

Part 13

Aboriginal and Historical Cultural Heritage Assessment

State Significant Development No. 5765

Prepared by:

Landskape Natural and Cultural Heritage Management

May 2020

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Aboriginal and Historical Cultural Heritage Assessment

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COMMONLY USED ACRONYMS

AHIMS	Aboriginal Heritage Information Management System
BCD	NSW Department of Planning, Industry and Environment – Biodiversity and Conservation Division
BL	Bowdens Lue
BLWP	Bowdens Lue Water Pipeline
EIS	Environmental Impact Statement
EL	Exploration Licences
GPR	ground penetrating radar
HMP	Heritage Management Plan
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	local government area
OEH	Office of Environment and Heritage
PADs	potential archaeological deposits
RWC	R.W. Corkery and Co. Pty Limited
SEARs	Secretary's Environmental Assessment Requirements
TSF	tailings storage facility
WRE	waste rock emplacement

EXECUTIVE SUMMARY

Bowdens Silver Pty Limited ("Bowdens Silver") is planning to apply for a development consent under Division 4.7 (State significant development; SSD) of Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to develop and operate an open cut silver mine known as the Bowdens Silver Project ("the Project") on a greenfields site approximately 2km to 3km northeast of Lue, approximately 26 kilometres east of Mudgee in central western NSW. The operational Project life, including the 1.5 year site establishment and construction stage, would be approximately 16.5 years. Ore processing would occur over an approximate 15 year period, with an annual processing rate of 2 Mtpa.

The Project would involve conventional open cut mining methods from one main and two smaller, satellite pits and would also include an out-of-pit waste rock emplacement (WRE), soil stockpiles, a tailings storage facility (TSF), processing plant and other ancillary infrastructure situated within an area covering approximately 1 000ha (the "Mine Site") that is situated within the Exploration Licences (EL) 5920 and 6354. The produced silver/lead and zinc concentrates would be despatched for smelting and processing off site by trucks that would access the Mine Site via a dedicated mine access road and new section of public road.

A pipeline to deliver water from the Ulan Coal Mine and/or Moolarben Coal Mine also forms part of the Project with land to be disturbed for its construction included in this assessment.

Bowdens Silver commissioned Landscape to undertake an Aboriginal and historical cultural heritage assessment for the Project. This report, (hereafter referred to as the "cultural heritage assessment") presents an assessment of the Aboriginal and historical cultural heritage for the Project. This report presents an assessment of the cultural heritage related issues for the Project in accordance with:

- the general requirements of the NSW Office of Environment and Heritage's Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales (OEH, 2011);
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010a);
- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010b);
- Historical Archaeology Code of Practice (NSW Heritage Office, 2006);
- NSW Heritage Manual (NSW Heritage Office, 1996); and
- Assessing Significance for Historical Archaeological Sites and 'Relics' (NSW Heritage Branch, 2009).

The specific objectives of the Aboriginal and historical cultural heritage assessment were to:

- Consult the local Aboriginal community to identify any concerns they may have (consultation with the Aboriginal community followed the Aboriginal Cultural Heritage Community Consultation Requirements for Proponents [DECCW, 2010b]);
- Conduct a desktop assessment to delineate areas of known and predicted Aboriginal cultural heritage within the Mine Site;

- Undertake a stratified archaeological survey of known and predicted Aboriginal cultural heritage identified in the desktop assessment with representatives of the local Aboriginal community;
- Record any Aboriginal and historical cultural heritage sites within the Mine Site and assess their significance;
- Identify the nature and extent of potential impacts of the Project on Aboriginal and historical cultural heritage; and
- Develop options in consultation with the community to avoid or mitigate potential impacts of the development on Aboriginal and historical cultural heritage places and items.

Preparation of this report involved collation of relevant archival, archaeological, historical and environmental information and the use of aerial photographs and topographic and geomorphic maps to identify areas likely to contain Aboriginal and historical cultural heritage sites. Archaeological field investigations of the Mine Site were undertaken over 15 days from 21 to 25 November 2011, 19 to 21 March 2013, 1 to 2 July 2013 and 24 to 26 March 2017. The field investigations for the proposed water supply pipeline corridor were undertaken over 3 days from 9 to 11 April 2019. The field investigations for the proposed relocated Maloneys Road were undertaken over 1 day on 12 April 2019. All field investigations were led by Project Archaeologist Dr Matt Cupper with the assistance of the following Aboriginal community representatives: Debbie Foley, Larry Foley and Steven Flick (Murong Gialinga Aboriginal and Torres Strait Islander Corporation), Debbie Foley, Larry Foley and Christine Milton (Mudgee Local Aboriginal Land Council), Lyn Syme, Kevin Williams, Coral Williams, Kelsey Williams-Fawcett (North East Wiradjuri Company Limited), Kevin Williams, Robyn Williams, Coral Williams (Warrabinga Native Title Claimants Aboriginal Corporation), Erwin Wolfendon (Mingaan Wiradjuri Aboriginal Corporation and Bradley Bliss, Brendan Doherty and Billy Stanley (Wellington Valley Wiradjuri Aboriginal Corporation), Shanae Martin (Gallanggabang Aboriginal Corporation) and Paul Brydon.

Forty-five Aboriginal cultural heritage sites have previously been recorded in and adjacent to the Mine Site. These comprise a rock shelter with rock art, 26 stone artefact scatters and 18 isolated finds of stone artefacts. However, the location of the rock shelter is poorly defined from historical records (1899) and this site was unable to be re-identified in any field survey whilst a further two sites, BL2 and BL20 have already been salvaged under Aboriginal Heritage Impact Permit 1132211. The surveys led by Dr Cupper identified an additional 31 Aboriginal cultural heritage sites, comprising 19 stone artefact scatters, nine isolated finds of stone artefacts, two scarred trees and a rock shelter with potential archaeological deposits and stone artefacts.

Three historical heritage features were also identified on the Mine Site. These are the ruins of a possible gold prospector's dwelling and two nearby shallow gold mining shafts.

Twenty-five Aboriginal cultural heritage sites are located within the approximately 420 hectare proposed disturbance area. This assessment has concluded that these sites are not of high scientific significance but are of high cultural significance.

Based on the results of this Aboriginal and historical cultural heritage investigation and consultation with representatives of the local Aboriginal community it is recommended that:

- Bowdens Silver arranges to salvage the Aboriginal artefacts at the 24 Aboriginal cultural heritage sites (Lue 9, BL3, BL4, BL15-BL18, BL35, BL36, BL38-BL40, BL43-48, BL51, BL52, BL54, BL56, BL61, BL62) located within the Mine Site and ancillary infrastructure disturbance areas. A suitably qualified archaeologist and representatives of the local Aboriginal community should be engaged to record and collect the Aboriginal objects. These items should be properly curated and stored in an on-site "Keeping Place".
- Potential archaeological deposits at rock shelter site BL44 should be test excavated by a suitably qualified archaeologist and representatives of the local Aboriginal community, and if they are shown to contain Aboriginal objects, deposits should be fully excavated, recorded and salvaged. These items should be properly curated and stored in an on-site "Keeping Place".
- Scarred tree BL49 should be relocated to an on-site "Keeping Place".
- During closure and rehabilitation activities, the Aboriginal artefacts and scarred tree stored in the on-site "Keeping Place" should be re-placed within rehabilitated areas in consultation with local Aboriginal groups and the NSW Department of Planning, Industry and Environment – Biodiversity and Conservation Division (BCD).
- Similarly, an archaeologist should be engaged to excavate salvage any relics of historical interest at the ruined dwelling that is located within the area of proposed disturbance. Salvaged items should be properly curated and archived at a location to be determined.
- Harm to all other Aboriginal cultural heritage sites within the Mine Site but outside direct disturbance areas must be avoided, with permanent protective barriers to be erected around the sites as required.
- In the unlikely event that human skeletal remains are encountered during the course of activities associated with the Project, all work in the vicinity must cease. Remains must not be handled or otherwise disturbed except to prevent further disturbance. If the remains are thought to be less than 100 years old, the Police or the State Coroner's Office (tel: 02 9552 4066) must be notified. If there is reason to suspect that the skeletal remains are more than 100 years old and Aboriginal, Bowdens Silver should contact the NSW Environment Protection Authority's Environmental Line (tel: 131 555) for advice. In the unlikely event that an Aboriginal burial is encountered, strategies for its management would need to be developed with the involvement of the local Aboriginal community. Works in the immediate vicinity must not recommence without written approval from NSW Department of Planning, Industry and Environment – Biodiversity and Conservation Division (BCD).
- Bowdens Silver should co-ordinate and implement these recommendations by integrating them into a single programme and document them in the form of a Heritage Management Plan (HMP). The HMP should remain active for the entire Project life and define the tasks, scope and conduct of all Aboriginal cultural heritage management activities. The HMP should be developed in consultation with the local Aboriginal community.

- Those parts of the water supply pipeline corridor and relocated Maloneys Road not previously assessed should be subject to detailed cultural heritage assessment and any Aboriginal or historical cultural heritage sites appropriately documented and managed in accordance with the HMP.
- Bowdens Silver should provide training to all on-site personnel regarding the HMP strategies relevant to their employment tasks.
- Bowdens Silver should continue to involve the registered Aboriginal stakeholders and any other relevant Aboriginal community groups or members in matters pertaining to the Project. In particular, the recording, collection, curation, storage and re-placement of Aboriginal objects should occur with the invited participation of local Aboriginal community representatives.

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1. INTRODUCTION

1.1 SCOPE

Bowdens Silver is planning to apply for a development consent under Division 4.7 (State significant development) of Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) to develop and operate an open cut silver mine known as the Bowdens Silver Project ("the Project") on a greenfields site approximately 2km to 3km northeast of Lue, approximately 26 kilometres east of Mudgee in central western NSW (see **Figure 1**). The operational Project life, including site establishment and construction and estimated time to complete rehabilitation, would be approximately 23 years. Ore processing would occur over an approximate 15 year period, with an annual processing rate of 2 Mtpa. The Mine Site is situated within EL5920 and EL6354.

It is proposed the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement (WRE), soil stockpiles, a tailings storage facility (TSF), processing plant and other ancillary infrastructure. A new public road (relocated Maloneys Road) and pipeline to deliver make-up water from the Ulan Coal Mine and or Moolarben Coal Mine also forms part of the Project.

Bowdens Silver commissioned Landscape to complete an Aboriginal and historical cultural heritage assessment for the Project. This report, (hereafter referred to as the "cultural heritage assessment") presents an assessment of the Aboriginal and historical cultural heritage for the Project in accordance with:

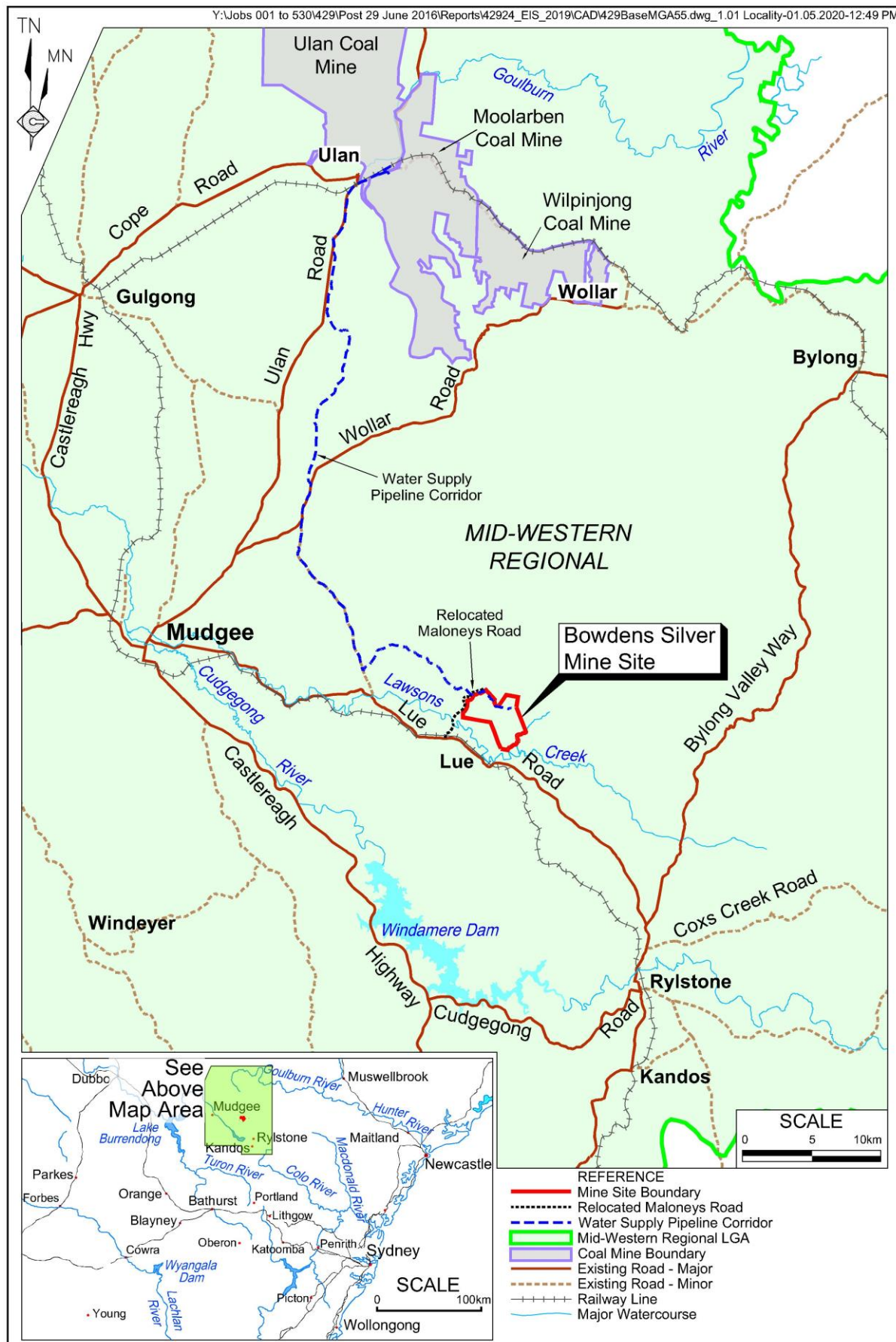
- the general requirements of OEH's Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales (OEH, 2011);
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010a);
- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010b);
- Historical Archaeology Code of Practice (NSW Heritage Office, 2006);
- NSW Heritage Manual (NSW Heritage Office, 1996); and
- Assessing Significance for Historical Archaeological Sites and 'Relics' (NSW Heritage Branch, 2009).

1.2 PROJECT DESCRIPTION

1.2.1 Introduction

This section provides an overview of the Project in sufficient detail to enable the reader to understand the type and scale of activities proposed. A more detailed description of the Project is included in Section 2 of the Environmental Impact Statement (EIS) (RWC, 2020).

Figure 1 Locality Plan



1.2.2 Objectives

The principal objectives of the Project are to:

- maximise the recovery of silver, zinc and lead from resources within the Mine Site;
- undertake all activities in an environmentally responsible manner to ensure compliance with relevant criteria / goals and reasonable community expectations;
- preserve the existing character of Lue;
- provide a stimulus for the Mudgee and district economy; and
- achieve the above objectives in a cost-effective manner to ensure the Project is viable.

1.2.3 Project Overview

For the purposes of this report, the Mine Site, proposed relocated Maloneys Road and the water supply pipeline corridor are referred to as the “Application Area”.

The seven principal components within the Mine Site are:

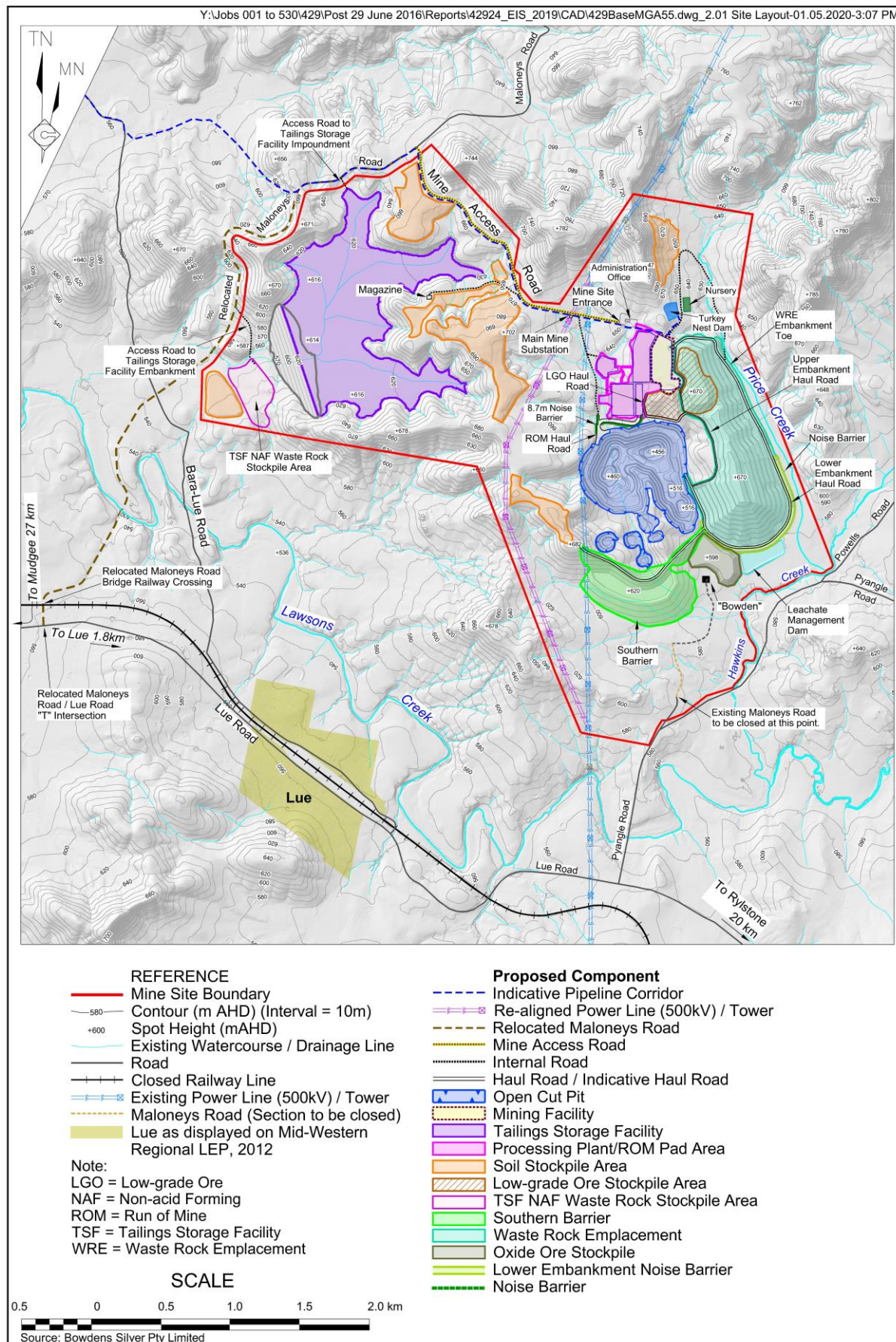
- a main open cut pit and two satellite open cut pits, collectively covering approximately 52ha;
- a processing plant and related infrastructure covering approximately 22ha;
- a WRE covering approximately 77ha;
- a low grade ore stockpile adjacent to but largely upon the northern sections of the WRE covering approximately 14ha (9ha above the WRE)¹;
- an oxide ore stockpile covering approximately 8ha;
- a TSF covering approximately 117ha; and
- a southern barrier to provide visual and acoustic protection to properties south of the Mine Site covering approximately 32ha.

The above components would be supported by a range of on-site and off-site infrastructure. The on-site infrastructure comprises haul roads, water management infrastructure, power/water reticulation, workshops, stores, compounds and offices/amenities. The off-site infrastructure comprises a relocated section of Maloneys Road (including a new railway bridge overpass and new road crossing of Lawsons Creek), a 132kV power line and a water supply pipeline for the delivery of make-up supply water to the Mine Site. **Figure 1** displays the location of the Mine Site, the relocated Maloneys Road and the alignment of the proposed water supply pipeline corridor. **Figure 2** displays the locations of the principal mine components.

It is noted that the 132kV power line required for the mine power supply would be the subject of a Part 5 application submitted under the EP&A Act to the relevant energy provider.

¹ The low grade ore stockpile would be constructed adjacent to but largely upon the northern sections of the WRE.

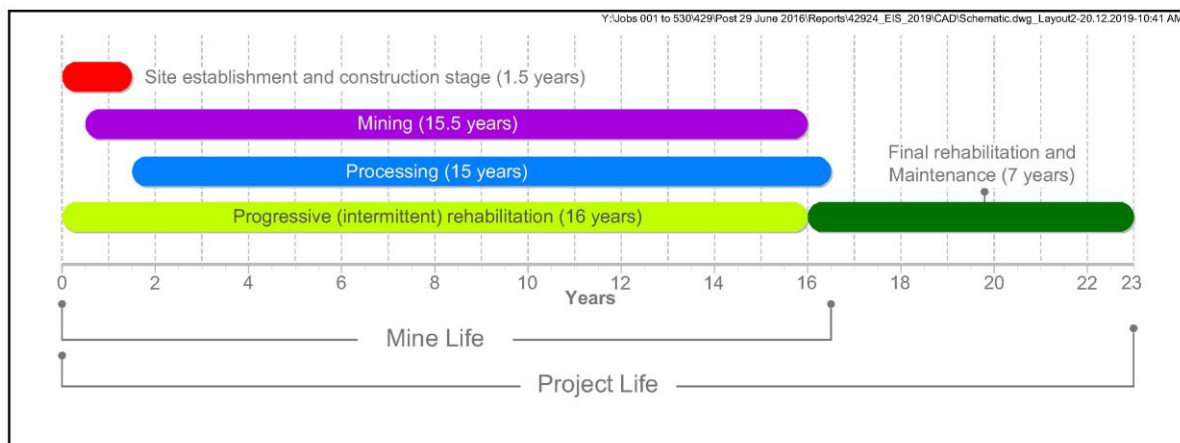
Figure 2 Mine Site Layout



The Project would incorporate conventional open cut pits (one main and two smaller, satellite pits), from which overburden/waste rock would be removed from above and around the silver-zinc-lead ore and either used for on-site construction activities or placed in the out-of-pit WRE or the southern barrier. The mined ore would be transported by haul trucks to the on-site processing plant where it would be crushed, milled and processed to liberate the silver, zinc and lead minerals. These minerals would be collected by conventional froth flotation to produce two concentrates that would be dewatered and transported off site by truck. The residual materials from processing (tailings) would be pumped in the form of a slurry to a TSF that would be located to the west of the main open cut pit.

The Project would require a site establishment and construction period of approximately 18 months during which the processing plant and all related infrastructure and the initial embankment of the TSF would be constructed. Once operational, Bowdens Silver anticipates the mine would produce concentrates for approximately 15 years. In total, it is proposed the mine life would be approximately 16.5 years, i.e. from the commencement of the site establishment and construction stage to the completion of concentrate production. It is envisaged rehabilitation activities would be completed over a period of approximately 7 years, i.e. from Year 16 to Year 23. **Figure 3** displays the duration of each of the main components throughout the mine life and Project life.

Figure 3 Mine Life and Project Life



1.3 CULTURAL HERITAGE LEGISLATIVE CONTEXT

Development consent for the Project is being sought under Division 4.7 of Part 4 of the EP&A Act. This Act recognizes the need to protect the cultural and natural heritage of NSW and provides for planning before development to determine the likely impact of an activity on the environment. Division 4.7 of Part 4 the EP&A Act provides an approval process that is particularly adapted for SSD.

Approvals and legislation that do not apply to Approved Part 4, Division 4.7 Projects:

Section 4.41 of the EP&A Act outlines the authorisations that do not apply to approved SSD, including those relevant to cultural heritage, viz.:

- Division 8 of Part 6, Part 4, an approval under Part 4, or an excavation permit under section 139 of the *Heritage Act 1977*; and
- An Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*.

1.4 OBJECTIVES OF STUDY

The specific objectives of this cultural heritage assessment were to:

- consult the local Aboriginal community to identify any concerns they may have about the Project and to involve the community in the management of any artefactual material located within the Application Area (consultation with the Aboriginal community followed OEH's *Aboriginal Cultural Heritage Community Consultation Requirements for Proponents* [DECCW, 2010a]);
- conduct a desktop assessment to delineate areas of known and predicted cultural heritage within the Mine Site and water supply pipeline corridor;
- undertake a stratified archaeological survey of known and predicted cultural heritage identified in the desktop assessment with representatives of the local Aboriginal community;
- record any cultural heritage sites within and adjacent to the Mine Site, relocated Maloneys Road and water supply pipeline corridor and assess their significance;
- identify the nature and extent of potential impacts of the Project on cultural heritage; and
- develop options, in consultation with the community, to avoid or mitigate potential impacts of the development on cultural heritage places and items.

1.5 SURVEY AREA

The survey area for the cultural heritage assessment included the Mine Site, relocated Maloneys Road and the water supply pipeline corridor (the Application Area).

1.6 STUDY INVESTIGATIONS

Preparation of this report involved collation of relevant archival, archaeological, historical and environmental information and the use of aerial photographs and topographic and geomorphic maps to identify areas likely to contain cultural heritage sites. This included review of the previous Aboriginal cultural heritage investigations within the Mine Site and the region (see Section 4.1.4).

Archaeological field investigation of the Mine Site was undertaken from 21 to 25 November 2011, 19 to 21 March 2013, 1 to 2 July 2013, 24 to 26 March 2017, of the water supply pipeline corridor from 9 to 11 April 2019 and the relocated Maloneys Road on 12 April 2019 by Project Archaeologist Matt Cupper with the assistance of the following Aboriginal community representatives: Debbie Foley, Larry Foley and Steven Flick (Murong Gialinga Aboriginal and Torres Strait Islander Corporation), Debbie Foley, Larry Foley and Christine Milton (Mudgee Local Aboriginal Land Council), Lyn Syme, Kevin Williams, Coral Williams, Kelsey Williams-Fawcett (North East Wiradjuri Company Limited), Kevin Williams, Robyn Williams, Coral Williams (Warrabinga Native Title Claimants Aboriginal Corporation), Erwin Wolfendon (Mingaan Wiradjuri Aboriginal Corporation) and Bradley Bliss, Brendan Doherty and Billy Stanley (Wellington Valley Wiradjuri Aboriginal Corporation), Shanae Martin (Gallangabang Aboriginal Corporation) and Paul Brydon. This report compiles the outcomes of all archaeological field investigations undertaken since 2011. Separate reporting for each period of investigation has not been prepared.

A ground penetrating radar (GPR) and magnetic gradiometer survey of an historical cultural heritage site was undertaken on 11 April 2012 by the Project Archaeologist and geophysical investigator Trent Bowman of GBG Australia.

Coverage of the Secretary's Environmental Assessment Requirements (SEARs) within this report is outlined in **Table 1**.

Table 1
Coverage of SEARs and Additional Requirements

Page 1 of 3

Relevant Requirement(s)		Coverage in Report
ABORIGINAL CULTURAL HERITAGE		
Secretary's Environmental Assessment Requirements		
The EIS must include an assessment of the likely Aboriginal and historic heritage (cultural and archaeological) impacts of the development, having regard to OEH's requirements (including the Heritage Division).		Section 7
While not exhaustive, Attachment 1 Extract (below) contains a list of some of the environmental planning instruments, guidelines, policies, and plans that may be relevant to the environmental assessment of this development.		
• The Burra Charter (The Australia ICOMOS charter for places of cultural significance)		Section 6.3.1
• Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (OEH)		Section 2.2.5
• Code of Practice for Archaeological Investigations of Objects in NSW (OEH)		Section 5
• Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (OEH)		Section 5
• NSW Heritage Manual (OEH)		Section 5
• Statements of Heritage Impact (OEH)		Section 6
• Assessing Significance for Historical Archaeological Sites and 'Relics' (OEH)		Section 6.3.1
• Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH)		Section 5
Relevant Requirements Nominated by Other Government Agencies		
Office of Environment & Heritage 13/12/16	The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in the EIS. This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the <i>Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW</i> (DECCW, 2011) and consultation with OEH regional officers.	Sections 5 and 6
	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> (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the EIS.	Section 2

Table 1 (Cont'd)
Coverage of SEARs and Additional Requirements

Page 2 of 3

Requirement(s)		Coverage in Report
Office of Environment & Heritage 13/12/16 (Cont'd)	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 EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.	Sections 7, 8
HISTORIC HERITAGE		
Relevant Requirements Nominated by Other Government Agencies		
The EIS must include an assessment of the likely Aboriginal and historic heritage (cultural and archaeological) impacts of the development, having regard to OEH's requirements (including the Heritage Division).		Section 7
While not exhaustive, Attachment 1 Extract (below) contains a list of some of the environmental planning instruments, guidelines, policies, and plans that may be relevant to the environmental assessment of this development.		
• The Burra Charter (The Australia ICOMOS charter for places of cultural significance)		Section 6.3.1
• Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (OEH)		Section 2.2.5
• Code of Practice for Archaeological Investigations of Objects in NSW (OEH)		Section 5
• Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (OEH)		Section 5
• NSW Heritage Manual (OEH)		Section 5
• Statements of Heritage Impact (OEH)		Section 6
• Assessing Significance for Historical Archaeological Sites and 'Relics' (OEH)		Section 6.3.1
• Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH)		Section 5
Relevant Requirements Nominated by Other Government Agencies		
NSW Heritage Council 8/12/16	The EIS shall include a Heritage Impact Assessment (HIS) prepared in accordance with the guidelines in the NSW Heritage Manual that addresses the significance of, and provides an assessment of the impact on the heritage significance of heritage items on the development site and in the vicinity.	Section 6
	The EIS shall also (include) a historical archaeological assessment prepared by a suitably qualified historical archaeologist in accordance with the Heritage Division, Office of Environment and Heritage Guidelines Assessing Significance for Historical Archaeological Sites and 'Relics' 2009. This assessment should identify what relics, if any, are likely to be present, assess their significance and consider the impacts from the proposal on this potential resource.	Sections 5, 6 & 7
	Where harm is likely to occur, it is recommended that the significance of the relics be considered in determining an appropriate mitigation strategy.	Section 6

Table 1 (Cont'd)
Coverage of SEARs and Additional Requirements

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Requirement(s)		Coverage in Report
HISTORIC HERITAGE (Cont'd)		
Relevant Requirements Nominated by Other Government Agencies (Cont'd)		
NSW Heritage Council 8/12/16 (Cont'd)	In the event that harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations.	Section 8
Office of Environment & Heritage 14/05/19	The EIS must provide a heritage assessment including but not limited to an assessment of impacts to <i>State and local heritage</i> 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:	Section 6 Section 8
	<ul style="list-style-type: none"> outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the NSW Heritage Manual (1996), 	No excavation undertaken
	<ul style="list-style-type: none"> 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), 	Section 6
	<ul style="list-style-type: none"> include a statement of heritage impact for all heritage items (including significance assessment), 	Section 7
	<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); and 	Section 8
	<ul style="list-style-type: none"> where potential archaeological impacts have been identified develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations (terrestrial and maritime as relevant) and include the results of these test excavations. 	
Relevant Requirements Nominated by Lue and District Community		
What are the likely impacts of the mine on Aboriginal and historic heritage?		Section 7
Where would the keeping place for the Aboriginal artefacts be?		Section 8.6

2. ABORIGINAL SOCIAL AND CULTURAL INFORMATION

2.1 INTRODUCTION

In accordance with the NSW OEH's *Aboriginal Cultural Heritage Community Consultation Requirements for Proponents* (DECCW, 2010a), this assessment has involved the appropriate representatives of the local Aboriginal community and considered their cultural values and concerns. The following sections describe involvement by the Aboriginal community and demonstrate that the input of the involved Aboriginal community representative has been considered when determining and assessing impacts, developing options, and making final recommendations relevant to Aboriginal cultural heritage outcomes of the Project.

2.2 ABORIGINAL COMMUNITY PARTICIPATION

Aboriginal community consultation for the Aboriginal cultural heritage assessment was conducted:

- before the field assessment to preliminarily gauge and assess community views and organise a field survey team;
- during the field survey with the Aboriginal team members; and
- after the field survey to discuss the findings and recommendations for Aboriginal cultural heritage management.

