this case by avoiding impact to a recorded Aboriginal site. If this can be done, then a suitable curtilage around the site must be provided to ensure its protection both during the short-term construction phase of development and in the long-term use of the area. If plans are altered, care must be taken to ensure that impacts do not occur to areas not previously assessed.
- If impact is unavoidable then appropriate management of the site/object will be determined through policies set out in an Aboriginal Cultural Heritage Management Plan (ACHMP). The ACHMP should include measures for site conservation, as well as detailing methods for the management of sites to be impacted. The management will depend on many factors including the assessed significance of the sites (**Section 8.2**). In certain instances, a site may have low archaeological, aesthetic, and historic values but moderate or high cultural value. In these cases, management is aimed to mitigate the loss of the cultural heritage values, rather than the loss of the scientific values. Sites of low scientific significance, such as an isolated find, could, from an archaeological perspective, be removed/destroyed with no further archaeological management being required. However, given the site's cultural value, further management in respect to these sites will be recommended here. For example, due to a site's cultural values, the local Aboriginal community may wish to collect or relocate artefacts, whether temporarily or permanently, and such management will form part of the ACHMP. The ACHMP will be developed in consultation between the proponent, RAPs and DPE.

9.2 MANAGEMENT AND MITIGATION OF RECORDED ABORIGINAL SITES

9.2.1 Opportunities to conserve Aboriginal cultural heritage values

Because of the current assessment, seven sites have been recorded within or adjacent to the study area. In addition, three previously recorded AHIMS sites are also within or adjacent to the study area.

Of these ten sites, three are located either on the edge of or outside of the study area and can be avoided. Due to the proximity of these three sites to the proposed work, it is recommended that temporary buffers around the site extent be erected using high visibility ground markers (i.e. staking and flagging or fencing), prior and during construction works. **Table 9-1** outlines the mitigation measures which should be applied to avoid impacting these sites.

Table 9-1: Mitigation management measures for sites to be avoided

Site Name & Number	Management measures
Bathurst Bike Park IF-1 #44-3-0221	Prior or during construction works a temporary 5 m buffer around the site extent should be erected using high visibility stakes and flagging or fencing.
CS SU4-A2 #45-1-2723	No management measures necessary. The site is already permanently fenced. All impacts to remain outside of this fence.
IV-OS-5 #45-1-2551	Prior or during construction works a temporary 5 m buffer around the site extent should be erected using high visibility stakes and flagging or fencing.

9.2.2 Management of potentially impacted Aboriginal sites

It is recommended that the seven sites (AHIMS #44-3-0222, #44-3-0223, #44-3-0224, #44-3-0225, #44-3-0228, #44-3-0229 and #45-1-2548) being impacted by the pipeline development be salvaged through the recording and collection of surface artefacts. This recommendation is made due to:

- The cultural value of these sites and their importance to the Aboriginal community
- The nature of the impacted sites (all are isolated finds or low-density artefact scatters)
- Being in landforms with high previous disturbance from a range of factors including erosion and land use practices
- The low archaeological values assigned to the sites preclude more intensive archaeological investigations
- Sites such as these have a limited ability to further inform the community about the history and culture of the area. While any potential research questions are limited, some information can nevertheless be gained.

9.2.2.1 Archaeological salvage: artefact collection

Stone artefact sites managed under this archaeological salvage will contribute to the research aim in that the sites will have surface artefacts mapped, catalogued, selectively photographed, collected and moved to safe-keeping for the duration of the construction phase.

It is envisioned that these investigations would include the following methodology although the final form of any investigation would be done in consultation with the RAPs.

- All visible artefacts at a site should be flagged in the field
- The site should be photographed after flagging and before recording

- All artefacts should have the following artefact information entered directly into a GPS unit, albeit one set up with all variable fields already entered to make the field recording job more efficient:
 - Location
 - Artefact Class
 - Artefact Type
 - Size
 - Reduction level
 - Raw Material
 - Notes.
- A selection of indicative and / or unusual artefacts from each site will be photographed
- A sketch plan of the site will be completed
- Should the collection team encounter a human burial, all work should cease in the area and advice from authorities and RAPs (should the remains be Aboriginal) sought
- The recording of the artefacts recovered will largely be completed in the field and this data would be incorporated into a report and used to appropriately update the relevant site cards
- A report of the finding will be prepared to preserve the data for future researchers.
- Following construction and depending on RAP consultation, the artefacts will either be kept in safe keeping, returned to where they were salvaged from, or relocated to a safe location which will not be impacted by ongoing maintenance following the construction of the pipeline.

HISTORIC HERITAGE ASSESSMENT

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10 HISTORIC HERITAGE ASSESSMENT: INTRODUCTION

10.1 BRIEF DESCRIPTION OF THE PIPELINE DEVELOPMENT

Please refer to **Sections 1** and **2** for a description of the pipeline development and the environmental context of the study area.

10.2 RELEVANT LEGISLATION

10.2.1 State legislation

Environmental Planning and Assessment Act 1979 (EP&A Act)

Please refer to **Section 3.3.1** for a description of the EP&A Act.

An approval under Part 4, or an excavation permit under section 139 of the *Heritage Act 1977* is not required under section 4.41 of the EP&A Act for an approved SSD project.

Heritage Act 1977 (Heritage Act)

The *Heritage Act 1977* (Heritage Act) is applicable to the current assessment. This Act established the Heritage Council of NSW. The Heritage Council's role is to advise the government on the protection of heritage assets, make listing recommendations to the Minister in relation to the State Heritage Register, and assess/approve/decline proposals involving modification to heritage items or places listed on the Register. Most proposals involving modification are assessed under Section 60 of the Heritage Act.

Automatic protection is afforded to 'relics', defined as 'any deposit or material evidence relating to the settlement of the area that comprised New South Wales, not being Aboriginal settlement, and which holds state or local significance' (note: formerly the Act protected any 'relic' that was more than 50 years old. Now the age determination has been dropped from the Act and relics are protected according to their heritage significance assessment rather than purely on their age). Excavation of land on which it is known or where there is reasonable cause to suspect that 'relics' will be exposed, moved, destroyed, discovered or damaged is prohibited unless ordered under an excavation permit.

10.2.2 Commonwealth legislation

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

Please refer to **Section 3.3.2** for a description of the EPBC Act.

10.2.3 Applicability to the pipeline development

The current pipeline development will be assessed as an SSD under Division 4.7 of the EP&A Act. Pursuant to section 4.41 of the EP&A Act, approval under Part 4 or an excavation permit under section 139 of the *Heritage Act* are not required for an approved SSD project.

It is noted there are no Commonwealth or National historic heritage listed places within the study area, and as such, the heritage provisions of the EPBC Act do not apply.

10.3 ASSESSMENT REQUIREMENTS

This historical heritage assessment has been prepared following the appropriate guidelines, policies and industry requirements, and following consultation with stakeholders including community members and relevant government agencies.

Guidelines and policies referenced are as follows:

- *Historical Archaeology Code of Practice* (Heritage Council 2006)
- *Assessing Heritage Significance* (Heritage Office 2001).

To inform the preparation of the EARs, DPE invited other government agencies to recommend matters to be address in the EIS. These matters were considered by the Secretary for DPE when preparing the EARs. Copies of the government agencies' advice to DPE were attached to the EARs.

The Heritage Council of New South Wales and the Office of Environment and Heritage (OEH) raised matters relevant to the historical heritage assessment. The matters raised are listed in **Table 10-1** and have been considered in preparing this assessment, as indicated in the table.

Table 10-1: Agency project specific assessment recommendations.

Requirement	Section addressed
<p>Prepare a Heritage Impact Statement (HIS) or Statement of Heritage Impact (SOHI) in accordance with the guidelines in the NSW Heritage Manual which identifies:</p> <ul style="list-style-type: none"> • All heritage items within and near the site, including built heritage, landscapes and archaeology, detailed mapping of these items, and assessment of why the items and site(s) are of heritage significance; • Detailed mitigation measures to offset potential impacts on heritage values. <p>The HIS/SOHI must assess heritage impacts of the proposed works on the heritage significance of the site; and the visual impacts of the proposed development on views to and from surrounding heritage items.</p>	<p>A SOHI is not required as no items of historic heritage significance will be impacted by the project.</p>
<p>A historic archaeological assessment is to be prepared by a suitably qualified historical archaeologist in accordance with the documents:</p> <ul style="list-style-type: none"> • <i>Archaeological Assessments Guidelines</i> (1996) • <i>Assessing Significance for Historical Archaeological Sites and 'Relics'</i> (2009) 	<p>Section 10 to Section 13</p>
<p>The EIS must provide a heritage assessment including but not limited to an assessment of impacts to State and local heritage including conservation areas, natural heritage areas, places of Aboriginal heritage value, buildings, works, relics, gardens, landscapes, views, trees should be assessed. Where impacts to State or locally significant heritage items are identified the assessment shall:</p> <ul style="list-style-type: none"> • Outline the proposed mitigation and management measures (including measures to avoid significant impacts and evaluation of the effectiveness of the mitigation measures) generally consistent with the NSW Heritage Manual (1996) • Be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria) • Include a state of heritage impact for all heritage items (including significance assessment) 	<p>Section 10 to Section 13</p>

Requirement	Section addressed
<ul style="list-style-type: none"> Consider impacts including, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment (as relevant) Where potential archaeological impacts have been identified develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavation (terrestrial and maritime as relevant) and include the results of these test excavations. 	

10.4 HISTORIC HERITAGE ASSESSMENT OBJECTIVES

The current assessment will apply the Heritage Council's *Historical Archaeology Code of Practice* (Heritage Council 2006) in the completion of a historical heritage assessment, including field investigations, to meet the following objectives:

Objective One: To identify whether historical heritage items or areas are, or are likely to be, present within the study area

Objective Two: To assess the significance of any recorded historical heritage items or areas

Objective Three: Determine whether the pipeline development is likely to cause harm to recorded historical heritage items or areas

Objective Four: Provide management recommendations and options for mitigating impacts.

10.5 DATE OF HISTORIC HERITAGE ASSESSMENT

The historic heritage assessment took place at the same time as the Aboriginal heritage assessment. Please refer to **Section 3.1** for the dates of the fieldwork.

10.6 OZARK INVOLVEMENT

The fieldwork and reporting of the historic heritage assessment are the same personnel involved with the Aboriginal heritage assessment. Please see **Section 3.2** for details.

11 HISTORIC HERITAGE ASSESSMENT: BACKGROUND

11.1 BRIEF HISTORY OF THE LITHGOW TO BLAYNEY REGION

Gregory Blaxland, William Wentworth and William Lawson were the first Europeans to cross the Blue Mountains in May 1813, thereby accessing this region and opening it up for the spread of European settlement.

After the discovery of the agriculturally suitable, well-watered plains of the Central Tablelands and fertile valley of the Cudgegong River, there was an almost immediate, albeit government controlled, influx of white settlers. Between 1815 and 1818, considerable exploration of the area around Orange and Bathurst and further west to the Lachlan and the Wellington Valley continued under explorers Evans and Oxley.

11.1.1 Blayney

The three hills dominating the area that were later to become Blayney, had been sighted by Surveyor George Evans in 1813. By 1820, Fredericks Valley (approximately 40 km west of Bathurst) had been established as a Government Stock Station, containing stockyards and huts for housing stockmen (mostly Ticket of Leave men and convicts). Following Governor Brisbane's 1823 reversal of Governor Macquarie's restrictions on pastoralists moving livestock west of the Blue Mountains, and throughout the 1830s / 1840s, the Central West began to experience a gradual influx of immigrants (Haglund 1984). Pastoralism and agriculture, dominated by squatters employing convict labour, was the economic mainstay of the region during this period.

The earliest towns in the region, such as Carcoar and Millthorpe, have their origins during this period. Carcoar, the third oldest town in NSW west of the Blue Mountains, was established at 'Coombing' during this period as a pastoral enterprise comprising horse, cattle and sheep grazing by Thomas Icely in 1831. By 1838 the settlement was formally established as a town, and by 1850 the town's population (500) almost rivalled that of Bathurst (Barnes 1999; Heritage Branch 2009). It was during this period that Stoke Stable was built and by 1860 Carcoar was large enough to warrant a hospital.

During his 1830 and 1835 journeys through the region, Major Thomas Mitchell encountered Charles Booth, a former Ticket of Leave man then residing with four or five convicts at 'Kyongs', a house / inn in the Guyong / Kings Plains area, the closest town being the Cornish settlement at Byng (Weatherstone 1988). Booth was the first freehold settler in what would become known as the Millthorpe area (previously known as The Forest, The Cross Roads, and Spring Grove) and one of the few settlers in that area to be mentioned in historical records (Nesbitt 1988).

Unlike Carcoar and Millthorpe, Blayney's development was sporadic. Houses, a mill and an inn were in existence by 1837, but it was not until 1843 that a village was established that would eventually grow into Blayney.

The discovery of gold in 1851 brought both a sharp population increase to the region and controversy, with the Rev. W.B. Clarke, John Lister and the Tom brothers (William and James) later contesting Edward Hargraves' claim to have discovered the first payable gold in the colony (ANMM 2009; SLNSW 2008). The gold rush was to prove lucrative for the region and attracted prospectors from Sydney, Victoria and South Australia. At this time Blayney was founded on its current site as a farming and mining settlement. Additional gold strikes were discovered in 1866 further to the west and this proved a setback for the development of towns such as Carcoar (Heritage Branch 2009).

The importance of agriculture to the district throughout the nineteenth and twentieth centuries is highlighted by the popularity of the local ploughing matches such as that organised by the Kings Plains Agricultural Association in Blayney from 1858 (Barker 1992: 225). Ploughing matches were a common phenomenon across south-eastern Australia during the nineteenth century and local champions attracted enthusiastic local support. These matches also inspired the subsequent proliferation of local agricultural shows (Barker 1992: 225).

The ensuing history of Blayney, Carcoar and Millthorpe was largely dominated by the growth of Bathurst and Orange and the infrastructure constructed to service these centres. Blayney and Millthorpe flourished with the arrival of the Bathurst to Orange railway in 1876 at the expense of Carcoar, which did not receive a rail line until 1888. Millthorpe's economy received a further boost with the establishment of The Mill in 1884 by the Great Western Milling Company (an event that was also not without controversy as Spring Grove [soon to become Millthorpe] and Spring Hill each bid for the establishment of The Mill).

The date of the establishment of the town's lime kilns is not known, however the first recorded sale of lime from Blayney was in 1850, at which time it was mainly bought to improve soil for agricultural purposes. In the 1880s, after the establishment of the railway, the kilns were able to be expanded as the lime could be sold more widely (ABC 2017).

The twentieth century saw Blayney's agricultural and mining economy supplemented by a butter factory in 1900, abattoir in 1957, Nestlé pet food plant in 1989, and a container terminal in 1994. Blayney also provides 10 megawatts of power to 3,500 homes via the Blayney wind farm, built in 2000 at a cost of \$18 million.

11.1.2 Bathurst

The Bathurst region was proclaimed by European settlers in May 1815, establishing the oldest inland settlement on the Australian continent (BRC 2014). Following the discovery of a route

through the Blue Mountains in 1813, Assistant Surveyor George Evans was sent by Governor Macquarie to examine the route and describe the country. Following Evans' positive reports, Macquarie commissioned William Cox to build a road from Emu Plains to the Bathurst Plains, which Cox completed in February 1815. Macquarie travelled the road in 1815, reaching the Macquarie River on 4 May, where he formally established the town of Bathurst (McLaughlan 2013: 10–11). Bathurst historian, Robin McLaughlan (2014), recently rediscovered an early map of Cox's road to Bathurst, and of Macquarie's proposed town plan for Bathurst, produced by John Oxley in 1815, and held in the National Archives, London.

A limited number of small land grants were approved by the Colonial Office in 1818 to ten selected settlers on the north bank of the Macquarie River, effectively separating the government settlement from private settlers. Commissioner John Bigge visited the government settlement in 1819 and conducted Bigge's Enquiry, which uncovered various corrupt and questionable practices, particularly attributable to Macquarie's appointed 'superintendent', Richard Lewis and Commandant, William Cox (McLaughlan 2013: 11–12). Major James Morisset was appointed Commandant in 1823 by Governor Brisbane, who wanted the government settlement and adjacent lands at Bathurst developed for agriculture, contrary to Commissioner Bigge's recommendation to wind down the settlement (McLaughlan 2013: 14). Between 1822 and 1825 more than 1,000 convicts were deployed to Bathurst, three-quarters of which were assigned to private pastoralists, and the remainder to public work (Roberts 2014: 247).

In 1824 open war erupted between the Wiradjuri, under the leadership of Windradyne, and the government settlement, which declared martial law soon after (Roberts 1995: 618–624). With civil law suspended, violence was officially sanctioned, and Brisbane transmitted a proclamation to London that: "*It hath been found that Mutual Bloodshed may be stopped by the Use of Arms against the Natives beyond the ordinary Rule of Law... and for this End resort to summary justice has become necessary*" (cited in Roberts 1995: 622). On 14 October 1824 the *Sydney Gazette* reported that: "*Bathurst [and] its surrounding district is engaged in an exterminating war*" (cited in Roberts 1995: 623) and by October and November reports of Aboriginal people surrendering in groups of up to sixty were reaching Sydney. Martial law was repealed on 11 December 1824.

By 1826 the government settlement had become a diverse and extensive agricultural enterprise, including the production of grain, wool, vegetables, cattle, sheep and leather via convict labour. However, due to the poor profitability of this enterprise, Governor Darling instructed the Bathurst government settlement to cease operating as a government farm, and by 1829 only six convicts remained in public service (McLaughlan 2013: 16).

Bathurst's economy was transformed by the discovery of gold in 1851. Prospectors and settlers flooded to the region, triggering an era of prosperity and growth. Hotels, courts, police stations,

post offices, schools and businesses, including Cobb & Co, were established. After the gold rush, Bathurst became a centre for agricultural and manufacturing. The Main Western railway line from Sydney reached Bathurst in 1876 and the town became an important railway centre, including workshops, locomotive depots and track and signal engineering offices. Today Bathurst hosts the railway regional engineering headquarters, including large manufacturing facilities. In 1885, Bathurst had a population of approximately 8,000 and a district population of an additional 20,000 people, mostly employed in agriculture and pastoralism. Bathurst is now a large regional centre for forestry, agriculture and industry. Education, tourism and manufacturing are important contemporary economic drivers.

11.1.3 Lithgow/Springvale areas

Lithgow Valley's first European settlers arrived in 1824 and the town was named in 1827 by the explorer Hamilton Hume, in honour of William Lithgow, Governor Brisbane's private secretary (RPS 2014). Settlement in the area was slow; by 1860 only four properties were settled in the valley. In 1838, one of the owners of those properties, Andrew Brown of "Cooerwull", wrote in his diary "getting coal", which was the first written record of coal noted in the Lithgow Valley.

In 1868, the construction of the railway line through the Valley spread workmen who built their campsites close to the cuttings, embankments and viaducts throughout the length of the valley. To support the needs for cooking fires and heating during winter, Mr. Poole in 1868 opened the Hermitage Colliery as the first commercial mine to engage in mining and selling coal. By 1874, there were four mines producing: Eskbank Colliery (at the eastern end of Main Street near the present Hoskins Church); the Lithgow Valley Colliery; Vale of Clywdd Colliery; and the Hermitage Colliery. The owners of the Lithgow Valley Colliery secured contracts to supply coal to the Railways to run their locomotives. The exportation of coal also became commercially viable with the construction of the railway line.

The nature of coal as a low value, high volume resource necessitated its need to be delivered in bulk or to be located near established transport infrastructure. The failure of several coal mines in the Cullen Bullen region prior to the development of the Wallerawang-Mudgee railway line is testament to the importance of developing bulk haulage networks for coal (Christison 2003).

In 1870, the railway reached Wallerawang. The Cobb and Co. Coach Service provided transport between the station at Wallerawang, Bathurst and Mudgee, utilising the route approximating the current Castlereagh Highway. The exploitation of coal reserves began in Wallerawang around 1873 with several mines being opened on the Lithgow seam at Mount Piper, mid-way between Wallerawang and Lidsdale. Completion of the Wallerawang-Mudgee railway branch line in 1880s coincided with the rapid growth of the coal mining industry in the Western Coalfields. The mines in the Wallerawang district generally followed the railway line

and included: Irondale Colliery (1883); Ivanhoe Colliery (1893); and the Commonwealth Colliery (1895) which became the first open cut mine in NSW during World War II (1940) (Carne 1908).

By 1900, Lithgow boasted nine hotels, three banks, a municipal water supply and gaslights in the main street. The population increased from 5,628 in 1901 to 8,196 in 1911, increasing the pressure on housing. In 1908, the sale of a portion of Coerwull, one of the earliest settled properties in the area, provided an increase in the amount of available land; however, it was only marginally successful in easing the demand (Cremin 1989).

11.2 LOCAL CONTEXT

11.2.1 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any potential previously-recorded heritage within the study area. The results of this search are summarised in **Table 11-1**.

Table 11-1: Historic heritage: desktop-database search results.

Name of Database Searched	Date of Search	Type of Search	Comment
National and Commonwealth Heritage Listings	28 August 2018 & 27 March 2019	World Heritage List Commonwealth Heritage List National Heritage List	No items within 1 km of study area.
NSW State Heritage Register	28 August 2018 & 27 March 2019	NSW SHR	No items within 1 km of study area.
Local Environment Plan (LEP)	28 August 2018 & 27 March 2019	Blayney Shire Council LEP 2012	One item within 1 km of study area.
		Bathurst Regional LEP 2014	13 items within 1 km of study area.
		Lithgow LEP 2014	6 items within 1 km of study area.

A search of the Heritage Council of NSW administered heritage databases and the Blayney Shire Council, Bathurst Regional Council and Lithgow LEP returned 20 records for historical heritage sites within a 1 km area around the study area (**Table 11-2** and **Figure 11-1**). Two items are adjacent to the pipeline corridor.

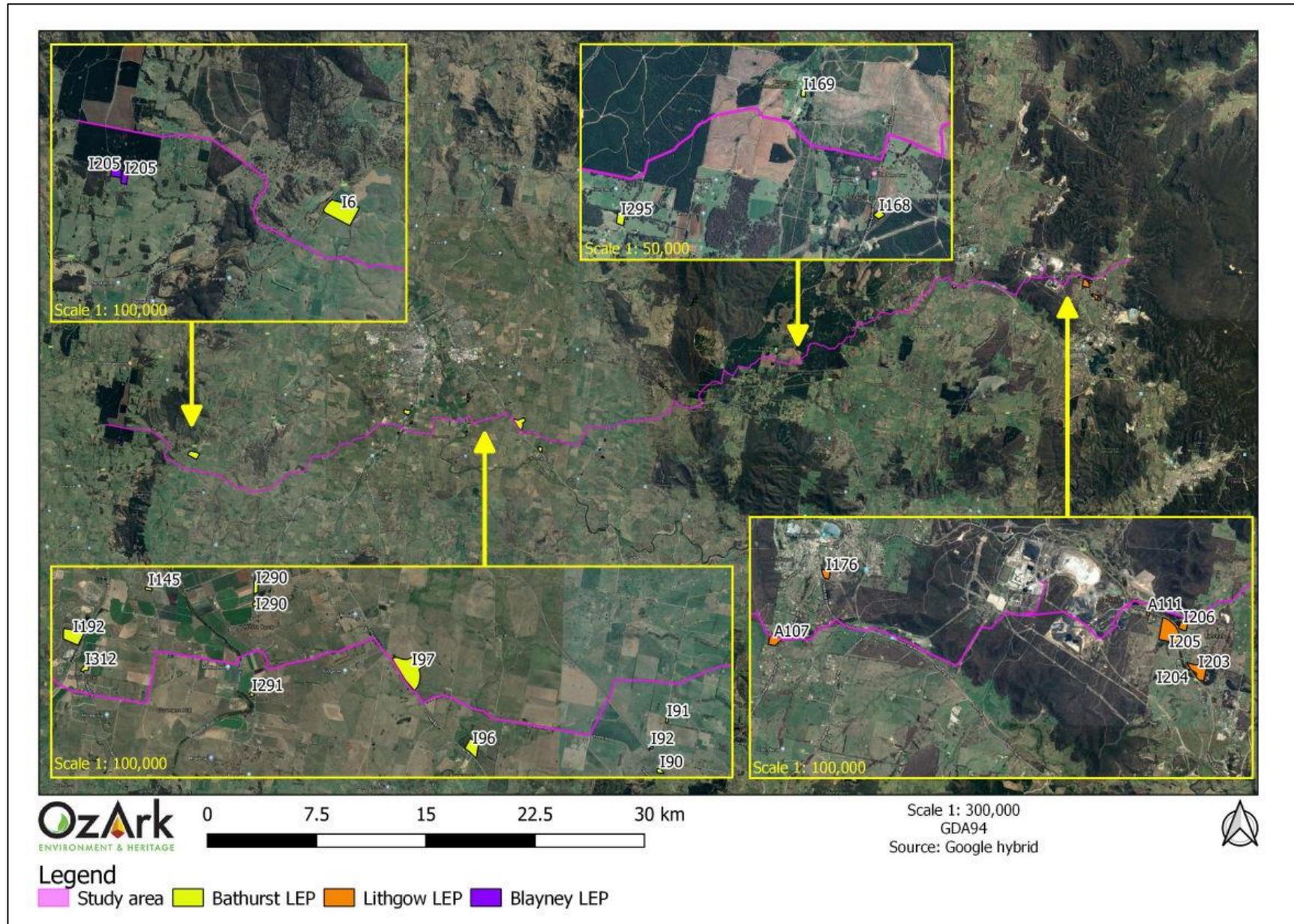
Table 11-2: Historic LEP listings within 1 km of study area.

LEP	Item number, name and location	Brief description	Distance from study area
Blayney LEP 2012	I205 – Woolshed 222 Pounds Lane Lot 42 DP 750413	None available	920 m south of study area.
Bathurst LEP 2014	I6 – Bathampton Homestead, stables and brick barn 2021 Mid Western Highway Part Lot 300, DP 1144793	Brick homestead and stables. Presumably designed by Edward Gell, leading architect of period. High level of original integrity. Association with Gilmour and Rutherford families. Large brick barn (convict built) is one of oldest buildings in district still standing.	900 m north of study area.

LEP	Item number, name and location	Brief description	Distance from study area
	I193 – Rainham 720 Vale Road Part Lot 37, DP 1173912	Two storied Georgian house built in 1832 for Captain Thomas Raine. Later many descendants of the Boyd family retained the Rainham home. Explorer and botanist Richard Cunningham visited there. Also served for a time as an Inn. It is sited close to one of the earliest road sections into Bathurst and some original road paving is still <i>in situ</i> in front of the house.	340 m southwest of study area.
	I312 – Rural Homestead 29 Lagoon Road Part Lot 24, DP 998285	None available	460m north of study area.
	I192 – Orton Park 285 College Road Lot 1, DP 854205	The Lanes built the first part of the main house in 1833. The McPhillamy family substantially changed the appearance of Orton Park House in 1886, adding the two-story ballroom extension and wrapping the eastern side of the building in a Victorian style veranda with cast iron lacework. The property was named after the Reverend Joseph Orton, a Methodist minister who conducted the first Methodist service west of the Blue Mountains. An excellent example of a Victorian mansion and major rural residence which has landmark qualities on the Vale Road.	930 m north of study area.
	I290 Group of 3 former Soldiers Settlers' cottages (including barn at 289 White Rock Road) 245, 257 and 289 White Rock Road Part Lots 116 and 117, DP 755781; Lot 201, DP 791124	Three soldier settlers' cottages. Modest matching cottages, probably prefabricated frames. Part of the Homestead initiative, what became known as 'Closer Settlement' and was a response to unlock land for dense settlement.	1 km north of study area.
	I291 – Uniting Church and cemetery 567 White Rock Road Lot 55, DP 1063035	The Church and cemetery were established on ground donated by John McPhillamy. The church on this site was opened in 1858 as a Wesleyan Chapel and extended to the present size in 1895. It became the Methodist Church in 1902, the Uniting Church in 1977 and Community Church in 1991. The cemetery is about 20 m east of the church. It is enclosed by a substantial, colonial bond, red brick wall with a coping formed by bricks on edge. This wall was apparently erected using contributions from the McPhillamy family. The earliest known interment was in 1859. The wall around the cemetery was built in the 1930's.	665 m southwest of study area.
	I97 – Leeholme Homestead and outbuildings 3664 O'Connell Road and 47 Tarana Road Part Lots 601 and 602, DP 1186424	The site contains several substantial buildings: the main house originally designed by architect Gell, and two large stables and carriage buildings plus smaller structures at rear. Many of the major buildings are brickwork English bond. The house was built in 1872.	Adjacent to east of study area along O'Connell Road.
	I96 – Mayfield 3390 O'Connell Road Lot 1, DP 783944	Victorian era country house or inn with hipped roof, long rectangular form addressing passing road.	655 m south of study area.
	I91 – Carlton 673 Brewongle Lane Part Lot 2, DP 792926	Edwardian house in relatively original condition which has undergone repair and conservation work.	760 m south of study area.
	I276 – Green Swamp Inn (former) 281 Walang Drive Part Lot 184, DP 1125708	Green Swamp Inn is probably one of the oldest Inns in the regional area constructed prior to 1835 and located on a section of the original 1830s main roads. Nearby were three toll-bars (1870s). It was opened by Andrew Livingstone. Building is an early colonial inn and has had unsympathetic alterations.	845 m northwest of study area.

LEP	Item number, name and location	Brief description	Distance from study area
	I295 – Macabee Cottage 187 Maccabees Road Part Lot 1980 and Lot 1981, DP 1132213	This cottage built in 1856 is associated with the early settler Thomas Macabee. The form of the building is typical of the aesthetic Georgian proportions.	395 m south of study area.
	I169 – Kirkconnell House Sunny Corner Road Part of DP 61171	Kirkconnell House is now part of the Kirkconnell Correctional Centre. The house was originally built by one of the original settler families. However, due to unproductive soil, it was later converted to the current use as a correctional centre.	330 m northeast of study area.
	I168 – St Mary's Church and Cemetery 184 Sherwood Road Lot 11, DP 1145959	This building, completed in 1864, is significant in that it was designed by Edward Gell, and is of an unusual timber construction (unusual for Gell). Construction started in 1863 and the church opened in 1864.	565 m south of study area.
Lithgow LEP 2014	A107 – Portland General Cemetery Sunny Corner Road Lot 7300, DP 1144082	The cemetery is less than 110 years old, the earliest markers being dated 1909. The memorials are mostly marble and granite. The cemetery is divided into denominational portions, all signposted but without any row markers. They comprise Anglican, Catholic, Presbyterian and Uniting portions as well as a small general section containing only two marked graves. There is also a small lawn cemetery, a columbarium and a memorial wall, all of recent date.	Adjacent to south of study area along Reservoir Road and Portland Sunny Corner Rod.
	I176 – Portland House 51 Wallerawang Road Lot 4, DP 856917	None available	920 m northwest of study area.
	A111 – Blackmans Flat Roman Catholic Cemetery Castlereagh Highway Lots 68 and 69, DP 751636	The cemetery comprises a dozen or so older monuments scattered over about a hectare and a small fenced area containing mostly more recent graves. Inscriptions date from 1877.	185 m south of study area.
	I205 – Farmhouse 1449 Castlereagh Highway Lot 101, DP 1145705	None available	135 m south of study area.
	I206 – Berwindi 1470 Castlereagh Highway Lot 1, DP 666540	None available	135 m south of study area.
	I203 – Lidsdale House and Gardens 1384 Castlereagh Highway Lots 5 and 7, DP 1084545	None available	1 km south of study area.

Figure 11-1: Location of LEP listed items in relation to study area.



11.3 SURVEY METHODOLOGY

Standard archaeological field survey and recording methods were employed in this study (Burke & Smith 2004). The historical heritage assessment of the study area was completed concurrently with the Aboriginal cultural heritage assessment. The survey was completed in geographical sections, with one team of surveyors consisting of one archaeologist and two RAP representatives working along the study area, not necessarily sequentially. See **Section 6.1** for further details.

11.4 PROJECT CONSTRAINTS

There were no significant constraints in completing the archaeological assessment of the study area. GSV posed the greatest constraint during field inspection (see **Section 6.3**), however, not to the extent that the efficacy of the survey was unduly diminished. A further constraint was the progressive refinement of the pipeline corridor, resulting in the survey being conducted in different sections of the study area and over several different mobilisations. This also resulted in returning to fill in areas which had been previously inaccessible due to access agreements.

12 RESULTS OF HISTORIC HERITAGE ASSESSMENT

12.1 HISTORIC HERITAGE SITES

There are no historic sites recorded within the study area. As such, there will be no impact to any historic sites during the proposed works.

12.2 DISCUSSION

The pipeline development has been purposely designed to avoid existing structures, including any historic listed buildings or locations. There was limited potential for historic heritage to be present inside the study area due to:

- The minimal disturbance area of pipeline corridor, which includes a 6-20 m wide pipeline construction corridor plus the approximately 2 ha of land in which the associated infrastructure such as the pumping station facilities, pressure reducing system and telemetry systems will be located.
- Most of the study area is through open paddocks or along existing tracks/roads.

12.3 LIKELY IMPACTS TO HISTORIC HERITAGE FROM THE PIPELINE DEVELOPMENT

The pipeline corridor itself is outside the curtilages for the Leeholme Homestead and the Portland General Cemetery. For Leeholme Homestead and outbuildings, the pipeline corridor is on the western side of O'Connell Road, while the homestead is on the eastern side.

There will be no ground disturbance impacts outside the road reserves adjacent to these local heritage listings, and neither the Leeholme Homestead nor the Portland General Cemetery will be impacted by the pipeline development.

13 MANAGEMENT AND MITIGATION: HISTORIC HERITAGE

13.1 GENERAL PRINCIPLES FOR THE MANAGEMENT OF HISTORIC SITES

Appropriate management of heritage items is primarily determined based on their assessed significance as well as the likely impacts of the proposed development.

In terms of best practice and desired outcomes, avoiding impact to any historical item is a preferred outcome, however, where a historical site has been assessed as having no heritage value, impacts to these items does not require any legislated mitigation.

13.2 MANAGEMENT AND MITIGATION OF RECORDED HISTORIC SITES

No items or sites of historic heritage significance were identified in the study area.

Following development consent of the project, impacts on historical heritage would be managed through a Historic Heritage Management Plan (HHMP) which is to be agreed to by the proponent, local councils and DPE. The archaeological management recommendations within this report would normally be incorporated into the HHMP that is usually formulated following development consent. The HHMP will also include an unanticipated finds protocol.

As Leeholme Homestead and outbuildings and the Portland General Cemetery are adjacent to the study area, care should be taken to remain outside the curtilages for these local heritage listings. To avoid inadvertent impacts, the curtilages of the Leeholme Homestead and outbuildings and the Portland General Cemetery should be marked as 'no-go zones' on the construction management plans and all contractors made aware of the two locations (see **Figure 13-1** and **Figure 13-2**).

Figure 13-1: Management for Leeholme Homestead and outbuildings.

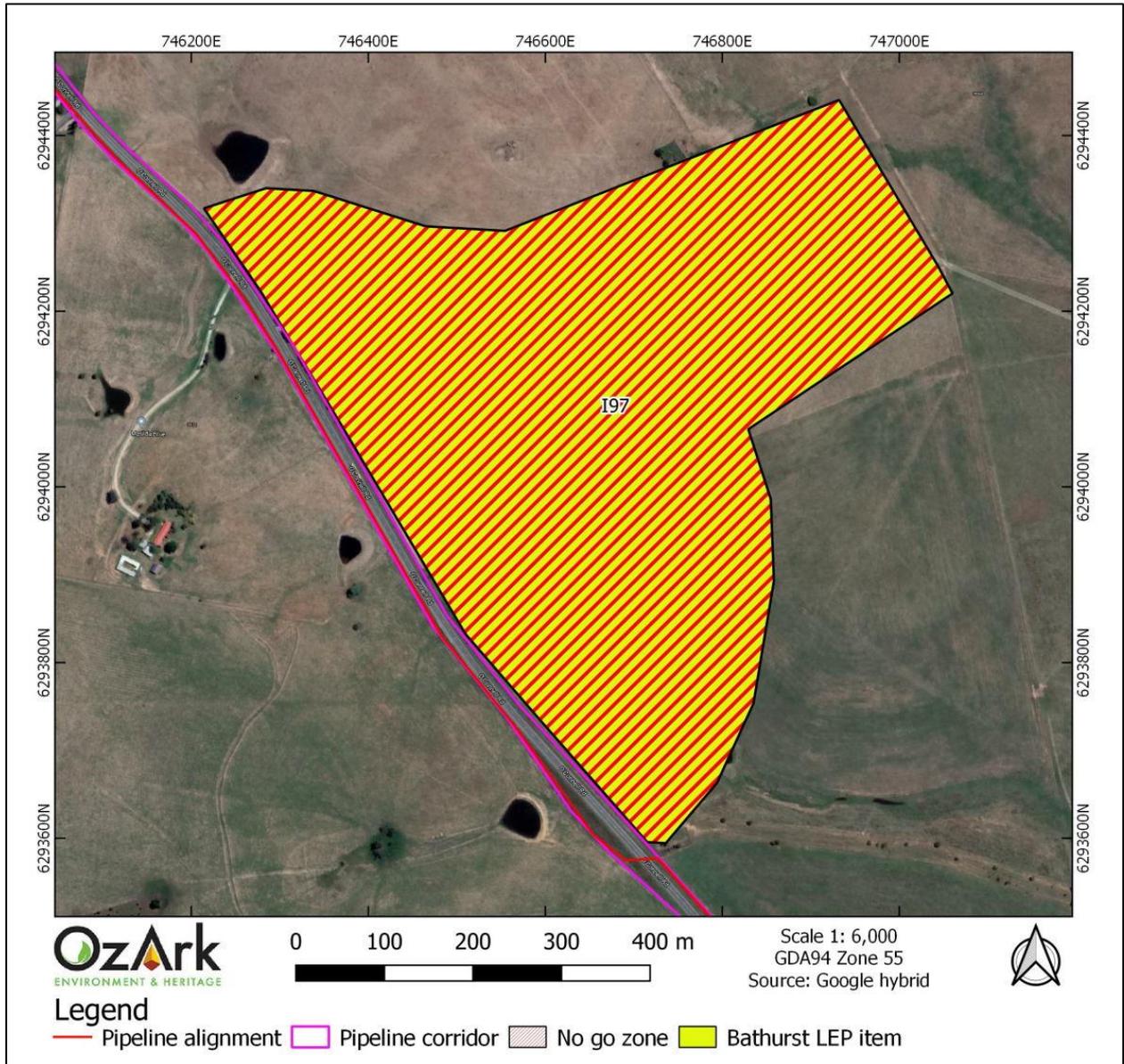
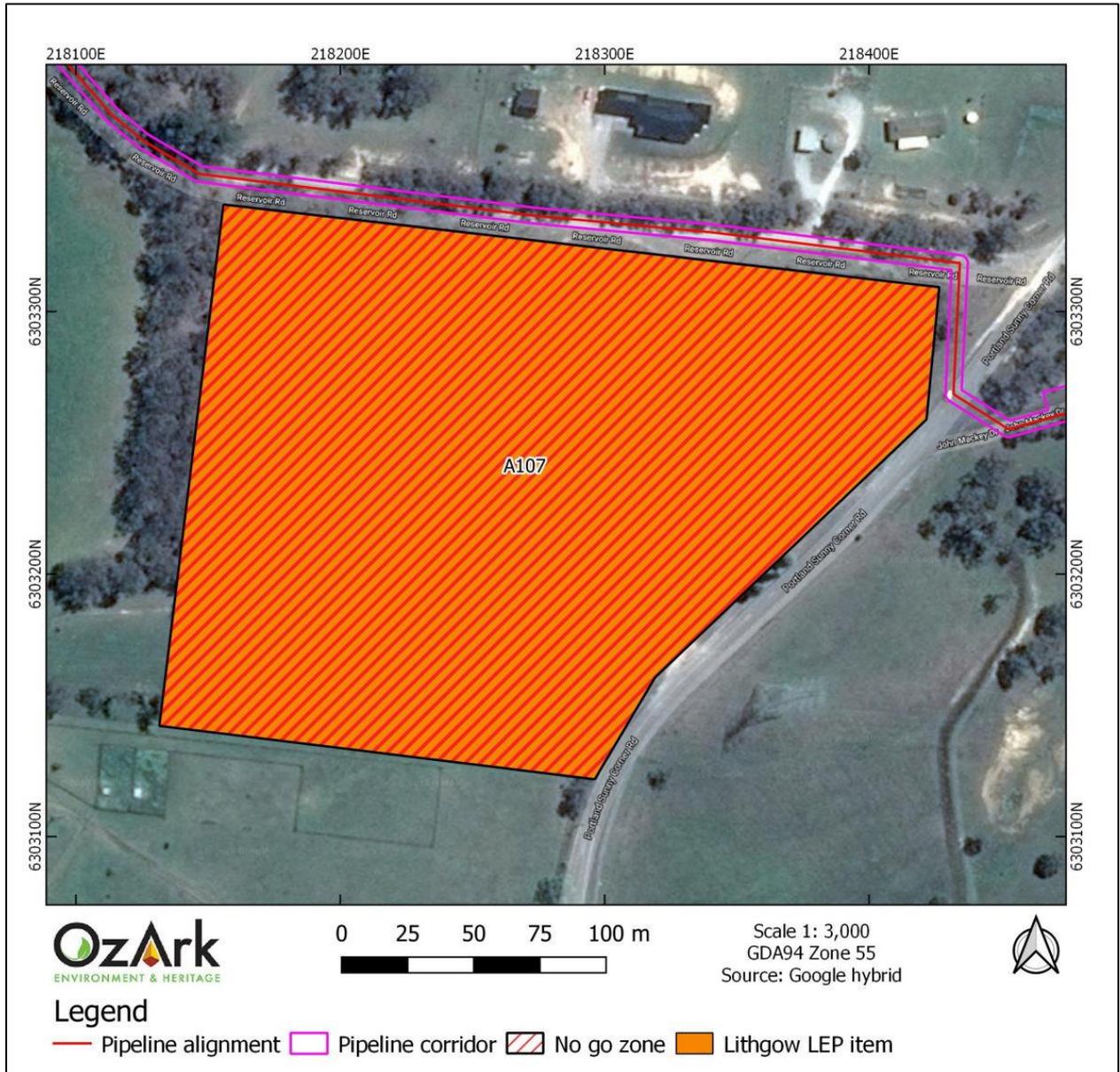


Figure 13-2: Management for Portland General Cemetery.