2.2.1 Identification of Aboriginal Community Groups and Individuals

Relevant stakeholders from the Aboriginal community were identified using a process consistent with the *Aboriginal Cultural Heritage Community Consultation Requirements for Proponents* (DECCW, 2010a), as follows.

- Written letters of notification sent to the Mudgee Local Aboriginal Land Council (LALC), Registrar of the NSW *Aboriginal Land Rights Act* 1983, NTS Corp Limited, NSW Office of Environment and Heritage (OEH), National Native Title Tribunal, Central West Catchment Management Authority (later Local Land Services) and Mid-Western Regional Council (8 September 2011; renotified 2 January 2019) requesting identification of relevant Aboriginal stakeholders (**Annexure 1**).
- Written letters of notification sent to the identified relevant Aboriginal persons/parties (23 September 2011; renotified 18 January 2019) (**Annexure 1**).
- Public advertisement placed in local/regional newsprint media *The Mudgee Guardian* (26 September 2011; re-advertised 18 January 2019) inviting interested persons/parties to register an interest in the Project (**Annexure 2**).

Responses to the written letters of notification and public notices (**Annexure 3**) are as follows:

- Office of the Registrar of the NSW *Aboriginal Land Rights Act* 1983 stating that the development area does not appear to have Registered Aboriginal Owners by letter dated 9 September 2011.
- National Native Title Tribunal stating that the Wellington Valley Wiradjuri People has an application for native title over areas of the study area where native title has not been previously extinguished by e-mail dated 9 September 2011.
- Mudgee Local Aboriginal Land Council registering its interest in the Project by telephone on 12 September 2011.
- Murong Gialinga Aboriginal and Torres Strait Islander Corporation registering its interest in the Project by telephone on 12 September 2011.
- Mid-Western Regional Council advising the names of Aboriginal organizations and individuals of whom they are aware that assert traditional interests in the Mid-Western local government area (LGA) by e-mail 14 September 2011.
- Mingaan Wiradjuri Aboriginal Corporation registering its interest in the Project by e-mail on 26 September 2011.
- Wellington Valley Wiradjuri Aboriginal Corporation registering its interest in the Project by letter on 26 September 2011.
- North Eastern Wiradjuri Company Limited registering its interest in the Project by letter on 24 October 2011.
- Warrabinga Native Title Claimants Aboriginal Corporation registering its interest in the Project by letter on 24 October 2011.
- Gallangabang Aboriginal Corporation registering its interest in the Project by email on 17 January 2019.
- Bradley Bliss registering his interest in the Project by email on 17 January 2019.
- Paul Brydon registering his interest in the Project by telephone on 24 January 2019.

The location of the Application Area and the nature of the works associated with the Project were explained to the registered Aboriginal stakeholders. Requirements for a cultural heritage assessment were discussed and the registered Aboriginal stakeholders were presented with a proposed methodology for the cultural and archaeological assessment. Input from the registered Aboriginal stakeholders about this study programme for assessing potential impacts on cultural heritage places and items was sought. Representatives of the registered Aboriginal stakeholders participated in the social and cultural study and archaeological field survey and contributed to developing management protocols to avoid or mitigate disturbance to cultural heritage sites.

2.2.2 Preliminary Aboriginal Involvement

Liaison with members of the local Aboriginal community was initiated from a whole-of-Project perspective by R.W. Corkery and Co. Pty Limited (RWC) on behalf of previous proponents for the Bowdens Silver Project, namely Bowdens Silver (then known as Silver Standard Australia Pty Limited) in 1996 and Kingsgate Bowdens Pty Ltd in 2011. This has included then Project

Archaeologist John Appleton completing an archaeological assessment of the then proposed area of disturbance for the Project at the time with representatives of Murong Gialinga ATSIC, Dave Maynard and Aleshia Oakenfull, in 1998 (Maynard 1998).

2.2.3 Aboriginal Involvement Prior to the Field Assessments

Prior to the field assessments, Project Archaeologist Matt Cupper held telephone discussions with Tony Lonsdale (CEO, Mudgee LALC), Debbie Foley (Director, Murong Gialinga ATSIC), Helen Riley (Director, Mingaan Wiradjuri Aboriginal Corporation), Billy Stanley (Director, Wellington Valley Wiradjuri Aboriginal Corporation) and Lyn Syme (North Eastern Wiradjuri Company Limited, Warrabinga Native Title Claimants Aboriginal Corporation) to explain the proposed works associated with the Project and the planned cultural heritage assessment.

A meeting was also held at Bowdens Silver's site office on 8 April 2019 prior to additional field survey of the water supply pipeline corridor. Attendees at this meeting were Tamara Peterson (Mudgee LALC), Larry Foley (Director, Murong Gialinga ATSIC), Bradley Bliss (individual stakeholder and Director, Wellington Valley Wiradjuri Aboriginal Corporation; Director, Gallangabang Aboriginal Corporation), Paul Brydon (individual stakeholder), Coral Williams (North Eastern Wiradjuri Company Limited), Matt Cupper (Landscape), Anthony McClure, Jane Munro and Blake Hjorth (Bowdens Silver) and Rob Corkery and Paul Ryall (RWC).

Measures to avoid or mitigate any impacts on cultural heritage places or items were discussed with the registered Aboriginal stakeholders. They were presented with written copies of a proposed methodology for the cultural and archaeological assessment (**Annexure 4**). Opinions of the registered Aboriginal stakeholders regarding the Project and its potential impacts on cultural heritage were sought and any concerns or queries were addressed.

The registered Aboriginal stakeholders were presented with information regarding the Project. The purpose of the presentation was to provide a detailed presentation of the Project to assist the registered Aboriginal parties to provide relevant information about the cultural significance of Aboriginal cultural heritage items and/or places and the potential for impacts from the Project.

2.2.4 Aboriginal Involvement During the Field Assessment

On the recommendation of the registered Aboriginal stakeholders, the following eleven representatives from the registered Aboriginal stakeholders participated in the field survey conducted over 17 days from 21 to 25 November 2011, 19 to 21 March 2013, 1 to 2 July 2013, 24 to 26 March 2017, 9 to 12 April 2019:

- Debbie Foley, Larry Foley, Christine Milton, Tamara Peterson (Mudgee Local Aboriginal Land Council);
- Debbie Foley, Larry Foley, Steven Flick (Murong Gialinga ATSIC);
- Lyn Syme, Kevin Williams, Coral Williams, Kelsey Williams-Fawcett (North Eastern Wiradjuri Company Limited);
- Erwin Wolfendon (Mingaan Wiradjuri Aboriginal Corporation);

- Kevin Williams, Robyn Williams, Coral Williams (Warrabinga Native Title Claimants Aboriginal Corporation);
- Bradley Bliss, Billy Stanley, Brendon Doherty (Wellington Valley Wiradjuri Aboriginal Corporation);
- Paul Brydon; and
- Shanae Martin (Gallangabang Aboriginal Corporation).

Discussions were held with the representatives of the Aboriginal stakeholders to ascertain their views about the Project and its potential impact on Aboriginal cultural heritage items, places and values.

2.2.5 Aboriginal Involvement Following the Field Assessment

A meeting was held at Bowdens Silver's site office on 23 May 2019 at the completion of the field surveys. Attendees at this meeting were Larry Foley and Debbie Foley (Directors, Murong Gialinga ATSIC), Brendon Doherty (Wellington Valley Wiradjuri Aboriginal Corporation), Shanae Martin (Gallangabang Aboriginal Corporation), Paul Brydon (individual stakeholder) and Kelsey Williams-Fawcett (North Eastern Wiradjuri Company Limited). Also in attendance were Matt Cupper (Landscape), Tom Purcell and Blake Hjorth (Bowdens Silver).

Draft copies of a summary of this cultural heritage assessment report were provided for comment to the registered Aboriginal stakeholders on 21 December 2011. Registered Aboriginal stakeholders were also provided a draft cultural heritage assessment report on 15 January 2013, consistent with the *Aboriginal Cultural Heritage Community Consultation Requirements for Proponents* (DECCW, 2010a). There were five written and one verbal responses to the draft summary report (**Annexure 5**).

A draft copy of this report was also provided for comment to the registered Aboriginal stakeholders on 2 August 2019. There were five written responses to the draft report (**Annexure 5**).

Comments from the registered Aboriginal stakeholders and responses addressing these comments are documented in **Table 2**. Some of the responses are repeated where different groups had the same or similar comment.

Table 2
Stakeholder Comments and Proponent Responses

Page 1 of 6

Comment	Response
Gallangabang Aboriginal Corporation – 31 August 2019	
Where are the Draft Survey Reports for ALL Aboriginal Cultural Heritage Assessments conducted over since 2014, as GAC have in that time NOT received any form of formal Draft report (as per the consultation guidelines) to make comment on in relation to what our membership and community recommend to occur in relation to further test pitting, salvage or further site investigation and recording.	The draft Aboriginal Cultural Heritage Assessment report for the entire project was provided to all registered Aboriginal stakeholders for review and input on 2 August 2019 in accordance with section 4.4 of the <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (DECCW 2010a). This report assembled the results of all relevant surveys, however, it was not circulated until the Project description was finalised in order to allow a clear understanding of which observed sites would require salvage or further investigation of those that could be retained in situ.
We further object to the meeting under “Consultation” conducted on the 23rd of May 2019 regarding Aboriginal Cultural Heritage Sites was a forced meeting to Bowdens objectives in regards to decisions made in relation to salvaging selected sites and artefacts without formal written comment by Registered Aboriginal Parties in regards to Our Heritage and the meeting was not held in a conducive way. Several Aboriginal Representatives present made objections and called for additional meetings. No minutes nor follow up actions were forwarded by Bowdens Silver Project.	The meeting on 23 May 2019 was to update registered Aboriginal stakeholders on the project and discuss draft Aboriginal cultural heritage management recommendations being considered for inclusion in the ACHAR.
Again we STRONGLY OBJECT to this Draft Bowdens Silver Project Aboriginal and Historical Cultural Heritage Specialist Consultant Studies Compendium Volume 3, Part 13 Dated 02 Aug 2019, and ask the Government Departments to NOT APPROVE this Draft nor any Final Version of this section nor Complete EIS until a full resurvey and review of all reports by ALL Registered Aboriginal Parties has been conducted and ALL Registered Aboriginal Parties have made formal comment on those conducted Survey Draft Reports as per the Consultation Guidelines.	Landsape has prepared the Aboriginal Cultural Heritage Assessment report in accordance with the Secretary’s Environmental Assessment Requirements (SEARs) and guided by the <i>Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW</i> (OEH 2011). Consultation with Registered Aboriginal stakeholders was completed in accordance with the <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (DECCW 2010a). The Aboriginal Cultural Heritage Assessment compiles the outcomes of relevant surveys since 2014 and is therefore the only report relevant for assessment and review by registered Aboriginal Stakeholders.

Table 2 (Cont'd)
Stakeholder Comments and Proponent Responses

Page 2 of 6

Comment	Response
Gallanggang Aboriginal Corporation – 31 August 2019 (Cont'd)	
WVWAC (<i>sic</i> ; GAC) is aware that approximately 20% of the Bowdens to Ulan Water Pipeline was not undertaken, that 20% represents a large area of previously unsurveyed Freehold Land and until there has been a thorough Aboriginal Cultural Heritage Survey conducted within that Land or any other alternative proposed route then WVWAC must Object to the Pipeline Project as 100% of the pipeline route must be surveyed prior to approval by any government department to ensure that our Heritage and links to our ancestors are not lost. We know of various ancestral culturally significant sites and landscape which comes from our Traditional Knowledge in this general area and if these are impacted in any way or this project is given approval without the route being properly surveyed and without Registered Aboriginal Parties been given proper consultation rights, we will seek Land and Environment Court Action to have any approval overturned.	Field survey and assessment of the previously unsurveyed sections of the proposed water supply pipeline corridor would be completed following the receipt of agreements with the subject landowners well in advance of any construction. The likelihood of encountering Aboriginal objects during these future surveys is mitigated by previous land disturbance by agricultural land use and the fact that Aboriginal objects were sparsely represented in the previously surveyed sections. Moreover, harm to any Aboriginal objects that may be identified in the proposed corridor would be avoided where possible by route deviations to remove the risk of impacts.
WVWAC (<i>sic</i> ; GAC) have also raised concerns of our own and that of local farmers from the Ulan/Wilpinjong/Moolarben area in relation to groundwater table degradation and ongoing environmental affects that this will have in taking water from this area and pumping it up to up to 60km away where it will have to remain onsite.	Water to be pumped to the Mine Site would be dewatering surplus to coal mine operations. Potential impacts associated with the use of this water have been considered with the use accounted for through the Water Access Licence held by the relevant coal mine.
WVWAC (<i>sic</i> ; GAC) request a full Meeting with ALL Registered Aboriginal Parties to be present to discuss ALL matters arising from this Draft Report and the Bowdens to Ulan Water Pipeline.	Bowdens Silver will continue to engage in regular liaison with registered Aboriginal stakeholders.
Wellington Valley Wiradjuri Aboriginal Corporation – 31 August 2019	
Where are the Draft Survey Reports for ALL Aboriginal Cultural Heritage Assessments conducted over since 2014, as WVWAC have in that time NOT received any form of formal Draft report (as per the consultation guidelines) to make comment on in relation to what our membership and community recommend to occur in relation to further test pitting, salvage or further site investigation and recording.	The draft Aboriginal Cultural Heritage Assessment report for the entire project was provided to all registered Aboriginal stakeholders for review and input on 2 August 2019 in accordance with section 4.4 of the <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (DECCW 2010a). This report assembled the results of all relevant surveys, however, it was not circulated until the Project description was finalised in order to allow a clear understanding of which observed sites would require salvage or further investigation of those that could be retained in situ.

Table 2 (Cont'd)
Stakeholder Comments and Proponent Responses

Page 3 of 6

Comment	Response
Wellington Valley Wiradjuri Aboriginal Corporation – 31 August 2019 (Cont'd)	
We further object to the meeting under "Consultation" conducted on the 23rd of May 2019 regarding Aboriginal Cultural Heritage Sites was a forced meeting to Bowdens objectives in regards to decisions made in relation to salvaging selected sites and artefacts without formal written comment by Registered Aboriginal Parties in regards to Our Heritage and the meeting was not held in a conductive way. Several Aboriginal Representatives present made objections and called for additional meetings. No minutes nor follow up actions were forwarded by Bowdens Silver Project.	The meeting on 23 May 2019 was to update registered Aboriginal stakeholders on the project and discuss draft Aboriginal cultural heritage management recommendations being considered for inclusion in the Aboriginal Cultural Heritage Assessment report.
Again we STRONGLY OBJECT to this Draft Bowdens Silver Project Aboriginal and Historical Cultural Heritage Specialist Consultant Studies Compendium Volume 3, Part 13 Dated 02 Aug 2019, and ask the Government Departments to NOT APPROVE this Draft nor any Final Version of this section nor Complete EIS until a full resurvey and review of all reports by ALL Registered Aboriginal Parties has been conducted and ALL Registered Aboriginal Parties have made formal comment on those conducted Survey Draft Reports as per the Consultation Guidelines.	Landscape has prepared the Aboriginal Cultural Heritage Assessment report in accordance with the Secretary's Environmental Assessment Requirements (SEARs) and guided by the <i>Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW</i> (OEH 2011). Consultation with Registered Aboriginal stakeholders was completed in accordance with the <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (DECCW 2010a). The Aboriginal Cultural Heritage Assessment compiles the outcomes of relevant surveys since 2014 and is therefore the only report relevant for assessment and review by registered Aboriginal Stakeholders.
WVWAC is aware that approximately 20% of the Bowdens to Ulan Water Pipeline was not undertaken, that 20% represents a large area of previously unsurveyed Freehold Land and until there has been a thorough Aboriginal Cultural Heritage Survey conducted within that Land or any other alternative proposed route then WVWAC must Object to the Pipeline Project as 100% of the pipeline route must be surveyed prior to approval by any government department to ensure that our Heritage and links to our ancestors are not lost. We know of various ancestral culturally significant sites and landscape which comes from our Traditional Knowledge in this general area and if these are impacted in any way or this project is given approval without the route being properly surveyed and without Registered Aboriginal Parties been given proper consultation rights, we will seek Land and Environment Court Action to have any approval overturned.	Field survey and assessment of the previously unsurveyed sections of the proposed water supply pipeline corridor would be completed following the receipt of agreements with the subject landowners well in advance of any construction. The likelihood of encountering Aboriginal objects during these future surveys is mitigated by previous land disturbance by agricultural land use and the fact that Aboriginal objects were sparsely represented in the previously surveyed sections. Moreover, harm to any Aboriginal objects that may be identified in the proposed corridor would be avoided where possible by route deviations to remove the risk of impacts.

Table 2 (Cont'd)
Stakeholder Comments and Proponent Responses

Page 4 of 6

Comment	Response
Wellington Valley Wiradjuri Aboriginal Corporation – 31 August 2019 (Cont'd)	
WVWAC have also raised concerns of our own and that of local farmers from the Ulan/Wilpinjong/Moolarben area in relation to groundwater table degradation and ongoing environmental affects that this will have in taking water from this area and pumping it up to up to 60km away where it will have to remain onsite.	Water to be pumped to the Mine Site would be dewatering surplus to coal mine operations. Potential impacts associated with the use of this water have been considered with the use accounted for through the Water Access Licence held by the relevant coal mine.
WVWAC request a full Meeting with ALL Registered Aboriginal Parties to be present to discuss ALL matters arising from this Draft Report and the Bowdens to Ulan Water Pipeline.	Bowdens Silver will continue to engage in regular liaison with registered Aboriginal stakeholders.
Mudgee Local Aboriginal Land Council – 2 September 2019	
Whilst the report doesn't consider the Aboriginal Cultural Heritage to be of high scientific or cultural significance we consider all of our Cultural Heritage to be important.	Scientific significance is assessed through review of site integrity, structure, contents, representativeness and rarity. The draft Aboriginal Cultural Heritage Assessment Report does state that all of the Aboriginal objects are of high cultural significance (see Executive Summary, Section 6.1.2. Aboriginal Social, Cultural, Spiritual and Historical Significance)
We are aware of a burial in the Breakfast Creek area so there needs to be caution as we feel that there is the potential for such sites to be unearthed.	The Application Area is at least 10km west of Breakfast Creek and no registered burial sites are located near the Application Area. Notwithstanding this, appropriate management strategies are contained in the draft Aboriginal Cultural Heritage Assessment Report to avoid and mitigate harm to burials
We are very concerned about the cumulative impacts on Aboriginal Cultural Heritage in our region from the multiple developments – namely mining which have destroyed and displaced our cultural heritage. This project adds another 26 sites to the list of those destroyed by mining within our region. Once these places are destroyed they are gone for good.	Given the low-moderate scientific significance of the Aboriginal cultural heritage sites, the cumulative effect that may result from the development of the Project is considered to be low, and would be mitigated by the ongoing program of archaeological recording/salvage recommended by the assessment. The Application Area is located within an area that has already been heavily modified by past clearing, mining, pastoral and agricultural activities. The Project is considered likely to cause few impacts additional to those that have already occurred. On this basis, it is considered that the Project would not appreciably increase cumulative impacts to Aboriginal cultural heritage in the region.

Table 2 (Cont'd)
Stakeholder Comments and Proponent Responses

Page 5 of 6

Comment	Response
Mudgee Local Aboriginal Land Council – 2 September 2019 (Cont'd)	
We have concerns about the impact of the proposed water pipeline from Ulan Coal to Lue. We are not only concerned about the impacts on cultural heritage but also the impacts of moving water from one catchment area to another. We feel that this is not culturally or environmentally appropriate. Additionally we have concerns about the potential environmental risks to water quality and security from the project.	Water to be pumped to the Mine Site would be dewatering surplus to coal mine operations. Potential impacts associated with the use of this water have been considered with the use accounted for through the Water Access Licence held by the relevant coal mine.
<p>We believe that all areas which will be impacted by the Project development during construction and operation of the mine (such as the water pipeline and any ancillary developments, access roads etc) should be surveyed to ascertain the presence of any Aboriginal Cultural Heritage materials prior to the approval of the development.</p> <p>If areas are not surveyed then the impact on Aboriginal Cultural Heritage from the project may be underestimated. There may be more than 26 sites which will be directly impacted by the development so we feel it is essential that this is determined before approval of the project so that all information is present.</p> <p>As such we request that a detailed Aboriginal Cultural Heritage assessment be carried out all areas which will be impacted by the project during construction and operation of the mine or ancillary infrastructure prior to development consent being sought so that decisions are made with all information present.</p>	Field survey and assessment of the previously unsurveyed sections of the proposed water supply pipeline corridor would be completed following the receipt of agreements with the subject landowners well in advance of any construction. The likelihood to encountering Aboriginal objects during these future surveys is mitigated by previous land disturbance by agricultural land use and the fact that Aboriginal objects were sparsely represented in the previously surveyed sections. Moreover, harm to any Aboriginal objects that may be identified in the proposed corridor would be avoided by route deviations to remove the risk of impacts.
We agree that Cultural Awareness Training is important for staff, contractors and management and we are willing to assist in facilitating this.	Registered Aboriginal stakeholders would be invited to assist with the provision of cultural awareness training relevant to the proposed work of all personnel working on the Project.
Any management plans for Aboriginal Cultural Heritage need to make allowances for Aboriginal Cultural Protocols and Practices to be observed – particularly in relation to on-country works, any salvage work and the establishment and management of any keeping place.	The Heritage Management Plan would be prepared in consultation with the registered Aboriginal stakeholders and consider any relevant Aboriginal Cultural Protocols and Practices brought to the attention of Bowdens Silver.

Table 2 (Cont'd)
Stakeholder Comments and Proponent Responses

Page 6 of 6

Comment	Response
Murong Gialinga Aboriginal and Torres Straits Islander Corporation - 2 September 2019	
We are concerned about the approximation of 12km not surveyed also the ground water table degeneration as they will be taking it from the Ulan area and pumping it a long distance where it will remain on site. We are in a drought. Our directors would like to request a meeting with Bowdens to get information when the unsurveyed area will be completed as if it not surveyed this leaves a lot of area not covered and any Cultural material not recorded if any is present and this Draft cannot be agreed on.	Field survey and assessment of the previously unsurveyed sections of the proposed water supply pipeline corridor would be completed following the receipt of agreements with the subject landowners well in advance of any construction. The likelihood to encountering Aboriginal objects during these future surveys is mitigated by previous land disturbance by agricultural land use and the fact that Aboriginal objects were sparsely represented in the previously surveyed sections. Moreover, harm to any Aboriginal objects that may be identified in the proposed corridor would be avoided where possible by route deviations to remove the risk of impacts. Water utilised within the Mine Site would be dewatering surplus to coal mine operations and not connected to existing groundwater or surface water systems. The proposed water pipeline would be designed to avoid harm to Aboriginal objects.

2.3 ABORIGINAL SOCIAL AND CULTURAL INFORMATION ABOUT THE MINE SITE

Aboriginal people of the southwest slopes are concerned about any development that might impact upon Aboriginal heritage and other values on land that is traditionally theirs. All land has high cultural significance for individual Aboriginal people and for the Aboriginal community collectively. It should also be noted that any development upon, or disturbance of land is contrary to principal Aboriginal beliefs regarding land, its values and its inherent cultural significance.

Several Aboriginal community representatives had previously visited the Mine Site. Dave Maynard and Aleshia Oakenfull, representatives of Murong Gialinga ATSIC, had participated in the original archaeological assessment of the Project (Appleton, 1996; Maynard, 1998).

The Aboriginal community representatives involved in the present study identified the Mine Site, relocated Maloneys Road and water supply pipeline corridor as places that Aboriginal people had occupied in the past. Physical evidence of this past land use was provided by the Aboriginal archaeological sites in the Mine Site and water supply pipeline corridor. The Aboriginal community representatives inspected the sites during the study. Aboriginal registered stakeholder groups Mudgee Local Aboriginal Land Council, Murong Gialinga Aboriginal and Torres Strait Islander Corporation, North Eastern Wiradjuri Company Limited. Paul Brydon and Warrabinga Native Title Claimants Aboriginal Corporation agreed that Bowdens Silver should arrange to salvage the Aboriginal objects at the 25 Aboriginal cultural heritage sites located within the Mine Site and ancillary infrastructure disturbance areas (**Annexure 5**). A suitably qualified archaeologist and representatives of the local Aboriginal community should be engaged to record and collect the Aboriginal objects. These items should be properly curated and stored

in an on-site “Keeping Place”. Following the relinquishment of the mining lease and/or the completion of all relevant rehabilitation activities for the Project, artefacts should be replaced within rehabilitated areas in consultation with local Aboriginal groups.

Wellington Valley Wiradjuri Aboriginal Corporation and Gallanggabang Aboriginal Corporation did not support the recommendation to salvage the Aboriginal objects, requesting that they remain *in situ* and not be disturbed by the proposed development (**Annexure 5**). Mr Bradley Bliss is the director for both these groups and registered as an individual stakeholder. He did not formally respond to the draft report as an individual stakeholder.

3. LANDSCAPE CONTEXT

3.1 INTRODUCTION

The Mine Site and associated water supply pipeline corridor are located in the upper catchment of the Macquarie River in the southwest slopes region of central western NSW. They occupy undulating terrain between the lowlands of the Macquarie River plains and Blue Mountains of the Great Dividing Range (**Figure 1**). The climate is dry sub-humid, with the Mine Site receiving on average, approximately 670 mm of rainfall per annum (SILO, 2019).

The geology of the Mine Site and associated water supply pipeline corridor comprises sandstones and mudstones of the Ordovician (455-435 million year old) Coomber Formation, Silurian (435-415 million year old) shallow marine to subaerial clastic sediments (sandstone, shale, conglomerate), limestone, volcanoclastic sandstone and felsic volcanics of the Dungerey Volcanics and Permian (292 million year old) rhyolite of the Rylstone Volcanics.

It is noted that a proportion of the Mine Site has previously been cleared for drilling activities to proceed. Reliance was placed upon the results of the previous archaeological surveys within the Mine Site to avoid areas of archaeological interest. Bowdens Silver erected a protective barrier around each of the sites close to the planned drill sites or the access tracks to the drill sites (see Section 8.5).

3.2 LANDFORMS AND VEGETATION

The Mine Site comprises hills and ridges of Palaeozoic sedimentary and volcanic bedrock, which slope down to Quaternary (less than a few million years old) alluvial plains in the south. Elevations range from 770 m AHD on the summits of the hills (see **Figure 2**) down to 570 m AHD along Hawkins Creek frontage in the southeast. The summits of the major hills are volcanics, conglomerates and sandstones. The lower slopes have weathered colluvium and low-lying areas are alluvial valley fill comprising channel and overbank deposits of gravel and silt. Soils of the hills, ridges and slopes are mostly sandy or stony, with rhyolite and sandstone beds frequently outcropping. Soils on the alluvial terraces are gravelly silts and silty clays.

Stringybark (*Eucalyptus oblonga*), Scribbly Gum (*E. rossii*), Rough-barked Apple (*Angophora floribunda*) and White Cypress Pine (*Callitris glaucophylla*) woodland of varying condition remains on the summits and slopes of the hills and along the stony ridges. Remnant, isolated paddock trees including White Box (*Eucalyptus albens*), Yellow Box (*E. melliodora*) and Blakely's Red Gum (*E. blakelyi*) are scattered across the predominantly cleared lower elevation sections of the Mine Site towards Hawkins Creek in the southeast and in the valleys. Native and introduced pasture grasses primarily occur in these areas.

Overall, the environment of the Mine Site has been extensively modified by past European land use practices. The alluvial valleys and lower hill slopes have been cleared for agricultural cropping and sheep and cattle grazing following European settlement in the second half of the nineteenth century. Even the crests of the hills and ridges, which are too steep and where soils are too shallow to plough and crop, have been impacted by sheep and cattle grazing and the construction of vehicular access tracks and mineral exploration drill pads (see **Plates 1 to 6**). The proposed water supply pipeline corridor has also been similarly modified by past pastoral clearing and for the construction of existing roads.



Plate 1 Alluvial flat in the southern section of the Mine Site near Bowdens site office



Plate 2 Alluvial flat in the southern section of the Mine Site



Plate 3 Ridgeline in the western section of the Mine Site



Plate 4 Cleared hill slope in the central section of the Mine Site in the area of a former drill site



Plate 5 Steep hill slope in the central section of the Mine Site in the area of a former drill site



Plate 6 Alluvial valley in the eastern section of the Mine Site

4. CULTURAL HERITAGE CONTEXT

4.1 ABORIGINAL CULTURAL HERITAGE CONTEXT

4.1.1 Ethno-Historical Context

Aboriginal people of the Wiradjuri language group occupied the southwest slopes at the time of first contact with Europeans (Sturt, 1833; Hovell and Hume, 1837; Mitchell, 1839; Tindale, 1974). The Wiradjuri were traditionally associated with the region encompassing the Macquarie, Lachlan and Murrumbidgee Rivers and bounded in the south by the Murray River.

There may have been around 60 different dialects of Wiradjuri, whose speakers shared similar material culture and social organization (Howitt, 1904; White, 1986). Perhaps the greatest regional variation was between speakers of the northern dialect (*Wirraaydhuurray*) and those of the south (speakers of the *Wirraayjuurray* dialect) (White, 1986). For example, the practice of carving zigzag motifs into tree trunks appears to have been particular to the Wiradjuri of the Macquarie and Lachlan River valleys, but is absent from the Murrumbidgee and Murray (Etheridge, 1918; Bell, 1982). Such carved trees are thought to have perhaps marked ceremonial areas and burial grounds. The *Burbung* ceremony was another of the Wiradjuri customs and traditions (Howitt, 1904). This ceremony was associated with male initiation and involved the preparation of special earth mounds and usually the application of red ochre.

The Wiradjuri were hunter-fisher-gatherers and appear to have had a semi-sedentary lifestyle. They caught fish including eels, freshwater crayfish, yabbies, tortoises and freshwater mussels in the Lachlan, Macquarie, Murrumbidgee and Murray Rivers and other streams and wetlands in the region (Howitt, 1904). Watercraft were manufactured from large slabs of bark cut from River Red Gum trees. Fish were caught using fishing lines and nets made from reed fibre.

Nets were used to catch waterbirds, whose eggs were also collected. Some of the other animals that the Wiradjuri hunted include kangaroos, wallabies, emus, possums, echidnas, lizards, snakes and frogs (Howitt, 1904). In summer, some Wiradjuri journeyed southeast to the high plains of the Great Dividing Range, where bogong moths were collected in large quantities (Flood, 1980). Plant foods included Native Millet, Panic Grass, Pigface fruits, Wild Cherries, Kangaroo Apple, tubers, yams, roots and other grass grains (Howitt, 1904; Gott, 1983).

Aspects of the initial interaction between Europeans and the Wiradjuri led to violent conflict. Aborigines were shot, poisoned and displaced from their land by pastoral settlers and, in retaliation, cattle, sheep, stockmen and shepherds were speared (Pearson, 1984).

Surveyors William Lawson and George Cox had led expeditions to the Cudgegong River area in 1821-1822 to locate new grazing pastures (Pearson, 1984). Over the next few years, pastoral runs were taken up in the Mudgee/Wellington area. More settlement followed, causing conflict with the local Aboriginal population. Intense fighting occurred between 1822-1824 in what were termed the Bathurst Wars (Pearson, 1984). In 1824, Governor Brisbane instituted a period of martial law over the region between Bathurst, Wellington and Mudgee. There was considerable resistance by local Aboriginal people led by Windradyne a senior Wiradjuri guerrilla leader, but by the end of the year the violent resistance had been quashed. Martial law was repealed on 11 December 1824, and on 28 December 1824 Windradyne travelled to Parramatta, where he was pardoned by Governor Brisbane (Pearson, 1984).

Within a decade of the first contact with Europeans, many of the Wiradjuri around Mudgee were living adjacent to pastoral homesteads, often working as shepherds or engaged in other labouring activities (Günther, 1837-1842; Potts, 1984). Those Aboriginal people who resided on pastoral holdings on the southwest slopes including Loowee and Wallerawang continued to live a semi-traditional existence into the second half of the nineteenth century (Günther, 1837-1842). This included collecting plant and animal foods to supplement station rations. Historical sources record a rapid decline in Wiradjuri numbers, caused by dispossession of land and the consequent destruction of habitat and social networks (Günther, 1837-1842; Pearson, 1984). Diseases including smallpox and malnutrition also took their toll (Günther, 1837-1842; Pearson 1984). Traditional social networks collapsed. Other social structures, such as marriage laws, were also abandoned.