14 RECOMMENDATIONS

14.1 ABORIGINAL CULTURAL HERITAGE

Under Section 89A of the NPW Act it is mandatory that all newly-recorded Aboriginal sites be registered with OEH AHIMS. As a professional in the field of cultural heritage management it is the responsibility of OzArk to ensure this process is undertaken.

To this end it is noted that seven Aboriginal sites were recorded during the assessment.

The following recommendations are made based on these impacts and with regard to:

- Legal requirements under the terms of the NPW Act whereby it is illegal to damage, deface or destroy an Aboriginal place or object without the prior written consent of OEH
- The findings of the current investigations undertaken within the study area
- The interests of the Aboriginal community.

Recommendations concerning Aboriginal cultural values associated with the pipeline development are as follows:

1. Should development consent for the project be granted, archaeological management strategies to manage and mitigate the impact of the pipeline development are set out in **Section 9.2**. All sites within the impact footprint for the project should be salvaged by a surface collection of all visible artefacts (see **Section 9.2.2.1**).
2. The salvage works will include the mapping, analysis and collection of all surface artefacts at the affected sites. Results will be included in a report to preserve the data in a useable form and the relevant AHIMS site cards will be updated accordingly.
3. All land-disturbing activities must be confined to within the assessed study area. Should the parameters of the proposed work extend beyond this, then further archaeological assessment may be required.
4. Following development consent of the project, an AHIP will not be required for impacts to cultural heritage, so long as the impact accords with the terms and conditions of the consent. Instead, impacts on Aboriginal heritage would be managed through an ACHMP which is to be agreed to by the proponent, RAPs and DPE. The archaeological management recommendations within this report would normally be incorporated into the ACHMP that is usually formulated following development consent. The ACHMP will also include an unanticipated finds protocol, unanticipated skeletal remains protocol and long-term management of any artefacts.

14.2 HISTORIC HERITAGE

The following recommendations are made based on the impacts associated with the pipeline development and with regard to:

- Legal requirements under the terms of the Heritage Act
- Guidelines presented in the *Burra Charter* (Australia ICOMOS 2013)
- The findings of the current assessment
- The interests of the local community.

Recommendations concerning the historic values within the study area are as follows.

5. Should development consent for the project be granted, archaeological management strategies to manage and mitigate the impact of the pipeline development are set out in **Section 13.2**.
6. To avoid the potential for harm to historic objects on unassessed adjacent landforms, all ground surface disturbing activities must be confined to the assessed study area.
7. Following development consent of the project, impacts on historical heritage would be managed through a HHMP which is to be agreed to by the proponent, local councils and DPE. The archaeological management recommendations within this report would normally be incorporated into the HHMP that is usually formulated following development consent. The HHMP will also include an unanticipated finds protocol.

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APPENDIX 1: ABORIGINAL COMMUNITY CONSULTATION LOG

Date	Organisation	Communication	Contact type
Navin Officer Heritage Consultants (NOHC): Consultation Log			
29/08/2017	National Native Title Tribunal	Confirmation of Native Title Search results	Email
4/09/2017	Blayney Shire Council	Seeking Expressions of Interest from relevant Aboriginal groups and individuals in the Blayney area.	Mail
4/09/2017	Central Tablelands Local Land Services	Seeking Expressions of Interest from relevant Aboriginal groups and individuals in the Blayney area.	Mail
4/09/2017	Native Title Services Corporation Limited	Seeking Expressions of Interest from relevant Aboriginal groups and individuals in the Blayney area.	Mail
4/09/2017	Office of Environment and Heritage	Seeking Expressions of Interest from relevant Aboriginal groups and individuals in the Blayney area.	Mail
4/09/2017	Orange Local Aboriginal Land Council	Seeking Expressions of Interest from relevant Aboriginal groups and individuals in the Blayney area.	Mail
4/09/2017	Office of the Registrar, Aboriginal Land Rights Act 1983	Seeking Expressions of Interest from relevant Aboriginal groups and individuals in the Blayney area.	Mail
6/09/2017	Central Western Daily	Advertisement – Expression of Interest for inclusion as Registered Aboriginal Party	Advertisement – Public Notice
6/09/2017	Western Advocate	Advertisement – Expression of Interest for inclusion as Registered Aboriginal Party	Advertisement – Public Notice
6/09/2017	Lithgow Mercury	Advertisement – Expression of Interest for inclusion as Registered Aboriginal Party	Advertisement – Public Notice
14/09/2017	NSW Office of Environment & Heritage	Identification of known Aboriginal parties who may hold an interest in the development.	Email
11/09/2017	Office of the Registrar Aboriginal Land Rights Act	Confirmation of Registered Aboriginal Owners pursuant to Division 3 of the Aboriginal Land Rights Act 1983 (NSW) search results	email
14/09/2017	Blayney Shire Council	Response to request for advice on holders of cultural knowledge	Mail (received 14/09/2017)
14/09/2017	Orange Local Aboriginal Land Council	Letter inviting registration	Mail
14/09/2017	Neville and Region Landcare	Letter inviting registration	Mail
14/09/2017	NTSCORP Limited	Letter inviting registration	– incorrect and withdrawn
14/09/2017	Blacksheild Lawyers for Wendy Lewis	Letter inviting registration	Letter
19/09/2017	Bathurst Local Aboriginal Land Council	Registered an interest in the project	Email
26/09/2017	Gundungurra Aboriginal Heritage Association Inc	Registered an interest in the project	Phone
27/09/2017	Dhuuluu-Yala Aboriginal Corporation	Registered interest in the project	Email
27/09/2017	Gundungurra Tribal Council Aboriginal Corporation	Registered an interest in the project	Email
28/09/2017	Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC)	Registered interest in the project	Phone
28/09/2017	Wiradjuri Traditional Owners Central West Aboriginal Corporation	Email registered interest in the project	Email
28/09/2017	Neville and Region Landcare	Registered interest in the project	Email

Date	Organisation	Communication	Contact type
28/09/2017	Gunjeewong Cultural Heritage Aboriginal Corporation	Registered interest in the project	Email
28/09/2017	Muragadi heritage Indigenous Corporation	Registered interest in the project	Email
28/09/2017	Murra Bidgee Mullangari Aboriginal Corporation	Registered interest in the project	Email
6/10/2017	All registered	Draft methodology for comment	Letter
9/10/2017	Bathurst Regional Council	Letter identifying interested group	Received via post – very late, letter addressed 19/9/17
11/10/2017	Groups identified by Bathurst Regional Council	Letter inviting registration	Email and mail
13/10/2017	Warrabinga	Registering an interest in the project	Email
13/10/2017	NOHC	Sent Warrabinga the draft methodology for comment	Email
OzArk Environment and Heritage (OzArk): Consultation Log			
25.5.18	Office of Environment and Heritage	Sheridan Baker (SB) sent letter advising of RAPs	Email
25.5.18	Bathurst Local Aboriginal Land Council	SB sent letter advising of RAPs	Email
4.6.18	Bathurst Local Aboriginal Land Council	Rebecca Hardman (RH) sent out stage 2 pkg, closing date 4th July 2018	Email
4.6.18	Dhuuluu-Yala Aboriginal Corporation	RH sent out stage 2 pkg, closing date 4th July 2018	Email
4.6.18	Gundungurra Aboriginal Heritage Association Inc.	RH sent out stage 2 pkg, closing date 4th July 2018	Email
4.6.18	Gundungurra Tribal Council Aboriginal Corporation	RH sent out stage 2 pkg, closing date 4th July 2018	Email
4.6.18	Murra Bidgee Mullangari Aboriginal Corporation	RH sent out stage 2 pkg, closing date 4th July 2018	Email
4.6.18	Wiradjuri Traditional Owners Central West Aboriginal Corporation	RH sent out stage 2 pkg, closing date 4th July 2018	Email
4.6.18	Neville and Region Landcare	RH sent out stage 2 pkg, closing date 4th July 2018	Email
4.6.18	Wellington Valley Wiradjuri Aboriginal Corporation	RH sent out stage 2 pkg, closing date 4th July 2018	Email
4.6.18	Gunjeewong Cultural Heritage Aboriginal Corporation	RH sent out stage 2 pkg, closing date 4th July 2018	Email
4.6.18	Muragadi Heritage Indigenous Corporation	RH sent out stage 2 pkg, closing date 4th July 2018	Email
4.6.18	Warrabinga	RH sent out stage 2 pkg, closing date 4th July 2018	Email
4.6.18	Gunjeewong Cultural Heritage Aboriginal Corporation	RH sent out stage 2 pkg, closing date 4th July 2018. Note different email	Email
4.6.18	Muragadi Heritage Indigenous Corporation	Responded to stage 2 pkg and returned field work form to RH	Email
4.6.18	Murra Bidgee Mullangari Aboriginal Corporation	Responded to stage 2 pkg and returned field work form to RH	Email
5.6.18	Wellington Valley Wiradjuri Aboriginal Corporation	Brad called to inform OzArk he has received the stage 2 package. Brad said he will go through the package and send through the required documentation and response by Monday 11th June.	Phone

Date	Organisation	Communication	Contact type
8.6.18	Wellington Valley Wiradjuri Aboriginal Corporation	Brad responded via email and submitted field work form, Brad also wanted it noted - <i>"Please be aware I also have a European Heritage Interest in this project"</i>	Email
8.6.18	Gundungurra Tribal Council Aboriginal Corporation	Shaun phoned to advise will get paperwork to us Tuesday afternoon and will attend meeting/ induction and is hoping to do fieldwork. RH took call.	Phone
12.6.18	Bathurst Local Aboriginal Land Council	SB rang and left a message requesting if attending AFGM	Phone
12.6.18	Gundungurra Aboriginal Heritage Association Inc.	SB rang and left a message requesting if attending AFGM	Phone
12.6.18	Gundungurra Tribal Council Aboriginal Corporation	SB rang- automated message saying that ' <i>your call could not be completed at this time, please hang up and try again later'</i>	Phone
12.6.18	Murra Bidgee Mullangari Aboriginal Corporation	SB rang and left a message requesting if attending AFGM	Phone
12.6.18	Neville and Region Landcare	SB rang and left a 10 second message asking for a call back	Phone
12.6.18	Gunjeewong Cultural Heritage Aboriginal Corporation	SB rang Cherie's mobile- number disconnected. SB rang Bruce's mobile and left a message requesting if attending AFGM.	Phone
12.6.18	Muragadi Heritage Indigenous Corporation	SB rang and spoke to Tony. Tony confirmed that Jesse would be attending the AFGM.	Phone
12.6.18	Warrabinga	SB rang and left a message requesting if attending AFGM	Phone
11.6.18	Murra Bidgee Mullangari Aboriginal Corporation	Ryan Johnson emailed to advise he will be attending the meeting on the 15th June	Email
11.6.18	Muragadi Heritage Indigenous Corporation	Jess emailed to advise they will have a site officer attending the meeting on the 15th June	Email
13.6.18	Bathurst Local Aboriginal Land Council	RH spoke to Toni Lee about attendance at meeting and induction, Toni advised one of their Reps will be there.	Phone
13.6.18	Dhuuluu-Yala Aboriginal Corporation	Sent reminder email for meeting	Email
13.6.18	Gundungurra Aboriginal Heritage Association Inc.	Sent reminder email for meeting	Email
13.6.18	Gundungurra Tribal Council Aboriginal Corporation	Sent reminder email for meeting	Email
13.6.18	Wiradjuri Traditional Owners Central West Aboriginal Corporation	Sent reminder email for meeting	Email
13.6.18	Gunjeewong Cultural Heritage Aboriginal Corporation	Sent reminder email for meeting	Email
13.6.18	Neville and Region Landcare	RH left a message with child for Lisa Paton to phone back	Phone
13.6.18	Neville and Region Landcare	Lisa phone back, will be attending the meeting this Friday	Phone
13.6.18	Wiradjuri Traditional Owners Central West Aboriginal Corporation	Yanhadarrambal replied via email to advise they will have a representative attend the meeting	Email
19.6.18	Muragadi Heritage Indigenous Corporation	RH spoke to Darlene, enquiring about follow up inductions, RH advised would contact her with more information as soon as she has some	Phone
19.6.18	Wellington Valley Wiradjuri Aboriginal Corporation	Brad responded via email with consolidated response from members	Email
20.6.18	Orange Local Aboriginal Land Council	RH spoke to Annette who indicated they had been speaking to Navin Officer and the client prior to us taking over from the previous consultant and that they had indicated they wanted to be a RAP for the project. RH	Phone

Date	Organisation	Communication	Contact type
		advised of due date of stage 2, 4th July. Annette said would get it back to us urgently	
20.6.18	Orange Local Aboriginal Land Council	RH sent out stage 2 pkg, closing date 4th July 2018	Email
21.6.18	Orange Local Aboriginal Land Council	James responded to stage 2 package. James said they have had extensive discussions with the proponent and previously done work on site for different locations. James indicated he will be in touch soon with further comments	Email
25.6.18	Neville and Region Landcare	RH emailed Lisa to confirm registration details	Email
27.6.18	Bathurst Local Aboriginal Land Council	RH sent out email to organise fieldwork inductions and attached field work survey contract for those who have not already returned. Requested RSVP by 4th July	Email
27.6.18	Dhuuluu-Yala Aboriginal Corporation	RH sent out email to organise fieldwork inductions and attached field work survey contract for those who have not already returned. Requested RSVP by 4th July	Email
27.6.18	Gundungurra Aboriginal Heritage Association Inc.	RH sent out email to organise fieldwork inductions and attached field work survey contract for those who have not already returned. Requested RSVP by 4th July	Email
27.6.18	Gundungurra Tribal Council Aboriginal Corporation	RH sent out email to organise fieldwork inductions and attached field work survey contract for those who have not already returned. Requested RSVP by 4th July	Email
27.6.18	Murra Bidgee Mullangari Aboriginal Corporation	RH sent out email to organise fieldwork inductions and attached field work survey contract for those who have not already returned. Requested RSVP by 4th July	Email
27.6.18	Wiradjuri Traditional Owners Central West Aboriginal Corporation	RH sent out email to organise fieldwork inductions and attached field work survey contract for those who have not already returned. Requested RSVP by 4th July	Email
27.6.18	Muragadi Heritage Indigenous Corporation	RH sent out email to organise fieldwork inductions and attached field work survey contract for those who have not already returned. Requested RSVP by 4th July	Email
27.6.18	Warrabinga	RH sent out email to organise fieldwork inductions and attached field work survey contract for those who have not already returned. Requested RSVP by 4th July	Email
27.6.18	Orange Local Aboriginal Land Council	RH sent out email to organise fieldwork inductions and attached field work survey contract for those who have not already returned. Requested RSVP by 4th July	Email
27.6.18	Murra Bidgee Mullangari Aboriginal Corporation	RH received email confirming wants to be part of induction	Email
27.6.18	Murra Bidgee Mullangari Aboriginal Corporation	RH sent email to confirm Ryan is only RSVP for himself	Email
27.6.18	Neville and Region Landcare	RH received email from Lisa Paton advising she is resigning and handing over to Steve Figures.	Email
29.6.18	Neville and Region Landcare	RH emailed Steve to see if he wished to remain involved with the project and receive updates or if he wished to withdraw	Email
29.6.18	Murra Bidgee Mullangari Aboriginal Corporation	RH received email confirming who will be part of the inductions	Email
29.6.18	Neville and Region Landcare	Steve replied and requested to be updated on the status of the project	Email
29.6.18	Neville and Region Landcare	RH sent email with stage 2 pkg, advised of closing date and that minutes will be sent when released	Email
3.7.18	Bathurst Local Aboriginal Land Council	RH sent reminder of RSVP to be involved with the induction to the project	Email

Date	Organisation	Communication	Contact type
3.7.18	Dhuuluu-Yala Aboriginal Corporation	RH sent reminder of RSVP to be involved with the induction to the project	Email
3.7.18	Gundungurra Aboriginal Heritage Association Inc.	RH sent reminder of RSVP to be involved with the induction to the project	Email
3.7.18	Gundungurra Tribal Council Aboriginal Corporation	RH sent reminder of RSVP to be involved with the induction to the project	Email
3.7.18	Wiradjuri Traditional Owners Central West Aboriginal Corporation	RH sent reminder of RSVP to be involved with the induction to the project	Email
3.7.18	Warrabinga	RH sent reminder of RSVP to be involved with the induction to the project	Email
3.7.18	Orange Local Aboriginal Land Council	RH sent reminder of RSVP to be involved with the induction to the project	Email
3.7.18	Neville and Region Landcare	RH sent reminder of RSVP to be involved with the induction to the project	Email
3.7.18	Orange Local Aboriginal Land Council	James phoned to confirm will be attending induction	Phone
4.7.18	Bathurst Local Aboriginal Land Council	RH received contract form and confirmation wants to be inducted	Email
9.7.18	Bathurst Local Aboriginal Land Council	RH sent copy of meeting minutes	Email
9.7.18	Dhuuluu-Yala Aboriginal Corporation	RH sent copy of meeting minutes	Email
9.7.18	Gundungurra Aboriginal Heritage Association Inc.	RH sent copy of meeting minutes	Email
9.7.18	Gundungurra Tribal Council Aboriginal Corporation	RH sent copy of meeting minutes	Email
9.7.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH sent copy of meeting minutes	Email
9.7.18	Wiradjuri Traditional Owners Central West Aboriginal Corporation	RH sent copy of meeting minutes	Email
9.7.18	Neville and Region Landcare	RH sent copy of meeting minutes	Email
9.7.18	Wellington Valley Wiradjuri Aboriginal Corporation	RH sent copy of meeting minutes	Email
9.7.18	Gunjeewong Cultural Heritage Aboriginal Corporation	RH sent copy of meeting minutes	Email
9.7.18	Muragadi Heritage Indigenous Corporation	RH sent copy of meeting minutes	Email
9.7.18	Warrabinga	RH sent copy of meeting minutes	Email
9.7.18	Orange Local Aboriginal Land Council	RH sent copy of meeting minutes	Email
9.7.18	Wellington Valley Wiradjuri Aboriginal Corporation	RH received email confirming minutes received	Email
9.7.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH received email enquiring of induction date	Email
9.7.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH replied confirming will be in touch with an exact date this week and induction likely to be in next 2 weeks	Email
9.7.18	Orange Local Aboriginal Land Council	RH received email confirming they are a RAP for the project and wanting to ensure they will be consulted for the project	Email
9.7.18	Orange Local Aboriginal Land Council	RH confirmed they are a RAP for the project and the meeting minutes were prior to them coming on board.	Email

Date	Organisation	Communication	Contact type
9.7.18	Orange Local Aboriginal Land Council	RH sent invitation to induction. RSVP 17th July 2018. induction 20th July 2018 10:30am	Email
9.7.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH sent invitation to induction. RSVP 17th July 2018. induction 20th July 2018 10:30am	Email
9.7.18	Muragadi Heritage Indigenous Corporation	RH sent invitation to induction. RSVP 17th July 2018. induction 20th July 2018 10:30am	Email
10.7.18	Gundungurra Tribal Council Aboriginal Corporation	RH received phone call advising Shaun had been unavailable due to passing of Elders. He wished to be included in the upcoming induction and may supply feedback on minutes and methodology after meeting tomorrow. Shaun was advised they needed to attend the induction to be considered for fieldwork	Phone
10.7.18	Gundungurra Tribal Council Aboriginal Corporation	RH sent invitation to induction. RSVP 17th July 2018. Induction 20th July 2018 10:30am.	Email
10.7.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH received email notifying of mix up between individuals and companies on minutes	Email
10.7.19	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH responded to email	Email
16.7.18	Orange Local Aboriginal Land Council	RH phoned to confirm will be attending induction and to also let Annette know will be sending an invitation to fieldwork through for some fieldwork commencing straight after the induction. Annette confirmed she will be having 2 people inducted and 1 able to attend fieldwork. Will get contract and workers comp through shortly	Phone
16.7.18	Gundungurra Tribal Council Aboriginal Corporation	RH phoned. No answer.	Phone
16.7.18	Bathurst Local Aboriginal Land Council	RH phoned to see if will be attending induction, was advised unsure yet will hopefully know tomorrow. If we don't hear assume yes	Phone
16.7.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH phoned. No answer.	Phone
16.7.18	Muragadi Heritage Indigenous Corporation	RH phoned. No answer.	Phone
17.7.18	Gundungurra Tribal Council Aboriginal Corporation	RH sent email to request confirmation of attending the induction, completed contract and current insurances.	Email
17.7.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH forwarded original email request confirmation of attendance at the induction on Friday	Email
17.7.18	Muragadi Heritage Indigenous Corporation	RH forwarded original email request confirmation of attendance at the induction on Friday	Email
18.7.18	Wellington Valley Wiradjuri Aboriginal Corporation	RH sent response to feedback given for Stage 2	Email
20.7.18	Orange Local Aboriginal Land Council	RH phoned to advise the fieldwork is cancelled due to snow. Induction will go ahead	Phone
25.7.18	Bathurst Local Aboriginal Land Council	RH phoned and left a message to call back	Phone
25.7.18	Bathurst Local Aboriginal Land Council	RH phoned and spoke to Toni Lee, explained all inductions have been run and fieldwork is starting Tuesday next week in their area. Explained that we cannot include them unless they are inducted. Discussed arranging a once off extra induction for them either Friday or Monday if they want to be part of the fieldwork. Toni will call the site officer and call me back if they want to arrange an induction	Phone

Date	Organisation	Communication	Contact type
26.7.18	Bathurst Local Aboriginal Land Council	SR received a call from Toni advising that Colleen Fisk would be able to attend on Friday 27 July or Monday 30 July. SR let her know that she would call Regis to see if an induction is available on those dates.	Phone
26.7.18	Bathurst Local Aboriginal Land Council	SR sent Toni an email confirming an induction for Monday 30 July 2018.	Email
27.7.18	Bathurst Local Aboriginal Land Council	SR called Toni to confirm the induction in Blayney at 11:30am on Monday 30 July 2018	Phone
27.7.18	Bathurst Local Aboriginal Land Council	SB rang and left a message to call back re fieldwork on Wednesday and Thursday (1 & 2 August)	Phone
27.7.18	Wellington Valley Wiradjuri Aboriginal Corporation	SB rang and spoke to Brad. Confirmed availability for the 1&2 August. SB to follow through with letter of offer on Monday	Phone
30.7.18	Bathurst Local Aboriginal Land Council	SB rang and spoke to Toni Lee. Confirmed availability for the 1&2 August. SB to follow through with letter of offer, and the LALC will send through workers compensation certificate	Phone
30.7.18	Bathurst Local Aboriginal Land Council	SB received valid workers compensation certificate	Email
30.7.18	Wellington Valley Wiradjuri Aboriginal Corporation	SB sent letter of offer for the fieldwork	Email
30.7.18	Bathurst Local Aboriginal Land Council	SB sent letter of offer for the fieldwork	Email
03.8.18	Bathurst Local Aboriginal Land Council	AC sent email with post fieldwork update. Was done at request of RAP site officers.	Email
03.8.18	Wellington Valley Wiradjuri Aboriginal Corporation	AC sent email with post fieldwork update. Was done at request of RAP site officers.	Email
10.8.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH received email requesting details of fieldwork	Email
10.8.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH replied with details of fieldwork status	Email
10.8.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH received phone call from Darleen regarding when fieldwork will commence. Requested to be kept updated on fieldwork progress	Phone
21.8.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH emailed to request Aboriginal contract form be updated with site officer that was inducted and requested copy of public liability and workers compensation certificate.	Email
21.8.18	Muragadi Heritage Indigenous Corporation	RH emailed to request Aboriginal contract form be updated with site officer that was inducted and requested copy of public liability and workers compensation certificate.	Email
21.8.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH received insurances and updated Aboriginal contract	Email
21.8.18	Muragadi Heritage Indigenous Corporation	RH received insurances and updated Aboriginal contract	Email
22.8.18	Bathurst Local Aboriginal Land Council	RH sent letter of offer for the fieldwork	Email
22.8.18	Orange Local Aboriginal Land Council	RH sent letter of offer for the fieldwork	Email
22.8.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH sent letter of offer for the fieldwork	Email
22.8.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH received email enquiring if there are alternate dates	Email

Date	Organisation	Communication	Contact type
22.8.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH responded to email to advise this was the only dates available now	Email
22.8.18	Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage	RH received phone call from Darleen Murra Bidgee are unable to attend fieldwork on the dates provided.	Email
21.8.18	Muragadi Heritage Indigenous Corporation	RH sent letter of offer for the fieldwork	Email
27.8.18	Gundungurra Tribal Council Aboriginal Corporation	RH received email enquiring when field work is commencing	Email
28-Aug-18	Bathurst Local Aboriginal Land Council	SB left a message for Toni Lee to call back re fieldwork	Phone
28-Aug-18	Orange Local Aboriginal Land Council	SB received a call from Annette confirming that Dougie will be attending tomorrow and that 8:40 is a better time to meet up	Phone
28-Aug-18	Bathurst Local Aboriginal Land Council	SB received a call from Toni Lee - confirming that Thursday fieldwork was fine and that Colleen Fisk will be there at 8:30	Phone
29.8.18	Gundungurra Tribal Council Aboriginal Corporation	RH responded fieldwork has commenced and that a Regis induction were required to be considered	Email
29.8.18	Gundungurra Tribal Council Aboriginal Corporation	RH received phone call, unhappy not included in fieldwork and wants to be inducted.	Email
21.9.18	Warrabinga	RH phoned lances mobile. No answer.	Phone
21.9.18	Warrabinga	RH phoned Warrabinga landline and left message	Phone
21.9.18	Warrabinga	RH phoned Black Shield lawyers to check if Warrabinga was still operating and if Simon had alternative contact details. Simon advised Lance is currently in Japan.	Phone
21.9.18	Warrabinga	RH received call back from Natalie at Warrabinga landline. She advised both email addresses we have are correct however they have been having issues with them and the phones for over a month. Natalie said she is confident Lance will want to be inducted and included with fieldwork. Lance is due back early October.	Phone
21.9.18	Warrabinga	RH sent email to both emails to organise when Lance is free for an induction and attached stage 2 for their records. RH requested they send a Read receipt to confirm receiving the email	Email
10.10.18	Warrabinga	RH phoned Lance's mobile. Lance is back in Australia but has not checked his emails since returning. He will look for induction email and reply within the hour	Phone
12.10.18	Warrabinga	RH received email confirming interest in induction and no preference of day	Email
12.10.18	Warrabinga	RH emailed to confirm Lance is aware no fees offered and see how far the site officer will be traveling for the induction	Email
16.10.18	Warrabinga	RH phoned - no answer.	Phone
16.10.18	Warrabinga	RH phoned and left message with staff	Phone
17.10.18	Warrabinga	RH phoned - no answer.	Phone
18.10.18	Warrabinga	RH received phone call from Site officer to be inducted. Confirmed happy to travel and possibly stay overnight to attend induction at own cost. RH will confirm induction date and email him with Lance CC'ed in.	Phone
25.10.18	Warrabinga	RH sent invite to induction	Email
25.10.19	Warrabinga	RH received email from Tyler, he will be attending induction	Email
7.11.18	Warrabinga	RH sent Invite to fieldwork	Email
7.11.18	Bathurst Local Aboriginal Land Council	RH sent Invite to fieldwork	Email

Date	Organisation	Communication	Contact type
7.11.18	Muragadi Heritage Indigenous Corporation	RH sent Invite to fieldwork	Email
9.11.18	Muragadi Heritage Indigenous Corporation	RH received email wanting to confirm fieldwork dates	Email
9.11.18	Muragadi Heritage Indigenous Corporation	RH received copy of Workers compensation and confirming will attend	Email
20.11.18	Bathurst Local Aboriginal Land Council	RH phoned, confirmed will be attending fieldwork	Phone
21.11.18	Warrabinga	RH phoned and spoke to Lance, confirmed Tyler will be attending fieldwork	Phone
28.11.18	Bathurst Local Aboriginal Land Council	Alyce Cameron (AC) rang site officer (Colleen Fisk) to let her know fieldwork was cancelled for Wednesday 28 November 2018 due to wet weather.	Phone
28.11.18	Muragadi Heritage Indigenous Corporation	AC rang site officer (Shaun Carroll) to let him know fieldwork was cancelled for Wednesday 28 November 2018 due to wet weather.	Phone
28.11.18	Bathurst Local Aboriginal Land Council	AC rang site officer (Colleen Fisk) to let her know fieldwork was cancelled for Thursday 29 November 2018 due to area being too wet to allow access. AC said OzArk would reschedule fieldwork for two weeks' time.	Phone
28.11.18	Muragadi Heritage Indigenous Corporation	AC rang site officer (Shaun Carroll) to let him know fieldwork was cancelled for today and for Thursday 29 November 2018 due to area being too wet to allow access. AC said OzArk would reschedule fieldwork for two weeks' time.	Phone
29.11.18	Bathurst Local Aboriginal Land Council	RH sent Invite to fieldwork	Email
29.11.18	Muragadi Heritage Indigenous Corporation	RH sent Invite to fieldwork	Email
29.11.18	Warrabinga	RH rang and spoke to Lance. Re: extra paperwork and medicals for Centennial Coal	Phone
29.11.18	Warrabinga	RH sent paperwork for Centennial Coal	Email
29.11.18	Wellington Valley Wiradjuri Aboriginal Corporation	RH phoned and left message to discuss paperwork	Phone
29.11.18	Wellington Valley Wiradjuri Aboriginal Corporation	RH sent paperwork for Centennial Coal	Email
4.12.18	Gunjeewong Cultural Heritage Aboriginal Corporation	SB received phone call, will get RH to phone back	Phone
5.12.18	Gunjeewong Cultural Heritage Aboriginal Corporation	RH phoned and left message	Phone
5.12.18	Muragadi Heritage Indigenous Corporation	Confirmed will be attending fieldwork	Email
6.12.18	Bathurst Local Aboriginal Land Council	RH phoned, confirmed will be attending fieldwork	Phone
6.12.15	Gunjeewong Cultural Heritage Aboriginal Corporation	RH phoned and left message	Phone
12.12.18	Muragadi Heritage Indigenous Corporation	RH received invoice for fieldwork	Email
12.12.18	Muragadi Heritage Indigenous Corporation	RH replied with amendments	Email
12.12.18	Bathurst Local Aboriginal Land Council	SB received invoice for fieldwork	Email
12.12.18	Muragadi Heritage Indigenous Corporation	RH received updated invoice	Email

Date	Organisation	Communication	Contact type
14.12.18	Warrabinga	RH tried to phone all 3 numbers to chase paperwork, all were no answer	Phone
14.12.18	Warrabinga	RH received phone call from Tyler, RH sent forms through. Tyler will try have completed before Christmas	Phone
20.12.18	Wellington Valley Wiradjuri Aboriginal Corporation	RH phoned Brad back, he noted his medical is 3rd Jan, will send paperwork through ASAP	Phone
3.1.19	Wellington Valley Wiradjuri Aboriginal Corporation	RH received copy of Brads medical	Email
15.1.19	Warrabinga	RH tried to phone both Lance & Tyler to chase paperwork for Centennial induction - no answer	Phone
15.1.19	Warrabinga	RH sent email requesting urgently to be contacted with an update on the paperwork	Email
15.1.19	Warrabinga	Email to all 3 addresses came back undeliverable	Email
16.1.19	Warrabinga	RH received phone call from Tyler, said he sent paperwork in December however did not realise it bounced back. Will resend today	Phone
16.1.19	Warrabinga	RH received email with most of the paperwork	Email
17.1.19	Warrabinga	RH sent remaining paperwork template through	Email
23.1.19	Warrabinga	RH phoned all 3 numbers, only Lances worked, left message on Lance's mobile	Phone
23.1.19	Warrabinga	RH sent email to Tyler requesting he call ASAP	Email
4.2.19	Warrabinga	RH phoned Tyler's mobile - Call cannot be connected	Phone
4.2.19	Warrabinga	RH phoned and left message on Lance mobile to call back ASAP	Phone
4.2.19	Warrabinga	RH sent email requesting call back urgently as waiting on letter to finalise induction and fieldwork	Email
4.2.19	Warrabinga	RH received bounce back from Lance's email	Email
4.2.19	Warrabinga	RH received phone call from Tyler, paperwork should be through today. Confirmed Tyler's mobile number. He is unsure if landline is no longer current and if Lance is having issues with his email however said he did receive the one that appeared bounced back	Phone
4.2.19	Warrabinga	Tyler emailed alternative email for Warrabinga	Email
4.2.19	Warrabinga	RH thanked Tyler	Email
12.2.19	Warrabinga	RH phoned Tyler to check when letter will be sent, advised needs urgently	Phone
13.2.19	Warrabinga	RH received letter of competency from Lance	Email
13.2.19	Warrabinga	RH thanked Lance	Email
13.2.19	Warrabinga	RH emailed Tyler to thank him for chasing it up	Email
14.2.19	Warrabinga	RH sent email requesting copies of white card and driver's licence	Email
14.2.19	Wellington Valley Wiradjuri Aboriginal Corporation	RH sent email requesting copies of white card and driver's licence	Email
14.2.19	Warrabinga	RH received White card and Drivers Licence	Email
15.2.19	Wellington Valley Wiradjuri Aboriginal Corporation	RH received White card and Drivers Licence	Email
18.2.19	Wellington Valley Wiradjuri Aboriginal Corporation	RH phoned to see if available for fieldwork on 4th March. Brad to call back	Phone
18.2.19	Warrabinga	RH phoned to see if available for fieldwork on 4th March. Tyler to call back	Phone
26.2.19	Wellington Valley Wiradjuri Aboriginal Corporation	RH received call from Brad re upcoming fieldwork	Email
26.2.19	Warrabinga	RH sent Invite to fieldwork on 4th - 7th March 2019	Email

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26.2.19	Wellington Valley Wiradjuri Aboriginal Corporation	RH sent Invite to fieldwork on 4th - 7th March 2019	Email
26.2.19	Wellington Valley Wiradjuri Aboriginal Corporation	RH received email confirming Brad will attend fieldwork and copies of his workers compensation insurance	Email
26.2.19	Warrabinga	AC received phone call confirming Tyler will attend fieldwork	Phone
27.2.19	Warrabinga	RH phoned and spoke to Lance, he will send copy of workers compensation tonight	Phone
28.2.19	Warrabinga	RH phoned and left message for Lance requesting copy of workers compensation	Phone
28.2.19	Warrabinga	RH phoned Tyler, automated message saying call cannot be connected	Phone
28.2.19	Warrabinga	RH Phoned and left message for lance requesting copy of workers compensation	Phone
28.2.19	Warrabinga	RH phoned Tyler, automated message saying call cannot be connected	Phone
28.2.19	Warrabinga	RH sent email chasing copy of workers compensation	Email
28.2.19	Warrabinga	RH received copy of workers compensation	Email
13.5.19	Bathurst Local Aboriginal Land Council	RH sent a project update letter	Email
13.5.19	Dhuuluu-Yala Aboriginal Corporation	RH sent a project update letter	Email
13.5.19	Gundungurra Aboriginal Heritage Association Inc	RH sent a project update letter	Email
13.5.19	Gundungurra Tribal Council Aboriginal Corporation	RH sent a project update letter	Email
13.5.19	Murra Bidgee Mullangari Aboriginal Corporation	RH sent a project update letter	Email
13.5.19	Wiradjuri Traditional Owners Central West Aboriginal Corporation	RH sent a project update letter	Email
13.5.19	Neville and Region Landcare	RH sent a project update letter	Email
13.5.19	Wellington Valley Wiradjuri Aboriginal Corporation	RH sent a project update letter	Email
13.5.19	Gunjeewong Cultural Heritage Aboriginal Corporation	RH sent a project update letter	Email
13.5.19	Muragadi Heritage Indigenous Corporation	RH sent a project update letter	Email
13.5.19	Warrabinga	RH sent a project update letter	Email
13.5.19	Orange Local Aboriginal Land Council	RH sent a project update letter	Email
20.5.19	Bathurst Local Aboriginal Land Council	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email
20.5.19	Dhuuluu-Yala Aboriginal Corporation	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email
20.5.19	Gundungurra Aboriginal Heritage Association Inc	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email
20.5.19	Gundungurra Tribal Council Aboriginal Corporation	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email
20.5.19	Murra Bidgee Mullangari Aboriginal Corporation	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email
20.5.19	Wiradjuri Traditional Owners Central West Aboriginal Corporation	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email

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20.5.19	Neville and Region Landcare	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email
20.5.19	Wellington Valley Wiradjuri Aboriginal Corporation	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email
20.5.19	Gunjeewong Cultural Heritage Aboriginal Corporation	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email
20.5.19	Muragadi Heritage Indigenous Corporation	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email
20.5.19	Warrabinga	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email
20.5.19	Orange Local Aboriginal Land Council	AC sent Stage 4 letter and draft report. Stage 4 closes COB 18 June 2019.	Email
28.5.19	Murra Bidgee Mullangari Aboriginal Corporation	RH sent updated stage 4 draft report and cover letter. Feedback closes 18.6.19	Email
28.5.19	Wiradjuri Traditional Owners Central West Aboriginal Corporation	RH sent updated stage 4 draft report and cover letter. Feedback closes 18.6.19	Email
28.5.19	Neville and Region Landcare	RH sent updated stage 4 draft report and cover letter. Feedback closes 18.6.19	Email
28.5.19	Wellington Valley Wiradjuri Aboriginal Corporation	RH sent updated stage 4 draft report and cover letter. Feedback closes 18.6.19	Email
28.5.19	Gunjeewong Cultural Heritage Aboriginal Corporation	RH sent updated stage 4 draft report and cover letter. Feedback closes 18.6.19	Email
28.5.19	Muragadi Heritage Indigenous Corporation	RH sent updated stage 4 draft report and cover letter. Feedback closes 18.6.19	Email
28.5.19	Warrabinga	RH sent updated stage 4 draft report and cover letter. Feedback closes 18.6.19	Email
28.5.19	Orange Local Aboriginal Land Council	RH sent updated stage 4 draft report and cover letter. Feedback closes 18.6.19	Email
28.5.19	Orange Local Aboriginal Land Council	AC took phone call from Phillip New. Phillip wanted the water testing results, and AC referred him onto Anthony Weinburg of Blakely's Environmental since OzArk didn't do the water testing for the EIS. Phillip also mentioned that Orange LALC is having a meeting with other Wiradjuri Councils next week and feedback will be provided after.	Phone
28.5.19	Murra Bidgee Mullangari Aboriginal Corporation	AC took phone call from Darleen. Wanted some clarification surrounding the pipeline alignment adjustments which warranted re-sending the report. AC explained where the adjustments were and why Bald Hill IF-1 was now being impacted, but that the study area had been surveyed. Darleen also wanted to make sure that RAPs had been on site during all surveys, which AC explained they had been and referred her to Section 4.2 of the report. Darleen said she would send an email confirming that review of report had occurred, and her corporation were okay with results.	Phone
28.5.19	Murra Bidgee Mullangari Aboriginal Corporation	RH received response: I have read the changes that have been included in this email for the above project, as per our discussion today with Alyce I don't have a problem with these changes.	Email
31.5.19	Muragadi Heritage Indigenous Corporation	RH received response: I have read the edits for the draft report ACHA, proposed McPhillamys Gold project, I don't see any problems with these. Please feel free to contact me	Email
12.6.19	Bathurst Local Aboriginal Land Council	RH phoned and left message following you to see if they have any feedback as stage 4 closes on the 18th	Phone
12.6.19	Bathurst Local Aboriginal Land Council	RH sent reminder email of Stage 4 close date and requested all feedback be sent in before 18th June	Email

Date	Organisation	Communication	Contact type
12.6.19	Dhuuluu-Yala Aboriginal Corporation	RH sent reminder email of Stage 4 close date and requested all feedback be sent in before 18th June	Email
12.6.19	Gundungurra Aboriginal Heritage Association Inc	RH phoned - N/A	Phone
12.6.19	Gundungurra Aboriginal Heritage Association Inc	RH sent reminder email of Stage 4 close date and requested all feedback be sent in before 18th June	Email
12.6.19	Gundungurra Tribal Council Aboriginal Corporation	RH sent reminder email of Stage 4 close date and requested all feedback be sent in before 18th June	Email
12.6.19	Wiradjuri Traditional Owners Central West Aboriginal Corporation	RH sent reminder email of Stage 4 close date and requested all feedback be sent in before 18th June	Email
12.6.19	Neville and Region Landcare	RH sent reminder email of Stage 4 close date and requested all feedback be sent in before 18th June	Email
12.6.19	Wellington Valley Wiradjuri Aboriginal Corporation	RH spoke to Brad, he has been in the field until today. Will be having a meeting and will send us feedback before the 18th	Phone
12.6.19	Gunjeewong Cultural Heritage Aboriginal Corporation	RH sent reminder email of Stage 4 close date and requested all feedback be sent in before 18th June	Email
12.6.19	Warrabinga	RH phoned and left message on lances mobile saying is following up for feedback as stage 4 closes on the 18th	Phone
12.6.19	Warrabinga	Lance phoned RH back, they are writing feedback today. RH said if we have it before the 18th would be great	Phone
12.6.19	Orange Local Aboriginal Land Council	RH phoned N/A	Phone
12.6.19	Orange Local Aboriginal Land Council	RH sent reminder email of Stage 4 close date and requested all feedback be sent in before 18th June	Email
12.6.19	Wellington Valley Wiradjuri Aboriginal Corporation	AC and RH received a letter via email from WVVAC regarding the draft report. WVVAC do not want specific information released but are supportive of the recommendations outlined in the report with minor modifications.	Email
17.6.19	Orange Local Aboriginal Land Council	RH received email: I would like to request an extension to reply to the Aboriginal Cultural Heritage Assessment for the proposed McPhillamys Gold Project Water Pipeline. We have arranged a meeting with Phil Gunn and Andrew Wannan from Regis in relation to the pipeline on 25/06/2017 and would like to speak with them prior to our response. Could we please extend the deadline to 09/07/2019?	Email
19.6.19	Orange Local Aboriginal Land Council	Anthony (Blakely's Environmental) responded: Hi Lisa, Thanks for taking the time to receive my phone call. As discussed, we are unable to accommodate an extension for your feedback on the Pipeline Development ACHAR till the 9th of July, given the statutory deadlines Regis needs to meet to have the EIS submitted in mid-July. We are aware that Orange LALC has been asked to provide feedback on both the mine and pipeline developments in May/June. As such we can grant an extension of time till Friday 28 June for feedback from Orange LALC as agreed to in our conversation on the phone.	Email
1.7.19	Wellington Valley Wiradjuri Aboriginal Corporation	AC replied to email and letter from Brad Bliss regarding report feedback from Stage 4. AC wanted clarification about what WVVAC is ok with having included in the report in terms of information and the Stage 4 response letter.	Email

Stage 1 Advertisement for expressions of interest**ABORIGINAL HERITAGE ASSESSMENT**

Navin Officer Heritage Consultants Pty Ltd has been commissioned by Regis Resources Ltd (RRL) to undertake a cultural heritage assessment of Centennial to McPhillamys Water Pipeline

The investigation is required to assess the potential impact of the proposed development of these lands on Aboriginal cultural heritage values.