Grants of land were set aside for church and government Aboriginal reserves from the 1830s. One of the earliest was Wellington Mission operated by the Church Missionary Society for Africa and the Far East between 1832 and 1844 on the Macquarie River at Wellington, some 90 kilometres west of the Lue area (Günther, 1837-1842). One of the ministers, Reverend Watson, had a policy of removing Aboriginal children from their families, which led to bitter confrontations between Watson and other missionaries. The Church Missionary Society dismissed Watson in 1839 (Pearson, 1984). Watson and his wife left the mission along with a small group of Wiradjuri People and established a private mission, known as Apsley Mission, just outside the boundary of the Wellington Mission. Approximately eight years after establishing Apsley Mission, Watson, his wife Ann and their small Aboriginal community of about thirty people moved to a new site on the bank of the Macquarie River, which became known as the Blake's Fall Mission (Pearson, 1984).

Many of the contemporary Aboriginal people of central western NSW live in regional centres such as Dubbo, and the region has a population of around 13,600 Aboriginal people, or some 6% of the total population (Australian Bureau of Statistics, 2016).

4.1.2 Prehistoric Context

Accounts of Aboriginal land use of the southwest slopes during the nineteenth century provide an insight into possible settlement patterns in the prehistoric period. Pearson (1984) concludes that, prior to European settlement, large localized clans of Aborigines inhabited the Upper Macquarie encompassing the present study area, with a total regional population of 500-600 people.

Pearson (1984) speculates that there may have been three distinct clan territories centred on Bathurst, Wellington and Mudgee/Rylstone. Natural boundaries such as creek and river valleys may have separated these territories. The Mudgee/Rylstone grouping was known as Mowgee, who lived along the Cudgegong River and its tributaries. Lawsons Creek, south of the Mine Site, is one such tributary. In Wiradjuri, Lawsons Creek was called *Loowee*, meaning a chain of waterholes, and gives its name to the town of Lue (Potts, 1984; McVicker, 1991).

During normal conditions, clans divided into bands of up to twenty people, who may have used a territory with a radius of 20-30 kilometres. These bands coalesced relatively quickly into groups of 80-150 people to take advantage of a guaranteed or desirable resource, such as seasonal food resources or goods offered by the Wellington mission (Pearson, 1984).

The material record of this occupation is preserved in the archaeological sites of the southwest slopes, most of which probably date to the period since the last Ice Age (after around 18,000 years ago). All that remains at many of these sites are flakes of stone debris from the making and resharpening of stone tools. These were made both at Aboriginal open and closed habitation areas (campsites and rock shelters) or special activity areas such as axe grinding groove sites.

As well as being the sites of manufacture and maintenance of stone implements, habitation areas usually contain evidence of domestic and other activities such as cooking and food preparation. Campfires or oven hearths are common, marked by charcoal and heat retaining stones or hearthstones. Organic remains consist of marsupial, rodent, bird, lizard, snake and fish bones, eggshell and freshwater mussel shell. Modified trees show where bark may have been removed by Aboriginal people to manufacture canoes, shelters and dishes.

4.1.3 Types of Aboriginal Cultural Heritage Sites in the Region

Based on the results and analytical conclusions of previous archaeological surveys in similar landscape contexts on the southwest slopes, it is possible to predict the types and topographic contexts of Aboriginal cultural heritage sites in the Lue area. The occurrence and survival of archaeological sites is, however, dependent on many factors including micro-topography and the degree of land surface disturbance.

The types of Aboriginal cultural heritage site previously recorded on the southwest slopes are described in Sections 4.1.3.1 to 4.1.3.11.

4.1.3.1 Stone Artefact Scatters

Scatters of stone artefacts exposed at the ground surface are one of the most commonly occurring types of archaeological site in the southwest slopes. The remains of fire hearths may also be associated with the artefacts. In rare instances, sites that were used over a long period of time may accumulate sediments and become stratified. That is, there may be several layers of occupation buried one on top of another.

Stone artefact scatters are almost invariably located near permanent or semi-permanent water sources. Local topography is also important in that open campsites tend to occur on level, well-drained ground elevated above the local water source. On the southwest slopes, they are commonly located on river terraces and along creek lines and also around the margins of lakes and swamps.

4.1.3.2 Axe-grinding Grooves

Axe-grinding grooves result from Aboriginal people having rubbed the edges of stone axe-heads repeatedly against a soft abrasive rock in order to shape or sharpen them. Grinding grooves are normally located adjacent to creeks where suitable stone for grinding may be present. In most instances, sandstone outcrops provided the most suitable surface for grinding.

4.1.3.3 Modified Trees

Slabs of bark were cut from trees by Aboriginal people and used for a variety of purposes including roofing shelters and constructing canoes, shields and containers. Scars also resulted from the cutting of toeholds for climbing trees to obtain honey or to capture animals such as possums. Some trees were carved, whereby Aboriginal people cut designs through the bark onto the wood beneath. Ethnohistoric records indicate that some carved trees were associated with burials whilst others may have been sacred or totemic sites.

On the southwest slopes, River Red Gums and Box are the most commonly scarred species. Carvings are often on Cypress Pine. The classification of scarred trees as natural, European or Aboriginal is often problematic. However, if the scar is Aboriginal, the tree must now be more than ~150 years old.

4.1.3.4 Hearths

Hearths consist of lumps of burnt clay or stone cobble hearthstones. Sometimes ash and charcoal are preserved. Other materials found in hearths include animal bone, freshwater mussel shell, emu eggshell and stone artefacts. Hearths probably represent the remains of cooking ovens, similar to those described in ethnographic accounts by Major Thomas Mitchell (1839). These were lined with baked clay nodules and stone cobbles, possibly to retain heat. Hearths may be isolated or occur in clusters and may be associated with open campsites or middens. They are sometimes located on floodplain terraces of the southwest slopes.

4.1.3.5 Rock Shelter Sites

Caves or shelters in cliff lines and beneath boulder overhangs were often used by Aboriginal people as campsites. Because of the confined area in these shelters and because of repeated Aboriginal occupation of such sites, the occupation deposits that they contain are often richer than open campsites and are usually stratified.

Rock shelters are only found where suitable geological formations are present. They may occur as overhangs, shelters beneath tors or as caves.

4.1.3.6 Rock Art Sites

Rock art consists of paintings, drawings and/or engravings on rock surfaces. In most instances in the wider region, rock art is related to the distribution of rock shelters but it may also be found on freestanding rocks.

4.1.3.7 Quarry Sites

These are locations where Aboriginal people obtained raw material for their stone tools or ochre for their art and decoration. Materials commonly used for making flaked stone tools include chert, silcrete, quartz and quartzite. These materials were obtained from exposed sedimentary formations or picked up as loose rock on the surface. Stone quarries may also be associated with volcanic rock outcrops, which provided the raw material for ground stone tools such as stone axes.

4.1.3.8 Freshwater Shell Middens

Shell middens are deposits of shell and other food remains accumulated by Aboriginal people as food refuse. In inland NSW, these middens typically comprise shells of the freshwater lacustrine mussel *Velesunio ambiguus* or the freshwater riverine mussel *Alathyria jacksoni*. Freshwater middens are most frequently found as thin layers or small patches of shell and often contain stone or bone artefacts and evidence of cooking. Such sites are relatively common along the watercourses of the southwest slopes and their associated lakes and other wetlands.

4.1.3.9 Earth Mounds

Earth mounds may have been used by Aboriginal people as cooking ovens or as campsites. Originally they appear to have ranged from 3 m to 35 m in diameter and from 0.5 m to 2 m in height. Today, however, they may be difficult to recognize because of the effects of ploughing, grazing and burrowing rabbits. Earth oven material, stone artefacts, food refuse and the remains of hut foundations have been exposed in excavated earth mounds.

4.1.3.10 Stone Arrangements, Ceremonial Rings and Ceremony and Dreaming Sites

Stone arrangements range from cairns or piles of rock to more elaborate arrangements such as stone circles or standing slabs of rock held upright by stones around the base. Some stone arrangements were used in ceremonial activities whilst others may represent sacred or totemic sites. Other features associated with the spiritual aspects of Aboriginal life are those now called 'ceremony and dreaming' sites. These can be either stone arrangements or natural features such as rock outcrops, waterholes or mountains, which may be associated with initiation ceremonies or the activities of ancestral creators.

4.1.3.11 Burials

Aboriginal burial grounds may consist of a single interment or a suite of burials. In the drier parts of the Murray-Darling Basin, skeletal material is regularly found eroding from sand deposits (Bonhomme, 1990; Hope, 1993) but in the higher southwest slopes, burial sites are rarely found because conditions for the preservation of bone are poor. Knowledge of Aboriginal burial grounds is best sought from local Aboriginal communities.

4.1.4 Previous Aboriginal Cultural Heritage Investigations

An understanding of the past Aboriginal occupation of the southwest slopes has begun to emerge from a number of studies including some undertaken in the areas surveyed as part of the current assessment. However, there have been few systematic regional investigations, with most undertaken in discrete areas including management studies of conservation reserves in the region and for mining developments. These include surveys of Goulburn River National Park (Haglund, 1980a, 1981a, 1984), the Ulan and Moolarben coal mines (Haglund, 1980b, 1981b, 1992, 1996; Hamm, 2006) and the Mine Site (Appleton, 1996; Maynard, 1998). Also relevant is Flood's (1980) broad-scale study of the uplands further east, which identified general features of the regional archaeological record of the southwest slopes.

Aboriginal occupation of central western NSW is known to date from at least 29,000-34,000 years ago. The oldest ages have been obtained from the Pleistocene (Ice Age) sites of Cuddie Springs and Tambar Springs at the downstream end of the Macquarie River catchment (e.g. Field and Dodson, 1999). Early radiocarbon ages have also been obtained from cultural sequences for rock shelter sites in the ranges to the east. For example, Gaynor (1997) obtained a 20,000 year age from Crazy Man Rock shelter in the Warrumbungle National Park. Closer to the Application Area, the Bobadeen shelter excavation (40 km northeast of the Mine Site) produced a basal age of 5,500 years. In 1961, Tindale completed an excavation at Noola rock shelter in the Rylstone area and suggested an age of approximately 12,000 years ago for initial occupation (Tindale, 1974).

Surface scatters of flaked stone artefacts are the most common site type in central western NSW. These stone assemblages are dominated by flakes and flaked pieces mostly struck from quartz, and less commonly, silcrete, chert and quartzite (e.g. Haglund, 1980a, 1981a, 1984). Few formalized tool types have been recorded, but include ground-edged axes and grinding dishes. Eucalypt trees with scars possibly made by Aboriginal people are also well represented along creek lines of the southwest slopes and are particularly abundant on the adjacent plains of the Macquarie River. Other site types on the plains include earthen features such as hearths and mounds. Rock shelters, rock art sites, axe-head grinding grooves, stone sources and stone arrangements also occur in the foothills of the southwest slopes.

Goulburn River National Park approximately 35 km north of the area studied for this assessment, was surveyed by Haglund between 1980 and 1984. Haglund identified 347 Aboriginal sites, which comprised stone artefact scatters, rock shelters some containing art, grinding grooves, scarred trees and a quarry source for the production of axe blanks (Haglund, 1980a, 1981a, 1984). The surveys focused on those parts of the landscape (alluvial flats and lower slopes associated with major water courses). The open and closed sites contained abundant stone artefacts and excavation of some shelters recovered a variety of organic materials such as bone (macropod, potoroo, rat, skink, birds, bandicoot, fish), shell, fur, hearths and burnt wood.

Haglund (1980b, 1981b, 1992, 1996) completed a number of cultural heritage assessments around Ulan for a proposed coal mine. This area is approximately 45 km north of the area studied for this assessment. The archaeologists identified a total of 709 Aboriginal sites within their respective study area, which comprised 558 open sites containing stone artefacts (containing 8,774 objects), nine grinding groove sites, 128 rock shelters, five modified trees, five stone arrangements, two ochre quarries and one waterhole/well. A further 296 rock overhangs were thought to have potential archaeological deposits (PADs) (Haglund, 1980b, 1981b, 1992, 1996).

Hamm (2006) identified 47 open stone artefact scatter sites, 156 individual stone artefact isolated finds, 17 rock shelter sites, a grinding groove site and a scarred tree in the study area for the Moolarben Coal Project, approximately 35 km north of the present study area. The stone artefact sites contained a total of 1,143 Aboriginal objects, but the majority (87%) comprised exposed stone artefactual material eroding from areas of bare soil exposure with less than five artefacts in density.

Flood's (1980) regional investigation of the higher uplands of the southwest slopes to the east of the area studied for this assessment suggested that there was little Aboriginal occupation of the region before 4,000 years ago after which the region was occupied at low intensity. Flood (1980) found that lowland sites often either comprised large base camps, open occupation areas covering two or three square kilometres found on sand dunes and near lakes and rivers, or smaller camps distributed along river banks in a lineal pattern.

Flood (1980) noted typical landscape settings of Aboriginal campsites. All sites are within 1 km and most within 100 m of a river, creek, lake or spring. However, no sites are located right at the water's edge. All sites are located on well-drained ground with a reasonably good view of the approaches. When sites occur on the side of a mountain range or valley their aspect is usually east or north thus obtaining shelter from the prevailing westerly winds (Flood, 1980).

The most recent archaeological investigations pertinent to the Mine Site are Appleton's (1996) and Maynard's (1998) assessments of a previous layout for the Project. They identified 26 stone artefact scatters, 16 isolated finds of stone artefacts, 3 rock shelters containing stone artefacts and 4 PADs in the study area. Additionally, NSW BCD Aboriginal Heritage Information Management System (AHIMS) lists a rock shelter site with art and two stone artefact scatters in the present study area.

4.1.5 Previously Recorded Aboriginal Cultural Heritage in the Mine Site, Water Pipeline Corridor and Relocated Maloneys Road

According to the NSW BCD AHIMS site database (accessed 16 May 2019; search number 421345) and additional literature surveys, 44* Aboriginal archaeological sites (**Table 3**) have previously been recorded within and adjacent to the Mine Site (**Figure 4**). These were mainly recorded during Appleton's (1996) and Maynard's (1998) assessments of a previous layout for the Project. They comprise:

- 14 isolated finds of stone artefacts and 13 stone artefact scatters exposed on the flat surfaces of rhyolitic outcrops on the flanks of Hawkins Creek in and adjacent to the southeast of the Mine Site;
- 6 stone artefact scatters and 1 isolated find of stone artefacts on the western footslopes of Blackmans Gully in the centre of the Mine Site;
- 6 stone artefact scatters and 1 isolated find of stone artefacts on sandstone bedrock in the headwaters of Price Creek in the northeast of the Mine Site;
- 1 isolated find of stone artefacts and 1 stone artefact scatter in the alluvial valley of Price Creek in the southeast of the Mine Site; and
- 1 stone artefact scatter in the bedrock hills overlooking Lawsons Creek in the southwest of the Mine Site.
- *There is also a very imprecise historical AHIMS recording of a shelter with art in this area, which is actually located outside the Mine Site and not included in this tally.

There are two Aboriginal archaeological sites previously located near the proposed water pipeline corridor near Ulan, a stone artefact scatter (AHIMS site number 36-3-0656; MC OS 19 and isolated find of a stone artefact (AHIMS site number 36-3-0708; CE-32-IF). These are inside property boundaries to the east and outside the proposed water pipeline corridor.

There are no Aboriginal archaeological sites previously located near the proposed relocated Maloneys Road.

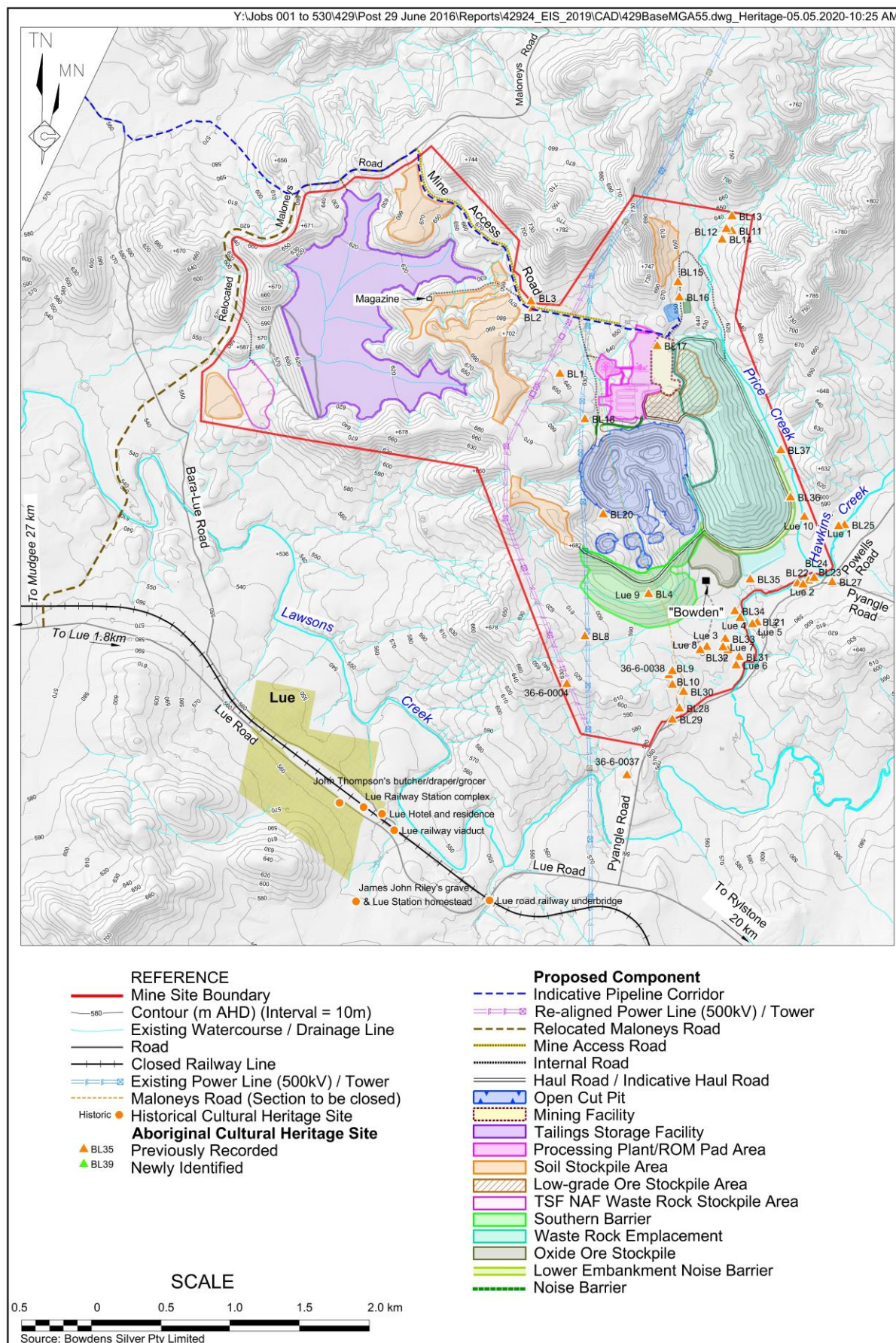
Figure 4 Previously identified Aboriginal Cultural Heritage Sites at the Mine Site

Table 3
Previously Identified Aboriginal Cultural Heritage Sites at the Mine Site

AHIMS Site Number	Site Name	Type	Location GDA94 mE (Zone 55)	Location GDA94 mN (Zone 55)
36-6-0004*	Lue	Shelter with art	768452	6384140
36-6-0037	Lue/Lawsons Creek	Artefact scatter	768885	6383483
36-6-0038	Lue/Battens Road	Artefact scatter	769187	6384204
36-6-0955	BL1	Artefact scatter	768402	6386374
36-6-0826	BL2	Artefact scatter	768208	6386845
36-6-0956	BL3	Artefact scatter	768194	6386895
36-6-0957	BL4	Artefact scatter	769040	6384788
36-6-0961	BL8	Artefact scatter	768582	6384484
36-6-0962	BL9	Artefact scatter	769212	6384234
36-6-0964	BL10	Isolated artefact	769212	6384134
36-6-0963	BL11	Artefact scatter	769641	6387402
36-6-0965	BL12	Artefact scatter	769600	6387417
36-6-0966	BL13	Artefact scatter	769641	6387508
36-6-0967	BL14	Artefact scatter	769570	6387340
36-6-0968	BL15	Artefact scatter	769252	6387034
36-6-0969	BL16	Artefact scatter	769262	6386924
36-6-0970	BL17	Isolated artefact	769102	6386574
36-6-0971	BL18	Isolated artefact	768582	6386047
36-6-0827	BL20	Artefact scatter	768714	6385362
36-6-0973	BL21	Artefact scatter	769822	6384584
36-6-0974	BL22	Artefact scatter	770112	6384864
36-6-0975	BL23	Isolated artefact	770192	6384884
36-6-0976	BL24	Artefact scatter	770232	6384904
36-6-0977	BL25	Isolated artefact	770452	6385284
36-6-0978	BL27	Artefact scatter	770362	6384874
36-6-0979	BL28	Artefact scatter	769262	6383964
36-6-0980	BL29	Isolated artefact	769212	6383884
36-6-0982	BL30	Isolated artefact	769292	6384084
36-6-0983	BL31	Isolated artefact	769692	6384334
36-6-0984	BL32	Isolated artefact	769612	6384384
36-6-0985	BL33	Isolated artefact	769592	6384464
36-6-0986	BL34	Isolated artefact	769662	6384664
36-6-0987	BL35	Isolated artefact	769772	6384894
36-6-0988	BL36	Artefact scatter	770062	6385484
36-6-0989	BL37	Isolated artefact	769992	6385824
36-6-0911	Lue 1	Isolated artefact	770408	6385276
36-6-0912	Lue 2	Artefact scatter	770153	6384857
36-6-0913	Lue 3	Isolated artefact	769460	6384408
36-6-0914	Lue 4	Isolated artefact	769700	6384616
36-6-0915	Lue 5	Artefact scatter	769788	6384571
36-6-0916	Lue 6	Isolated artefact	769670	6384274
36-6-0917	Lue 7	Artefact scatter	769576	6384405
36-6-0918	Lue 8	Artefact scatter	769412	6384384
36-6-0919	Lue 9	Artefact scatter	769040	6384788
36-6-0920	Lue 10	Isolated artefact	770162	6385344

*Imprecise historical recording and actually located outside Mine Site

4.2 HISTORICAL CULTURAL HERITAGE CONTEXT

4.2.1 Historical Context

The first European to visit the southwest slopes was explorer and Surveyor-General of NSW Lieutenant John Joseph William Molesworth Oxley during his 1818 expedition of the Macquarie River (Johnson, 2001). In 1821-1822, James Blackman, George Henry Cox and William Lawson surveyed the area around Cudgegong River for grazing land. They gave their names to several features in or near the present Mine Site, including Lawsons Creek and Blackmans Gully. Within a few years, pastoralists had occupied much of the land in the Mudgee region.

James Walker, who had earlier taken up the Wallerawang run near Rylstone, was granted the 1,000 acre Loowee run in 1825 (Potts, 1984). Over the succeeding years, Walker expanded Loowee Station until it comprised over 21,000 acres of freehold land. Loowee was run as a sister property to Wallerawang by manager Andrew Brown. Convicts and Aboriginal shepherds tended flocks at remote outstations dispersed up to 50 kilometres apart across the holdings, with sheep driven back to Loowee or Wallerawang for shearing (Potts, 1984).

Walker sold Loowee to James John Riley and H.W. Bloomfield in 1856. Riley donated land for an Anglican church and school, although the first town to develop in the area was Dungerey, two kilometres east of where the town of Lue now stands (Potts, 1984).

Loowee was purchased by Dr James Charles Cox in 1862, at which time it comprised 39,346 freehold and leasehold acres and ran 30,000 sheep (Potts, 1984). A policy of closer settlement was pursued over the second half of the nineteenth century with the passing of the 1861 and 1884 *Crown Lands Acts*. Some of the leasehold sections of the old pastoral holding of Loowee were resumed, subdivided and sold freehold to selectors (NSW Department of Lands, 1884). Much of the timbered crown land was gazetted as the Apple Tree Flat Gold Field Reserve proclaimed on 15 Jan 1869 (later renamed the Gulgong Gold Field in May 1899).

Land reform was designed to break the domination of land tenure by a few wealthy individuals, but this failed to stop the establishment of pastoral agglomerations. For example, Cox's brothers Edward King Cox, a member of the NSW Legislative Council, and Richard William Cox, and their wives and children, purchased many of the freehold allotments including parts of the present Mine Site (NSW Department of Lands, 1883, 1884, 1894, 1895, 1903, 1905, 1915, 1917, 1924, 1933a, 1933b; Teale, 1969). Thomas Jarman Hawkins, a member of the NSW Legislative Council for East Macquarie and Commissioner for Crown Lands in the Western Division, also purchased freehold allotments including parts of the present Bowdens Project Site (NSW Department of Lands, 1883, 1895, 1905, 1917, 1933a). Hawkins gave his name to Hawkins Creek in the study area.

When the railway line from Lithgow was extended to Mudgee in 1884, Lue was chosen as the site for a station because the grade was too steep at Dungerey (Potts, 1984; Sheedy, 1988). A town grew up around the railway station, which included several stores, churches, school and a hotel.

The population of Lue and the amount of commercial activity declined with the contraction of the pastoral industry over the twentieth century. The railway line from Rylstone through Lue to Mudgee closed in 2005.

Bowdens Silver owns the majority of the land encompassing the Mine Site, which is currently being used for sheep and cattle grazing. This land use would continue on sections of Bowdens Silver's landholding during the Project life and upon closure and rehabilitation of the Mine Site. Other freehold land within the Mine Site boundary, not currently owned by Bowdens Silver or under agreement with the Company, is used for sheep and cattle grazing, hobby farms or is unutilized timbered country.

4.2.2 Previous Historical Cultural Heritage Investigations

There has been little historical archaeological investigation of the Lue area. Hughes Trueman Ludlow (1985) compiled an inventory of historical heritage sites in the old Mudgee LGA (now part of the Mid-Western Regional LGA). They identified a number of structures in the town of Lue as being of State or local importance. These include features associated with the Wallerawang-Gwabegar railway line that passes through Lue, comprising the Lue Railway Station complex with associated stationmaster's dwelling, and a railway viaduct and underbridge (Hughes Trueman Ludlow, 1985; Sheedy, 1988; Fraser, 1995). Other sites of historical significance in the area include Lue Station homestead, Lue Hotel and residence and the former Lue general store.

4.2.3 Types of Historical Cultural Heritage Sites in the Region

The types of historical heritage sites that occur on the southwest slopes are described in Sections 4.2.3.1 to 4.2.3.4.

4.2.3.1 Pastoral Sites

Historical heritage sites in the farming regions of the southwest slopes mostly relate to the arrival of European graziers and associated industries from the second half of the nineteenth century. Old homesteads and associated structures such as work sheds, shearing sheds and labourers' quarters are examples of historical heritage sites that may be encountered. Less conspicuous sites include survey markers, particularly those blazed on Eucalypt and Cypress Pine trees, which are also of historical interest.

4.2.3.2 Urban Sites

Towns on the southwest slopes contain historically significant commercial, public and residential buildings from the nineteenth and early twentieth centuries. Examples include municipal halls, churches, libraries, schools and courthouses. Parks, gardens and cemeteries including the monuments, grave markers and other structures they contain also have historical significance.

4.2.3.3 Industrial Sites

Historical industrial features are not abundant in the region, but include abandoned mining sites and sawmills. Such sites may contain old sheds and abandoned machinery including steam engines and boilers.

4.2.3.4 Transport Sites

Small bridges made from River Red Gum timber or stone cobbles may occur in the region. Railway sites comprise stations and sidings, rail track, stabling yards and water towers and hydrants. Historical mileage markers and navigation markers may also be encountered.

4.2.4 Previously Recorded Historical Cultural Heritage in the Mine Site, Water Pipeline Corridor and Relocated Maloneys Road

The NSW State Heritage Inventory contains items listed by the Heritage Council under the Heritage Act. The Mudgee Shire Local Environmental Plan (LEP) also lists historical heritage sites within the former Mudgee Shire, precursor to the current Mid-Western Regional LGA in which the Mine Site is located (Mudgee Shire, 1998).

There are no previously registered historical cultural heritage sites in the Mine Site or in or near the water pipeline and relocated Maloneys Road. The historical heritage site closest to the Mine Site previously registered on the NSW State Heritage Register is Lue Railway Station complex (State Heritage Register Database Number 5012084) (see **Table 4** and **Figure 4**). This structure is located adjacent to the Wallerawang-Gwabegar Railway in Lue, approximately 2 kilometres southwest of the Mine Site (BCD, 2019). The Lue Railway Station complex, Lue road railway underbridge, Lue railway viaduct, Lue Station homestead including James John Riley's grave, Lue hotel and residence and John Thompson's butcher/draper/grocery store in Lue are also listed on the Mudgee LEP (Mudgee Shire, 1998).

Table 4
Historical Cultural Heritage Sites near the Mine Site

Heritage Inventory Number*	Description	Location GDA94 mE (Zone 55)	Location GDA94 mN (Zone 55)	Distance and Direction from Mine Site
5012084	Lue Railway Station complex	766989	6383258	2 km southwest
2070361	Lue Station homestead	766935	6382579	2.5 km southwest
2070362	James John Riley's grave	766935	6382579	2.5 km southwest
2070364	Lue Hotel and residence	767122	6383210	2 km southwest
2070366	Lue railway viaduct	767210	6383091	2 km southwest
2070365	John Thompson's butcher/draper/grocer	766816	6383289	2 km southwest
4280433	Lue road railway underbridge	767895	6382586	1.8 km south
* see locations on Figure 4				

5. CULTURAL HERITAGE FIELD INVESTIGATION

In accordance with the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales (OEH, 2011), Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010b), Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW, 2010c), Historical Archaeology Code of Practice (NSW Heritage Office, 2006) and NSW Heritage Manual (NSW Heritage Office, 1996), an archaeological design and survey methodology was prepared as a key component of the cultural heritage field assessment. Details of the archaeological design and survey methodology are presented in the following subsections.

5.1 CULTURAL HERITAGE SITE PREDICTIVE MODEL

Previous archaeological studies indicate that the most frequently recorded Aboriginal cultural heritage places on the southwest slopes are open occupation areas represented by scatters of stone artefacts and culturally modified trees (NSW BCD AHIMS site database). Burials, earthen features including mounds and hearths and stone features including stone quarries, ceremonial rings, axe-grinding grooves, rock shelters and rock art sites are also represented in the archaeological record.

The potential for encountering Aboriginal cultural heritage on the Mine Site is mitigated to some extent by the moderate degree of previous disturbance. For example, the extent of tree clearance from past agricultural land use reduces the probability of encountering scarred and carved trees. Similarly, modification of the original land surface during past agricultural land use could have destroyed earthen features such as mounds and stone features such as arrangements and ceremonial rings, had they previously existed in this area. Stone artefacts, alternatively, are more likely to survive in the soil.

Based on past observations of archaeological site types and their distribution and landscape setting, the following predictive model of Aboriginal cultural heritage site locations for the activity is proposed.

- **Trees scarred or carved by Aboriginal people** may occur wherever mature Eucalypt and Cypress Pine trees grow. However, given the extent of vegetation clearance the probability of encountering culturally modified trees is not high.
- **Stone artefact scatters and isolated finds** of stone artefacts are possible over the entire Mine Site and associated water supply pipeline corridor. They are typically found within 200 m of water sources, so are most likely to be encountered on the margins of the Hawkins Creek, Blackmans Gully, Walkers Creek and other ephemeral streams in the study area. They are also possible around natural depressions such as ephemeral swamps.
- **Burial sites** are unlikely, given that the region's acidic soils are not suited to preserving bone and other organic material.
- **Freshwater shell middens** may occur on the margins of the Hawkins Creek.
- **Earthen features** including **mounds, ovens and hearths, stone arrangements and ceremonial rings** are normally restricted to level ground, the former usually adjacent to water sources. They are unlikely to be encountered because previous

land disturbance such as earthworks associated with quarrying and mining activities, grading roads and fence lines and ploughed cultivation during agricultural cropping is likely to have destroyed earthen and stone features, had these site types originally occurred in the Mine Site and associated water supply pipeline corridor.