The area subject to investigation consists of approximately 90 kilometres in length and would run adjacent to existing easements for power and gas between Wallerwang and McPhillamys.

We are implementing the NSW Office of Environment and Heritage *Aboriginal cultural heritage consultation requirements for proponents 2010* for this project.

We invite Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of objects and places in the investigation area, to register an interest in a process of community consultation.

The purpose of this consultation is to assist the proponent and government authorities in the preparation and assessment of legislative requirements, permits and approvals.

Please forward expressions of interest to:

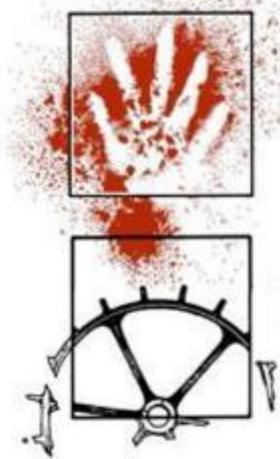
The Secretary
Navin Officer Heritage Consultants Pty Ltd
4/71 Leichhardt Street
Kingston ACT 2604

The closing date for this registration of interest is 20th September 2017

Stage 1 Example of letter sent to Aboriginal stakeholders for expressions of interest

14th September 2017

Chairperson
[REDACTED]



**Navin
Officer**
heritage
consultants
pty ltd
abn: 28 092 901 605

Dear Chairperson,

Re: Implementation of the OEH Aboriginal cultural heritage consultation requirements for proponents 2010 for the Centennial to McPhillamys Water Pipeline

Navin Officer Heritage Consultants Pty Ltd has been commissioned by Regis Resources to conduct a cultural heritage assessment of the Centennial to McPhillamys Water Pipeline project (please see attached map).

We are required to implement the Office of Environment and Heritage's *Aboriginal cultural heritage consultation requirements for proponents 2010* for this project. I am therefore writing to inform you of this development proposal and associated cultural heritage assessment and invite registration as an interested group.

The closing date for this registration of interest is 28th September 2017.

Please respond in writing to:

The Secretary
Navin Officer Heritage Consultants Pty Ltd
4/71 Leichhardt Street
KINGSTON ACT 2604

or by fax to: (02) 6282 9416

or by email to: nhayes@nohc.com.au

Please note it is a requirement of the *Aboriginal cultural heritage consultation requirements for proponents 2010* that we provide your name to the NSW Office of Environment and Heritage and to the Local Aboriginal Land council unless you specify otherwise.

Yours faithfully,

Nicola Hayes

(Ms) Nicola Hayes
Principal Archaeologist

Number 4, Kingston Warehouse
71 Leichhardt St, Kingston ACT 2604
ph 02 6282 9415 fax 02 6282 9416
navinofficer@nohc.com.au
www.nohc.com.au

Stage 2/3 Example of invitation sent to RAPs for Regis induction



OzArk Environmental & Heritage Management Pty Ltd
 ABN: 59 104 582 354

Should you not be able to attend the meeting, you are still welcome to provide feedback on the documents enclosed via phone, email or letter/fax.

This meeting is scheduled to be held:

Date: **Friday 15th June 2018**
 Time: 10:30 am
 Place: 57 Adelaide Street (corner Water St)
 Blayney NSW
(A light lunch will be provided)

In addition to comments on the draft methodology, if you can share any Aboriginal cultural heritage knowledge relevant to the proposed study area, we welcome this input so as to improve our assessment outcomes and to ensure Aboriginal cultural values are considered. OzArk is required to give you 28 days to supply feedback on the attached documents. This period closes **5pm on Wednesday 4th July 2018**. If you need any help supplying feedback please do not hesitate to contact our office.

If you wish to attend the meeting, we ask that you RSVP by contacting our office through telephone or email, by no later than **COB Monday 11th June 2018**.

Please also find attached engagement documents for RAP Site Officers wishing to be involved in fieldwork. Please complete and return by either mail or email to our office. If more convenient these documents can be brought along to the meeting on the 15th June 2018.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office.

Important dates to remember

RSVP for Meeting	11 June 2018
Meeting including fieldwork induction	15 June 2018
Closing date for feedback on the methodology	4 th July 2018

Kind regards,



Sheridan Baker
Community Liaison Officer

Stage 2/3: Minutes from AFGM held on 15 June 2018 **Meeting Minutes****Call to order**

A meeting and fieldwork induction for the Aboriginal Cultural Heritage Survey for the proposed McPhillamys Gold Project - Pipeline Development was held at Regis Resources, 57 Adelaide Street, Blayney NSW 2799 on Friday 15th June 2018 commencing at 11:07am and Closing at 14:00pm.

Attendees

Attendees included:

- ~ Brad Bliss, WWAC
- ~ Lisa Paton, Neville & regional landcare
- ~ Cherie Turrise, Gunjeewong Cultural Heritage Aboriginal Corporation
- ~ Bruce Turrise, Gunjeewong Cultural Heritage Aboriginal Corporation
- ~ Michael Coote, Regis Resources
- ~ Chris Roach, Regis Resources
- ~ Sarah Parfett, Regis Resources
- ~ Jodie Benton, OzArk Environmental & Heritage Management Pty Ltd
- ~ Rebecca Hardman, OzArk Environmental & Heritage Management Pty Ltd

RAPs not in attendance

RAPs not in attendance included:

- ~ Brian Grant, Dhuuluu-Yala Aboriginal Corporation
- ~ Sharon Hall, Gundungurra Aboriginal Heritage Association inc
- ~ Shaun Brown, Gundungurra Tribal Council Aboriginal Corporation
- ~ Yanhadarrambal Jade, Wiradyuri Traditional Owners Central West Aboriginal Corporation
- ~ Lance Syme, Warrabinga
- ~ Toni Lee, Bathurst Local Aboriginal Land Council

Apologies

Apologies received from RAPs not able to attend included:

- ~ Shaun Carroll, Murra Bidgee Mullangari Aboriginal Corporation, Cultural Heritage (Vehicle accident)
- ~ Adam King, Muragadi Heritage Indigenous Corporation (Vehicle accident)

Proceedings

Background to project

- Regis have fast growth with three mines in Western Australia and are in the top five gold producers in Australia.
- Three drill programs have been conducted at the proposed McPhillamys site since 2013 defining approximately 2.2 million ounces of gold.
- Regis displayed a map outlining the proposed mine site which expanded from Vittoria Road, Guyong NSW to the Mitchell Hwy, Guyong NSW and noted having approx. 100 land owners within a 5km area around the proposed pit.
- The proposed site is expected to extract approx. 7million tonnes per annum.
- Approx. ¾ of a ton of water is required to treat 1 ton of ore, recycling around 65% of the water used.
- The proposed pipeline will transport the required water to run the plant. Approx. 13mg/L of water per day will be transported along the pipeline with emphasis on the current water supply option, being excess mine water that cannot be used for discharge into creeks.
- The pipeline route has been re-routed from initially being through 100 landowners to currently 18-19 landowners and state forests.
- Regis are currently finalising the site layout keeping the community and environment in mind, consulting with the landholders.
- Regis are hoping over the next 6 months to have the Environmental Impact Statement (EIS) drafted. With the anticipation of commencing construction of the site and pipeline this time next year.
- *Discussion between Regis and Brad Bliss: Regarding if the CCC has been enforced. It was believed at this stage there was not a requirement for the CCC however it would be looked at should the community feedback state otherwise.*
- Regis outlined the fact they had taken an extensive time planning the site and pipeline route, endeavoring to minimise the impact on the community and environment. Currently up to version 32 of the site layout.
- The impact of noise, the visual amenity to others passing by, the environment and the community are all factors they have taken into account with the main focus being on the community, then the environment.
- Regis acknowledge it is difficult not to have a large impact with such a large footprint.
- *Discussion between Regis and Lisa Paton: regarding the names of the properties within the site and establishing that the road through the center of the site will be closed. Regis confirmed it would be closed however the impact to traffic would be very minimal with alternative routes nearby. There are four current property names within the site, Regis recalled 3: Kings Station, Koomoorang and Ingledoon (an old homestead) Ingledoon was discussed and thought to be the old Dungeon property. It was established the site encompassed 2100ha.*

The Pipeline

- It was noted that pumping station will be spread over 4 sites, some locations of which are known, some still being determined.
- *Brad Bliss noted he has knowledge around the Energy Australia power plant where some water storage is currently.*

- The exact route has not yet been finalised however much for the route runs down roads or disturbed areas where possible.
- Off the displayed map, red lines indicated unconfirmed route sections.
- The pipeline route follows road reserves where possible. The listing below is from where the water is drawn, the roads it follows or crosses to the site location.
 - John Mackey drive
 - Portland common road
 - Through a forestry route along road reserves
- *Cherie Turrise noted her family used to have 100 acres on the corner of sunny corner Rd.*
- At the Bathurst, Lithgow border there is an option for a 2nd pump station, this would allow the use of a flexible pipe rather than steel due to the elevation increasing from approx. 900 to 1260. The flexible pipe will allow for flexibility in the route for example around trees to minimise impact.
 - Sunny Corner Rd
 - Forestry Rd with the possibility a few pine trees will need to be removed
- The Gaol infrastructure will be avoided, the route changes after Sunny Corner Rd to dip around and join back on further down.
 - Roads are then followed until meeting the Greater Western Hwy.
 - Route then through landholders with one landholder just before the railway line still in negotiation.
- *Jodie Benton noted a 20m corridor along the roads will be surveyed for the heritage section.*
 - Tarana Rd
 - O'Connell Rd
 - Along a Private Landholders Rd
 - Thompsons Hill Retreat Rd
 - White Rock Rd
 - Underboar under the Macquarie River
 - Montavella Rd
 - Gormans Hill Rd
 - Along a Private Landholders Rd
 - Through the bike park
- A 3rd pump station will be at the Landfill site (*Brad Bliss noted he has European knowledge around this area*).
 - Along Private Landholder's roads almost until the end of the pipeline with a few sections not yet confirmed however will strive to follow the gas easement.
 - Through Forestry land after the Mid-Western Hwy.
 - The mine site starts just after the Blayney boarder.
- The pipe will be constructed of 450mm pipe with 800mm covers.
- It was explained that no one is permitted on the route or private landholders land without a Regis representative.
- *Lisa Paton noted her background is in Environmental and raised the potential presence of Koalas and Quolls being present in the steep dense area between the site and the Mid-Western Hwy. Michael at Regis said they have made an effort to avoid dense woodlands to mitigate any potential impact on these*

communities and that is why they have tried to use existing roads to run the pipeline as the impact is already there. He also noted the use of poly-pipe will allow for flexibility around trees. Further he commented that the area being surveyed is 20m however the impact will not be that big it just allows flexibility along the route.

OzArk Power point

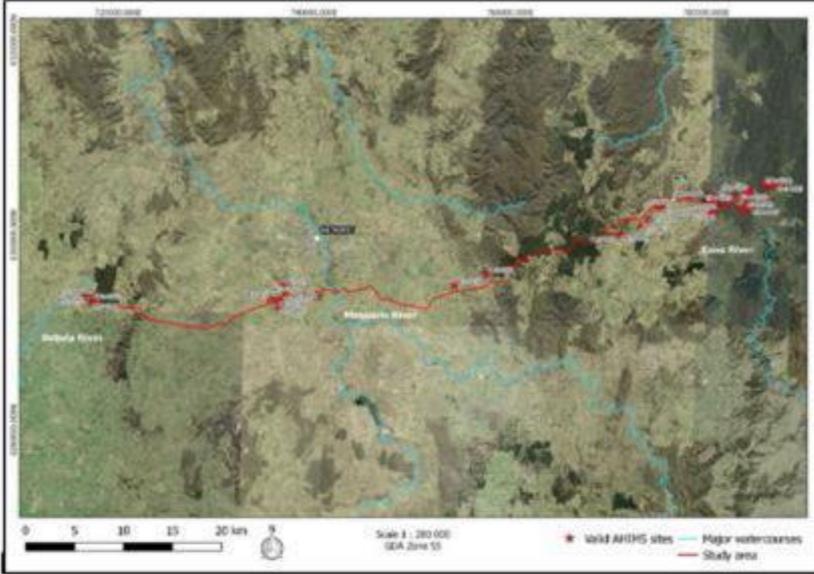
- Jodie presented from a PowerPoint presentation on the Aboriginal heritage.
- OzArk have been contracted to manage the Heritage Assessment component of the project.
- Jodie displayed a map with overlays of known areas of interest to certain groups and invited attendees to comment on any areas they feel they have relevant knowledge.
- *Brad Bliss enquired why Orange LALC are not involved as RAPs for the project as a small portion of the pipeline is in the Orange LALC area. Chris from Regis noted James and Greg had initially been involved in the project since the start. OzArk agreed to have a more in depth look at the information supplied by the previous consultant Navin Officer to see why they are not RAPs when returning to the office.*
- Jodie noted the pipeline route areas in red have not yet been finalised therefore fieldwork would commence in sections along the yellow confirmed route areas first with the indication that fieldwork may be conducted in 2 day stints rostering RAPs with knowledge relevant to that particular area.
- It was noted there are 64 previous recorded sites consisting mostly of stone artefacts.
- *The accuracy of the location of these artefacts was discussed and agreed due to changes in how the location is recorded discrepancies may arise, therefore if close to the route assumptions will be made that it may end up being on the route so care will be taken to look for these when surveying.*
- *Brad Bliss noted a lot of sites are on the East end of the project.*
- *Brad Bliss indicated there is a ceremonial place at Panorama.*
- *Lisa Paton indicated there is a Meeting place at Kings Plain.*
- *Brad Bliss noted older recordings are usually approx. 800m out.*
- *Chris from Regis enquired will sites only shown and found to be along the route when preparing a desktop plot be looked at or will we go looking for them? Jodie and Brad responded that if the location cannot be determined on the desktop it's not viable to go looking for it however they will keep an eye out along the route.*
- *Lisa Paton indicated she thinks a lot of older sites on the end close to the project site location have not been recorded on AHIMS. She also mentioned that the old property Dungeon which is possibly the Inglewood property had a burial site. Chris from Regis indicated the whole property has previously been dug up by mining so it is unlikely that it is still there.*
- *Lisa Paton advised she has been doing local research and she feels the Blayney Shire is normally not sentimental in regards to Aboriginal heritage and wants Regis to use this as an opportunity to change this mentality and to preserve and protect Aboriginal cultural heritage. She wants Blayney to become proud of its' Aboriginal Heritage.*
- *Lisa Paton said she has been handing over any site recording information to Orange LALC as a way to build relationships however she thinks this has not yet been recorded on AHIMS. She noted she has information related to the burial of Jimmy Clements and a burial near the railway in Blayney.*
- *Brad Bliss advised Lisa to register sites herself.*

- A discussion was had in regards to ring trees however it was determined these were not relevant to the proposed site.
- Attendees were encouraged to highlight any known sites within the footprint that are not yet known of or registered.
- Chris from Regis acknowledged they are happy to proceed with the project and action any Aboriginal heritage as it is found. He also noted they will do everything they can to protect any sites even if it is not directly on the route.
- Brad Bliss and Jodie discussed difference between a track and a road – road being where materials are imported therefore a huge emphasis will not be on the roads as they already disturbed.
- Brad and Michael from Regis discussed the pad size for the pumping station, approx. a 25x25m pad with potential disturbance to a 50x50m area.
- Brad Bliss noted he has tradition interest from Yetholm to Centennial mines and European interest around the Bathurst area.
- Lisa Paton indicated she has knowledge around the Orange area and the center of the pipeline.
- Cherie Turrise indicated she is the 6th generation with her knowledge mainly in the ACT however her Great Great Grandmother was stolen from Wiradjuri area.
- Brad Bliss indicated he will send formal feedback on the methodology after his corporation has a meeting and discusses.
- It was noted that any persons wanting to participate in the fieldwork will need to be inducted.
- Brad Bliss recommended Bald Hill be scrutinised as stone arrangements have two meanings, either a burial ground is close or a ceremonial area is near.
- Brad Bliss noted his Great Great Grandfather was King Billy Cumnock, the top Aboriginal man who held ceremonies at Mount Panorama. He noted there are two types of boras, a common bora for initiated man and an initiation bora for young men to be initiated. Women are not allowed.
- Brad Bliss advised there are toe and hand holes cut in a tree he thinks near the site, not on the site, and towards the Lithgow area but not certain.

Pipeline Safety Induction

- This induction is an induction for the pipeline project not McPhillamys mine.
- The induction booklet is a live document subject to constant updates.
- Regis will provide a booklet at the induction with areas along the pipeline broken down into workable sections. It will also detail areas to avoid.
- There will be scheduled calls at 9am, 12pm and end of day as a safety precaution to monitor and make sure fieldworkers are ok. This can also be done via txt.
- It was recommended to download the emergency + app which will give the latitude and longitude even if you don't have service.
- Sarah and Jodie discussed the requirement of submitting OzArk SWMS.

Stage 2/3: Survey methodology provided to RAPs



**ABORIGINAL CULTURAL HERITAGE
SURVEY METHODOLOGY**

McPHILLAMYS GOLD PROJECT – PIPELINE DEVELOPMENT

June 2018

Prepared by
OzArk Environmental & Heritage Management Pty Ltd
for
Blakely's Environmental
on behalf of Regis Resources

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1 INTRODUCTION

OzArk Environmental & Heritage Management Pty Limited (OzArk) has been engaged by Blakely's Environmental on behalf of LFB Resources NL, which is a 100% owned subsidiary of Regis Resources Ltd (Regis, the Proponent) to prepare a survey methodology for the McPhillamys Gold Project – Pipeline Development (the Pipeline Development). This methodology is in accordance with Stage 3 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs).

1.1 PROPOSAL OVERVIEW

The McPhillamys Gold Project is a large tonnage, low grade gold mining project located approximately eight kilometres north east of Blayney in the Central Tablelands of NSW. The mine will require a significant and reliable water supply to enable operation.

An options assessment study undertaken in 2016 examined various water supply options including transfer of treated wastewater discharged from the Bathurst Regional Council Waste Water Treatment Works and purchase of surface water extraction licences from the Belubula River. The study indicated that a pipeline connection to Centennial's operations in the Lithgow area could be a suitable option from a reliability, cost and environmental/social impact perspective.

As a result, the Pipeline Development has been scoped from Centennial mines / Mt Piper near Lidsdale to Kings Plain near Blayney consisting of approximately 80 kilometres (km) of water pipeline. Approximately 13 megalitres (ML) per day of water would be transferred from Centennial mines and Mt Piper for the mining and processing requirements during the operational phase of the expected 15 year lifespan of the McPhillamys Gold Project.

The assessment area for the Pipeline Development comprises a 20 metre (m) wide corridor, which will be referred to as the Pipeline Corridor (**Figure 1**). Please note that although the Pipeline Corridor mapped here is very close to being finalised, a couple of sections are still undergoing landholder consultation and there may be some minor changes. No survey of a section will be undertaken until the Pipeline Corridor is finalised in that area.

1.2 PROPOSED IMPACTS

Proposed works

The Pipeline Development would include the following aspects:

- A 80km raw water transfer pipeline;
- Four or five pumping stations;

- Three raw water storage tanks (nominally 10ML subject to detailed design);
- Isolation valves located approximately every 2–3km;
- Pressure reducing valves and scour valves;
- Power supply and controls; and
- An optic cable communications system.

Key construction activities of the Pipeline Development include:

- Installation of off take valves and pump stations;
- Below ground installation of pipeline;
- Excavating rock with minimum impact on the environment in an economically sustainable manner;
- Construction of road, railway and river crossings; and
- Installation of power supply to pump stations.

Key operational activities of the Pipeline Development would include:

- Maintenance of the pumping stations;
- Maintenance of the air valves and scour valves; and
- Other infrequent maintenance of the pipeline (e.g. pigging to remove scaling, or repairing of leaks).