- **Rock shelters** and **rock art sites** are possible in caves and overhangs in sedimentary and volcanic bedrock in the low hills and ridges of the Mine Site. These rock formations are generally not suited to **quarrying**, but Aboriginal people may have collected pebbles and cobbles from colluvial and alluvial deposits for stone artefact knapping. However, **axe-grinding grooves** are possible on sandstone surfaces, so such outcrops in the Mine Site and associated water supply pipeline corridor were targeted for particular attention during the survey.

While predictive studies can be expected to identify areas in which sites associated with economic or subsistence activities may be present, notably open habitation areas, other sites may fall outside such a predictive framework. For example, places associated with spiritual aspects of traditional Aboriginal society such as ceremony and dreaming sites are often located at topographically distinct or unique features, which cannot be identified from an examination of maps or other records. For this reason, it was essential that local Aboriginal communities be consulted so that sites of significance to them could be identified.

Any historical heritage sites in the Mine Site and associated water supply pipeline corridor were anticipated to most likely relate to early pastoral activities of the last half of the nineteenth century or the first half of the twentieth century and goldmining activities associated with the former Apple Tree Flat (Gulgong) Gold Field. Site types that have the potential to occur include ruins of mine structures, discarded mining and farming machinery and blazed survey marks.

5.2 FIELD METHODOLOGY

5.2.1 Logistics

Fieldwork was undertaken over 17 days from 21 to 25 November 2011, 19 to 21 March 2013, 1 to 2 July 2013, 24 to 26 March 2017 and 9 to 12 April 2019 by Project Archaeologist Dr Matt Cupper with the assistance of the following Aboriginal community representatives: Debbie Foley, Larry Foley and Steven Flick (Murong Gialinga Aboriginal and Torres Strait Islander Corporation), Debbie Foley, Larry Foley and Christine Milton (Mudgee Local Aboriginal Land Council), Lyn Syme, Kevin Williams, Coral Williams, Kelsey Williams-Fawcett (North East Wiradjuri Company Limited), Kevin Williams, Robyn Williams, Coral Williams (Warrabinga Native Title Claimants Aboriginal Corporation), Erwin Wolfendon (Mingaan Wiradjuri Aboriginal Corporation) and Bradley Bliss, Brendan Doherty and Billy Stanley (Wellington Valley Wiradjuri Aboriginal Corporation), Shanae Martin (Gallanggabang Aboriginal Corporation) and Paul Brydon.

These Aboriginal community representatives were involved on a rotational basis, such that each day the fieldwork team comprised the Project Archaeologist and two to four Aboriginal community representatives.

A ground penetrating radar (GPR) and magnetic gradiometer survey of an historical cultural heritage site was undertaken on 11 April 2012 by the Project Archaeologist and geophysical investigator Trent Bowman of GBG Australia (see Section 5.5.2).

5.2.2 Survey Methods

The proposed disturbance areas within the Mine Site and associated water supply pipeline corridor were inspected on foot by the Project Archaeologist and Aboriginal community representatives (**Plates 7** and **8**). The field team examined the ground surface for any archaeological traces such as stone artefacts, axe-grinding grooves, hearths, hearthstones, shells, bones and mounds. All mature trees in the areas of proposed disturbance were inspected for scarring or carving by Aboriginal people.

Particular attention was paid to areas with high ground surface visibility such as along stock and vehicle tracks and in scalds, gullies and other eroded areas.

The team members walked abreast across the surveyed areas in a series of closely spaced transects. These were evenly distributed over the areas of proposed disturbance and approximately 10 m apart. Due to the general openness of the landscape, it was usually possible to identify likely site locations from at least 10 m and deviate from the transects to make closer inspections.

5.2.3 Access to Survey Areas and Weather Conditions

Access was available to all of the Mine Site and most (approximately 80%) of the associated water supply pipeline corridor. Weather conditions during the surveys were generally fine.



Plate 7 Survey team members inspecting a rocky outcrop within the southern section of the Mine Site



Plate 8 Survey team members inspecting open grasslands within the southern section of the Mine Site

The team members walked abreast across the surveyed areas in a series of closely spaced transects. These were evenly distributed over the areas of proposed disturbance and approximately 10 m apart. Due to the general openness of the landscape, it was usually possible to identify likely site locations from at least 10 m and deviate from the transects to make closer inspections.

5.2.4 Access to Survey Areas and Weather Conditions

Access was available to all of the Mine Site and most (approximately 80%) of the associated water supply pipeline corridor. Weather conditions during the surveys were generally fine.

5.3 CULTURAL HERITAGE SITE DEFINITION AND RECORDING

For this investigation, Aboriginal archaeological sites were defined as a concentration of stone artefacts, a rock shelter or scarred tree. Stone artefacts that were not part of a concentration were recorded as isolated finds. When a site was located, the following variables were recorded.

- *Site designation:* sites were designated Bowdens Lue (BL) or Bowdens Lue Water Pipeline (BLWP) followed by a numeric identifier.
- *Site type:* site types recorded were stone artefact scatters and isolated finds of stone artefacts, a rock shelter and scarred trees.

- *Grid reference*: this information was obtained using a Garmin handheld GPS and confirmed using the Mudgee 8832 1:100,000 topographic map sheet.
- *Environmental setting*: this describes the sites' environmental context including such factors as landform, slope, vegetation and local hydrology.
- *Aspect*: direction at which the site faces. Aspect is often thought to be a key determinant of site location.
- *Site size*: refers to the dimensions over which artefacts are visible.
- *Visibility*: a measurement of the conditions of ground surface visibility in the survey area. Ground surface visibility conditions affect whether sites are detected and whether their full extent has been recorded.
- *Site contents*: this is a description of the artefacts at the site. With open campsites the features recorded included raw material, artefact type, artefact dimensions, presence of retouch or use wear and any general comments considered relevant. It is important to realise that these artefact descriptions are only preliminary descriptions, as more detailed recording is considered to be more appropriate if a mitigation phase is undertaken for this or other regional projects.
- *Site condition*: describes the condition of the site in terms of factors which may have disturbed it or which may have the potential to disturb.

5.4 SURVEY COVERAGE DATA

5.4.1 Conditions of Visibility

Conditions of ground surface visibility affect how many sites are located. Visibility may also skew the results of a survey. If, for example, conditions of ground surface visibility vary dramatically between different environments, then this would be reflected in the numbers of sites reported for each area. The area with the best visibility may be reported as having the most sites (because they are visible on the ground) while another area with less visibility but perhaps more sites would be reported as having very little occupation. It is important therefore to consider the nature of ground surface visibility as part of any archaeological investigation.

Conditions of ground surface visibility were typically around 10-60 % (**Table 5, Plates 9 and 10**). Grass and herbaceous plant growth was moderate, with areas of the ground surface exposed by erosion from scalding and gullying and stock and vehicular traffic.

5.4.2 Coverage Analysis

Coverage analysis is a useful measurement to allow cultural resource managers to assess surveys from adjacent areas and it also allows some meaningful calculation of the actual sample size surveyed. The *actual* or *effective* area surveyed by a study depends on the conditions of ground surface visibility. Conditions of surface visibility are affected by vegetation cover, geomorphic processes such as sedimentation and erosion rates, and the abundance of natural rock.

Table 5

Visibility conditions at the Mine Site and associated Water Supply Pipeline Corridor

Survey Unit	Landforms	Vegetation	Exposures	Visibility (%)	Survey Method
Open Cut	Upper Hill Slope, Lower Hill Slope, Hill Crest, Alluvial Valley	Stringybark, Scribbly Gum, Rough-barked Apple, White Cypress Pine, grasses	Scalds, animal tracks, vehicle tracks, gullies	60	Pedestrian
WRE and Topsoil Stockpile	Lower Hill Slope, Alluvial Valley	White Box, Yellow Box, Blakely's Red Gum, grasses	Scalds, animal tracks, vehicle tracks, gullies	10	Pedestrian
TSF	Upper Hill Slope, Lower Hill Slope, Alluvial Valley	Stringybark, Scribbly Gum, Rough-barked Apple, White Cypress Pine, grasses	Scalds, animal tracks, vehicle tracks, gullies	20	Pedestrian
Processing Area	Upper Hill Slope, Lower Hill Slope, Hill Crest	Stringybark, Scribbly Gum, Rough-barked Apple, White Cypress Pine, grasses	Scalds, animal tracks, vehicle tracks, gullies	50	Pedestrian
Relocated Maloney's Road	Upper Hill Slope, Lower Hill Slope, Hill Crest, Alluvial Valley	Stringybark, Scribbly Gum, Rough-barked Apple, White Cypress Pine, grasses	Scalds, animal tracks, vehicle tracks, gullies	20	Pedestrian
Water supply pipeline	Upper Hill Slope, Lower Hill Slope, Hill Crest, Alluvial Valley	Stringybark, Scribbly Gum, Rough-barked Apple, White Cypress Pine, grasses	Scalds, animal tracks, vehicle tracks, gullies	20	Pedestrian



Plate 9 Moderate levels of ground surface visibility north of Hawkins Creek in the southern section of the Mine Site



Plate 10 Good conditions of surface visibility in the southern section of the Mine Site

Approximately 27% of the surface areas of the proposed areas of disturbance for the Project were inspected on foot (**Table 6**). This is considered to be a relatively high coverage and was a result of the intensive nature of the survey and the generally fair conditions of surface visibility.

Table 6
Effective coverage of the Project

Survey Unit	Area (ha)	Visibility (%)	Coverage (ha) (% area)		Effective Coverage (ha) (%)		Sites
Open cut pits	68	60	8	12	4.8	7	7
Ancillary disturbance areas	364	25	52	14	13	4	62
Relocated Maloneys Road	25	20	10	40	2	8	-
Water supply pipeline	250	20	120	48	24	10	6
Total	707	-	192	27	43.8	6	75

5.5 SURVEY RESULTS

5.5.1 Aboriginal Cultural Heritage Sites

5.5.1.1 Previously Identified Aboriginal Sites

Forty-four Aboriginal archaeological sites have previously been recorded within and adjacent to the Mine Site (see **Table 3** and **Figure 4**). These were mainly recorded during Appleton's (1996) and Maynard's (1998) assessments of a previously proposed layout for the Project with details regarding the nature of these sites presented in **Table 7** below. They comprise:

- 14 isolated finds of stone artefacts and 13 stone artefact scatters exposed on the flat surfaces of rhyolitic outcrops on the flanks of Hawkins Creek in and adjacent to the southeast of the Mine Site;
- 6 stone artefact scatters and 1 isolated find of a stone artefact on the western footslopes of Blackmans Gully in the centre of the Mine Site;
- 6 stone artefact scatters and 1 isolated find of a stone artefact on sandstone bedrock in the headwaters of Price Creek in the northeast of the Mine Site;
- 1 isolated find of a stone artefact and 1 stone artefact scatter in the alluvial valley of Price Creek, in the southeast of the Mine Site. There is also an historical AHIMS record of a rock shelter with art (AHIMS site number 36-6-0004) with very imprecise grid references in area; and
- 1 stone artefact scatter in the bedrock hills overlooking Lawsons Creek in the southwest of the Mine Site.

Table 7
Previously Identified Aboriginal Cultural Heritage Sites at the Mine Site

Page 1 of 2

Name	Location GDA94 mE (Zone 55)	Location GDA94 mN (Zone 55)	Landform	Size (m)	Contents
36-6-0004	768452	6384140	Hill slope	N/A	Hand stencils of rock shelter
36-6-0037	768885	6383483	Hill slope	20 x 2	5 quartz flakes and flaked pieces, 1 fine grained volcanic core
36-6-0038	769187	6384204	Hill slope	8 x 3	8 silcrete, quartz and chert flakes and flaked pieces
BL1	768402	6386374	Hill slope	N/A	9 mudstone flakes and flaked pieces
BL2	769305	6384598	Valley flank	10 x 10	10 chert flakes and flaked pieces, 6 silcrete flakes and flaked pieces
BL3	768194	6386895	Hill slope	N/A	10 mudstone cores and flakes
BL4	769040	6384788	Hill slope	5 x 5	8 chert flakes
BL8	768582	6384484	Ridge	20 x 20	13 chert flakes and flaked pieces
BL9	769212	6384234	Valley floor	10 x 10	7 chert flakes and flaked pieces, quartz flaked piece
BL10	769212	6384134	Valley floor	N/A	Chert flake
BL11	769641	6387402	Valley floor	2 x 2	Chert core
BL12	769600	6387417	Valley floor	2 x 2	Chert flake
BL13	769641	6387508	Valley floor	2 x 2	Chert core

Table 7 (Cont'd)
Previously Identified Aboriginal Cultural Heritage Sites at the Mine Site

Page 2 of 2

Name	Location GDA94 mE (Zone 55)	Location GDA94 mN (Zone 55)	Landform	Size (m)	Contents
BL14	769570	6387340	Valley flank	10 x 10	5 chert flakes
BL15	769252	6387034	Valley flank	10 x 10	19 mudstone and chert flakes and flaked pieces
BL16	769262	6386924	Valley flank	10 x 10	31 mudstone and chert flakes and flaked pieces
BL17	769102	6386574	Hill slope	N/A	Chert flake
BL18	768582	6386047	Hill slope	N/A	Chert flake
BL20	769305	6384598	Valley flank	10 x 10	10 chert flakes and flaked pieces, 6 silcrete flakes and flaked pieces
BL21	769822	6384584	Valley floor	10 x 10	13 chert flakes, quartz flake, silcrete flake
BL22	770112	6384864	Valley floor	10 x 10	5 chert flakes, mudstone flake, malachite flake
BL23	770192	6384884	Valley floor	N/A	Chert flake
BL24	770232	6384904	Valley floor	10 x 10	2 chert cores, chert flake
BL25	770452	6385284	Valley floor	N/A	Silcrete core
BL27	770362	6384874	Valley floor	10 x 10	3 mudstone flakes, 2 quartz flakes
BL28	769262	6383964	Valley floor	10 x 10	7 mudstone and chert flakes and flaked pieces
BL29	769212	6383884	Valley floor	N/A	Mudstone flaked piece
BL30	769292	6384084	Valley floor	N/A	Metasedimentary flake
BL31	769692	6384334	Valley floor	N/A	Mudstone flake
BL32	769612	6384384	Valley floor	N/A	Mudstone core
BL33	769592	6384464	Valley floor	N/A	Mudstone flaked piece
BL34	769662	6384664	Valley floor	N/A	Mudstone flake
BL35	769772	6384894	Valley floor	N/A	Mudstone flaked piece
BL36	770062	6385484	Valley floor	10 x 10	5 mudstone and chert flakes
BL37	769992	6385824	Valley floor	N/A	Chert flake
Lue 1	770408	6385276	Valley floor	N/A	Silcrete flaked piece
Lue 2	770153	6384857	Valley floor	2 x 1	5 silcrete flakes and flaked pieces
Lue 3	769460	6384408	Valley floor	N/A	Mudstone flake
Lue 4	769700	6384616	Valley floor	N/A	Mudstone core
Lue 5	769788	6384571	Valley floor	15 x 2	2 mudstone flakes, quartz core
Lue 6	769670	6384274	Valley floor	N/A	Quartz flake
Lue 7	769576	6384405	Valley floor	5 x 1	Silcrete flake, quartz flake
Lue 8	769412	6384384	Valley floor	20 x 20	27 silcrete and chert flakes and flaked pieces, chert core
Lue 9	769040	6384788	Hill slope	5 x 5	8 chert flakes
Lue 10	770162	6385344	Valley floor	N/A	Mudstone flake

Hawkins Creek Sites

Appleton (1996) and Maynard (1998) identified 14 isolated finds of stone artefacts (BL10, BL25, BL29, BL30, BL31, BL32, BL33, BL34, BL35, Lue 1, Lue 3, Lue 4, Lue 6, Lue 10) and 11 stone artefact scatters (BL9, BL21, BL22, BL23, BL24, BL27, BL28, Lue 2, Lue 5, Lue 7, Lue 8) on the northwest flanks of Hawkins Creek along the southern boundary of the Mine Site. Additionally, Rex Silcox recorded two stone artefact scatters along the western verges of Maloneys and Battens Roads in this area (AHIMS site numbers 36-6-0037 and 36-6-0038). The isolated finds comprised flakes, flaked pieces and cores of mudstone. Lue 8 comprised 27 silcrete and chert flakes and flaked pieces and a chert core.

Lue 8 was re-identified on the flat surface of a rhyolite outcrop. Artefacts were exposed over an area approximately 20 m x 20 m in size.

The isolated finds could not be re-identified in the field.

Blackmans Gully sites

Appleton (1996) and Maynard (1998) identified 6 stone artefact scatters (BL1, BL2, BL3, BL4, BL20, Lue 9) and 1 isolated find of a stone artefact (BL18) on the western footslopes of Blackmans Gully, which bisects the centre of the Mine Site.

Stone artefact scatters BL1, BL2 and BL3 are located in the northern part of the central section of the Mine Site. BL1 comprises nine mudstone flakes and flaked pieces, BL2 comprised 21 mudstone flakes and flaked pieces and a silcrete flake, with nine mudstone flakes and a core at BL3. None of the sites could be re-identified in the field.

Site BL20 is scatter of 16 mudstone cores, flakes and flaked pieces in the central section of the Mine Site, east of the main open cut pit. Only a couple of mudstone fragments could be re-identified in this area.

Sites BL4 and Lue 9 occur in the southern section of the Mine Site, within the disturbance footprint of the southern barrier. Lithic objects respectively comprise 18 and 5 flakes and flaked pieces of mudstone. Eight chert flaked pieces were re-identified on an outcrop of rhyolite over an area measuring approximately 5 m x 5 m.

Isolated find BL18, a single chert flake, was re-identified on a gravel access track north of "Bundarra" homestead, west of the haul road to the ROM pad.

It is noted that items of Aboriginal cultural heritage significance have been salvaged from both BL2 and BL20 under Aboriginal Heritage Impact Permit No. 1132211, issued by OEH in May 2013. The items were salvaged in accordance with the permit and stored within the Bowdens Silver site office enclosed in plastic bags and stored in a locked cabinet as a temporary location until long term management is agreed. The Wellington Valley Wiradjuri Aboriginal Corporation objected to salvage of the items in a letter dated 9 February 2013, however the permit was approved on 3 May 2013.

Northeastern Price Creek Headwater Sites

Six stone artefact scatters (BL11-16) and an isolated find of a stone artefact (BL17) had been identified during previous surveys (Appleton, 1996; Maynard, 1998) on sandstone bedrock in the valley of the eastern headwater of Price Creek in the northeast section of the Mine Site.

Stone artefact scatter BL14 consists of 45 flakes and flaked pieces. These were re-identified on a sandstone outcrop on the northeastern flanks of the valley, where they extend over an area approximate 10m x 10m in size. Stone artefact scatters BL11-13 comprise fewer (9, 2 and 5, respectively) artefacts of chert cores, flakes and flaked pieces to the north of BL14. These were re-identified on lower, gullied ground north of the sandstone outcrop.

BL15 and BL16 are respectively scatters of 19 and 31 chert and mudstone flakes and flaked pieces on the eroded northwestern flanks of the valley. BL17 is a nearby isolated find of a chert flake. None of these sites could be re-identified in the field.

Southeastern Price Creek Valley Sites

There is one isolated find of a stone artefact (BL37) and a stone artefact scatter (BL36) exposed in a gravel track at the southern end of the alluvial valley of Price Creek where it meets Hawkins Creek in the southeast of the Mine Site (Appleton, 1996; Maynard, 1998). The concentration of stone artefacts BL36 consisted of 5 chert and mudstone flakes, with an isolated chert (BL37) flake nearby to the north. None of these sites were re-identified in the field.

Bingman Ridge Sites

There is a shelter with human hand stencil art (AHIMS site number 36-6-0004) recorded as being present on Bingman Ridge which overlooks Lawsons Creek in the southwestern section of the Mine Site in the vicinity of the proposed re-aligned 500kV power transmission line.

The shelter is a literature reference from 1899 and was recorded as occurring “half way between Mudgee and Rylstone”. The site coordinates are listed as “guessed very general location” on the AHIMS register and could not be re-identified during this or previous assessments (Appleton, 1996; Maynard, 1998).

In addition, a stone artefact scatter (BL8), which comprises 13 chert flakes and flaked pieces is situated on a spurline of Bingman Ridge, north of a minor, ephemeral drainage feature.

Water Supply Pipeline Corridor Sites

Two Aboriginal archaeological sites have previously been recorded immediately adjacent to the water supply pipeline corridor (see **Figure 5**). They comprise:

- 1 stone artefact scatter (AHIMS site number 36-3-0656; MC OS 19) exposed on scalds east of Ulan Road at Ulan; and
- 1 isolated find of a stone artefact (AHIMS site number 36-3-0708; CE-32-IF) exposed on a scald east of Ulan Road at Ulan.

5.5.1.2 Newly Identified Aboriginal Cultural Heritage Sites

Thirty-one Aboriginal cultural heritage sites were newly identified during the field surveys led by Dr Cupper (see **Figure 5** and **Figure 6**). These comprise 19 stone artefact scatters, nine isolated finds of stone artefacts, two scarred trees and a rock shelter with potential archaeological deposits and stone artefacts:

- AHIMS site number 36-6-0828 (BL39) – two chert flakes in a gravel access track east of “Bowdens” homestead;
- AHIMS site number 36-6-0829 (BL38) – a concentration of 10 chert flakes and flaked pieces and 6 silcrete flakes and flaked pieces. Artefacts were scattered over the exposed surface of a rhyolite outcrop and covered an area of approximately 10 m x 10 m in the southern section of the Mine Site, north of Hawkins Creek;

Figure 5 Locations of Aboriginal Cultural Heritage Sites within the Water Supply Pipeline Corridor

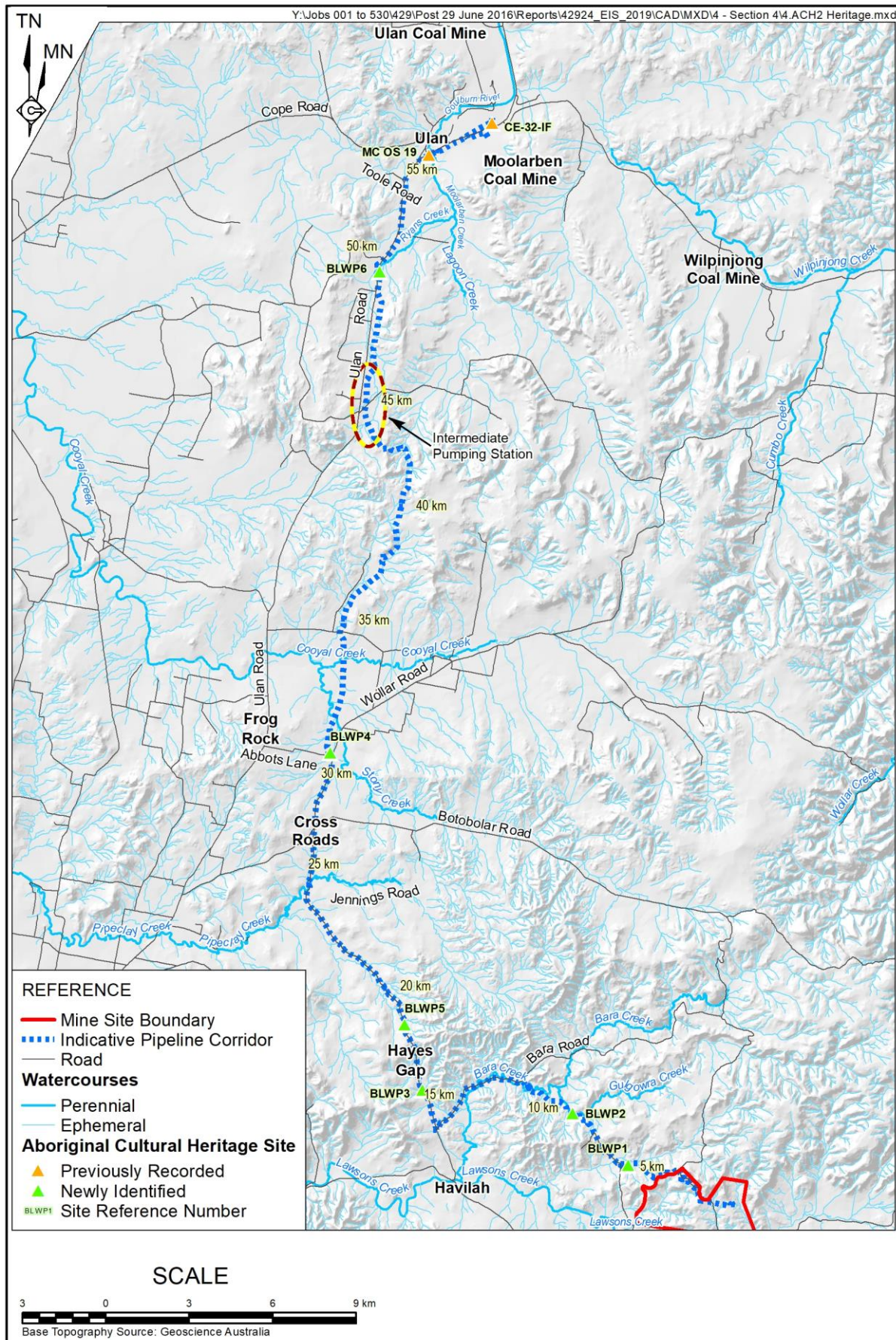
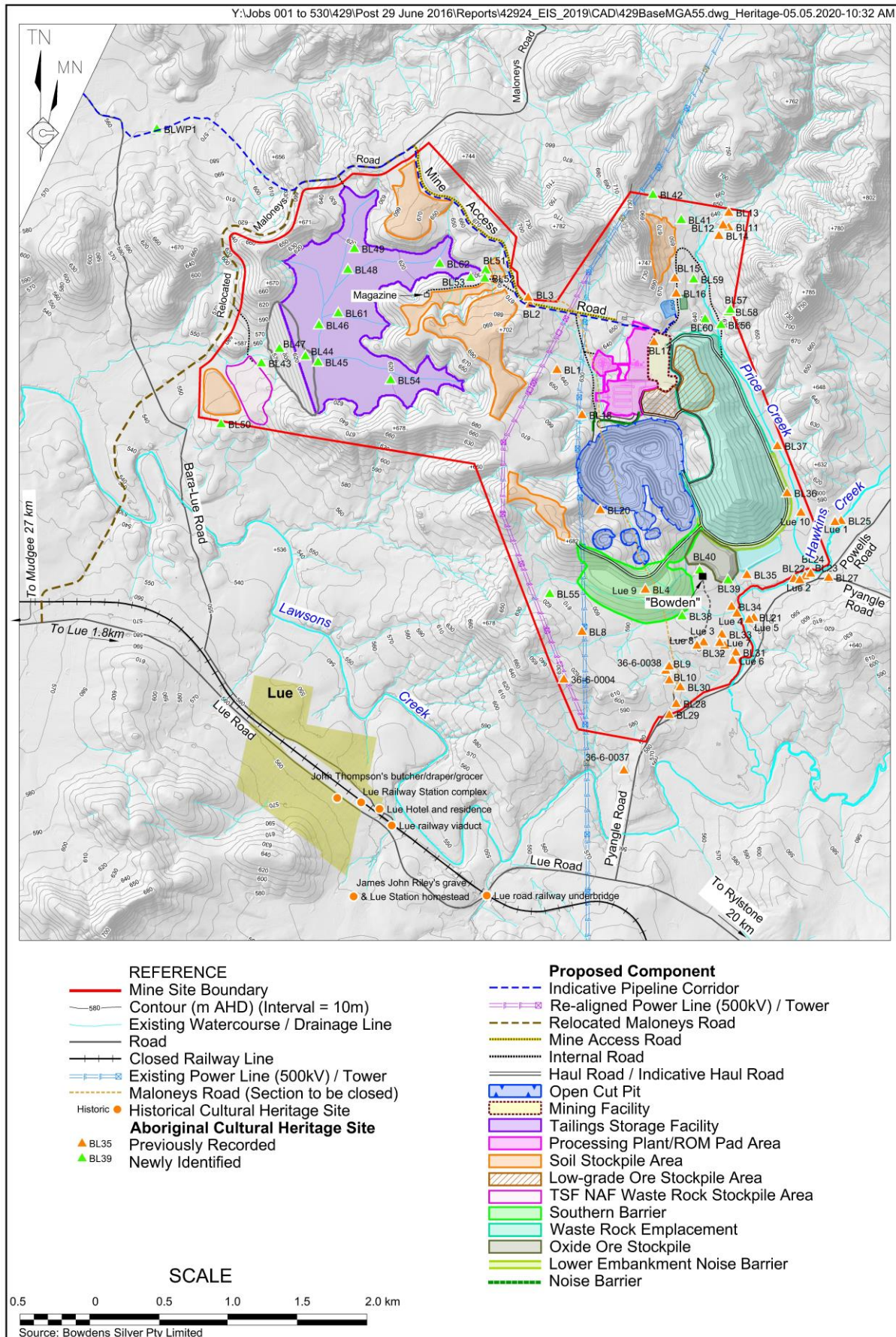


Figure 6 Locations of Aboriginal Cultural and Historic Heritage Sites within the Mine Site

- AHIMS site number 36-6-0830 (BL40) – two chert flakes exposed in a grader cut behind “Bowdens” homestead shed;
- AHIMS site number 36-6-0891 (BL41) – 32 chert flakes, flaked pieces and angular fragments and 6 quartz angular fragments. Artefacts were scattered over the exposed surface of a rhyolite outcrop and covered an area of approximately 150 m x 100 m in the valley of the western headwater of Price Creek in the northeastern section of the Mine Site;
- AHIMS site number 36-6-0892 (BL42) – one chert flake exposed in a scald in the valley of Price Creek, in the northeastern section of the Mine Site;
- AHIMS site number 36-6-0893 (BL43) – hundreds of chert, fine grained volcanic and quartz blades, points, scrapers, cores, flakes, flaked pieces and angular fragments. Artefacts were scattered over the exposed surfaces of rhyolite outcrops and covered an area of approximately 300 m x 100 m in Walkers Creek Valley in the western section of the Mine Site;
- AHIMS site number 36-6-0894 (BL44) – a rock shelter in a rhyolite tor with a floor area measuring approximately 4 m x 3 m and containing 3 chert and quartz flakes and potential archaeological deposits in the valley of the southern headwater of Walkers Creek, in the western section of the Mine Site;
- AHIMS site number 36-6-0895 (BL45) – hundreds of chert, fine grained volcanic and quartz blades, points, scrapers, cores, flakes, flaked pieces and angular fragments. Artefacts were scattered over the exposed surfaces of rhyolite outcrops and covered an area of approximately 50 m x 50 m in the valley of the southern headwater of Walkers Creek, in the western section of the Mine Site;
- AHIMS site number 36-6-0896 (BL51) – eight chert and quartz flakes. Artefacts were exposed in a vehicle track and covered an area of approximately 5 m x 5 m in the northern headwaters of Walkers Creek, in the western section of the Mine Site;
- AHIMS site number 36-6-0897 (BL55) – one conglomeritic sandstone hammerstone exposed on the surface, west of the proposed Southern Barrier;
- AHIMS site number 36-6-0898 (BL46) – 20 chert and quartz flakes and flaked pieces. Artefacts were scattered over the exposed surfaces of rhyolite outcrops and covered an area of approximately 20 m x 20 m in the northern headwaters of Walkers Creek, in the western section of the Mine Site;
- AHIMS site number 36-6-0899 (BL47) – six chert, fine grained volcanic and quartz cores, flakes and flaked pieces. Artefacts were scattered over the exposed surface of a rhyolite outcrop and covered an area of approximately 10 m x 10 m in the valley of Walkers Creek in the western section of the Mine Site;
- AHIMS site number 36-6-0900 (BL49) – a dead and fallen Eucalypt tree with a possible cultural scar measuring 700 mm x 220 mm in the northern headwaters of Walkers Creek, in the western section of the Mine Site;
- AHIMS site number 36-6-0901 (BL48) – two chert flakes and flaked pieces. Artefacts were on a vehicle track and covered an area of approximately 2 m x 2 m in the northern headwaters of Walkers Creek, in the western section of the Mine Site;

- AHIMS site number 36-6-0902 (BL50) – one chert broken blade on the exposed surface of a rhyolite outcrop on the southern flank of Walkers Creek valley, adjacent to, but outside of, the Mine Site boundary in the western section of the Mine Site;
- AHIMS site number 36-6-0903 (BL54) – one chert flake on the exposed surface of a rhyolite outcrop in the valley of the southern headwater of Walkers Creek, in the western section of the Mine Site;
- AHIMS site number 36-6-0904 (BL53) – 45 chert, fine grained volcanic and quartz blades, cores, flakes and flaked pieces. Artefacts were exposed surfaces along a vehicle track and adjacent cleared land and covered an area of approximately 100 m x 50 m in the northern headwaters of Walkers Creek, in the western section of the Mine Site;
- AHIMS site number 36-6-0905 (BL52) – 15 chert flakes. Artefacts were exposed surfaces along a vehicle track and adjacent cleared land and covered an area of approximately 10 m x 10 m in the northern headwaters of Walkers Creek, in the western section of the Mine Site;
- AHIMS site number 36-6-0990 (BL56) – one chert flake. Artefact was on an exposed surface of a scalded area in the valley of Price Creek, in the northeastern section of the Mine Site;
- AHIMS site number 36-6-0991 (BL60) – 10 quartz and tuff flakes, angular fragments and a core. Artefacts were on exposed surfaces in a scalded area and covered an area of approximately 7 m x 3 m in the valley of Price Creek, in the northeastern section of the Mine Site;
- AHIMS site number 36-6-0992 (BL59) – 25 quartz and tuff flakes, angular fragments and cores and a sandstone axe. Artefacts were on exposed surfaces in a scalded area and covered an area of approximately 10 m x 15 m in the valley of Price Creek, in the northeastern section of the Mine Site;
- AHIMS site number 36-6-0993 (BL58) – four quartz flakes and one quartz core. Artefacts were on exposed surfaces in a scalded area and covered an area of approximately 5 m x 6 m in the valley of Price Creek, in the northeastern section of the Mine Site;
- AHIMS site number 36-6-0994 (BL57) – quartz angular fragment. Artefact was on exposed surface of scalded area in the valley of Price Creek, in the northeastern section of the Mine Site;
- AHIMS site number 36-6-0995 (BL62) – one quartz flake. Artefact was on a scalded area in the northern headwaters of Walkers Creek, in the western section of the Mine Site;
- AHIMS site number 36-6-0996 (BL61) – 14 chert and quartzite flakes. Artefacts were on exposed surfaces along a vehicle track and adjacent cleared land and covered an area of approximately 5 m x 5 m in the northern headwaters of Walkers Creek, in the western section of the Mine Site;
- BLWP1 – 11 tuff, chert, quartz and quartzite angular fragments, flakes, flaked pieces, blades. Artefacts were on exposed surfaces along a vehicle track and adjacent cleared land and covered an area of approximately 30 m x 30 m in the southern section of the water supply pipeline corridor;

- BLWP2 – six tuff and chert angular fragments. Artefacts were on exposed surfaces along a vehicle track and covered an area of approximately 5 m x 5 m in the southern section of the water supply pipeline corridor;
- BLWP3 – one chert flake. Artefact was on exposed surface adjacent to a road in the southern section of the water supply pipeline corridor;
- BLWP4 – one chert flake. Artefact was on exposed surface in cultivated paddock in the middle section of the water supply pipeline corridor;
- BLWP5 – a living Bimble Box tree with a possible cultural scar measuring 880 mm x 260 mm in the southern section of the water supply pipeline corridor; and
- BLWP6 – two tuff and quartz flakes. Artefacts were on exposed surfaces along a vehicle track and covered an area of approximately 10 m x 10 m in the northern section of the water supply pipeline corridor.

Summary descriptions of the newly identified Aboriginal cultural heritage sites are contained in **Table 8**.

Table 8

Newly Identified Aboriginal Cultural Heritage Sites at the Mine Site, Relocated Maloneys Road and Water Supply Pipeline Corridor

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AHIMS Site Number	Name	Location GDA94 mE (Zone 55)	Location GDA94 mN (Zone 55)	Landform	Size (m)	Contents
36-6-0829	BL38	769305	6384598	Valley flank	10 x 10	10 chert flakes and flaked pieces, 6 silcrete flakes and flaked pieces
36-6-0828	BL39	769636	6384858	Valley flank	2 x 2	2 chert flakes
36-6-0830	BL40	769431	6384927	Valley flank	2 x 2	2 chert flakes
36-6-0891	BL41	769298	6387457	Hill slope	150 x 100	32 chert flake, flaked pieces and angular fragments and 6 quartz angular fragments on rhyolite outcrops
36-6-0892	BL42	769094	6387638	Hill slope	N/A	1 chert flake
36-6-0893	BL43	766269	6386423	Valley flank	300 x 100	100s chert, fine grained volcanic and quartz blades, points, scrapers, cores, flakes, flaked pieces and angular fragments
36-6-0894	BL44	766587	6386474	Tor	4 x 3	Rock shelter with 3 chert and quartz flakes, potential archaeological deposits
36-6-0895	BL45	766678	6386430	Valley flank	50 x 50	100s chert, fine grained volcanic and quartz blades, points, scrapers, cores, flakes, flaked pieces and angular fragments
36-6-0896	BL51	767888	6387094	Ridge	5 x 5	8 chert and quartz flakes

Table 8 (Cont'd)

Newly Identified Aboriginal Cultural Heritage Sites at the Mine Site, Relocated Maloneys Road
and Water Supply Pipeline Corridor

Page 2 of 2

AHIMS Site Number	Name	Location GDA94 mE (Zone 55)	Location GDA94 mN (Zone 55)	Landform	Size (m)	Contents
36-6-0897	BL55	768350	6384759	Valley flank	N/A	1 sandstone hammerstone
36-6-0898	BL46	766685	6386698	Hill slope	20 x 20	20 chert and quartz flakes, and flaked pieces
N/A	BLWP 1	765515	6388112	Mid-slope	30 x 30	11 tuff, chert, quartz, quartzite angular fragments, flakes, flaked pieces, blades
N/A	BLWP2	763524	6389978	Mid-slope	5 x 5	6 tuff, chert angular fragments
N/A	BLWP3	758122	6390830	Mid-slope	N/A	1 chert flake
N/A	BLWP4	754794	6402967	Lower slope	N/A	1 chert flake
N/A	BLWP5	757474	6393171	Mid-slope	N/A	Scarred Bimble (?) Box scar 880 mm long, 260 mm wide
N/A	BLWP6	756571	6420304	Stone Artefacts	10 x 10	2 tuff, quartz flakes
36-6-0899	BL47	766400	6386527	Tor	10 x 10	6 chert, fine grained volcanic and quartz cores, flakes, and flaked pieces
36-6-0900	BL49	766941	6387249	Hill slope	N/A	Possible scarred tree. Scar measures 700 x 220 mm
36-6-0901	BL48	766893	6387098	Valley flank	2 x 2	2 chert flakes and flaked pieces
36-6-0902	BL50	765978	6385984	Ridge	N/A	1 chert broken blade
36-6-0903	BL54	767202	6386301	Ridge	N/A	1 chert flake
36-6-0904	BL53	767780	6387039	Ridge	100 x 50	45 chert, fine grained volcanic and quartz blades, cores, flakes and flaked pieces
36-6-0905	BL52	767881	6387035	Ridge	10 x 10	15 chert flakes
36-6-0990	BL56	769585	6386699	Slope	N/A	1 chert flake
36-6-0991	BL60	769471	6386741	Slope	7 x 3	10 quartz and tuff flakes, angular fragments and core
36-6-0992	BL59	769388	6387028	Slope	15 x 10	25 quartz and tuff flakes, angular fragments and cores, sandstone axe
36-6-0993	BL58	769637	6386793	Slope	6 x 5	5 quartz flakes, core
36-6-0994	BL57	769653	6386809	Slope	N/A	1 quartz angular fragment
36-6-0995	BL62	767556	6387141	Slope	N/A	1 quartz flake
36-6-0996	BL61	766824	6386784	Slope	5 x 5	14 chert and quartzite flakes

5.5.2 Historical Cultural Heritage Sites

Three historical features thought to be associated with nineteenth century gold mining activities in the Apple Tree Flat Goldfield Reserve (Richard Smart *personal communication*, 23 November 2011) are located in areas of proposed disturbance within the Mine Site. These historical cultural heritage sites are on the western flanks of Blackmans Gully and include:

- Ruins of a (possible prospector's) hut; and
- Two adjacent shallow pits thought to be beginnings of abandoned attempts to dig mine shafts.

A summary of the historical cultural heritage sites is contained in **Table 9** and their locations are shown on the map in **Figure 5**.

Table 9
Historical Cultural Heritage Sites at the Mine Site

Site Name	Location	GDA94 mE (Zone 55)	GDA94 mN (Zone 55)	Contents
Hut ruins	Western flank Blackmans Gully	768822	6385348	3 sandstone blocks, fragments of cast iron stove, sheet iron, broken glass bottles, broken ceramic vessels
Shallow pit	Western flank Blackmans Gully	768794	6385227	Earthworks
Shallow pit	Western flank Blackmans Gully	768774	6385273	Earthworks

5.5.2.1 Hut Ruins

Ruins of a small dwelling occur on the western flank of Blackmans Gully (**Plate 11**). They occupy levelled ground approximately 10 m x 10 m in area south of an exotic pine tree and comprise three sandstone blocks, two fragments of a cast iron stove and twisted pieces of sheet iron (**Plate 12**). Five black and green glass fragments including necks, bodies and bases of 'case' gin, ale and soda water bottles and three stoneware shards from domestic kitchen crockery also occur at the site (**Plate 13**). The bottles date to the mid-nineteenth century, as do the ceramic items, which include the rim of a brown transferware platter (**Plate 14**).

Ground penetrating radar (GPR) and magnetic gradiometer surveys of the hut ruins showed a number of regular geophysical anomalies, which may represent the remains of subsurface stone foundations or disturbed ground at the base of former hut walls (**Annexure 6**).

5.5.2.2 Shallow Pits

Two shallow pits are located on a rocky ridgeline approximately 250 m south of the hut ruins. They are approximately 50 m apart. The pit openings measure approximately 2 m x 2 m and have been excavated to depths of approximately 2 m (southern pit) and 0.3 m (northern pit) as shown in **Plates 15** and **16**.



Plate 11 **Location of hut ruins south of a large pine tree in the central section of the Mine Site**



Plate 12 **Sandstone blocks and sheet iron at the hut ruins**



Plate 13 **Base of a black glass ale bottle at the hut ruins**



Plate 14 **Rim fragment of a brown transfer ware kitchen platter at the hut ruins**



Plate 15

Southern shallow pit in the centre of the Mine Site



Plate 16

Northern shallow pit in the centre of the Mine Site

6. CULTURAL HERITAGE VALUES

6.1 ABORIGINAL CULTURAL HERITAGE SIGNIFICANCE

The significance of Aboriginal archaeological sites such as that found during this study are usually assessed in terms of their importance to archaeologists (i.e. their scientific or research significance), their importance to contemporary Aboriginal people and their importance to the general public. Once the significance of a site has been assessed, it can be ranked against others and specific recommendations formulated. Criteria for assessing scientific significance are set out below. The values used in this assessment have been the subject of some discussion in the archaeological literature and the information provided is drawn from a number of sources (e.g. Bowdler, 1983).

A summary of the archaeological significance assessment of the sites is presented in **Table 10**.

6.1.1 Scientific Significance

A number of criteria are used to assess the scientific significance of a site. These include the integrity of a site, its structure and contents. All of these criteria combine to give a site its value as a research tool for archaeologists. In addition to the above criteria, a site may also be of scientific significance because of its representativeness or rarity. It is a basic tenet of archaeology that any site which is not represented elsewhere is of great value because archaeologists are concerned with preserving a representative sample of all site types for future generations.

Site Integrity

Site integrity refers to its state of preservation or condition. A site can be disturbed through a number of factors including natural erosional processes, destructive land use practices or repeated use of a site in the past by both humans and animals.

low	highly disturbed or poorly preserved with little research potential.
moderate	some disturbance but remaining cultural material allows for some research potential.
high	little or no disturbance to site, good preservation and considerable research potential.

In terms of site integrity, the sites located during this survey would mostly rate as 'low'. This assessment is based on the degree of disturbance noted during the investigation. The stone artefact scatters were typically identified in modified contexts such as along graded roads and fence lines. They have been disturbed by repeated ploughed cultivation, traffic of hooved animals and vehicles, coupled with erosion by wind and water. The rock shelter site AHIMS site number 36-6-0894 (BL44) rates moderate, with potentially intact archaeological deposits.

Table 10
Assessment of Significance of the Aboriginal Cultural Heritage Sites

Page 1 of 2

Site Name	Scientific Significance				Aboriginal Significance	Educational Significance	Aesthetic Significance
	Integrity	Structure	Contents	Rarity			
BL1	Low	Low	Low	Low	High	Low	Low
BL2	Low	Low	Low	Low	High	Low	Low
BL3	Low	Low	Low	Low	High	Low	Low
BL4	Low	Low	Low	Low	High	Low	Low
BL8	Low	Low	Low	Low	High	Low	Low
BL9	Low	Low	Low	Low	High	Low	Low
BL10	Low	Low	Low	Low	High	Low	Low
BL11	Low	Low	Low	Low	High	Low	Low
BL12	Low	Low	Low	Low	High	Low	Low
BL13	Low	Low	Low	Low	High	Low	Low
BL14	Low	Low	Low	Low	High	Low	Low
BL15	Low	Low	Low	Low	High	Low	Low
BL16	Low	Low	Low	Low	High	Low	Low
BL17	Low	Low	Low	Low	High	Low	Low
BL18	Low	Low	Low	Low	High	Low	Low
BL20	Low	Low	Low	Low	High	Low	Low
BL21	Low	Low	Low	Low	High	Low	Low
BL22	Low	Low	Low	Low	High	Low	Low
BL23	Low	Low	Low	Low	High	Low	Low
BL24	Low	Low	Low	Low	High	Low	Low
BL25	Low	Low	Low	Low	High	Low	Low
BL27	Low	Low	Low	Low	High	Low	Low
BL28	Low	Low	Low	Low	High	Low	Low
BL29	Low	Low	Low	Low	High	Low	Low
BL30	Low	Low	Low	Low	High	Low	Low
BL31	Low	Low	Low	Low	High	Low	Low
BL32	Low	Low	Low	Low	High	Low	Low
BL33	Low	Low	Low	Low	High	Low	Low
BL34	Low	Low	Low	Low	High	Low	Low
BL35	Low	Low	Low	Low	High	Low	Low
BL36	Low	Low	Low	Low	High	Low	Low
BL37	Low	Low	Low	Low	High	Low	Low
BL38	Low	Low	Low	Low	High	Low	Low
BL39	Low	Low	Low	Low	High	Low	Low
BL40	Low	Moderate	Moderate	Low	High	Low	Low
BL41	Low	Moderate	Moderate	Low	High	Low	Low

Table 10 (Cont'd)
Assessment of Significance of the Aboriginal Cultural Heritage Sites

Page 2 of 2

Site Name	Scientific Significance				Aboriginal Significance	Educational Significance	Aesthetic Significance
	Integrity	Structure	Contents	Rarity			
BL42	Low	Low	Low	Low	High	Low	Low
BL43	Moderate	Moderate	Moderate	Low	High	Low	Low
BL44	Moderate	Moderate	Moderate	Moderate	High	Moderate	Moderate
BL45	Moderate	Moderate	Moderate	Low	High	Low	Low
BL46	Low	Low	Low	Low	High	Low	Low
BL47	Low	Low	Low	Low	High	Low	Low
BL48	Low	Low	Low	Low	High	Low	Low
BL49	Low	Low	Low	Low	High	Low	Low
BL50	Low	Low	Low	Low	High	Low	Low
BL51	Low	Low	Low	Low	High	Low	Low
BL52	Low	Low	Low	Low	High	Low	Low
BL53	Low	Moderate	Moderate	Low	High	Low	Low
BL54	Low	Low	Low	Low	High	Low	Low
BL55	Low	Low	Low	Low	High	Low	Low
BL56	Low	Low	Low	Low	High	Low	Low
BL57	Low	Low	Low	Low	High	Low	Low
BL58	Low	Low	Low	Low	High	Low	Low
BL59	Low	Low	Low	Low	High	Low	Low
BL60	Low	Low	Low	Low	High	Low	Low
BL61	Low	Low	Low	Low	High	Low	Low
BL62	Low	Low	Low	Low	High	Low	Low
Lue 1	Low	Low	Low	Low	High	Low	Low
Lue 2	Low	Low	Low	Low	High	Low	Low
Lue 3	Low	Low	Low	Low	High	Low	Low
Lue 4	Low	Low	Low	Low	High	Low	Low
Lue 5	Low	Low	Low	Low	High	Low	Low
Lue 6	Low	Low	Low	Low	High	Low	Low
Lue 7	Low	Low	Low	Low	High	Low	Low
Lue 8	Low	Moderate	Moderate	Low	High	Low	Low
Lue 9	Low	Low	Low	Low	High	Low	Low
Lue 10	Low	Low	Low	Low	High	Low	Low
BLWP1	Low	Low	Low	Low	High	Low	Low
BLWP2	Low	Low	Low	Low	High	Low	Low
BLWP3	Low	Low	Low	Low	High	Low	Low
BLWP4	Low	Low	Low	Low	High	Low	Low
BLWP5	Low	Low	Low	Low	High	Low	Low
BLWP6	Low	Low	Low	Low	High	Low	Low

Site Structure

Site structure refers to the physical dimensions of a site (i.e. its area and depth or stratification). A large site or a site with stratified deposits usually has more research potential than a small site or surface scatter. In some instances, however, specific research questions may be aimed at smaller sites in which case they would be rated at a higher significance than normal.

low	small surface scatters with no stratified deposit.
moderate	medium to large surface scatters with or without stratification.
high	large <i>in situ</i> surface scatters, any site with stratified deposit.

The isolated finds rate low according to the site structure criterion. Most of the stone artefact scatters are also small in size and have a low site structure. Several sites are larger (e.g. BL40, BL43, BL45, Lue 8) and rate moderate. Artefacts generally form a lag deposit on scalded or exposed rock surfaces. The surfaces of all these sites are degrading. The rock shelter site AHIMS site number 36-6-0894 (BL44) rates moderate, with potentially intact archaeological deposits.

Site Contents

Site contents refers to the range and type of occupation debris found in a site. Generally, sites that contain a large and varied amount of organic and non-organic material are considered to have greater research potential than those sites with small, uniform artefacts.

low	small amount and low diversity of cultural material.
moderate	medium amount and diversity of cultural material.
high	large and diverse amount of cultural material.

The original cultural materials of the sites recorded during the survey have been exposed to weathering. Only stone artefacts remain at the open sites, with no organic materials preserved. Stone artefacts are mainly of silcrete, chert or mudstone. Formal tool types are not prevalent, but include scrapers. Unmodified flakes and cores dominate the stone artefact assemblage. Artefact density at these sites is typically relatively low.

Most of the stone artefact sites rate low to moderate by the site contents criterion. They could be useful for studies of human subsistence strategies. The rock shelter site AHIMS site number 36-6-0894 (BL44) rates moderate, with potential archaeological deposits possibly containing datable organic material such as charcoal from hearths and animal bones, which could contribute to a chronology of occupation. The latter could also provide information about past subsistence strategies.

Site Representativeness and Rarity

Representativeness or rarity refers to how often a particular site type occurs in an area and requires some knowledge of the background archaeology of the area in which the study is being undertaken. Sites that are representative of the local and regional archaeological record may have value for that reason and if a site is rare or unique in some way then it is *ipso facto* significant (Bowdler, 1983).

low	many of the same site type occurring in a single area or region.
moderate	site type occurs elsewhere but not in great quantity or with good preservation.
high	site type is rare or unique.

On the basis of the results of previous archaeological investigations (e.g. Haglund, 1980a, 1980b, 1981a, 1981b, 1984, 1992, 1996; Kuskie, 2004; Hamm, 2006) and information held on the NSW BCD AHIMS site register it is clear that scarred trees, rock shelters, stone artefact scatters and isolated finds of stone artefacts are widespread in the region. These types of archaeological sites located during this study are therefore not unique and are well represented outside the survey area.

6.1.2 Aboriginal Social, Cultural, Spiritual and Historical Significance

The significance of a site is not restricted to its scientific or research value. The views of Aboriginal people on the significance of archaeological sites are also important. Their perceptions usually stem from traditional, cultural and educational beliefs although most local Aboriginal communities also value the scientific information that archaeological sites may be able to provide.

Archaeological sites provide connections to the past for the present Aboriginal community and for future generations. Aboriginal cultural heritage sites such as those identified during this survey can also provide information about past lifestyles and strengthen the links between Aboriginal people and the land.

The level of significance attributed to individual sites may vary according to a number of factors including the nature and integrity of the heritage items and the landscape in which the site is located. The views of the Aboriginal representatives involved in the field survey and community field inspections and discussion forums are considered to be indicative of Aboriginal community attitudes.

The Aboriginal significance of the sites listed in **Table 9** was established through consultation with the Aboriginal stakeholders involved with the field survey.

Generally, the Aboriginal community views all archaeological sites as highly significant because they preserve a record of how and where people lived in the past. Such cultural heritage sites also stand as testimony to the continuation of Aboriginal culture and association with the land.

6.1.3 Educational Significance

The value of archaeological sites to the general public is generally assessed by their potential to educate the public about the Aboriginal past. With the exception of the rock shelter site, AHIMS site number 36-6-0894 (BL44) which rates moderate, all other sites rank low by this criterion. They are small, isolated and unlikely to attract particular interest in Aboriginal heritage.

6.1.4 Aesthetic Significance

Aesthetic significance relates to the scale, form, materials, texture, colour, space and relationship of the components of the place. The relationship of the place with its setting is equally important.

The stone artefact scatters are subdued features in the landscape and lack high aesthetic value. The possible scarred trees are also of low aesthetic value, one having died and fallen.

The rock shelter site AHIMS site number 36-6-0894 (BL44) rates moderate.

6.2 ABORIGINAL CULTURAL LANDSCAPE

Scientific information collected from the Aboriginal archaeological sites identified during this study combined with social and cultural information provided by the Aboriginal community stakeholders and ethno-historical sources, allows interpretation of the Aboriginal cultural landscape of the Mine Site and associated water supply pipeline corridor, provided in the following sections.

6.2.1 Summary of the Archaeological Record

The material culture of past Aboriginal occupants of the survey area comprises 45 dispersed stone artefact scatters, 27 isolated finds of stone artefacts, one rock shelter with stone artefacts and potential archaeological deposits and two scarred trees. Assemblages contain varying abundances of artefacts (from one to several hundred). Some formal implements are present (points, blades, scrapers, axes, hammerstones), but overwhelmingly the assemblages are dominated by unmodified flakes, flaked pieces and angular fragments and large cores. This reflects the abundance of locally-derived lithic types (chert, quartz, mudstone and fined grained volcanics).

6.2.2 Aboriginal Settlement Patterns

The location of freshwater sources are likely to have been the main controlling factor of Aboriginal occupation of the survey area. Humans carry out most of their activities close to fresh water, rarely straying far from reliable water sources (see Gould, 1969, 1980; Allen, 1974; Jochim, 1976; Mitchell, 1990; McNiven, 1998). They also prefer larger or more persistent water sources to smaller, ephemeral water bodies, such as those found within the Mine Site. As well as the obvious abundance of aquatic molluscs, fish and birds at large, permanent water sources, mammals such as macropods that were hunted for protein and skins are also limited by water availability.

There are no permanent streams or wetlands in the Mine Site. Hawkins Creek, adjacent to the southern boundary of the Mine Site, and Lawsons Creek, which Hawkins Creek meets approximately 1 kilometre to the south, are intermittent watercourses that episodically flow for brief periods after heavy rain. However, these streams retain pools of surface water for some weeks in waterholes.

The larger Aboriginal archaeological sites with the greatest abundance and diversity of artefacts (Lue 8, BL40, BL43, BL45) identified during the survey are all within 500 m of Hawkins Creek or the valley of the ephemeral Walkers Creek in the western section of the Mine Site and which are within 1 000 m of Lawsons Creek. Peak occupation of the survey area is likely to have corresponded to when these transient supplies were available. The bulk of the Aboriginal cultural heritage sites encountered by Appleton (1996) and Maynard (1998) also occurred on the margins of Hawkins Creek.

Almost all of the other Aboriginal cultural heritage sites in the Mine Site and associated water supply pipeline corridor are also located on level ground adjacent to temporary (ephemeral) water sources, such as along Blackmans Gully and Price Creek.

6.2.3 Aboriginal Subsistence Strategies

Hunter-fisher-gatherers obtain the resources necessary for life by foraging and collecting subsistence strategies. Foragers gather food as it is encountered, regularly moving between resource zones and rarely storing food (Binford, 1980, 1989). Collectors, alternatively, adopt a logistical strategy for procuring resources. They often rely on stores of food and may maintain base camps, with smaller groups dispersing to collect resources. Foraging and collecting are two end-members of a subsistence continuum, with most hunter-fisher-gatherer societies engaging in a combination of both strategies (Yellen, 1977; Binford, 1980, 1989; Renfrew and Bahn, 1991).

Sites occupied by hunter-fisher-gatherer people may reflect these strategies (Binford, 1980; Foley, 1981). For example, base camps were generally occupied for long periods of the year and were used for a range of domestic and industrial activities. Alternatively, base camps may have been intensively used for part of the year, acting as congregative focal points. Temporary field camps were dispersive sites, created when groups charged with carrying out a specific task journeyed beyond the daily foraging radius.

The frequency of site occupation can sometimes be determined from their contents and structure. Residential base campsites, occupied over relatively long periods of time, tend to have a more complex structure than short-term campsites. Base camps may contain evidence of a wide variety of activities associated with daily habitation. Short-term sites were probably only occupied for a specific reason, such as to collect a particular resource. These usually display evidence of being occupied only once or twice, and are often smaller, with fewer and less diverse archaeological remains.

It is probable that the Aborigines who occupied the survey area were hunter-fisher-gatherers employing both foraging and collecting subsistence strategies. These people would have primarily occupied the riparian zones of the Macquarie River and its more permanent tributaries including the Cudgegong River, dispersing from the riverine corridors to exploit ephemeral resources of the more poorly watered, hilly hinterland during favourable climatic conditions, as invoked in the subsistence model of Pearson (1984).

Only small areas were investigated in a heterogeneous landscape, but it is probable that the archaeological record reflects the occupation of the hill country by small, mobile bands.

The archaeology of the survey area probably derives from temporary sites used by small groups of people during periods of seasonal dispersal. The small number and density of stone artefacts, along with the paucity of formal implement types, suggests that Aboriginal people only visited the cultural heritage places for brief periods.

6.2.4 Synthesis

Aboriginal people probably occupied the survey area following the end of the last Ice Age some 18,000 years ago. The Aboriginal archaeological record of the survey area could be late Holocene (less than a few thousand years) in age. The lack of reliable, permanent sources of water in the hills would have made the study area somewhat unattractive for prolonged or regular habitation.

The non-stratified stone artefact assemblages and isolated finds of stone artefacts probably represent temporary occupation sites. People from the small, mobile groups that probably periodically journeyed into the hill country from the rivers and streams of the Macquarie and Cudgegong valleys to forage for food, lithic and other resources may have occupied such an area for brief durations.

6.3 HISTORICAL CULTURAL HERITAGE VALUES

6.3.1 Introduction

The assessment of historic heritage significance has been undertaken using the NSW BCD Heritage Branch's assessment criteria detailed in *Assessing Significance for Historical Archaeological Sites and 'Relics'* (NSW Heritage Branch, 2009). The NSW criteria cover the generic *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance* (Burra Charter) values of historic, aesthetic, scientific and social significance (see Australia ICOMOS, 1988, 1999, 2013; Marquis-Kyle and Walker, 1992; Pearson and Sullivan, 1995), but express the values in a more detailed form to maintain consistency and facilitate comparison of assessments across jurisdictions.

A summary of the significance assessments of the historical heritage sites is presented in **Table 11**.

Table 11
Assessment of Significance of the Historical Cultural Heritage Sites

Site Name	Significance						
	Criterion (a)	Criterion (b)	Criterion (c)	Criterion (d)	Criterion (e)	Criterion (f)	Criterion (g)
Hut Ruins	Local (Low)	Local (Low)	N/A	Local (Low)	Local (Moderate)	Local (Low)	Local (Low)
Shallow Pits	Local (Low)	Local (Low)	N/A	Local (Low)	Local (Low)	Local (Low)	Local (Low)

6.3.2 Historical Cultural Heritage Significance Criteria

6.3.2.1 Criterion (a) [Historical Significance]

Importance in the course, or pattern of the cultural history of NSW's cultural or natural history, or the cultural or natural history of the local area;

The hut ruins and shallow pits meet this criterion at the low level. They have some significance in the local history of Lue, thought to be associated with early gold prospecting in the region, but are not of state or national importance.

6.3.2.2 Criterion (b) [Historical Association Significance]

Strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history, or the cultural or natural history of the local area;

The sites have low local significance according to this criterion. The person or persons who constructed and dwelt in the hut are unknown, although a German prospector is thought to have lived there (Richard Smart *personal communication* 23 November 2011).

6.3.2.3 Criterion (c) [Aesthetic Significance]

Importance in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW or the local area;

The hut ruins and shallow pits have negligible aesthetic values because they are very subdued features in the landscape, and do not meet the thresholds for inclusion at either local or State level.

6.3.2.4 Criterion (d) [Social Significance]

Has strong or special association with a particular community or cultural group in NSW or the local area for social, cultural or spiritual reasons;

The social significance of a site is based on whether it has a strong or special association with a particular community or cultural group at a local, regional, state or national level for social, cultural or spiritual reasons.

Historical features associated with the hut ruins and shallow pits generally have low local social significance to residents of Lue and the wider community.

6.3.2.5 Criterion (e) [Research Potential]

Potential to yield information that will contribute to an understanding of NSW's cultural or natural history, or the cultural or natural history of the local area;

The hut ruins has moderate technical and research significance. The remains of domestic activities from the second half of the nineteenth century are preserved at the site and more are likely to be buried in the subsurface. The potential for the shallow pits to provide information about the history of the gold prospecting in the local area or NSW is limited, due to their small site and poor state of preservation.

6.3.2.6 Criteria (f) and (g) [Rarity and Representativeness]

Possesses uncommon, rare or endangered aspects of NSW's cultural or natural history, or the cultural or natural history on the local area;

Important in demonstrating the principal characteristics of a class of place of NSW's cultural or natural places or environments, or the local areas cultural or natural environments

Nineteenth century dwelling and prospecting sites are not particularly abundant in the Lue area. However, the ruins and shallow pits are very poorly preserved examples of such site types.

7. ASSESSMENT OF IMPACTS OF THE PROJECT ON CULTURAL HERITAGE

The Project would directly and may potentially indirectly impact upon Aboriginal and historical cultural heritage sites. Potential negative direct and indirect impacts may result from any surface disturbance for the development including that requested for the proposed open cut pits, WRE, southern barrier, soil stockpiles, TSF, processing area and ancillary infrastructure. Impacts may include the destruction of the sites via earthmoving or indirect physical effects (e.g. dust deposition) or aesthetic effects.

7.1 DIRECT IMPACTS

The proposed activities associated with Project development would disturb the current land surface and could directly impact cultural heritage associated with the affected landforms and its landscape context.

Such impacts on cultural heritage values typically fall into three categories:

- the loss of information which could otherwise be gained by conducting research today;
- the loss of the cultural heritage resource for future research using methods and addressing questions not available today; and
- the permanent loss of the physical record.

These impacts can usually be mitigated to various degrees, depending on the nature and significance of the cultural heritage. Where sites are of low significance, their destruction may have little consequence. This could be due to the lack of useful information that could be gained from research, or the availability of many equivalent and alternative sites for study.