2 ARCHAEOLOGICAL CONTEXT

2.1 AHIMS DATA

A search of the Aboriginal Heritage Information Management System (AHIMS) on May 5 2018 has revealed 64 previously recorded sites within 1km either side of the Pipeline Corridor. **Figure 1** maps this data for the entire route, whereas **Figures 2 to 4** provide details in areas with higher site densities. It is noted that only the valid AHIMS sites are mapped here.

It is important to note that the sites shown here do not represent all Aboriginal sites within proximity of the Pipeline Corridor, as AHIMS only contains sites recorded under the auspices of assessments for other projects or incidental recordings, leading them to be registered on AHIMS.

Sites are predominantly comprised of open artefact scatters, with an additional three grinding groove sites, two scarred trees, two shelters, two ceremonial / dreaming sites, one potential archaeological deposit (PAD) and one stone arrangement.

Very few sites plot on the Pipeline Corridor, but those locations where sites plot within 50m will be examined carefully, in the understanding that GPS coordinates from AHIMS can be erroneous.

Western portion - Figure 2

There are no previously recorded sites within 100m of the Pipeline Corridor.

Central portion – Figure 3

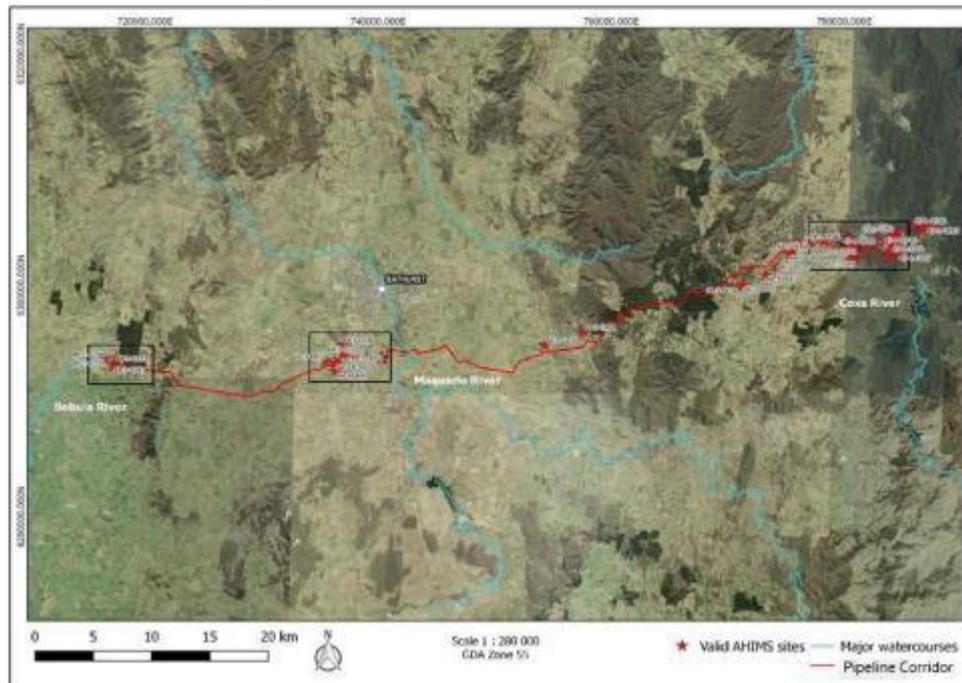
There is one previously recorded site within 50m of the Pipeline Corridor. This is site #44-3-0058, an open camp site with six artefacts recorded in 1980 by Michael Pickering during an assessment for an electricity easement. This and the associated recorded sites were recorded pre-GPS era so care will be taken within this area to examine whether any site extents occur within the Pipeline Corridor.

Eastern portion – Figure 4

There are two clusters of sites within 50m of the Pipeline Corridor:

- A cluster south of Mt Piper that includes sites #45-1-2552, 2551 and 2548. These are all open camp sites recorded by Mills. Original reports and site cards will be examined to ground truth whether these sites extend into the Pipeline Corridor; and
- A cluster of sites through what was Lamberts Gully Mine, being sites #45-1-2795, 2724, 2723, 2722 and 2721. These are all open camp sites recorded by RPS and all locations will need to be carefully ground-truthed during survey as they may extend into the Pipeline Corridor.

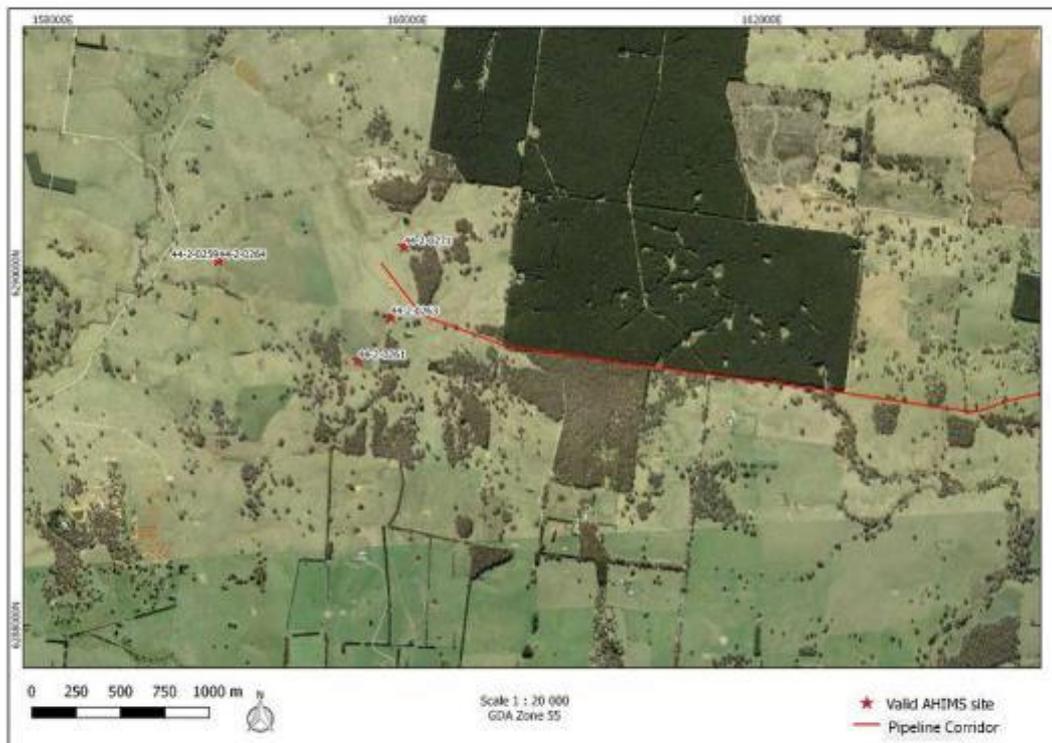
Figure 1. Location of the Pipeline Corridor with AHIMS sites plotted¹.



¹ Site concentrations indicated here with rectangles are detailed in Figures 2 to 4.

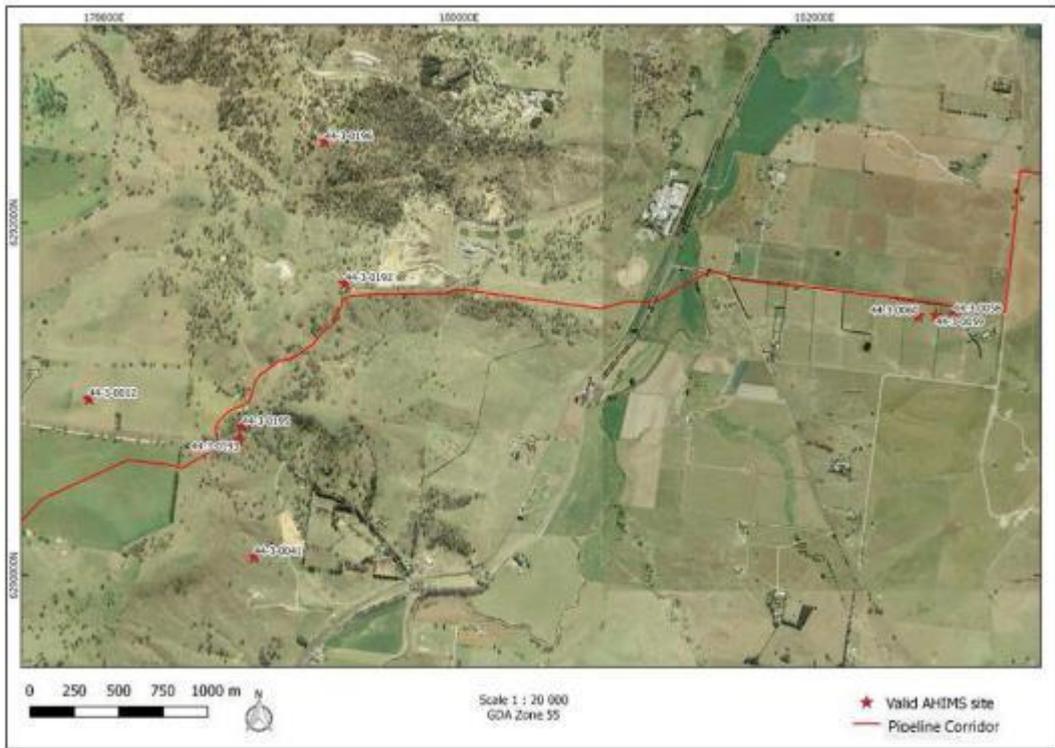
Aboriginal Cultural Heritage Survey Methodology: McPhillamys Gold Project – Pipeline Development

Figure 2: Detail - western portion.



Aboriginal Cultural Heritage Survey Methodology: McPhillamys Gold Project – Pipeline Development

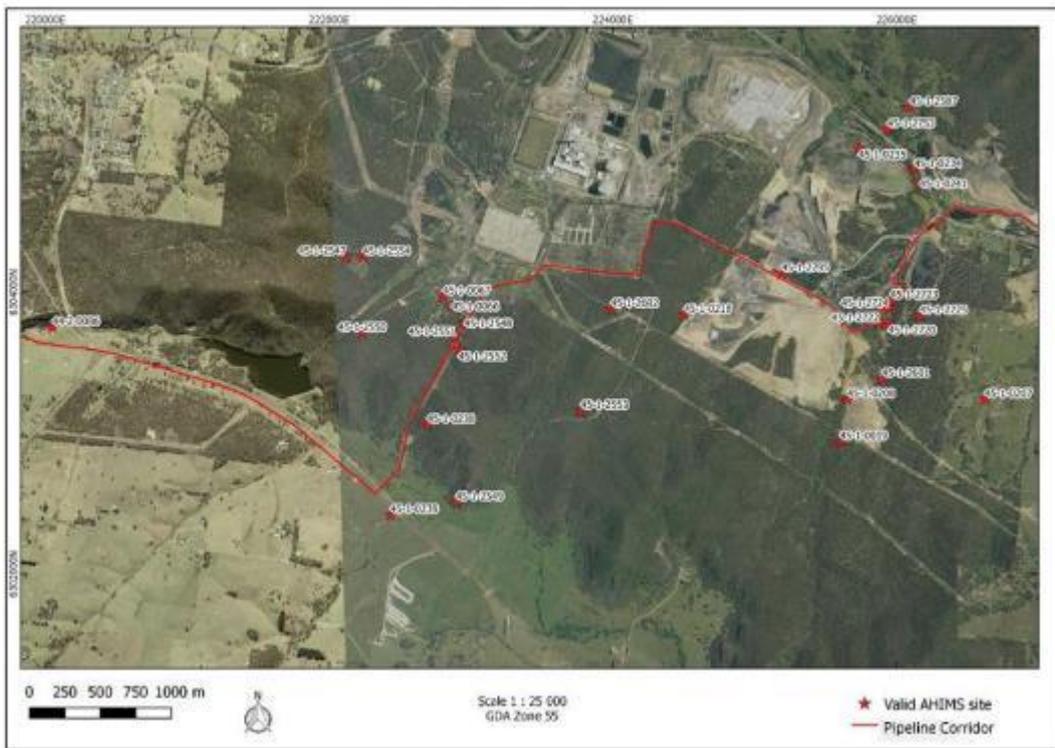
Figure 3: Detail - central portion.



Aboriginal Cultural Heritage Survey Methodology: McPhillamys Gold Project – Pipeline Development

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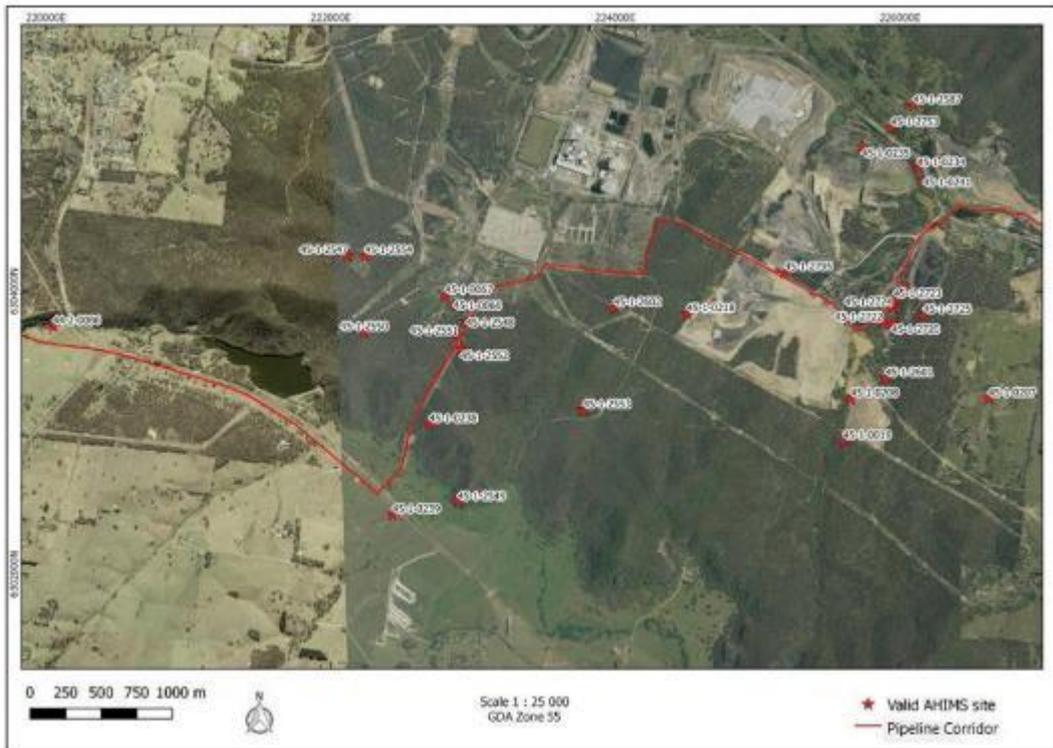
Figure 4: Detail - eastern portion.



Aboriginal Cultural Heritage Survey Methodology: McPhillamys Gold Project – Pipeline Development

5

Figure 4: Detail - eastern portion.



3 PREDICTIVE MODEL

3.1 BACKGROUND

Across Australia, numerous archaeological studies in widely varying environmental zones and contexts have demonstrated a high correlation between the permanence of a water source and the permanence and/or complexity of Aboriginal occupation. Site location is also affected by the availability of and/or accessibility to a range of other natural resources including: plant and animal foods; stone and ochre resources and rock shelters; as well as by their general proximity to other sites/places of cultural/mythological significance. Consequently sites tend to be found along permanent and ephemeral water sources, along access or trade routes or in areas that have good flora/fauna resources and appropriate shelter.

In formulating a predictive model for Aboriginal archaeological site location within any landscape it is also necessary to consider post-depositional influences on Aboriginal material culture. In all but the best preservation conditions very little of the organic material culture remains of ancestral Aboriginal communities survives to the present. Generally it is the more durable materials such as stone artefacts, stone hearths, shell, and some bones that remain preserved in the current landscape. Even these however may not be found in their original depositional context since these may be subject to either (a) the effects of wind and water erosion/transport: both over short and long time scales or (b) the historical impacts associated with the introduction of European farming practices including: grazing and cropping; land degradation associated with exotic pests such as goats and rabbits and the installation of farm related infrastructure including water-storage, utilities, roads, fences, stockyards and residential quarters. Scarred trees may survive for up to several hundred years but rarely beyond.

3.2 LANDFORM MODELLING

As the Pipeline Corridor for the Pipeline Development is linear and narrow, it traverses a range of central tablelands landforms from steep hills to flat landforms: all of which are dissected by a variety of waterways.

The Macquarie River is the only fourth order waterway intersected by the Pipeline Development, and this will be under-bored.

Other smaller creeks may be crossed, although there are not many. All will be assessed during the field survey. The tributary systems of lower order streams (e.g. first and second order streams) would have only provided ephemeral water sources, hence have a lower likelihood for Aboriginal site presence.

In summary, there are a variety of topographic features within the project corridor that would have encouraged past Aboriginal occupation; namely:

- The ridges and spurs would have provided good views along the creek valleys and would have been used as vantage points; and
- The landforms adjacent to waterways (terraces) have the capability of providing elevated landforms adjacent to water: landforms recognised in the area as having archaeological sensitivity.

3.3 PREDICTIVE MODEL FOR THE PIPELINE CORRIDOR

- Isolated finds may be indicative of: random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or sub-surface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in topographies where open artefact scatters typically occur.
 - As isolated finds can occur anywhere, particularly within disturbed contexts, it is predicted that this site type could be recorded within the Pipeline Corridor.
- Open artefact scatters are here defined as two or more artefacts, not located within a rock shelter, and located no more than 50 m away from any other constituent artefact. This site type may occur almost anywhere that Aboriginal people have travelled and may be associated with hunting and gathering activities, short or long term camps, and the manufacture and maintenance of stone tools. Artefact scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools, but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of background scatter rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'.

Artefact scatters are most likely to occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands. Larger sites may be expected in association with permanent water sources.

Topographies which afford effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites evidenced by open artefact scatters.

- As the Pipeline Corridor traverses a wide range of landforms, this site type has potential to occur. Artefact scatters are most likely to be located within landforms of a gentle gradient associated with permanent / semi-permanent waterways as these are likely to have been attractive camping areas. Smaller sites containing low density and low complexity assemblages are predicted near less permanent watercourses. Moderate to steeply sloping landforms are unlikely to have been utilised with lower gradient ridges and spurs being more attractive for camping. The lack of water in these elevated landforms would suggest, however, that camping would have been short-term and that sites would be smaller and contain low complexity assemblages. The high degree of impact from past agricultural

practices along the floodplains i.e. cultivation, will probably mean that surface scatters and archaeological deposits are likely to have become displaced. It would be expected that most sites located would date to the late Holocene (i.e. less than 4,000 years old), the age attributed to the A-Horizon artefact bearing deposits. Although Pleistocene sites contained within B-Horizon sediments may also occur, but must be considered a rare eventuality.

- Aboriginal scarred trees contain evidence of the removal of bark (and sometimes wood) in the past by Aboriginal people, in the form of a scar. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed as a consequence of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting or bark removal. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any particular example of bark removal. Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal cultural heritage items can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginal people for both their own purposes and for roofing on early European houses. Consequently the distinction between European and Aboriginal scarred trees may not be clear.
 - Due to the significant clearance of trees from within the Pipeline Corridor, this site type is predicted to have a low likelihood of occurring. It is also noted that this site type is rare at a regional level due to historical tree clearance.
- Quarry sites and stone procurement sites typically consist of exposures of stone material where evidence for human collection, extraction and/or preliminary processing has survived. Typically these involve the extraction of siliceous or fine grained igneous and meta-sedimentary rock types for the manufacture of artefacts. The presence of quarry/extraction sites is dependent on the availability of suitable rock formations.
 - This site type could be recorded should suitable rock outcroppings be available, although the narrow Pipeline Corridor width reduces the likelihood of intersection.
- Burials are generally found in soft sediments such as aeolian sand, alluvial silts and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them.
 - Although it is possible that this site type could be found it is considered a rare site type especially given the disturbance that has occurred over much of the Pipeline Corridor.

4 SURVEY METHODOLOGY

4.1 ASSESSMENT APPROACH

The Aboriginal cultural heritage assessment of the Pipeline Corridor will follow the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010). The field inspection will follow the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH 2011).

4.2 BACKGROUND

The following archaeological methodology is based on the understanding that:

- Some portions of the Pipeline Corridor have been significantly disturbed, such as those through mining sites;
- Some portions have been moderately disturbed, such as those through plantations, along modified road corridors, transmission line easements etc.; and
- Some portions have undergone low levels of disturbance, possibly only from land clearing

We will apportion survey effort according to the likelihood of Aboriginal sites being present and with regards to disturbance.

All survey will be undertaken with the assistance of Registered Aboriginal Parties (RAP) representatives. Apart from their valuable experience in recognising and recording archaeological sites, the RAP representatives will be able to acquaint themselves with the Pipeline Corridor in order to inform their cultural values assessment. Any cultural values relating to the Pipeline Corridor will be captured by the OzArk archaeologist (if such information is provided during the survey) and included in the *Aboriginal Cultural Heritage Assessment Report* (ACHAR) to be prepared as part of the Environmental Impact Statement (EIS) for the Pipeline Development.

4.2.1 Survey methodology

Standard archaeological field survey and recording methods will be employed in this assessment (Burke & Smith 2004).