Sites with greater significance may be the subject of cultural heritage investigation prior to their disturbance. This allows for the salvage of information, and the recovery of a sample of artefactual materials according to current methods and research priorities. Sites and site groupings that are common elsewhere may not require the same degree of salvage attention as those which are rare, of high significance, and subject to active deterioration.

Salvage investigations can provide for the discovery of new knowledge about the past human occupation and land use of an area. Despite the loss of physical evidence involved, the information gained can in turn aid the interpretation and better management of the remaining cultural heritage resource.

7.2 POTENTIAL INDIRECT IMPACTS

In areas where the proposed activities required for the development of the Project would not involve significant earthmoving, impacts may occur indirectly such as minor, inadvertent surface disturbance or aesthetic impacts caused by outcomes other than significant attention of the landscape context.

Potential indirect impacts to cultural heritage sites could include.

- deposition of dust generated by mining;
- damage from blasting and vibration from operations and potential instability as a result of open pit operations and layout;
- accidental disturbance by peripheral activities; and
- inappropriate visitation including the unauthorized removal of cultural heritage objects.

7.3 CULTURAL HERITAGE IMPACTED BY THE PROJECT

Three historical cultural heritage sites (ruined hut and two shallow pits) and 26 Aboriginal cultural heritage sites are located within the area being considered for disturbance.

The Aboriginal cultural heritage sites are almost all scatters or isolated finds of stone artefacts, but include one rock shelter with potential archaeological deposits. This assessment has concluded that these sites are not of high scientific or cultural significance. The historical cultural heritage sites similarly do not meet the thresholds of State-significance. Therefore, it can be concluded the mine and ancillary infrastructure disturbance areas are located in areas where significant impacts on highly-important cultural heritage would be avoided.

7.3.1 Statements of Heritage Impact

Hut Ruins

The hut ruins have moderate technical and research significance, with remains of domestic activities from the second half of the nineteenth century preserved at the site and likelihood archaeological relics. They have low historical, historical association and social significance in the local history of Lue, thought to be associated with early gold prospecting in the region. Nineteenth century dwelling and prospecting sites are not particularly abundant in the Lue area. However, the ruins are very poorly preserved examples of such site type.

The open cut would detrimentally impact on the heritage significance by destroying the site. The open cut cannot be viably modified to avoid harm. Harm can be mitigated by a suitably qualified archaeologist excavating and salvaging any relics of historical interest (to be curated and archived at a location to be determined).

Shallow Pits

The shallow pits have low historical, historical association and social significance in the local history of Lue, thought to be associated with early gold prospecting in the region. Nineteenth century prospecting sites are not particularly abundant in the Lue area. However, the features are very poorly preserved examples of such site type.

The open cut would detrimentally impact on the heritage significance by destroying the sites. The open cut cannot be viably modified to avoid or mitigate harm.

7.4 POTENTIAL FOR PREVIOUSLY UNIDENTIFIED CULTURAL HERITAGE TO OCCUR IN THE APPLICATION AREA

Although the Mine Site was sufficiently surveyed, there remains the potential for Aboriginal cultural heritage sites to be located within this area (e.g. sites that may have been obscured by grass or soil at the time of survey, and sites in the parts of the relocated Maloneys Road and water supply pipeline corridor not yet surveyed). Such previously unidentified features, should they occur, would probably be isolated finds or low-density concentrations of stone artefacts (based on the predictive model outlined in Section 5.1 and informed by the results of the current survey, summarised in Section 5.5).

The shallow soils of the Mine Site, coupled with past disturbance from mining, pastoralism, agriculture, and dam, track and fence construction, means that significant *in situ* subsurface cultural deposits are highly improbable.

Archaeological survey of the pipeline corridor assessed approximately 80% of the total proposed corridor. The survey coverage was agreed with regulators as being sufficient for the purposes of the EIS and application. As noted in Section 2.2.5, several Aboriginal stakeholders remain concerned that this survey is not completed. The Applicant has committed to undertaken survey of the remaining pipeline corridor prior to land disturbance for construction of the pipeline.

The likelihood of encountering Aboriginal objects during these future surveys is mitigated by previous land disturbance by agricultural land use and the fact that Aboriginal objects were sparsely represented in the previously surveyed sections.

The Application Area does not contain culturally sensitive landforms such as lunettes or source-bordering sand dunes where subsurface Aboriginal cultural deposits (e.g. burials) have been recorded previously.

The likelihood of additional historical cultural heritage sites within the Application Area is very low.

A strategy for managing any newly identified Aboriginal and historical cultural heritage sites during the life of the mine development is outlined in Section 8.

7.5 POTENTIAL CUMULATIVE IMPACTS

The Project is located within a region with a number of currently approved or operational mines and other large-scale infrastructure projects. These existing operations have caused adverse heritage impacts to a range of Aboriginal and historical cultural heritage sites, principally archaeological ones. For the most part, these adverse impacts have been associated with the disturbance or destruction of Aboriginal and historical cultural heritage sites subsequent to archaeological investigation and assessment.

The surveys undertaken for this assessment indicate that the types of Aboriginal and historical cultural heritage sites within the Application Area that may be impacted by the mine development generally comprise part of a region-wide distribution of very small Aboriginal open occupation sites with disturbed stone artefacts of low scientific significance and historical mining and pastoral sites of local significance. Given the low-moderate scientific significance of the

Aboriginal cultural heritage sites and local significance of the historical cultural heritage sites, the cumulative effect that may result from the development of the mine is considered to be low, and would be mitigated by the ongoing program of archaeological recording/salvage recommended by this assessment.

In terms of cultural values, the Application Area is located within an area that has already been heavily modified by past clearing, mining, pastoral and agricultural activities. The Project is considered likely to cause few impacts additional to those that have already occurred. On this basis, it is considered that the mine development would not appreciably increase cumulative impacts to Aboriginal or historical cultural heritage in the region.

8. MITIGATION MEASURES

This section presents proposed mitigation strategies for the management of cultural heritage values within the Mine Site, relocated Maloneys Road and within the water supply pipeline corridor that may be subject to direct impacts by the Project.

8.1 ADDITIONAL SURVEY

Those parts of the relocated Maloneys Road and water supply pipeline corridor not previously assessed should be subject to detailed cultural heritage assessment and any Aboriginal or historical cultural heritage sites appropriately documented and managed in accordance with the Heritage Management Plan (HMP).

8.2 HERITAGE MANAGEMENT PLAN

The optimal means of co-ordinating and implementing the proposed management strategies is to integrate them into a single program and document in the form of a *Heritage Management Plan (HMP)*. The HMP would reflect the proposed management of the cultural heritage sites within the Mine Site and along the water supply pipeline. The HMP would cover all relevant actions and requirements to be conducted at the Mine Site. The HMP would remain active for the Project life and define the tasks, scope and conduct of all cultural heritage management activities.

8.3 ROLE OF THE LOCAL ABORIGINAL COMMUNITY

Bowdens Silver is committed to involving the local Aboriginal community as an integral participant in the management of Aboriginal cultural heritage values in the Mine Site and along the water supply pipeline corridor and relocated Maloneys Road. The strategies outlined in this report have incorporated the views of Aboriginal community representatives and the HMP would be drafted following receipt of development consent in consultation with the local Aboriginal community.

The recording, collection, curation, storage and replacement of salvaged Aboriginal objects would occur with the invited participation of local Aboriginal community representatives.

8.4 SITE MANAGEMENT AND CULTURAL AWARENESS TRAINING

The effective application of the HMP and its strategies is dependent on an appreciation of its content and function by on-site staff and employees.

It is recommended that training is provided to all on-site personnel regarding the HMP strategies relevant to their employment tasks.

8.5 MANAGEMENT OF CULTURAL HERITAGE WITHIN THE DISTURBANCE AREAS

The potential area of disturbance associated with the Project currently allows for optimised design locations for the principal mine components including the proposed open cut pits, WRE, southern barrier, soil stockpiles, TSF and processing plant. There is unlikely to be opportunity to avoid the cultural heritage sites within these areas.

Subsequently, the area of disturbance for the principal mine components, which would disturb the Aboriginal and historical cultural heritage sites cannot be relocated away from the cultural heritage sites to avoid disturbance. Additionally, any such relocation would not remove threats to the sites from indirect disturbance.

This assessment has concluded that the Aboriginal and historical cultural heritage sites are not of high scientific significance (Sections 6.1 and 6.3). Representatives of the registered Aboriginal stakeholders visited the Aboriginal cultural heritage sites, where options for their management were discussed. Based on the results of these discussions with representatives of the registered Aboriginal stakeholders, it is recommended that Bowdens Silver arrange for the salvage of the Aboriginal objects prior to the commencement of site activities. Bowdens Silver should engage a suitably qualified archaeologist and representatives of the registered Aboriginal stakeholders to record and collect the stone artefacts. These items should be properly curated and stored in an on-site "Keeping Place". Artefacts should be replaced within rehabilitated areas in consultation with representatives of the local Aboriginal community and BCD.

Examination of the artefacts and their contexts should form an integral part of the recording programme in order to better understand and interpret local and regional patterns of past Aboriginal settlement and resource use. In particular, this could involve investigating lithic technologies and reduction strategies adopted at the Aboriginal cultural heritage sites. These strategies of information collection would complement the salvage programme.

Similarly, an archaeologist should be engaged to salvage any relics of historical interest at the ruined dwelling located within the disturbance area. Salvaged items should be properly curated and archived at a location to be determined.

Proposed site management strategies for the cultural heritage sites identified during the field surveys are summarized in **Table 12**. It is noted that Bowdens Silver has already erected a protective barrier around approximately 10 of the artefact scatters or isolated artefacts. Bowdens Silver has also limited the extent of grazing in the section of the Mine Site adjacent to Hawkins Creek in an area in which numerous artefacts have previously been identified.

Table 12
Proposed Specific Management Strategies for the Cultural Heritage Sites

Page 1 of 2

Site Name	Type	Summary Archaeological Significance	Potential Impacts	Proposed Management Measures
BL1	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL2	Artefact scatter	Low	None	Aboriginal objects already salvaged
BL3	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL4	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL8	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL9	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL10	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
BL11	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL12	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL13	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL14	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL15	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL16	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL17	Isolated artefact	Low	Direct	Salvage Aboriginal objects
BL18	Isolated artefact	Low	Direct	Salvage Aboriginal objects
BL20	Artefact scatter	Low	None	Aboriginal objects already salvaged
BL21	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL22	Artefact scatter	Low	None	None
BL23	Isolated artefact	Low	None	None
BL24	Artefact scatter	Low	None	None
BL25	Isolated artefact	Low	None	None
BL27	Artefact scatter	Low	None	None
BL28	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL29	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
BL30	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
BL31	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
BL32	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
BL33	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
BL34	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
BL35	Isolated artefact	Low	Direct	Salvage Aboriginal object
BL36	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL37	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
BL38	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL39	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL40	Artefact scatter	Low-Moderate	Direct	Salvage Aboriginal objects
BL41	Artefact scatter	Low-Moderate	Indirect	Erect and maintain protective barrier
BL42	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
BL43	Artefact scatter	Low-Moderate	Direct	Salvage Aboriginal objects
BL44	Rock shelter	Moderate	Direct	Salvage Aboriginal objects

Table 12 (Cont'd)
Proposed Specific Management Strategies for the Cultural Heritage Sites

Page 2 of 2

Site Name	Type	Summary Archaeological Significance	Potential Impacts	Proposed Management Measures
BL45	Artefact scatter	Low-Moderate	Direct	Salvage Aboriginal objects
BL46	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL47	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL48	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL49	Scarred tree	Low	Direct	Salvage Aboriginal objects
BL50	Isolated artefact	Low	None	None
BL51	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL52	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL53	Artefact scatter	Low-Moderate	Indirect	Erect and maintain protective barrier
BL54	Isolated artefact	Low	Direct	Salvage Aboriginal object
BL55	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
BL56	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL57	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL58	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL59	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL60	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
BL61	Artefact scatter	Low	Direct	Salvage Aboriginal objects
BL62	Artefact scatter	Low	Direct	Salvage Aboriginal objects
Lue 3	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
Lue 4	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
Lue 6	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
Lue 7	Artefact scatter	Low	Indirect	Erect and maintain protective barrier
Lue 8	Artefact scatter	Low-Moderate	Indirect	Erect and maintain protective barrier
Lue 9	Artefact scatter	Low	Direct	Salvage Aboriginal objects
Lue 10	Isolated artefact	Low	Indirect	Erect and maintain protective barrier
BLWP1	Artefact scatter	Low	Indirect	Erect temporary protective barrier [#]
BLWP2	Artefact scatter	Low	Indirect	Erect temporary protective barrier [#]
BLWP3	Isolated artefact	Low	Indirect	Erect temporary protective barrier [#]
BLWP4	Isolated artefact	Low	Indirect	Erect temporary protective barrier [#]
BLWP5	Scarred tree	Low	Indirect	Erect temporary protective barrier [#]
BLWP6	Artefact scatter	Low	Indirect	Erect temporary protective barrier [#]
Hut ruins	Hut ruins	Low-Moderate	Direct	Salvage historical relics
Shallow pit	Shallow pit	Low	Direct	None
Shallow pit	Shallow pit	Low	Direct	None
[#] For the duration of the pipeline construction and rehabilitation				

8.6 MANAGEMENT OF PREVIOUSLY UNIDENTIFIED CULTURAL HERITAGE WITHIN THE DISTURBANCE AREAS

Those parts of the relocated Maloneys Road and water supply pipeline corridor not previously assessed should be subject to detailed cultural heritage assessment and any Aboriginal or historical cultural heritage sites appropriately documented and managed following the receipt of development consent and prior to disturbance in those areas.

In the event that a previously unidentified Aboriginal or historical cultural heritage site is encountered during construction or operation of the mine or ancillary infrastructure, work must stop immediately in the vicinity and the site protected from any further inadvertent impact and reported to a relevant specialist (e.g. a suitably qualified archaeologist).

A suitably qualified archaeologist should assess the significance of the site (in consultation with the registered Aboriginal stakeholders for Aboriginal cultural heritage).

Where impacts are proposed to an Aboriginal stone artefact scatter or isolated find, and avoidance of impacts is not feasible the Aboriginal objects should be recorded and salvaged.

Any newly identified historical cultural heritage sites of local significance should be avoided where possible. If disturbance cannot be avoided, the site should be subject to detailed archival recording.

Any newly identified State-significant historic relics or intact archaeological deposits should be reported to the NSW Heritage Council with the advice from the archaeologist for determination of further procedures.

8.7 SUMMARY RECOMMENDATIONS

Based on the results of this cultural heritage investigation and consultation with representatives of the local Aboriginal community it is recommended that following the receipt of development consent and prior to site disturbance

- Those parts of the relocated Maloneys Road and water supply pipeline corridor not previously assessed should be subject to detailed cultural heritage assessment and any Aboriginal or historical cultural heritage sites appropriately documented and managed in accordance with the Heritage Management Plan (HMP).
- Bowdens Silver arranges to salvage the Aboriginal artefacts at the 24 Aboriginal cultural heritage sites (Lue 9, BL3, BL4, BL15-BL18, BL35, BL36, BL38-BL40, BL43-48, BL51, BL52, BL54, BL56, BL61, BL62) located within the Mine Site and ancillary infrastructure disturbance areas. A suitably qualified archaeologist and representatives of the local Aboriginal community should be engaged to record and collect the Aboriginal objects. These items should be properly curated and stored in an on-site "Keeping Place".
- Potential archaeological deposits at rock shelter site BL44 should be test excavated by a suitably qualified archaeologist and representatives of the local Aboriginal community, and if they are shown to contain Aboriginal objects, deposits should be fully excavated, recorded and salvaged. These items should be properly curated and stored in an on-site "Keeping Place".
- Scarred tree BL49 should be relocated to an on-site "Keeping Place".

- During closure and rehabilitation activities, the stored Aboriginal artefacts and scarred tree should be replaced within rehabilitated areas in consultation with local Aboriginal groups and the BCD.
- Similarly, an archaeologist should be engaged to excavate and salvage any relics of historical interest at the ruined dwelling located within the Mine Site. Salvaged items should be properly curated and archived at a location to be determined.
- In the unlikely event that human skeletal remains are encountered during the course of activities associated with the Project, all work in that area must cease. Remains must not be handled or otherwise disturbed except to prevent further disturbance. If the remains are thought to be less than 100 years old the Police or the State Coroner's Office (tel: 02 9552 4066) must be notified. If there is reason to suspect that the skeletal remains are more than 100 years old and Aboriginal, Bowdens Silver should contact the BCD's Environmental Line (tel: 131 555) for advice. In the unlikely event that an Aboriginal burial is encountered, strategies for its management should to be developed with the involvement of the local Aboriginal community.
- Bowdens Silver should co-ordinate and implement these proposed management strategies by integrating them into a single program and document in the form of a HMP. The HMP should remain active for the Project life and define the tasks, scope and conduct of all Aboriginal cultural heritage management activities. The HMP should be developed in consultation with the local Aboriginal community.
- Bowdens Silver should provide training to all on-site personnel regarding the HMP strategies relevant to their employment tasks.
- Bowdens Silver should continue to involve the registered Aboriginal stakeholders and any other relevant Aboriginal community groups or members in matters pertaining to the Project. In particular, the recording, collection, curation, storage and replacement of Aboriginal objects should occur with the invited participation of local Aboriginal community representatives.

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Annexures

(Total No. of pages including blank pages = 158)

- Annexure 1* Letters of Notification (84 pages)
- Annexure 2* Public Notices (4 pages)
- Annexure 3* Formal Responses from Aboriginal Stakeholders to Notification (20 pages)
- Annexure 4* Proposed Methodology for Aboriginal Cultural Heritage Assessment (14 pages)
- Annexure 5* Formal Responses from Aboriginal Stakeholders to Draft Report (22 pages)
- Annexure 6* GBG Australia Pty Limited Report on Geophysical Survey of Historical Cultural Heritage Site (12 pages)

* This Annexure is only available on the digital version of this document

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Annexure 1

Letters of Notification

(Total No. of pages including blank pages = 84)

Note: This Appendix is only available on the digital version of this document

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Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

2 January 2019

Mr Paul Houston
NSW Office of Environment and Heritage
PO Box 2111
Dubbo 2830

Dear Paul,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

Bowdens Silver Pty Ltd is planning to apply for an approval under Division 4.7 (State significant development) of Part 4 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figure 1, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Aboriginal stakeholders have been involved in ongoing cultural heritage assessments for the Project but the scope has been subsequently modified to include a proposed ~70 km long pipeline to obtain surplus water from one of the coal mines in the Ulan area (Figure 1).

Landscape on behalf of Bowdens Silver Pty Ltd would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. Could the NSW Office of Environment and Heritage provide contact details of any known Aboriginal groups or individuals who may hold cultural knowledge relevant to the proposed project area, please?

I would appreciate if you could provide any information regarding Aboriginal stakeholders by Wednesday 16 January 2019 to me: Dr Matt Cupper, Landscape, PO Box 1068 Carlton 3053; e-mail: landscape@telstra.com; tel: 0408 006 690.

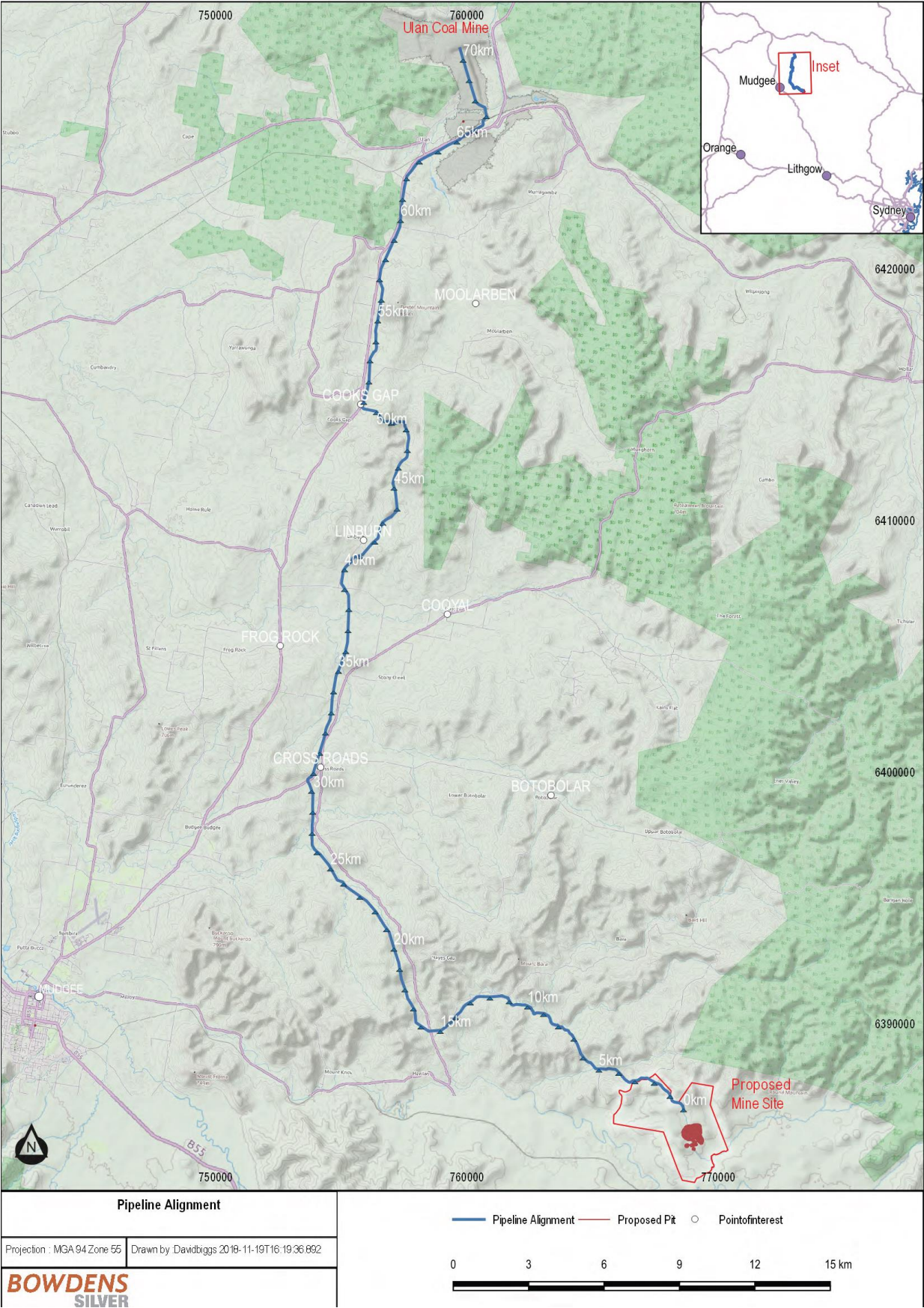
Yours sincerely,

A handwritten signature in black ink, appearing to read 'Matt Cupper', with a long, sweeping horizontal line extending to the right.

Dr Matt Cupper

PO Box 1068 Carlton 3053

Tel: 0408 006 690 E-mail: landscape@telstra.com





Landscape

Natural and Cultural Heritage Management
a division of M.L. Cupper Pty Ltd
ABN: 48 107 932 918

2 January 2019

Office of the Registrar, NSW *Aboriginal Land Rights Act* 1983

NSW Department of Aboriginal Affairs

PO Box 112

Glebe NSW 2037

Dear Sir/Madam,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

Bowdens Silver Pty Ltd is planning to apply for an approval under Division 4.7 (State significant development) of Part 4 of the *Environmental Planning and Assessment Act* 1979 to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figure 1, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

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Landscape on behalf of Bowdens Silver Pty Ltd would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. Could the Registrar, *NSW Aboriginal Land Rights Act* 1983 please advise if there are any Aboriginal owners in the proposed project area, please?

I would appreciate if you could provide any information regarding Aboriginal stakeholders by Wednesday 16 January 2019 to me: Dr Matt Cupper, Landscape, PO Box 1068 Carlton 3053; e-mail: landscape@telstra.com; tel: 0408 006 690.

Yours sincerely,

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Dr Matt Cupper

PO Box 1068 Carlton 3053

Tel: 0408 006 690 E-mail: landscape@telstra.com





Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

8 September 2011

Mr Tim Ferraro
General Manager
Central West Catchment Management Authority
PO Box 227
Wellington 2820

Dear Mr Ferraro,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Landscape on behalf of Kingsgate would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. Could the Central West CMA provide contact details of any established Aboriginal reference group relevant to the proposed project area, please?

I would appreciate if you could provide any information regarding Aboriginal stakeholders by Friday 23 September 2011 to me: Dr Matt Cupper, Landscape, PO Box 246, Merbein 3505; e-mail: landscape@telstra.com; tel: 0408 006 690.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Matt Cupper', with a long horizontal flourish extending to the right.

Dr Matt Cupper

PO Box 246 Merbein Victoria 3505

Tel: 0408 006 690 Fax: 03 5025 2549 E-mail: landscape@telstra.com





Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

2 January 2019

Central Tablelands Local Land Services
PO Box 510
Cowra 2794

Dear Sir/Madam,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

Bowdens Silver Pty Ltd is planning to apply for an approval under Division 4.7 (State significant development) of Part 4 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figure 1, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Aboriginal stakeholders have been involved in ongoing cultural heritage assessments for the Project but the scope has been subsequently modified to include a proposed ~70 km long pipeline to obtain surplus water from one of the coal mines in the Ulan area (Figure 1).

Landscape on behalf of Bowdens Silver Pty Ltd would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. Could Local Land Services provide contact details of any known Aboriginal groups or individuals who may hold cultural knowledge relevant to the proposed project area, please?

I would appreciate if you could provide any information regarding Aboriginal stakeholders by Wednesday 16 January 2019 to me: Dr Matt Cupper, Landscape, PO Box 1068 Carlton 3053; e-mail: landscape@telstra.com; tel: 0408 006 690.

Yours sincerely,

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Dr Matt Cupper

PO Box 1068 Carlton 3053

Tel: 0408 006 690 E-mail: landscape@telstra.com





Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

18 January 2019

Dear Sir/Madam,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

Bowdens Silver Pty Ltd is planning to apply for an approval under Division 4.7 (State significant development) of Part 4 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figure 1, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Aboriginal stakeholders have been involved in ongoing cultural heritage assessments for the Project but the scope has been subsequently modified to include a proposed ~70 km long pipeline to obtain surplus water from one of the coal mines in the Ulan area (Figure 1).

Landscape on behalf of Bowdens Silver Pty Ltd would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. The purpose of the consultation is to assist Kingsgate in the preparation of an application for an Aboriginal Heritage Impact Permit and to assist the Director General of the NSW Office of Environment and Heritage in his or her consideration and determination of the application.

Any persons or groups who would like to be consulted are invited to contact me: Dr Matt Cupper, Landscape, PO Box 1068 Carlton 3053; e-mail: landscape@telstra.com; tel: 0408 006 690.

Closing date for registrations of interest is 5:00 pm Friday 1 February 2019.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Matt Cupper', with a long horizontal flourish extending to the right.

Dr Matt Cupper

PO Box 1068 Carlton 3053

Tel: 0408 006 690 E-mail: landscape@telstra.com





Landskape

Natural and Cultural Heritage Management

a division of M.L. Copper Pty Ltd

ABN: 48 107 932 918

8 September 2011

Mr Tony Lonsdale
Chief Executive Officer
Mudgee Local Aboriginal Land Council
PO Box 1098
Mudgee 2850

Dear Mr Lonsdale,

Re: Bowdens Silver Project, Lue –Aboriginal Stakeholder Identification

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Landskape on behalf of Kingsgate would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. Could the Mudgee Local Aboriginal Land Council provide contact details of any known Aboriginal groups or individuals who may hold cultural knowledge relevant to the proposed project area, please?

I would appreciate if you could provide any information regarding Aboriginal stakeholders by Friday 23 September 2011 to me: Dr Matt Cupper, Landskape, PO Box 246, Merbein 3505; e-mail: landskape@telstra.com; tel: 0408 006 690.

Yours sincerely,

Dr Matt Cupper

PO Box 246 Merbein Victoria 3505

Tel: 0408 006 690 Fax: 03 5025 2549 E-mail: landskape@telstra.com





Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

8 September 2011

Mr Tony Lonsdale
Chief Executive Officer
Mudgee Local Aboriginal Land Council
PO Box 1098
Mudgee 2850

Dear Mr Lonsdale,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

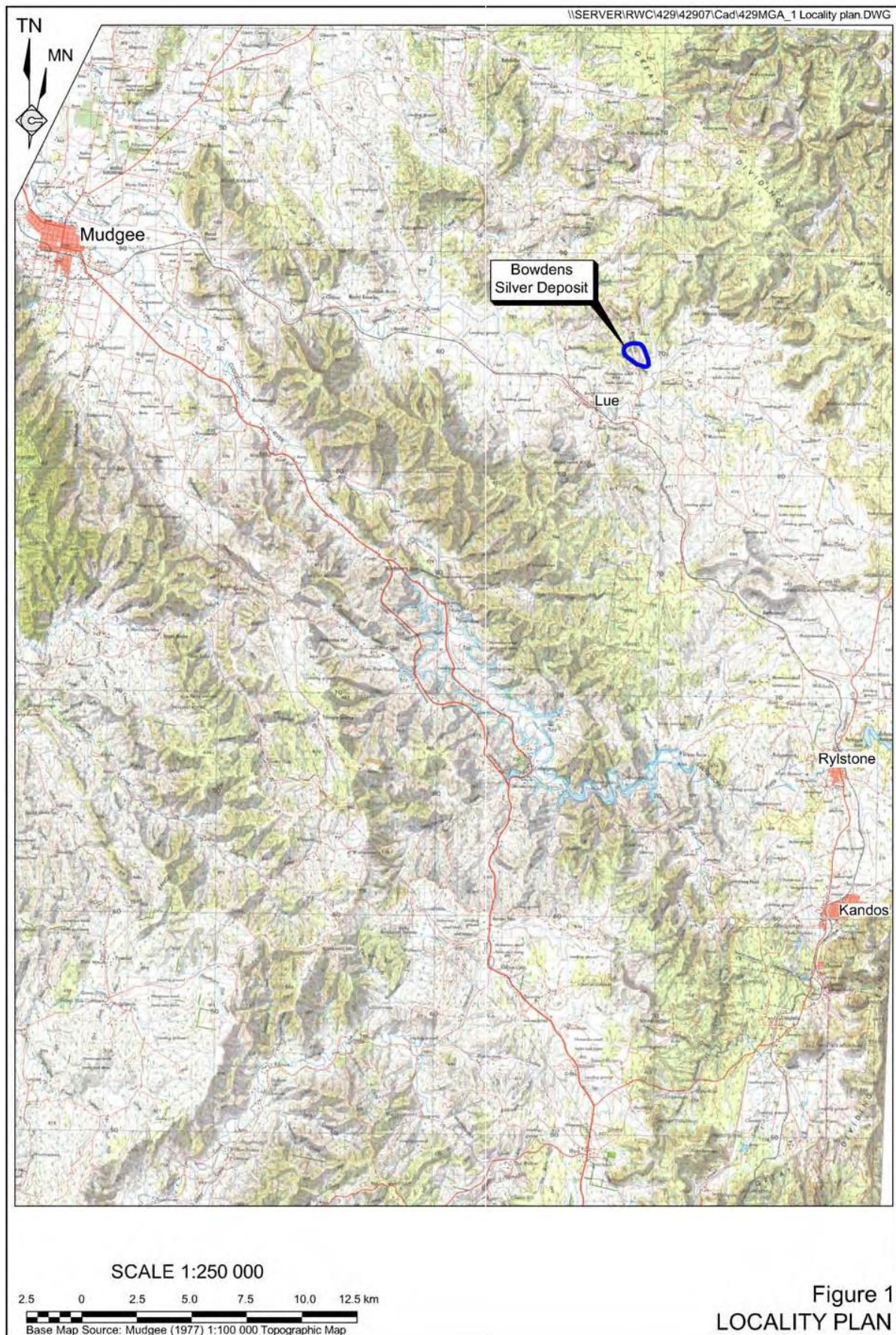
Landscape on behalf of Kingsgate would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. Could the Mudgee Local Aboriginal Land Council provide contact details of any known Aboriginal groups or individuals who may hold cultural knowledge relevant to the proposed project area, please?

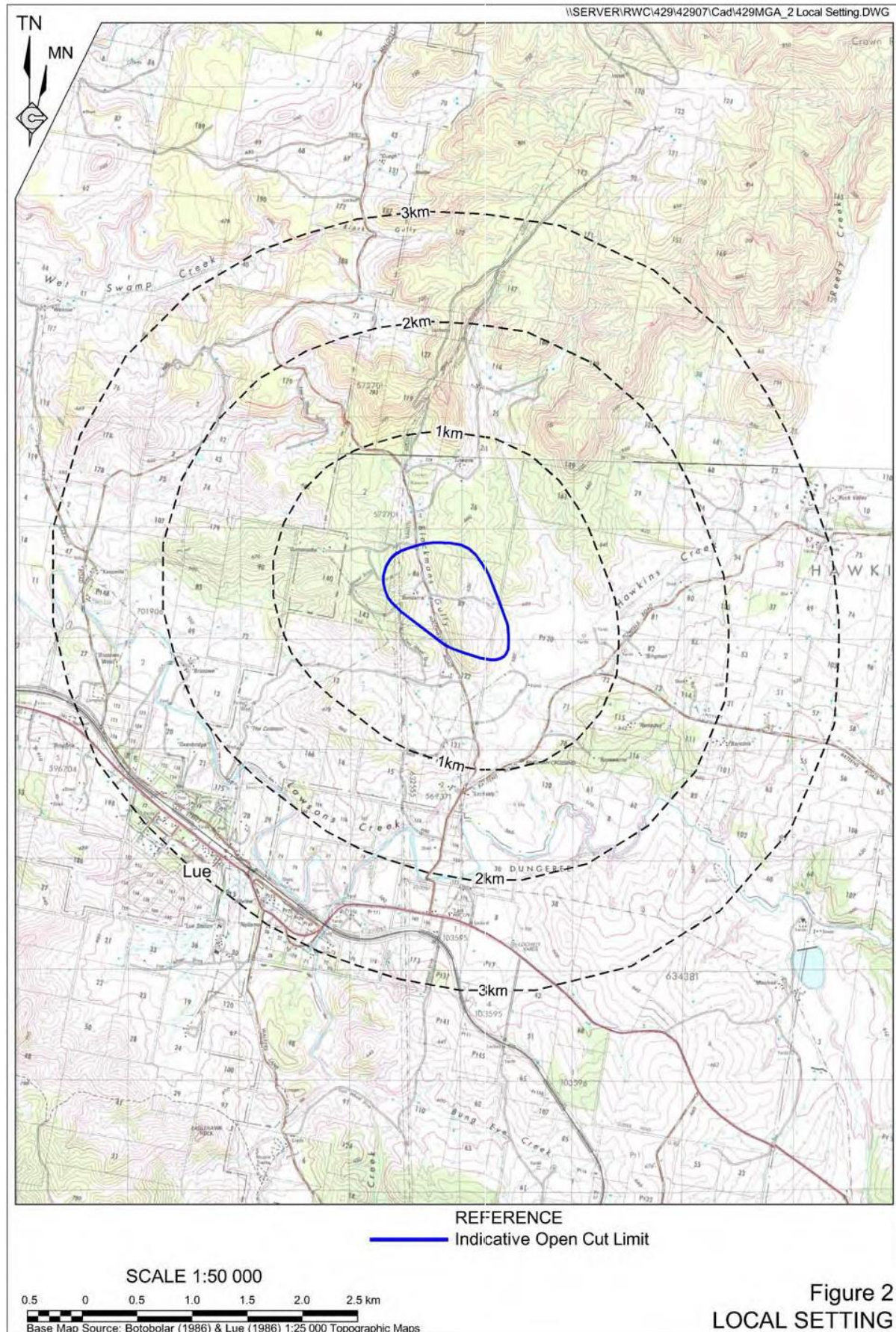
I would appreciate if you could provide any information regarding Aboriginal stakeholders by Friday 23 September 2011 to me: Dr Matt Cupper, Landscape, PO Box 246, Merbein 3505; e-mail: landscape@telstra.com; tel: 0408 006 690.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Matt Cupper', with a long, sweeping horizontal line extending to the right.

Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

2 January 2019

General Manager
Mid-Western Regional Council
PO Box 156
Mudgee 2850

Dear Sir/Madam,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

Bowdens Silver Pty Ltd is planning to apply for an approval under Division 4.7 (State significant development) of Part 4 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figure 1, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Aboriginal stakeholders have been involved in ongoing cultural heritage assessments for the Project but the scope has been subsequently modified to include a proposed ~70 km long pipeline to obtain surplus water from one of the coal mines in the Ulan area (Figure 1).

Landscape on behalf of Bowdens Silver Pty Ltd would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. Could Mid-Western Regional Council provide contact details of any known Aboriginal groups or individuals who may hold cultural knowledge relevant to the proposed project area, please?

I would appreciate if you could provide any information regarding Aboriginal stakeholders by Wednesday 16 January 2019 to me: Dr Matt Cupper, Landscape, PO Box 1068 Carlton 3053; e-mail: landscape@telstra.com; tel: 0408 006 690.

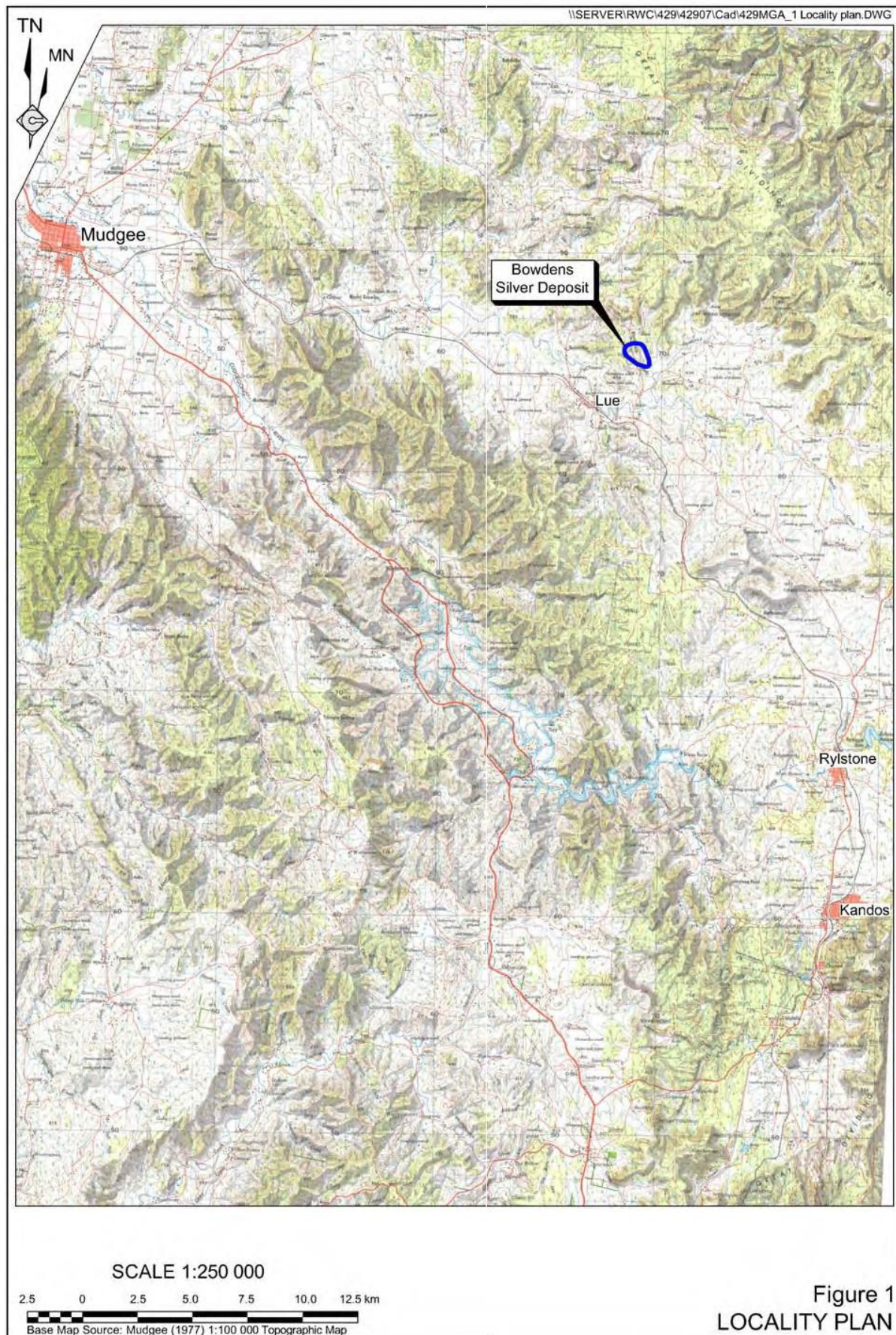
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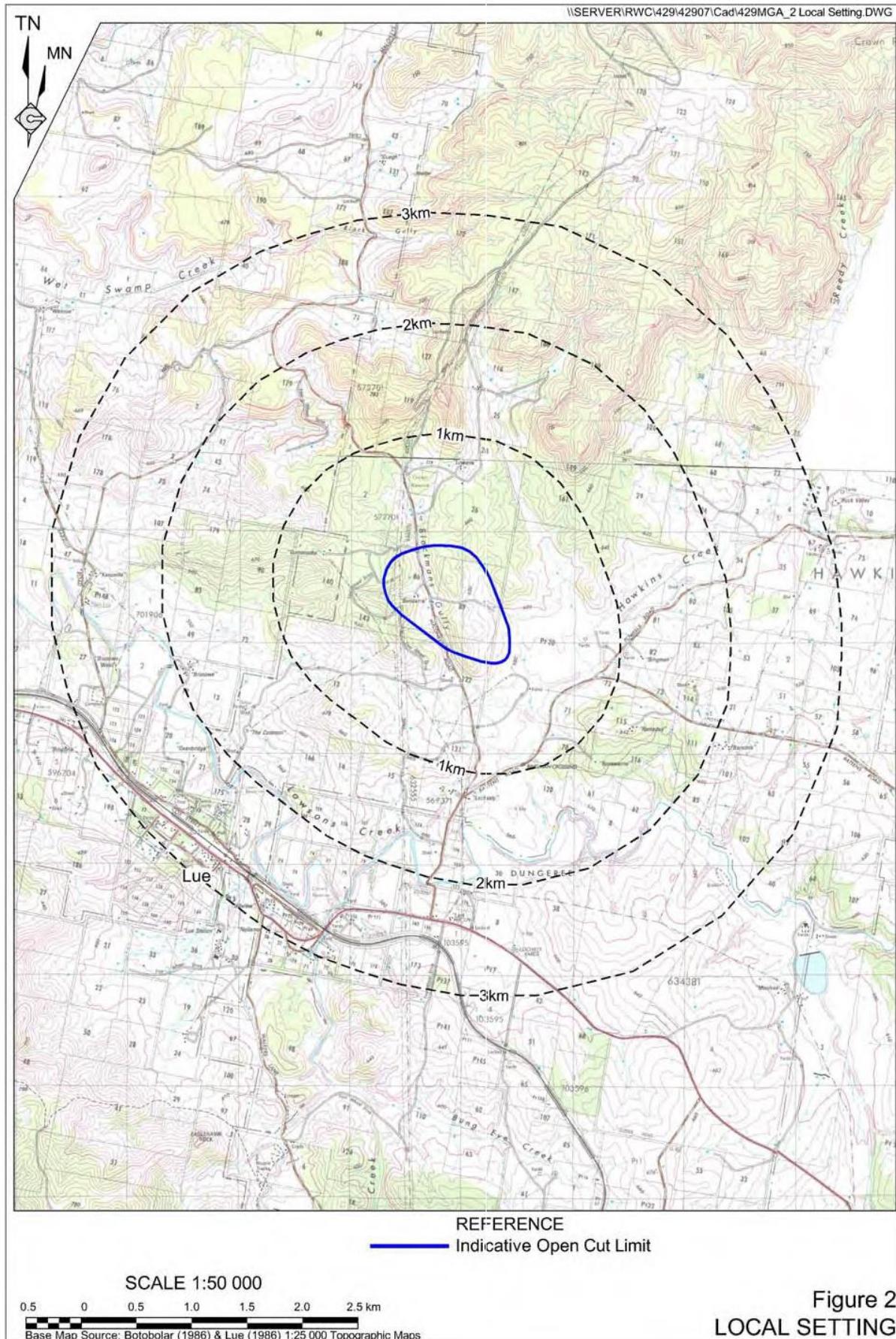
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Dr Matt Cupper

PO Box 1068 Carlton 3053

Tel: 0408 006 690 E-mail: landscape@telstra.com







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Philip Teitzel

Wellington Valley Wiradjuri People

Teitzel and Partners

PO Box 442

Roseville 2069

Dear Mr Teitzel,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

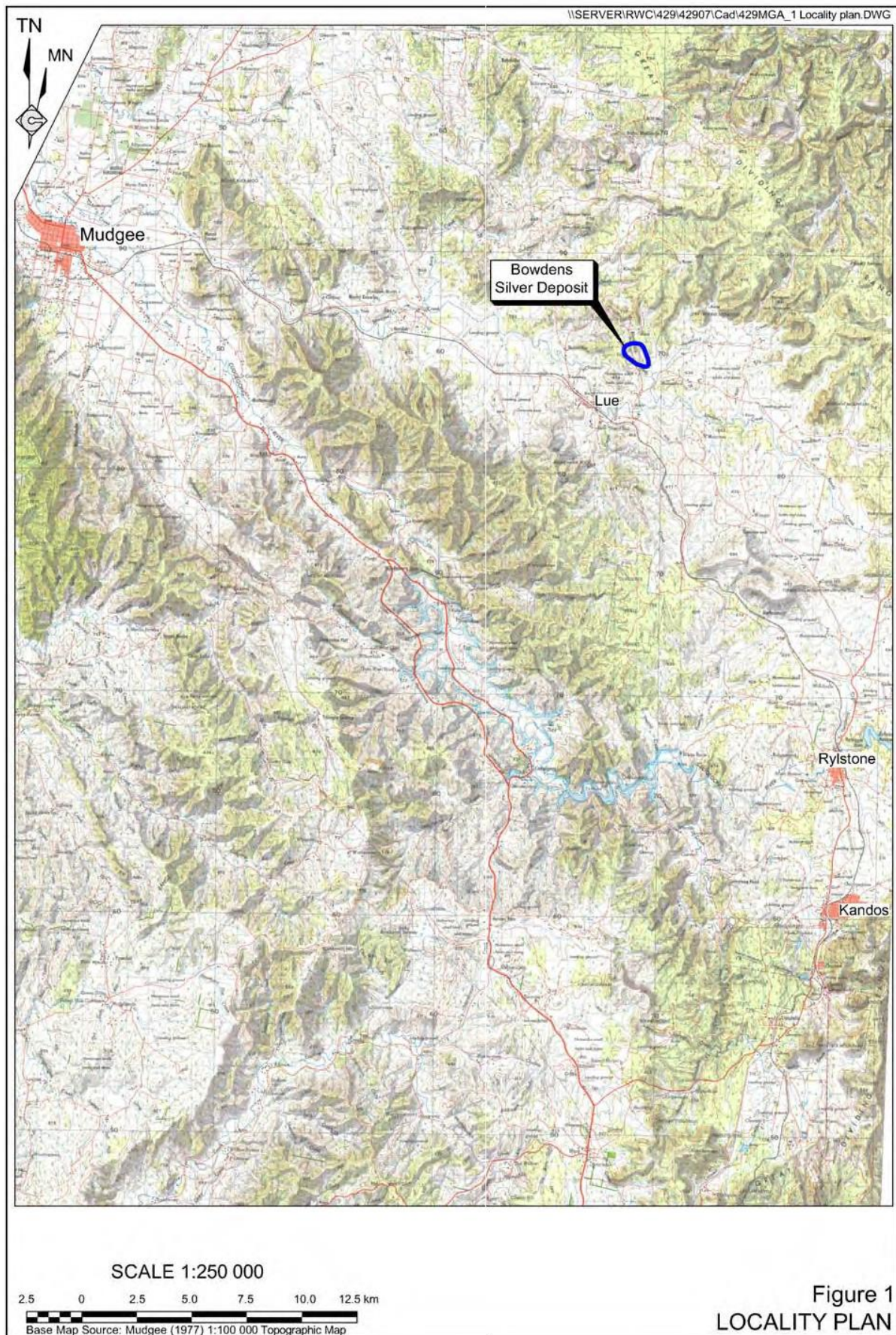
Landscape on behalf of Kingsgate would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. The purpose of the consultation is to assist Kingsgate in the preparation of an application for an Aboriginal Heritage Impact Permit and to assist the Director General of the NSW Office of Environment and Heritage in his or her consideration and determination of the application. Any persons or groups who would like to be consulted are invited to contact me: Dr Matt Cupper, Landscape, PO Box 246, Merbein 3505; e-mail: landscape@telstra.com; tel: 0408 006 690.

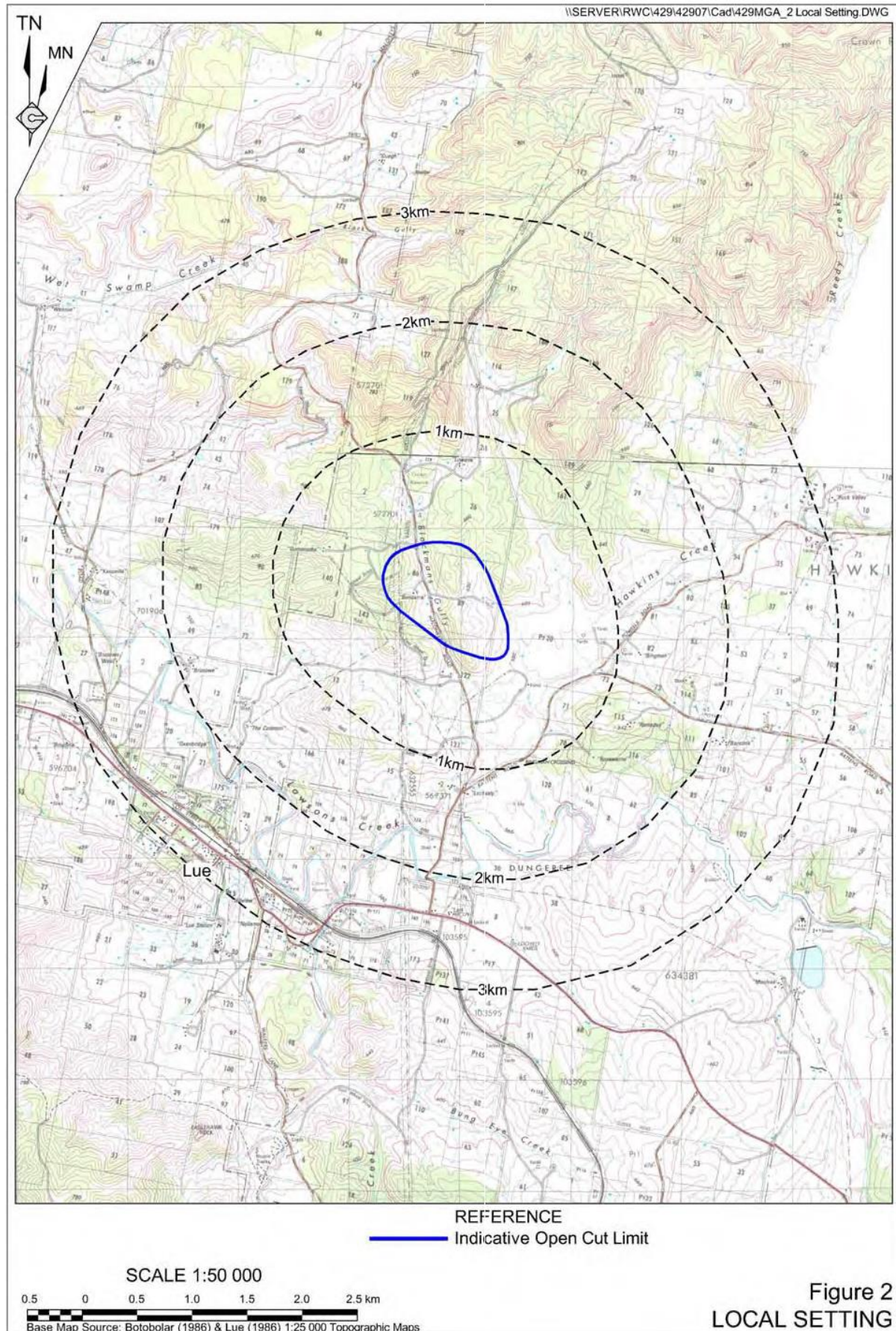
Closing date for registrations of interest is 5:00 pm Monday 10 October 2011.

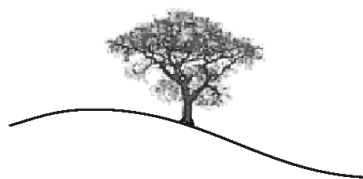
Yours sincerely,

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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Ms Lyn Syme
North-Eastern Wiradjuri
PO Box 29
Kandos 2848

Dear Ms Syme,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

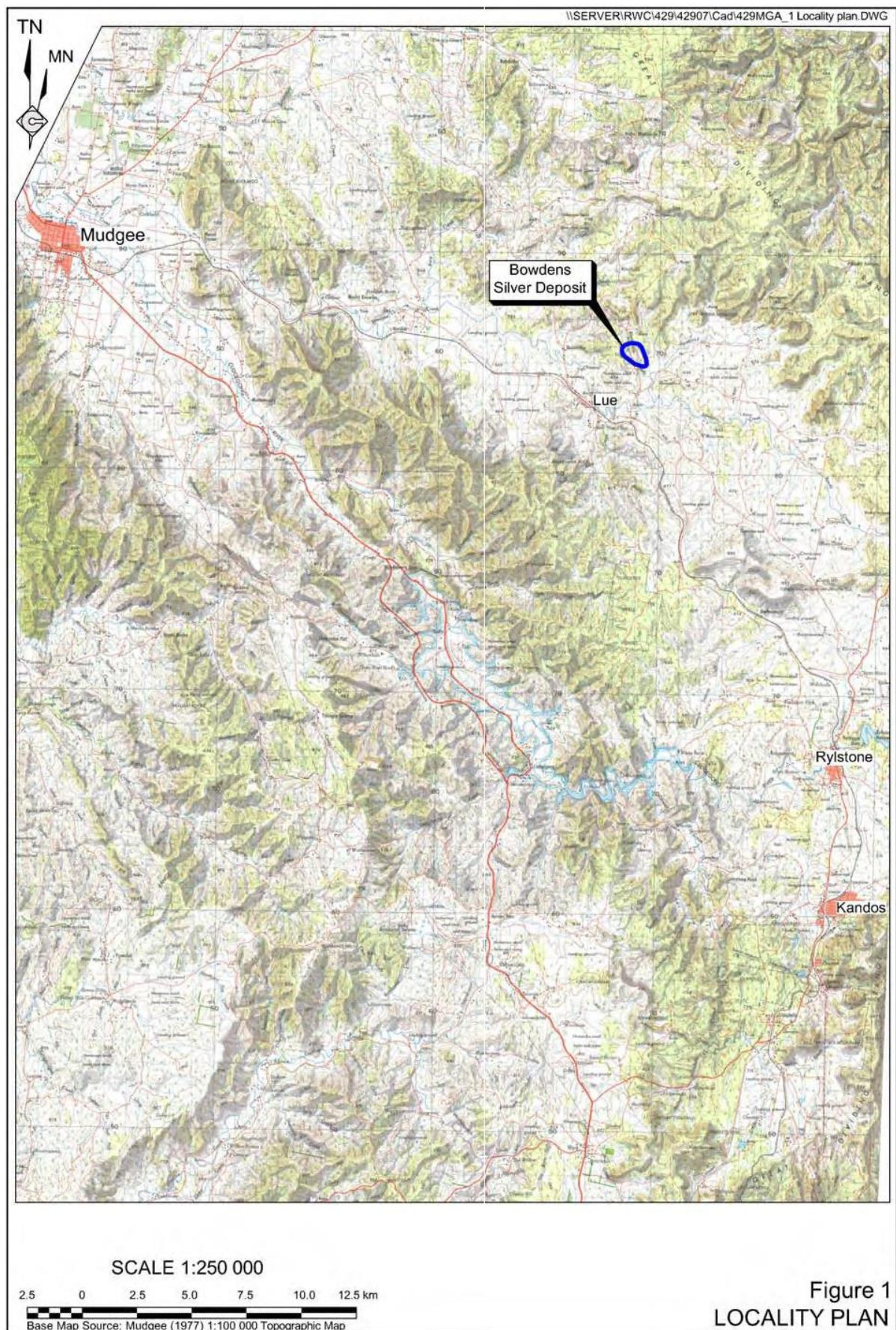
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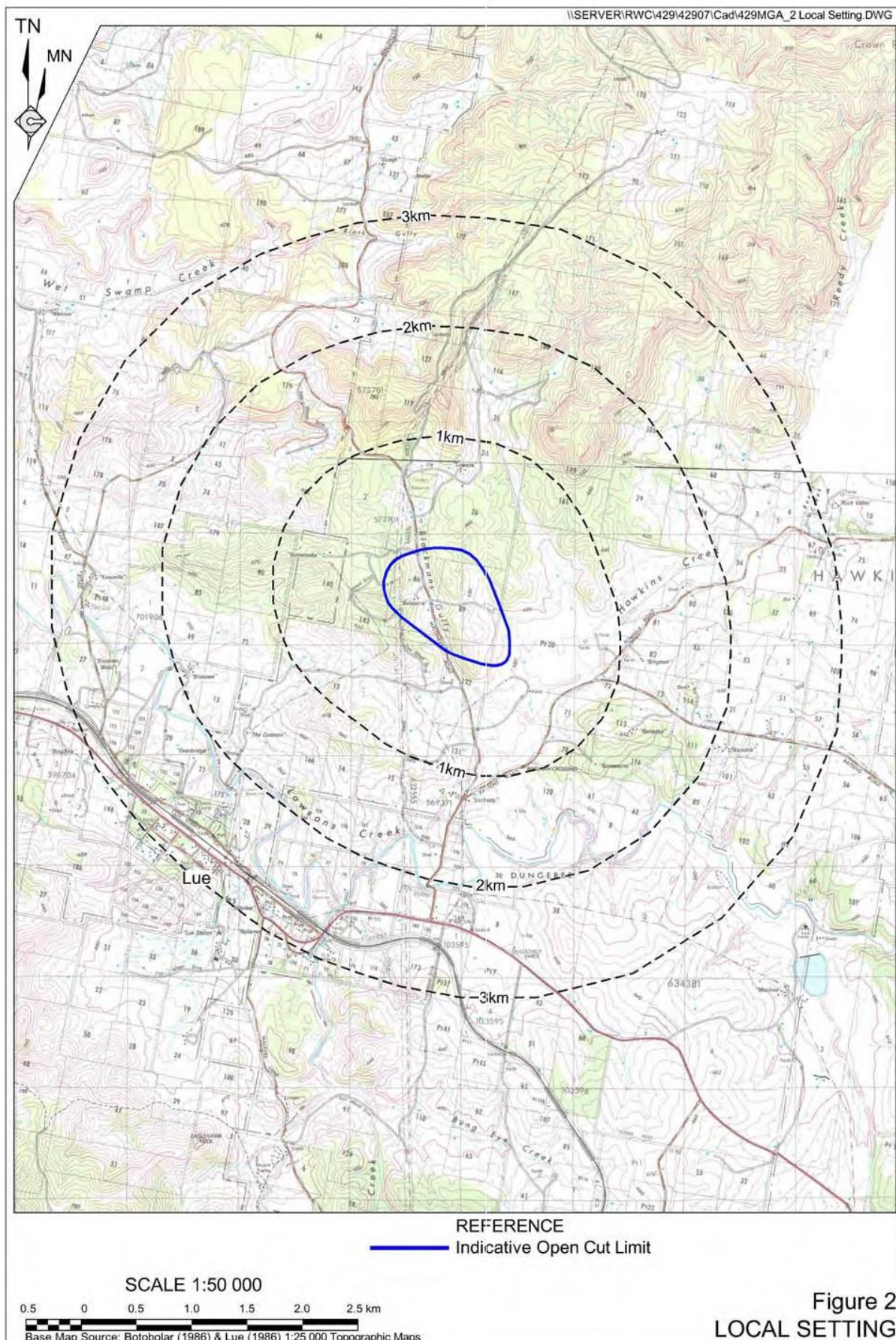
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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Mr Neville Williams
Mooka
PO Box 70
Cowra 2794