It should be noted that the aim of any archaeological survey is not to locate each and every artefact in a landscape but to undertake investigations so that the archaeological potential and archaeological characteristics of all landforms within the Pipeline Corridor are known. Therefore the aims of the survey will be to:

- Reinspect the location of any previously recorded sites that remain within the landscape along the Pipeline Corridor (as noted in **Section 2.1**) so that their current condition and scientific heritage values can be assessed;
- Conduct pedestrian transects across landforms exhibiting archaeological potential in the Pipeline Corridor (i.e. landforms adjacent to waterways where there is not clear and

observable disturbance to the ground surface). This assessment will be sufficient so that the archaeological potential of the landforms can be determined;

- Determine if any portions of the Pipeline Corridor require test excavation in order to understand the archaeological potential at a particular location;
- Undertake sufficient assessment in order to satisfy Sections 2.2, 2.4 (as it pertains to scientific values), 2.5, 2.6, and 2.7 in the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (The Guide, OEH 2011);
- Collecting sufficient data so that the results can be presented in an ACHAR as set out in Section 3 of the Guide (OEH 2011); and
- Undertaking survey and record keeping to satisfy Requirements 1–13 of the Code of Practice.

It is envisioned that fieldwork for the survey would be completed in geographical sections, with one team of surveyors consisting of one archaeologist and two RAP representatives working along the Pipeline Corridor, not necessarily sequentially. The order and length of sections will be determined with respect to logistics, RAP interest areas and access arrangements. No sections will be surveyed until the Pipeline Corridor has been confirmed.

4.2.2 Test excavation

It is noteworthy that the proponent has some flexibility with the Pipeline Corridor location and an aim of the assessment will be to avoid, where feasible, sites / PADs.

It is still possible, however, that the survey may identify landforms where test excavation under the Code of Practice (Requirements 14–17) is required. Should such landforms be identified during the survey, the test excavation methodology would be prepared as a separate document that will be circulated to all RAPs for review and comment.

REFERENCES

- Burke & Smith 2004 Burke, H. and Smith, C. 2004. *The Archaeologist's Field Handbook*, Blackwell, Oxford.
- DECCW 2010 DECCW. 2010. *Code of Practice for the Investigation of Aboriginal Objects in New South Wales*. Department of Environment, Climate Change and Water, Sydney.
- OEH 2011 Office of Environment and Heritage. 2011. *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales*. Department of Environment, Climate Change and Water, Sydney.

Stage 2/3: Response from WVVAC in relation to survey methodology



C/- 1 Golden Place
Orange NSW 2800
ABN: 7754 3187
ICN: 7398
WVVAC@hotmail.com

19 June 2018

Jodi Benton
OzArk EHM
P.O. Box 2069,
Dubbo NSW 2830

**RE: Aboriginal Cultural Heritage Survey Methodology: McPhillamys Gold Project – Pipeline Development,
Dated: June 2018.**

Dear Jodi,

Wellington Valley Wiradjuri Aboriginal Corporation (WVVAC) would like to thank you for your invitation to provide a response for This Aboriginal Cultural Heritage issue relevant to obligations to protect our Heritage within our Traditional Lands. Wellington Valley Wiradjuri represents fourteen traditional families with identified apical ancestry pre European occupation with our known Traditional Lands. We know our culture, country and continue with our association with our traditional lands.

WVVAC objects to any other non-traditional aboriginal organizations or people taking part in site surveys, consultation and assessments within our Traditional Lands. These non-traditional people and groups are outsiders under Traditional Lore and have no right to advise on or to be present during consultation or site visits as they do not possess the specific traditional knowledge in relation to these lands or sites. These participants may be indigenous and may live locally within the region however, this still does not give them the right to disregard Traditional Lore and values.

Wellington Valley Wiradjuri Aboriginal Corporation is supportive of any efforts to provide facilities and business for the community at large within our Traditional Lands, provided Proponents have consulted with WVVAC and negotiated an agreed outcome in relation to our cultural, heritage and environmental concerns.

In response to the Aboriginal Cultural Heritage Survey Methodology: McPhillamys Gold Project – Pipeline Development, Dated: June 2018. WVVAC make the following recommendations and comments.

- Reinspect the location of any previously recorded sites that remain within the landscape along the Pipeline Corridor (as noted in Section 2.1) so that their current condition and scientific heritage values can be assessed;
 - WVVAC agree to this and also recommend that where older sites are recorded, the plotted positions may be incorrect and that these sites be identified and going slightly out of the easement maybe required to do so.
 - In relation to the Bald Hill Stone Arrangements near Bathurst, participants on this section of the survey need to be aware that they may be close to a burial or a section relating to Initiation and if the latter, this is a Male only restricted site.
- Conduct pedestrian transects across landforms exhibiting archaeological potential in the Pipeline Corridor (i.e. landforms adjacent to waterways where there is not clear and observable disturbance to the ground

surface). This assessment will be sufficient so that the archaeological potential of the landforms can be determined;

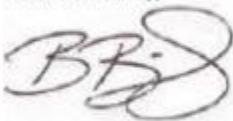
- WVVAC do not agree with this point of the methodology and recommend that those RAP's participating in the surveys make that determination and if RAP's disagree then the area is to be surveyed.
- Determine if any portions of the Pipeline Corridor require test excavation in order to understand the archaeological potential at a particular location;
 - WVVAC agree to this recommendation.
- Undertake sufficient assessment in order to satisfy Sections 2.2, 2.4 (as it pertains to scientific values), 2.5, 2.6, and 2.7 in the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (The Guide, OEH 2011);
 - WVVAC agree to this in principal, however do not recognize scientific values as we put a far higher value on Anthropological value and all artefacts are of High Significance to us as Aboriginal People.
- Collecting sufficient data so that the results can be presented in an ACHAR as set out in Section 3 of the Guide (OEH 2011); and
 - WVVAC agree and also note that RAP's cultural knowledge and values should also be included.
- Undertaking survey and record keeping to satisfy Requirements 1–13 of the Code of Practice.
 - WVVAC agree to this recommendation.

It is envisioned that fieldwork for the survey would be completed in geographical sections, with one team of surveyors consisting of one archaeologist and two RAP representatives working along the Pipeline Corridor, not necessarily sequentially. The order and length of sections will be determined with respect to logistics, RAP interest areas and access arrangements. No sections will be surveyed until the Pipeline Corridor has been confirmed.

- WVVAC agree to this proposal in relation to survey area and RAP representation in the field assessment.

WVVAC does not object to our details being given to OEH, however WVVAC do not wish to advise any other organization of our knowledge relating to this project. WVVAC look forward to further participating in the above project, sharing our knowledge of country and to ensure our Heritage is protected. We trust our response meets your requirements. Please contact WVVAC Directors should you require our assistance to address any Aboriginal issues to support your future plans.

Yours sincerely,



Bradley R Bliss J.P.
 WVVAC CEO & Contact Officer
 Gallangabang Aboriginal Corporation - Director
 Senior Aboriginal Cultural Heritage Field Officer
 Senior Aboriginal Cultural Educator & Mentor
 Traditional Owner Gulma, Mudegah, Mudigee, Mayn, Muralong and Wongajong Clans
 0427321016

Stage 2/3: OzArk's reply to WVVAC

Good Morning,

Thank you for your response to the above project. In relation to your concerns

Reinspect the location of any previously recorded sites that remain within the landscape along the Pipeline Corridor (as noted in Section 2.1) so that their current condition and scientific heritage values can be assessed;

- WVVAC agree to this and also recommend that where older sites are recorded, the plotted positions may be incorrect and that these sites be identified and going slightly out of the easement maybe required to do so.

- In relation to the Bald Hill Stone Arrangements near Bathurst, participants on this section of the survey need to be aware that they may be close to a burial or a section relating to Initiation and if the latter, this is a Male only restricted site.

In terms of going outside the easement to relocate sites due to old/incorrect GPS co-ordinates – where it's possible we can do this. Some of the pipeline corridor is through private land and we may not be able to legally reinspect the sites if the sites do turn out to be outside the easement area. This will have to be a discussion for when we're doing fieldwork, have a Regis representative with us (as they're organising access to the pipeline corridor) and if it actually occurs.

The archaeologists who will be doing the fieldwork understand and accept that they may not be able to reinspect some sites due to being female and in these cases will follow the discretion of the RAPs.

Conduct pedestrian transects across landforms exhibiting archaeological potential in the Pipeline Corridor (i.e. landforms adjacent to waterways where there is not clear and observable disturbance to the ground surface). This assessment will be sufficient so that the archaeological potential of the landforms can be determined;

- WVVAC do not agree with this point of the methodology and recommend that those RAP's participating in the surveys make that determination and if RAP's disagree then the area is to be surveyed.

This will be agreed upon by both the RAPs and archaeologist through discussion while conducting the survey.

Determine if any portions of the Pipeline Corridor require test excavation in order to understand the archaeological potential at a particular location;

- WVVAC agree to this recommendation.

Undertake sufficient assessment in order to satisfy Sections 2.2, 2.4 (as it pertains to scientific values), 2.5, 2.6, and 2.7 in the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales (The Guide, OEH 2011);

- WVVAC agree to this in principal, however do not recognize scientific values as we put a far higher value on Anthropological value and all artefacts are of High Significance to us as Aboriginal People.

OzArk understands this. As archaeologists we don't comment on the cultural values of sites but rely on the RAPs to provide us with this information, usually while conducting the field survey, in written statements or through commenting on the draft report.

Collecting sufficient data so that the results can be presented in an ACHAR as set out in Section 3 of the Guide (OEH 2011); and

- WVVAC agree and also note that RAP's cultural knowledge and values should also be included.

If the RAPs provide cultural knowledge and values for the study area then this is included in the report.

Undertaking survey and record keeping to satisfy Requirements 1–13 of the Code of Practice.

- WVVAC agree to this recommendation.

It is envisioned that fieldwork for the survey would be completed in geographical sections, with one team of surveyors consisting of one archaeologist and two RAP representatives working along the Pipeline Corridor, not necessarily sequentially. The order and length of sections will be determined with respect to logistics, RAP

interest areas and access arrangements. No sections will be surveyed until the Pipeline Corridor has been confirmed.

- *WWWAC agree to this proposal in relation to survey area and RAP representation in the field assessment.*

Rebecca Hardman

Procurement and Administration Officer



OzArk Environmental & Heritage Management Pty Ltd

PO Box 2069 DUBBO 2830

P: 02 6882 0118; F: 02 6882 0630

rebecca@ozarkehm.com.au; www.ozarkehm.com.au

OzArk and staff respectfully acknowledge the Traditional Owners and Custodians of the country on which we work.

Example invitation to RAPs for fieldwork

	<p>OzArk Environmental & Heritage Management Pty Ltd ABN: 59 104 582 354</p>
<p>30 July 2018</p>	
<p>Members [REDACTED]</p>	
<p>Dear Members,</p>	
<p>Aboriginal Cultural Heritage McPhillamys Gold Project - Pipeline Development</p>	
<p>Thank you for your ongoing interest in this project. OzArk would like to invite the [REDACTED] [REDACTED] to provide a Sites Officer to participate in the two (2) days field assessment, scheduled for Wednesday 1st and Thursday 2nd August 2018.</p>	
Field Work Date:	Wednesday 1 st and Thursday 2 nd August 2018
Time to Meet:	8:00am
Location to Meet:	Rear carpark (across the road from the Aquatic Centre) McDonalds Bathurst (see attached map)
Duration:	2 full days.
Fee offer:	The fee offered is [REDACTED] for each full day of participation in the fieldwork for the experienced Site Officer (excl. GST). This fee is all inclusive of travel, travel time, fuel, accommodation, meal expenses and participation in the field work. Breaks are not paid.
Invoices:	Invoices are to be addressed to: OzArk EHM C/- Sheridan Baker PO Box 2069 Dubbo, NSW 2830 Sheridan@ozarkehm.com.au
<p>You must ensure that you or your representative has enough water and snacks / lunch for the duration of the fieldwork.</p>	
<p>Personal Protective Equipment (PPE) – your Site Officer will need:</p>	
<ul style="list-style-type: none"> • Long pants and long sleeve shirt; • High visibility safety shirt / vest; • Enclosed, sturdy footwear; 	
<p>Dubbo Queanbeyan HEAD OFFICE: 145 Wingewarra St/PO Box 2069 DUBBO NSW 2830 02 6882 0118 enquiry@ozarkehm.com.au www.ozarkehm.com.au</p>	

OzArk Environmental & Heritage Management Pty Ltd

ABN: 59 104 582 354

- Water / Sunscreen / Hat.

You or your representative must be physically fit and will need to identify if you have any medical conditions / allergies that should be known to other people participating in the fieldwork in the event of an emergency. The OzArk field director will send home anyone who they determine to be 'unfit for work' or who may pose a WH&S risk to themselves or others.

Please note, if you are sending a representative who has any underlying medical conditions or severe allergies, it is important that they have on their person appropriate treatment such as asthma inhalers or EpiPens and notify us accordingly.

As previously noted due to NSW WH&S legislation we need to have on record current Workers Compensation insurances before going into the field. Unfortunately we will **NOT** be able to allow participation in the fieldwork without seeing your **current Workers Compensation Certificate of Currency**. These can be emailed through to sheridan@ozarkehm.com.au. **Please note, we have a copy of your valid Workers Compensation Certificate of Currency on file.**

We confirm that you have advised the availability of an appropriately inducted site officer for this work. If the site officer is unable to attend on the day, we will either proceed with the survey with the OzArk archaeologist only, or offer this position to other relevant groups.

If you have any feedback or relevant cultural heritage knowledge that you would like to offer, please discuss with the archaeologist during the fieldwork or contact our office.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office.

Kind regards,



Sheridan Baker
Consultation Officer

Meeting Location



Stage 4: Cover letter sent to RAPs with draft report



Stage 4: Cover letter sent to RAPs with amended draft report



OzArk Environment & Heritage

Dubbo	T: 02 6882 0118	ABN 59 104 582 354
Queanbeyan	enquiry@ozarkelhm.com.au	145 Wingewarra St
Newcastle	www.ozarkelhm.com.au	PO Box 2069
		DUBBO NSW 2830

28th May 2019

ABORIGINAL CULTURAL HERITAGE ASSESSMENT FOR THE PROPOSED MCPHILLAMYS GOLD PROJECT WATER PIPELINE

Dear Members,

Thank-you for your continued participation as a Registered Aboriginal Party (RAP) and involvement in the above-mentioned project.

As you are aware stage 4 commenced on the 20th May 2019 with Regis (the Proponent) offering you the opportunity to provide feedback on the draft report that has been undertaken in accordance with stage four (4) of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (ACHCR)*.

As per the ACHCRs the twenty-eight (28) days to supply feedback on the attached document closes on **Tuesday 18th June 2019**.

The purpose of this letter is to highlight a few edits in the new attached document due to the finalisation of the pipeline alignment and corridor. These edits are:

- Minor alignment adjustments – the corridor is now following a greater amount of existing roadways and tracks, mainly through the forestry areas of Sunny Corner and Yetholme. There were also some minor alternations through cultivated paddocks so as to miss the gas pipeline which the pipeline alignment is parallel to in these areas. See pg. 4–11, Figures 1-2 a–h.
- Impact area – the pipeline corridor has been fine-tuned from a 20 m wide corridor, to between 6-20 m. The overall study area is still 180 hectares, but the impact area itself is 127 hectares (pg. 12, Section 1.1).
- Bald Hill IF-1 will now be impacted due to the alignment adjustments (pg. 79, Table 8-1).
- Figures have been updated with the final pipeline alignment

Should you require an extended time frame to review these edits past the stage 4 closing date of **Tuesday 18th June 2019**, please contact our office. If we do not hear from you within this time frame, we will presume that you are satisfied with the contents of the report as it stands, and the time allocated for review.

Should you need any help supplying feedback or have any queries, please do not hesitate to contact our office.

Kind regards,



Rebecca Hardman
Community Liaison & Administration

Stage 4: Response from Muragadi Heritage Indigenous Corporation

M Muragadi <muragadi@yahoo.com.au> Alyce Cameron 27/05/2019
 RE: McPhillamys Gold Pipeline - Stage 4 ACHCRs

i You forwarded this message on 28/05/2019 8:33 AM.

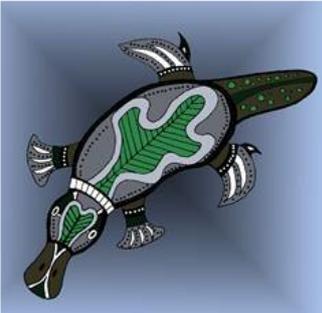
Hi Alyce,
 I have read the project information and ACHCRs for the above project, I endorse the recommendations made by Ozark, please feel free to contact me if you require further details.
 Kind regards
 Jesse Johnson
 0418970389

Stage 4: Response from Murra Bidgee Mullangari Aboriginal Corporation

RJ Ryan Johnson <murrabidgeemullangari@yahoo.com.au> Rebecca Hardman 28/05/2019
 RE: ABORIGINAL CULTURAL HERITAGE ASSESSMENT FOR THE PROPOSED MCPHILLAMYS GOLD PROJECT WATER PIPELI...

Hi Rebecca,
 I have read the changes that have been included in this email for the above project, as per our discussion today with Alyce I don't have a problem with these changes.
 Kind regards
 Darleen Johnson

Ryan Johnson | Murra Bidgee Mullangari



Aboriginal Corporation Cultural Heritage

A: PO Box 246, Seven Hills, NSW, 2147
 E: murrabidgeemullangari@yahoo.com.au
 ICN: 8112

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Stage 4: Response from Orange Local Aboriginal Land Council



Orange Local Aboriginal Land Council
 79 – 81 Kite St, Orange NSW 2800
 PO Box 10, Orange NSW 2800
 Ph: 02 6361 4742
 F: 02 6361 9119
 E: admin@olalc.com.au

27th June 2019

Anthony Weinberg
 Environmental Consultant
 Suite 23, Level 6, 58 Pitt St | GPO Box 4507 Sydney NSW 2001
 Office ph: + 61 2 8071 4590
 Mobile: 0411 430 528
 Email: blakelysenvironmental@gmail.com

Dear Anthony

RE: Draft Aboriginal Cultural Heritage Assessment for the Proposed McPhillamys Gold Project Water Pipeline

In response to the Aboriginal Cultural Heritage Assessment for the Proposed McPhillamys Gold Project Water Pipeline. Orange Local Aboriginal Land Council would like to raise our concern for the timeframe of which we have been asked to respond to this report, that we received on 20th May 2019, with our response to the assessment due by Tuesday 18 June 2019. Thank you for the extension to respond to 28th June 2019.

We would like to raise our concern on the impact on our internal operations that this response time has had, given in the month of June between the 3rd and 18th we were requested to respond to both this assessment and the **Draft McPhillamys Gold Project – Aboriginal and Cultural Heritage Assessment**, that is a part of Regis' proposed combined project.

Given the complexity of Regis' combined proposed projects we have had to put considerable resources into these responses in a very short timeframe and felt this was necessary to ensure we have made an appropriate response under our obligations of Section 52 of the NSW Aboriginal Land Rights Act 1983 (ALRA) in relation to protecting Aboriginal Culture and Heritage, and that we responded as accurately and thoroughly as possible. Given the time frame allowed and the complexity of the projects we do not believe we have been given adequate time.

In consultation with the Orange Local Aboriginal Land Council Board and Community. It's our determination the Draft Aboriginal Cultural Heritage Assessment for the Proposed McPhillamys Gold Project Water Pipeline is of a great concern to the Aboriginal Cultural Heritage of the Kings Plains area.

We recommend that further investigation be carried out for the following items;

1. Due to the complexity of the overall proposed McPhillamys Pipeline and proposed McPhillamys Mine project and the consideration that Aboriginal Cultural Heritage is not governed by boundaries or the existence of individual projects sites, that rather Aboriginal Cultural Heritage is about the connectivity of Country and surrounding landscape and forms a regionally collective picture of Aboriginal Cultural Heritage. We recommend that both your

proposed projects should consider the collective impact on the location of the footprint of the 2 Aboriginal clans of the Kings Plains and Belubula area. And also take into consideration the high level of significance of the Kings Plains area to Aboriginal people and other Australians in relation to European settlement of NSW and Australia.

2. In light of item 1 we recommend that the considerations outlined in our response to the ***Draft McPhillamys Gold Project – Aboriginal and Cultural Heritage Assessment***, be considered in conjunction with this proposed pipeline project as a collective Aboriginal Cultural Heritage Landscape Management response.
3. We recommend that you identify, record and respond to the concerns related to cultural heritage significance connected to spirituality, community and social wellbeing from the impacts to Cultural water flows to and from the Belubula River Headwaters, from the construction of the pipeline and the associated infrastructure on the springs that make up the headwaters of the Belubula River.
4. In relation to item 3 the Orange Local Aboriginal Land Council is deeply concerned about the environmental impacts to the Belubula River from not only the construction of the water pipeline and associated infrastructure but also from the potential impacts from the contaminated water that is proposed to be pumped through the pipeline. This relates to Aboriginal Cultural Heritage through the Aboriginal Cultural connection to the headwaters of the Belubula River which is seen to be the beginning of life and the river itself as the centre of existence from a water, food, travel and other resource perspective. Rivers form part of the identification of marking out or naming a stretch of country which relates to a sense of belonging to kin and country. These river connections are not only physical but social, spiritual and jural spaces. These negative environmental impacts would affect the Belubula River from an Aboriginal Cultural Heritage perspective.
5. Native animals and in particular the platypus play a part as totems for Aboriginal people in the region. There is dreaming stories that relate to platypus and also a giant platypus that is the mighty totem of the Lachlan catchment area, the Orange Local Aboriginal Land Council is concerned about the negative environmental impacts to the habitat of the platypus and other native animals from the construction of the pipeline and the ongoing impacts from the contaminated water being pumped into the Belubula catchment through the pipeline.
6. Orange Local Aboriginal Land Council requests the analysis of the water being transferred through the pipeline so that we can independently research the impacts to the catchment.
7. In relation to item 6 we request explanation to what dust suppressants will be used on the proposed McPhillamys mine site and if this dust suppressant will be water extracted from the proposed pipeline? If so what impacts this will have to the project site and surrounding environment.
8. We request examination of the Aboriginal and Cultural heritage and Spiritual connections to the Kings Plains area in relation to the Belubula River and Elders past and determination of this relevance and any information related to the Elders past on the protection of the Aboriginal Cultural Heritage of the Belubula River, this is relevant due to the potential negative impacts to water flows and ongoing river health to an Aboriginal Cultural Heritage significant site.



Orange Local Aboriginal Land Council
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 E: admin@olalc.com.au

9. Given the close proximity, of within 1km of the pipeline, of artefact finds within the **Draft McPhillamys Gold Project – Aboriginal and Cultural Heritage Assessment**, of Isolated finds MGP-A28, MGP-A33, MGP-A3, MGP-A21, MGP-A6, MGP A11 and Artefact scatters MGP-A34, MGP-A35, MGP-A9, MGP-A10, MGP-A5. Consideration of the complete Aboriginal Cultural Heritage landscape and potential for other archaeological finds must be taken into consideration and explored for additional archaeological deposits.
10. We request that a thorough Cultural mapping exercise be undertaken mapping tangible and intangible heritage on the Country surrounding including the pipeline and the mine project site (this should involve interviewing and including Elders and other Traditional Owners about important places and stories and mapping those sites) and that the archaeologist and historians to lead the above investigations be appointed by the Orange Local Aboriginal Land Council and that all costs be covered by Regis, and that any ensuing reports be shared with the Orange Local Aboriginal Land Council.

At this stage without the investigation and action to the above items, Orange Local Aboriginal Land Council cannot respond to the recommendations that are listed on pages 9 and 10 of the Aboriginal Cultural Heritage Assessment for the Proposed McPhillamys Gold Project Water Pipeline, as we believe that the information provided in your assessment is inadequate and does not allow us to make an accurate response to your recommendations, nor does it take into consideration the high level of significance of the Kings Plains area to Aboriginal people and other Australians in relation to European settlement of NSW and Australia.

Yours sincerely

Annette Steele
 Chief Executive Officer

APPENDIX 2: AHIMS RESULTS

NSW Office of Environment & Heritage		AHIMS Web Services (AWS)				Your Ref/PO Number : 1922				
		Extensive search - Site list report				Client Service ID : 358490				
SiteID	SiteName	Datum	Zone	Easting	Northing	Contour	Site Status	SiteFeatures	SiteType	Reports
45-1-2547	IV-05-1 Contact	AGD	56	222914	6380068	Open site	Valid	Artefact :-	Open Camp Site	
	Recorders	Mrs.Robynne Mills Permits								
45-1-2548	IV-IF-2 Contact	AGD	56	222850	6389590	Open site	Valid	Artefact :-	Isolated Find	
	Recorders	Mrs.Robynne Mills Permits								
45-1-2549	IV-05-3 Contact	AGD	56	222790	6385230	Open site	Valid	Artefact :-	Open Camp Site	
	Recorders	Mrs.Robynne Mills Permits								
45-1-2551	IV-05-5 Contact	AGD	56	222750	6383490	Open site	Valid	Artefact :-	Open Camp Site	
	Recorders	Mrs.Robynne Mills Permits								
45-1-2552	IV-05-4 Contact	AGD	56	222810	6385400	Open site	Valid	Artefact :-	Open Camp Site	
	Recorders	Mrs.Robynne Mills Permits								
45-1-2553	IV-05-6 Contact	AGD	56	222670	6382970	Open site	Valid	Artefact :-	Open Camp Site	
	Recorders	Mrs.Robynne Mills Permits								
45-1-2554	IV-IF-1 Contact	AGD	56	222135	6304000	Open site	Valid	Artefact :-	Isolated Find	
	Recorders	Mrs.Robynne Mills Permits								
45-6-2354	Lamberts Creek 7 Contact	AGD	56	225530	6389350	Open site	Destroyed	Artefact :-	Open Camp Site	
	Recorders	Mr.Jillan Corbett,Ms.Laila Hayford Permits								
45-6-2355	Lamberts Creek 6 Contact	AGD	56	225480	6389070	Open site	Destroyed	Artefact :-	Open Camp Site	405
	Recorders	Mr.Laila Hayford,Mr.Jillan Corbett Permits								
45-1-0056	Pipers Flat/Ivashoe Colliery Contact	AGD	56	222760	6385720	Open site	Valid	Artefact :-	Open Camp Site	
	Recorders	Ms.Laila Hayford Permits								
45-1-0067	Pipers Flat/Ivashoe Colliery Contact	AGD	56	222760	6385780	Open site	Valid	Artefact :-	Open Camp Site	387
	Recorders	ASRSYS Permits								
45-1-0206	59-Liddale Contact	AGD	56	227750	6381590	Open site	Valid	Artefact :-	Open Camp Site	2360
	Recorders	Elizabeth Rich,Alice Gorman Permits								
45-1-0207	58-Blackmass Flat Contact	AGD	56	226520	6389050	Open site	Valid	Artefact :-	Open Camp Site	2360
	Recorders	Elizabeth Rich,Alice Gorman Permits								
45-1-0208	55-Blackmass Flat Contact	AGD	56	225550	6383050	Open site	Valid	Artefact :-	Open Camp Site	2360
	Recorders	Elizabeth Rich Permits								
45-1-0209	54-Wallerawang Contact	AGD	56	226300	6382550	Open site	Valid	Artefact :-	Open Camp Site	2360
	Recorders	Elizabeth Rich Permits								
45-1-0215	Lamberts CL 5M: Pipers Contact	AGD	56	225300	6382480	Open site	Valid	Artefact :-	Open Camp Site	2294
	Recorders	Helel Brayshaw,Ms.Laila Hayford Permits								
45-1-0218	57 - Blackmass Flat Contact	AGD	56	224400	6383650	Open site	Valid	Artefact :-	Open Camp Site	
	Recorders	Ms.Neville Baker,Elizabeth Rich Permits								

Report generated by AHIMS Web Service on 19/07/2018 for Alys Cameron for the following area at Search using shape-file Buffer July 1.5km.SHP with a buffer of 0 meters. Additional Info :
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NSW Office of Environment & Heritage		AHIMS Web Services (AWS)				Your Ref/PO Number : 1922				
		Extensive search - Site list report				Client Service ID : 358490				
SiteID	SiteName	Datum	Zone	Easting	Northing	Contour	Site Status	SiteFeatures	SiteType	Reports
45-1-0234	Western main 3 Contact	AGD	56	226028	6384680	Open site	Valid	Artefact :-	Open Camp Site	
	Recorders	Helen Brayshaw Permits								
45-1-0236	Western main 1: same as 45-1-0241 Contact	AGD	56	226068	6384580	Open site	Valid	Artefact :-	Open Camp Site	
	Recorders	Helen Brayshaw Permits								
45-1-0238	Mount Piper Contact	AGD	56	222590	6382870	Closed site	Valid	Artefact :-, Art (Pigment or Engraved) :-, Grinding Groove :-	Axe Grinding Groove Shelter with Art Shelter with Deposit	2907
	Recorders	Helen Brayshaw,Mary Dailor Cosmbling Archaeologists Permits								
45-1-0239	Innodale Creek Contact	AGD	56	222338	6382330	Open site	Partially Destroyed	Artefact :-	Open Camp Site	2907
	Recorders	Helen Brayshaw,Mary Dailor Cosmbling Archaeologists Permits								
45-1-0242	Western main 3, same as 45-1-0235 Contact	AGD	56	225638	6384830	Open site	Valid	Artefact :-	Open Camp Site	2501
	Recorders	Helen Brayshaw Permits								
45-1-0243	512-Springsdale Colliery Contact	AGD	56	224978	6382900	Open site	Destroyed	Artefact :-	Open Camp Site	
	Recorders	ASRSYS Permits								
45-1-0244	515-Springsdale Colliery Contact	AGD	56	224758	6384040	Open site	Destroyed	Artefact :-	Open Camp Site	467
	Recorders	Elizabeth Rich,E Bonney Permits								
45-1-0093	Long Swamp 1,Wallerawang Contact	AGD	56	228778	6385540	Open site	Valid	Artefact :-	Open Camp Site	550
	Recorders	Elizabeth Rich,Shelly Green,Doctor,Susan McIntyre-Tansley Permits								
45-1-0094	Long Swamp 2,Wallerawang Contact	AGD	56	228298	6385550	Open site	Valid	Artefact :-	Open Camp Site	510
	Recorders	Elizabeth Rich,Shelly Green,Doctor,Susan McIntyre-Tansley Permits								
45-1-0100	Anger Place 1,Ben Bulbin State Forest Contact	AGD	56	227648	6381600	Closed site	Valid	Artefact :-	Shelter with Deposit	950
	Recorders	Doctor,Susan McIntyre-Tansley Permits								
45-1-0209	56-Blackmass Flat Contact	AGD	56	225188	6383230	Open site	Destroyed	Artefact :-	Open Camp Site	2360
	Recorders	J Fields,Elizabeth Rich Permits								
45-1-0019	Innodale Contact	AGD	56	225508	6382750	Closed site	Valid	Artefact :-, Grinding Groove :-	Axe Grinding Groove Shelter with Deposit	
	Recorders	R Miller Permits								
44-G-0003	Fathampoon Fitzgeralds Valley Contact	AGD	55	722564	6289685	Open site	Valid	Burial :-	Burial/s	353,1298
	Recorders	ASRSYS Permits								
44-S-0006	Pipers Flat Contact	AGD	55	778508	6383800	Open site	Valid	Artefact :-	Open Camp Site	387
	Recorders	ASRSYS Permits								
44-S-0041	Exid Hills Contact	AGD	55	736392	6292554	Open site	Valid	Stone Arrangement :-	Stone Arrangement	353,606,1298

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NSW Office of Environment & Heritage		AHIMS Web Services (AWS)					Your Ref/PO Number : 1923 Client Service ID : 358490			
Extensive search - Site list report										
SiteID	SiteName	Date	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
44-3-0058	Orton Park Bathurst	AGD	55	740400	6293700	Open site	Valid	Artefact : 6	Open Camp Site	606,1298
	Contact	Recorders								
	Contact	Recorders								
44-3-0059	Orton Park Bathurst	AGD	55	740300	6293700	Open site	Valid	Artefact : 1	Open Camp Site	606
	Contact	Recorders								
44-3-0068	Willawa Creek 4	AGD	55	775500	6302970	Open site	Valid	Artefact : -	Open Camp Site	232
	Contact	Recorders								
44-3-0069	Willawa Creek 3	AGD	55	775200	6302720	Open site	Valid	Artefact : -	Open Camp Site	232
	Contact	Recorders								
44-3-0070	Willawa Creek 2	AGD	55	774200	6301570	Open site	Valid	Artefact : -	Open Camp Site	232
	Contact	Recorders								
44-3-0071	Scotts Creek 5	AGD	55	771822	6300868	Open site	Valid	Artefact : -	Open Camp Site	232,1298
	Contact	Recorders								
44-3-0072	Scotts Creek 4	AGD	55	770800	6299330	Open site	Valid	Artefact : -	Open Camp Site	232,1298
	Contact	Recorders								
44-3-0073	Scotts Creek 3	AGD	55	770900	6299820	Open site	Valid	Artefact : -	Open Camp Site	232
	Contact	Recorders								
44-3-0077	Kirkconnell Creek 1	AGD	55	764450	6297820	Open site	Valid	Artefact : -	Open Camp Site	232,1298
	Contact	Recorders								
44-3-0080	Orton Park Bathurst	AGD	55	740200	6293700	Open site	Valid	Artefact : 1	Open Camp Site	606
	Contact	Recorders								
44-3-0061	Panorama Hill Bathurst Site No. 4	GDA	55	736468	6294867	Open site	Valid	Modified Tree (Carved or Scored) :	Scored Tree	606,1298
	Contact	Recorders								
44-3-0067	Willawa Creek 1	AGD	55	773270	6300900	Open site	Valid	Artefact : -	Open Camp Site	83,232
	Contact	Recorders								
44-3-0011	Mt Appleby	AGD	55	734979	6291511	Open site	Valid	Stone Arrangement :	Stone Arrangement	353,1298
	Contact	Recorders								
44-3-0013	Bald Hills	AGD	55	735514	6293505	Open site	Valid	Stone Arrangement :	Stone Arrangement	353,606,1298
	Contact	Recorders								
45-1-2574	FAD 2, Castlereagh Highway Realignment, Lifodale	AGD	56	238250	6301120	Open site	Partially Destroyed	Artefact : - Potential Archaeological Deposit (FAD) :		98708,102443

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NSW Office of Environment & Heritage		AHIMS Web Services (AWS)					Your Ref/PO Number : 1923 Client Service ID : 358490			
Extensive search - Site list report										
SiteID	SiteName	Date	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-1-2550	IV-05-2	AGD	56	232130	6303230	Open site	Valid	Artefact : -	Open Camp Site	1436,1707
	Contact	Recorders								
45-1-2587	WCLA	AGD	56	225991	6305123	Open site	Valid	Artefact : 1		98901
	Contact	Recorders								
44-2-0261	MCP-A31	GDA	55	717279	6293068	Open site	Valid	Artefact : -		
	Contact	Recorders								
44-2-0263	MCP-A33	GDA	55	717477	6293296	Open site	Valid	Artefact : -		
	Contact	Recorders								
44-2-0264	MCP-A34	GDA	55	717683	6293109	Open site	Valid	Artefact : -		
	Contact	Recorders								
45-1-2601	SNW-051 with PAD	AGD	56	225796	6303196	Open site	Valid	Artefact : 6		
	Contact	Recorders								
45-1-2602	WCU1	GDA	56	223989	6303882	Open site	Valid	Artefact : 1		
	Contact	Recorders								
45-1-0045	Ben Bulbin Stone Arrangement Ben Bulbin State Forest	AGD	56	226000	6305600	Open site	Valid	Stone Arrangement :	Stone Arrangement	
	Contact	Recorders								
45-1-0235	Western main 9, same as 45-1-0242	AGD	56	225630	6304830	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders								
45-1-0241	Western main 1, same as 45-1-0236	AGD	56	226000	6304600	Open site	Valid	Artefact : -	Open Camp Site	2501
	Contact	Recorders								
44-2-0276	MCP-A11	GDA	55	717652	6294926	Open site	Valid	Artefact : -		
	Contact	Recorders								
44-2-0277	MCP-A12	GDA	55	717673	6295167	Open site	Valid	Artefact : -		
	Contact	Recorders								
44-2-0278	MCP-A13	GDA	55	717705	6295213	Open site	Valid	Artefact : -		
	Contact	Recorders								
45-1-2763	Neubeck Creek Open Site 5	GDA	56	225938	6305155	Open site	Valid	Artefact : 1		
	Contact	Recorders								
45-1-2720	CS 3U4-A5	GDA	56	225945	6303776	Open site	Valid	Artefact : 1		
	Contact	Recorders								
45-1-2721	CS 3U4-A4	GDA	56	225953	6303807	Open site	Valid	Artefact : 1		
	Contact	Recorders								
45-1-2722	CS 3U4-A3	GDA	56	225879	6303777	Open site	Valid	Artefact : 1		

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NSW Office of Environment & Heritage		AHIMS Web Services (AWS) Extensive search - Site list report				Your Ref/PO Number : 1923 Client Service ID : 330490				
SiteID	SiteName	Datum	Zone	Easting	Northing	Content	Site Status	SiteFeatures	SiteTypes	Reports
45-1-2723	Contact CS 304-A2	Recorders: GDA	56	235959	6303943	Open site	Valid	Artefact : 1	Permits	
45-1-2724	Contact CS 304-A1	Recorders: GDA	56	235946	6303882	Open site	Valid	Artefact : 1	Permits	
44-3-4171	Contact W28 A6	Recorders: GDA	55	757657	6296015	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	Permits	3764
44-3-4163	Contact W28 A5	Recorders: GDA	55	766563	6297463	Open site	Valid	Artefact : 1	Permits	3764
44-3-4181	Contact MCP A29	Recorders: GDA	55	717576	6296885	Open site	Valid	Artefact : -	Permits	
44-3-4182	Contact MCP A6	Recorders: GDA	55	717576	6294932	Open site	Valid	Artefact : -	Permits	
44-3-4183	Contact MCP A5	Recorders: GDA	55	717646	6294875	Open site	Valid	Artefact : -	Permits	
44-3-4184	Contact MCP A10	Recorders: GDA	55	717496	6294939	Open site	Valid	Artefact : -	Permits	
44-3-4185	Contact Wahluu bora stoner site	Recorders: GDA	55	737162	6295163	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Ceremonial Ring (Stone or Earth) : -, Stone Arrangement : -	Permits	
44-3-4186	Contact Wahluu bora stoner site 2	Recorders: GDA	55	736854	6295282	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Ceremonial Ring (Stone or Earth) : -, Stone Arrangement : -	Permits	
44-3-4187	Contact Wahluu ceremonial and initiation complex plants	Recorders: GDA	55	736854	6295282	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Aboriginal Resource and Gathering : -, Aboriginal Ceremony and Dreaming : -	Permits	282608

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NSW Office of Environment & Heritage		AHIMS Web Services (AWS) Extensive search - Site list report				Your Ref/PO Number : 1923 Client Service ID : 330490				
SiteID	SiteName	Datum	Zone	Easting	Northing	Content	Site Status	SiteFeatures	SiteTypes	Reports
45-1-2795	Contact BF JH 1 IF - Blackmans Flat IF	Recorders: GDA	56	235191	6304132	Open site	Valid	Artefact : -	Permits	
44-3-0193	Contact Grinding stone upper Wahluu	Recorders: GDA	55	736342	6293221	Open site	Valid	Artefact : -	Permits	
44-3-0194	Contact Hammer stone artefact Wahluu	Recorders: GDA	55	736342	6293221	Open site	Valid	Artefact : -	Permits	
44-3-0195	Contact Scar tree marker Wahluu	Recorders: GDA	55	736367	6293294	Open site	Valid	Modified Tree (Carved or Scarred) : -	Permits	
44-3-0196	Contact Womera Dreaming site Wahluu	Recorders: GDA	55	736924	6294879	Closed site	Valid	Aboriginal Ceremony and Dreaming : -	Permits	
44-3-0197	Contact Scar tree Wahluu 2	Recorders: GDA	55	736992	6294972	Open site	Valid	Modified Tree (Carved or Scarred) : -	Permits	
44-3-0184	Contact Wahluu bora stoner site	Recorders: GDA	55	737162	6295163	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Ceremonial Ring (Stone or Earth) : -, Stone Arrangement : -	Permits	
44-3-0185	Contact Wahluu bora stoner site 2	Recorders: GDA	55	736854	6295282	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Ceremonial Ring (Stone or Earth) : -, Stone Arrangement : -	Permits	
44-3-0186	Contact Wahluu ceremonial and initiation complex plants	Recorders: GDA	55	736854	6295282	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Aboriginal Resource and Gathering : -, Aboriginal Ceremony and Dreaming : -	Permits	282608

Report generated by AHIMS Web Service on 19/07/2018 for Alyce Cameron for the following area at Search using shape-file Buffer July 1.5km.SHP with a buffer of 0 meters. Additional info :
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		AHIMS Web Services (AWS) Extensive search - Site list report						Your RefPO Number : 1923 Client Service ID : 358490		
SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
44-0-0214	Mt Pazaransa Scarred Tree 1	GDA	55	736485	6294854	Open site	Valid	Modified Tree (Carved or Scarred) :-		
	Contact									Permits
		Recorders:	Entact Heritage Pty Ltd - Waterloo,Mr.Alistair Hobbs							
44-0-0216	Stone fire pit Pearce	GDA	55	754907	6294842	Closed site	Valid	Aboriginal Ceremony and Dreaming :- Grinding Groove :-		
	Contact									Permits
		Recorders:	Charles Sturt University,Mr.Jade Flynn							
44-0-0217	Grinding grooves pearose	GDA	55	743879	6292592	Closed site	Valid	Grinding Groove :-		
	Contact									Permits
		Recorders:	Charles Sturt University,Mr.Jade Flynn							

Report generated by AHIMS Web Service on 19/07/2018 for Alyce Cazareu for the following area at Search using shape-file Beffie July 15km.SHP with a buffer of 0 meters. Additional Info :
 RW Number of Aboriginal sites and Aboriginal objects found is 89
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