Dear Mr Williams,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

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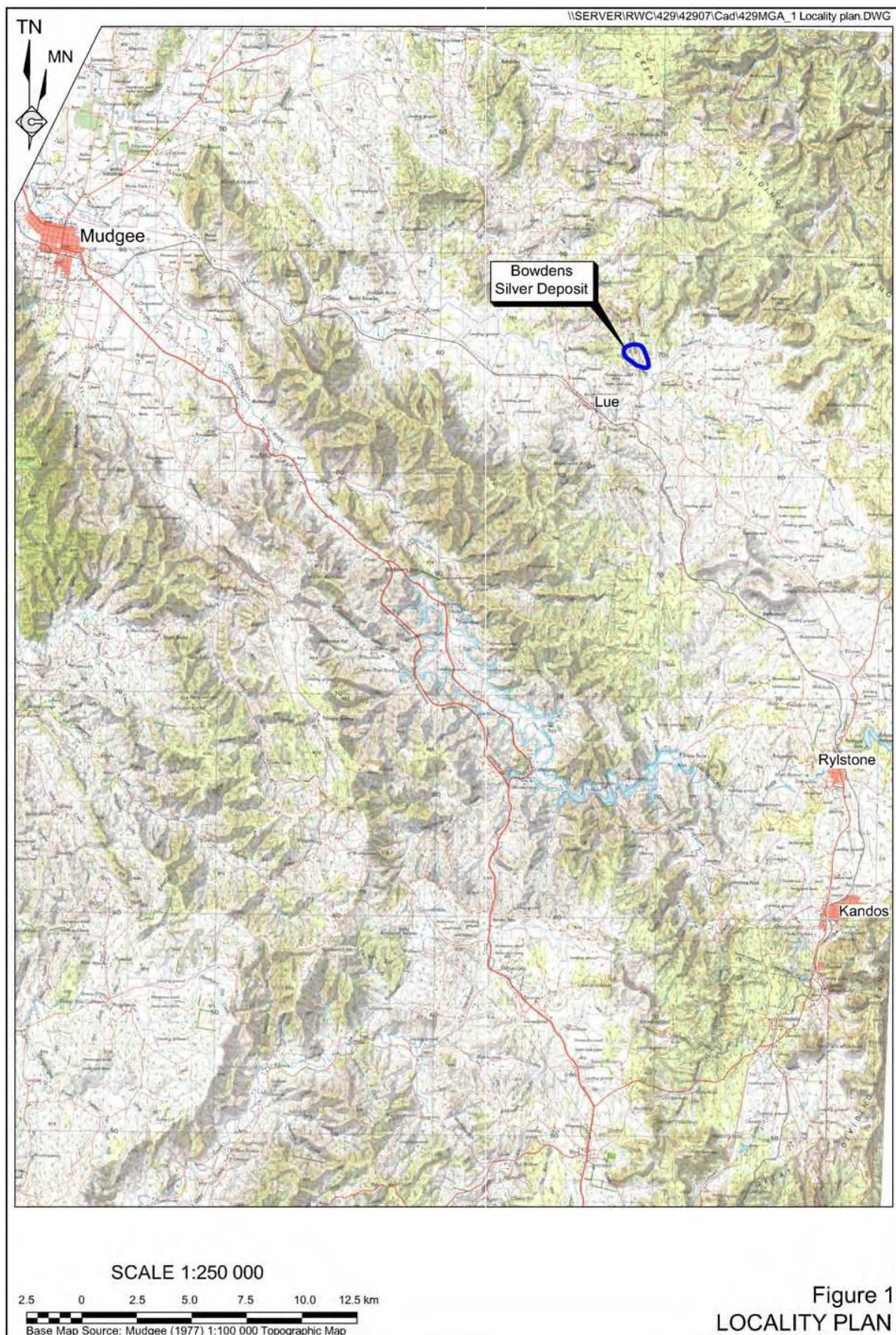
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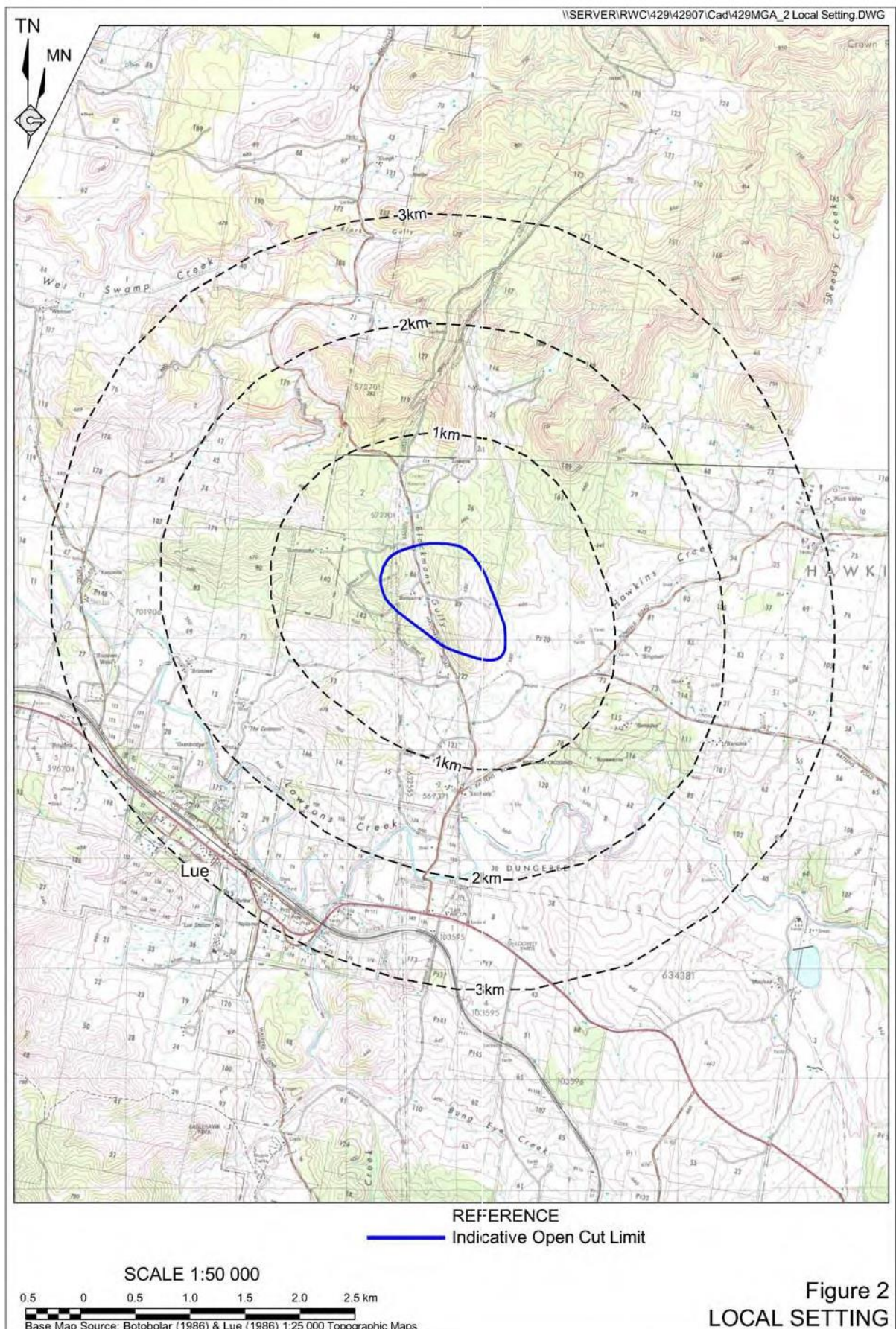
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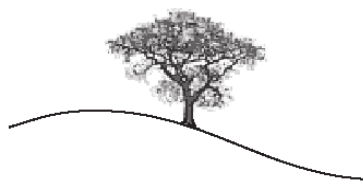
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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

8 September 2011

Mr Stephen Wright

Officer of the Registrar, NSW *Aboriginal Land Rights Act* 1983

NSW Department of Aboriginal Affairs

PO Box 112

Glebe NSW 2037

Dear Mr Wright,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

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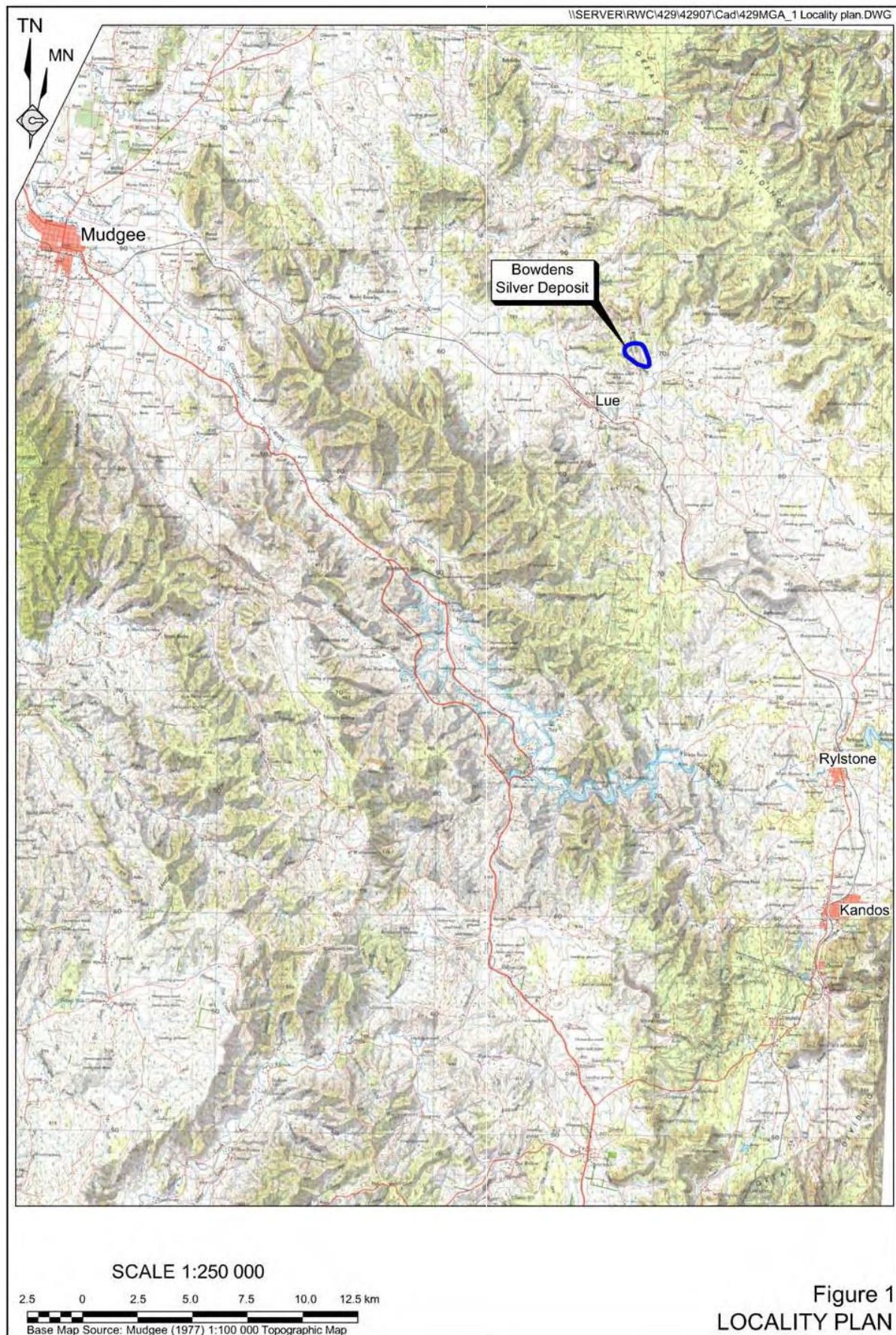
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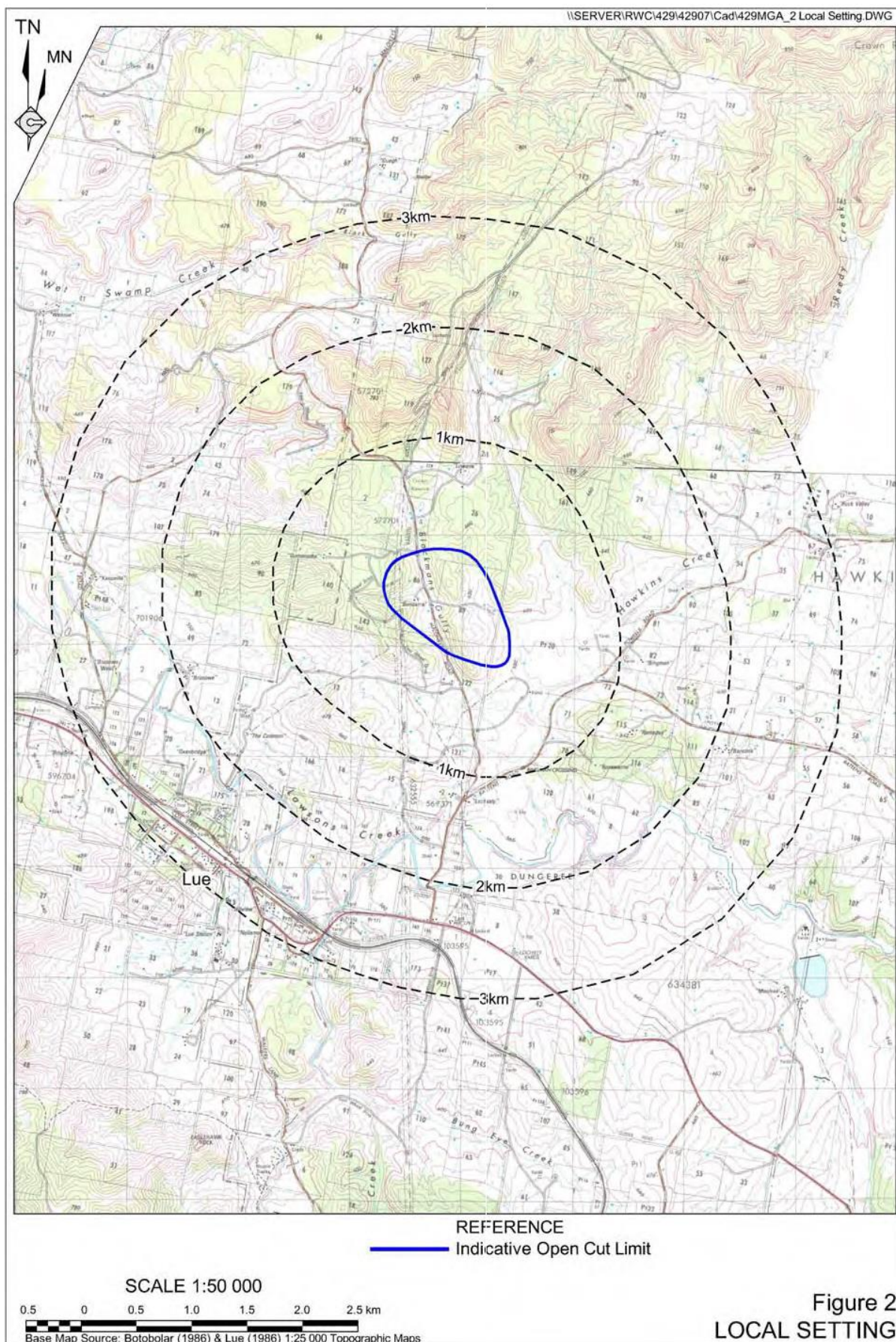
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Dr Matt Cupper

PO Box 246 Merbein Victoria 3505

Tel: 0408 006 690 Fax: 03 5025 2549 E-mail: landscape@telstra.com







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ABN: 48 107 932 918

8 September 2011

Mr Stephen Wright

Officer of the Registrar, NSW *Aboriginal Land Rights Act* 1983

NSW Department of Aboriginal Affairs

PO Box 112

Glebe NSW 2037

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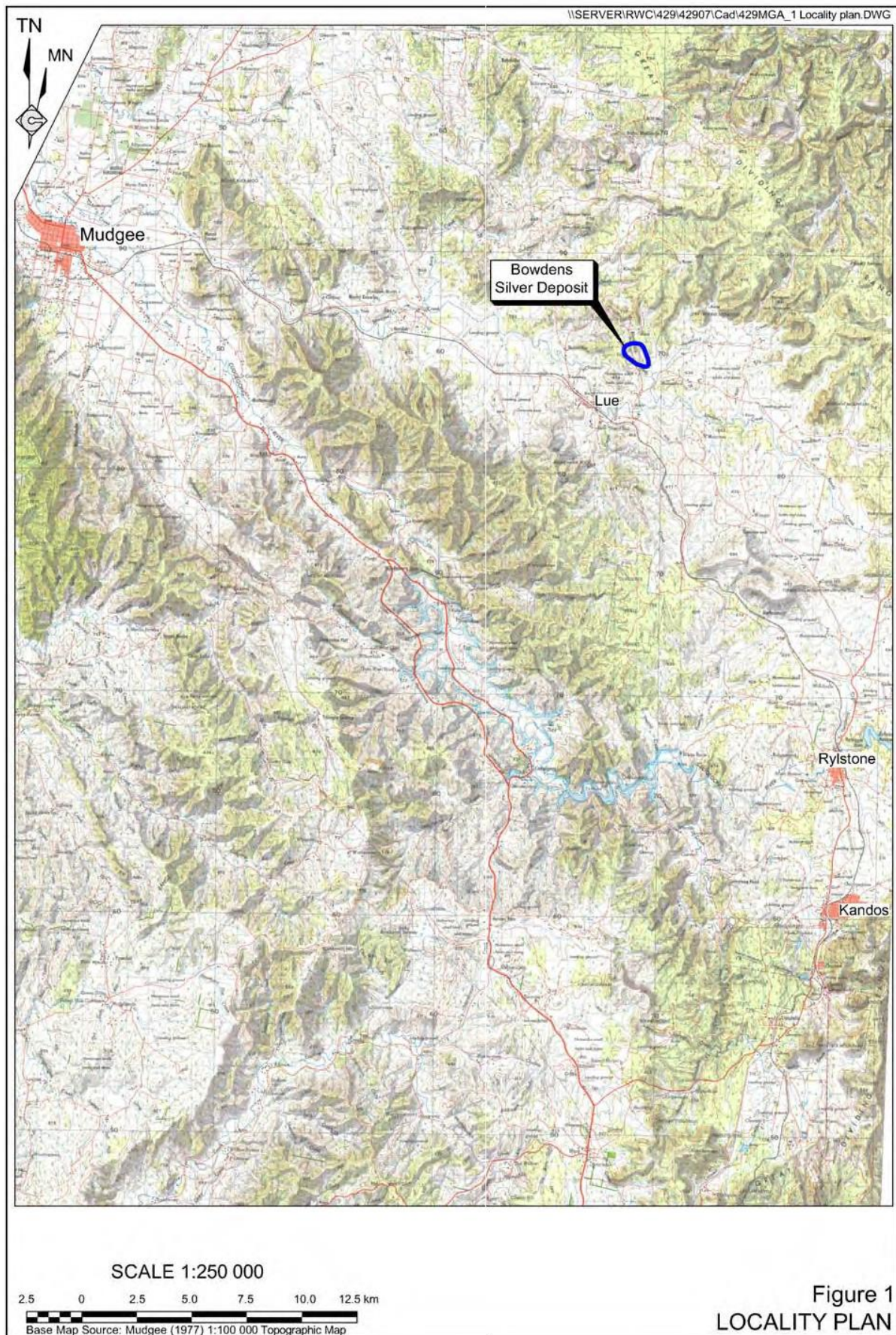
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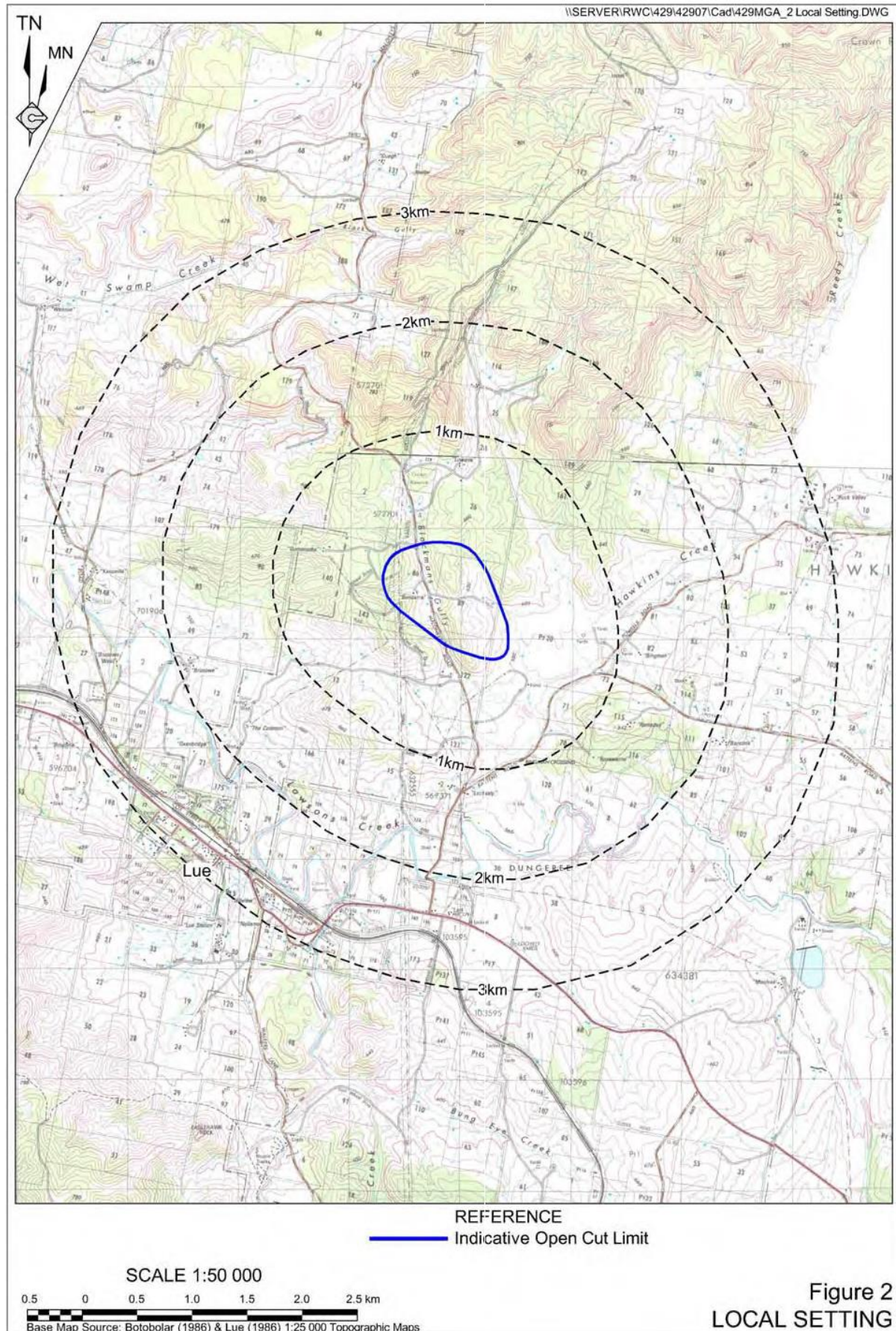
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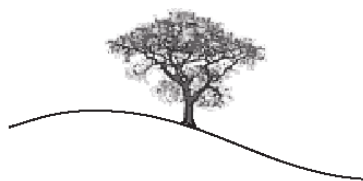
Dr Matt Cupper

PO Box 246 Merbein Victoria 3505

Tel: 0408 006 690 Fax: 03 5025 2549 E-mail: landscape@telstra.com







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

8 September 2011

Mr Warrick Bennett
General Manager
Mid-Western Regional Council
PO Box 156
Mudgee 2850

Dear Mr Bennett,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

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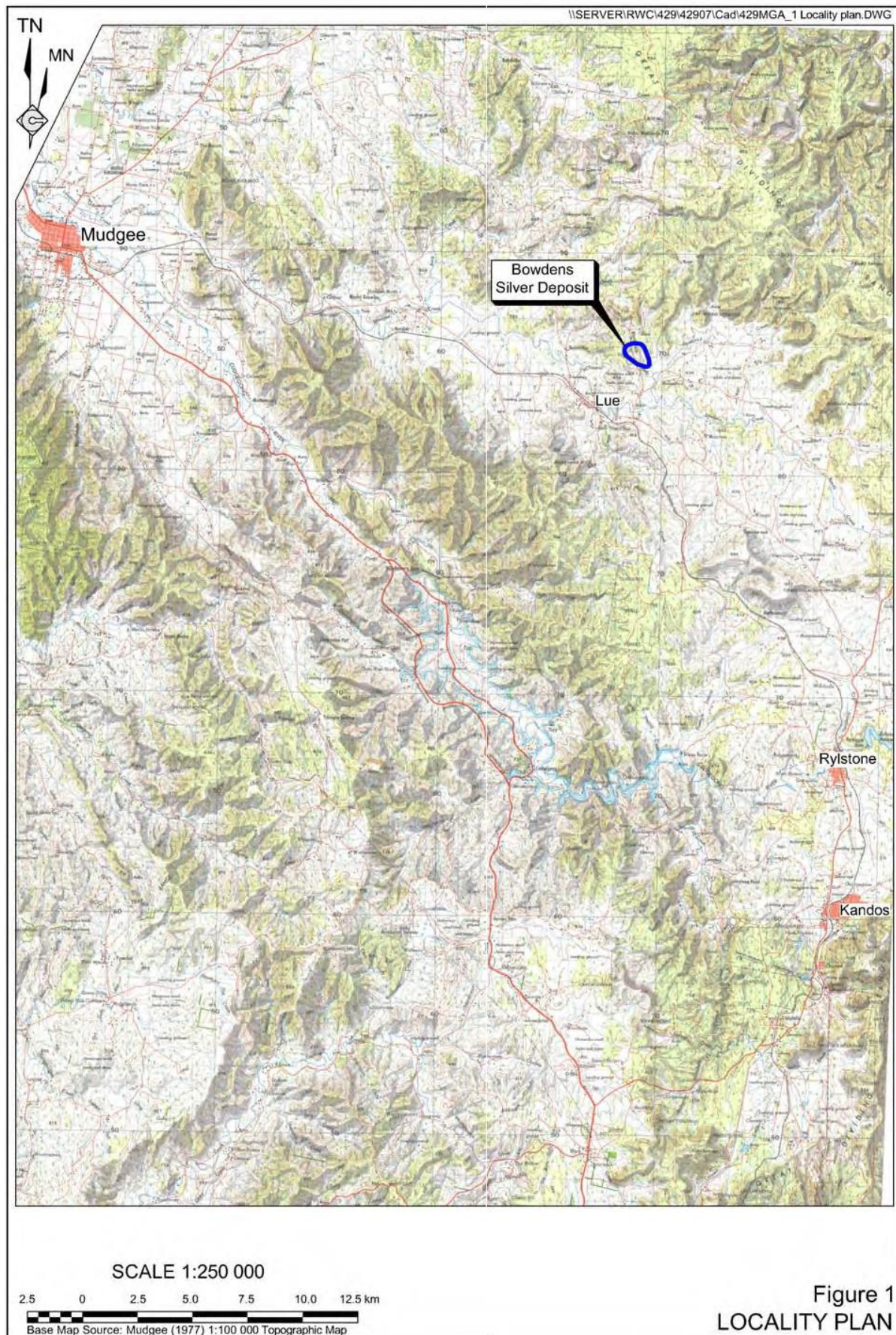
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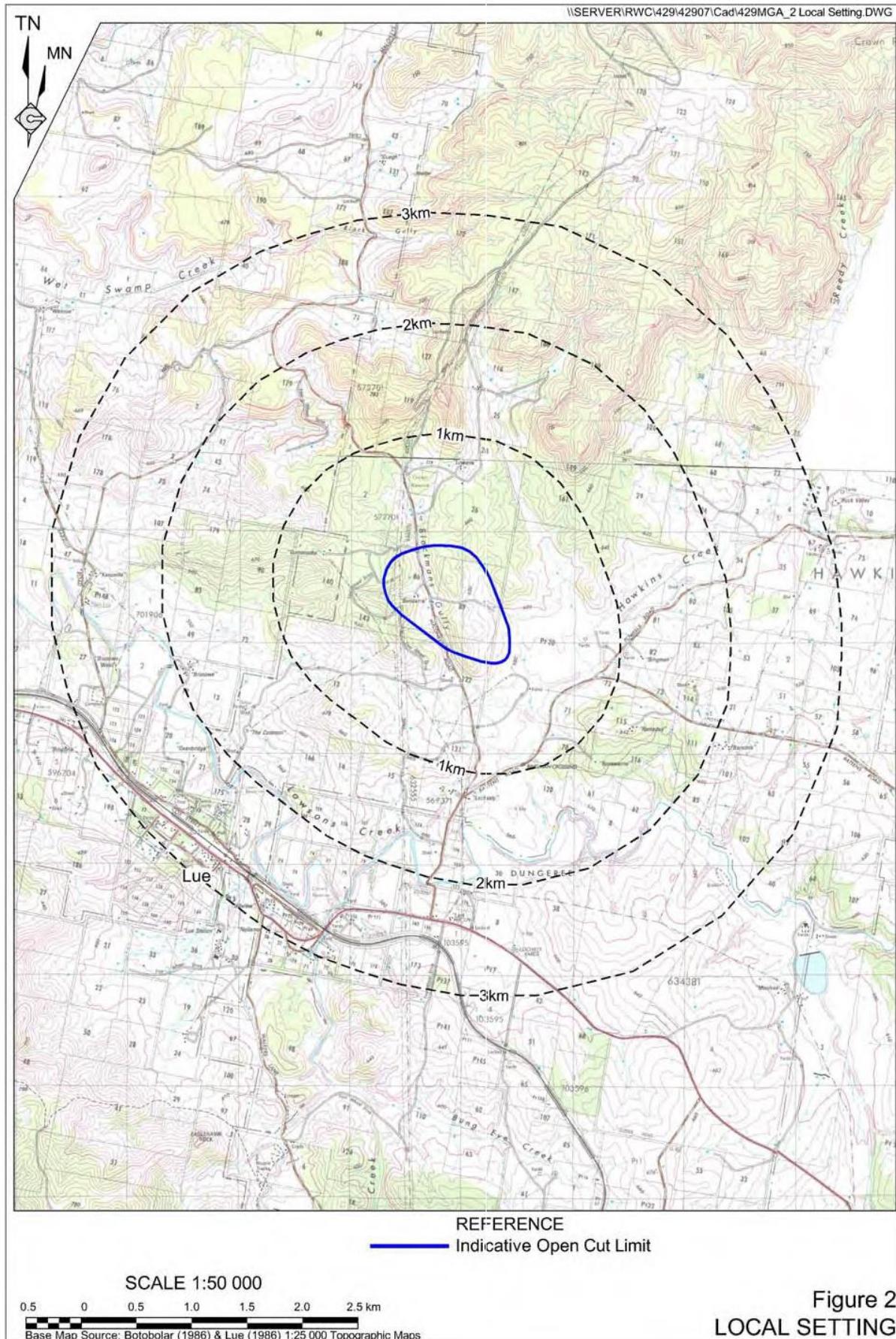
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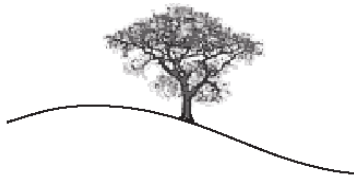
Dr Matt Cupper

PO Box 246 Merbein Victoria 3505

Tel: 0408 006 690 Fax: 03 5025 2549 E-mail: landscape@telstra.com







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

8 September 2011

Mr Phil Purcell
NSW Office of Environment and Heritage
PO Box 2111
Dubbo 2830

Dear Phil,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

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I would appreciate if you could provide any information regarding Aboriginal stakeholders by Friday 23 September 2011 to me: Dr Matt Cupper, Landscape, PO Box 246, Merbein 3505; e-mail: landscape@telstra.com; tel: 0408 006 690.

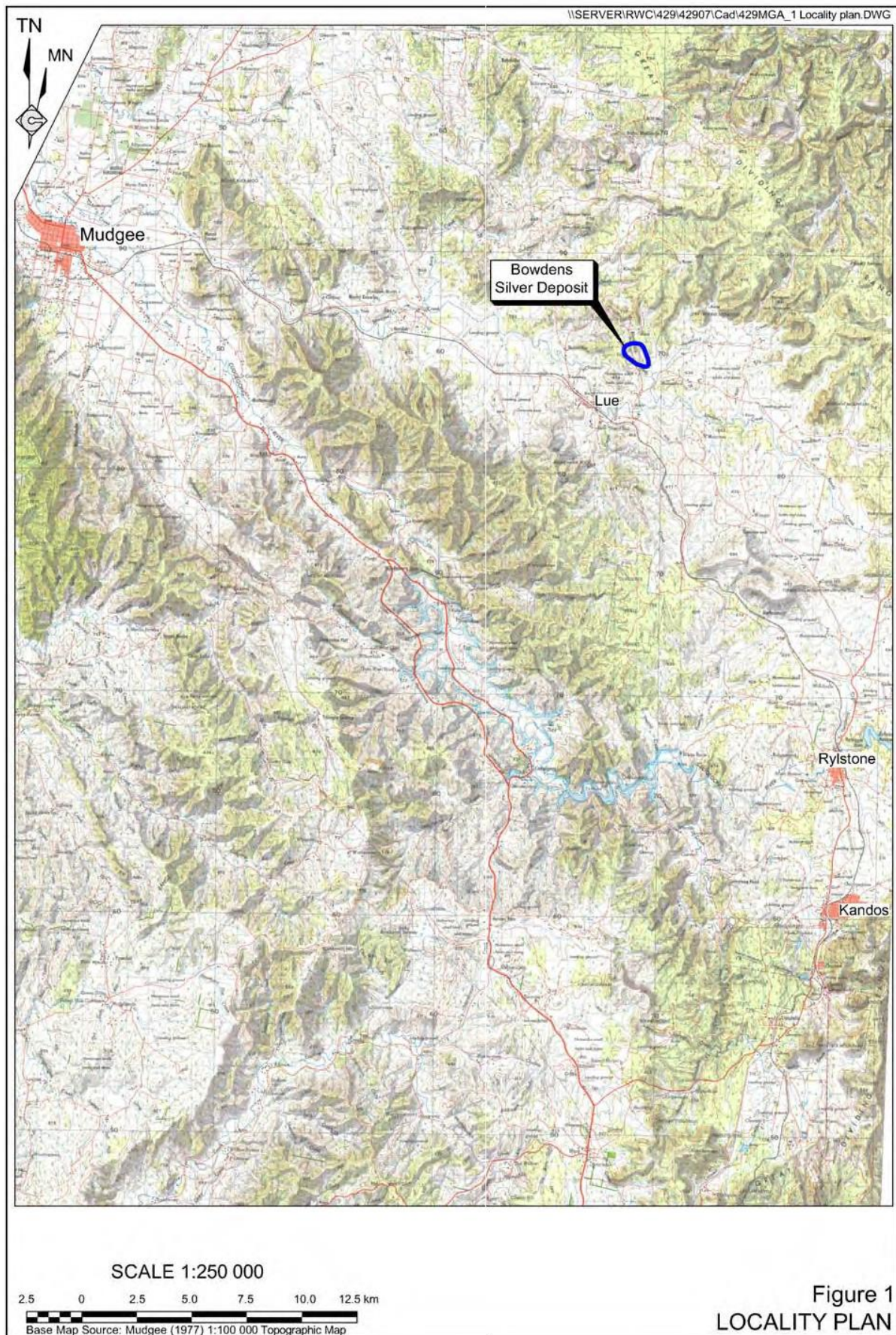
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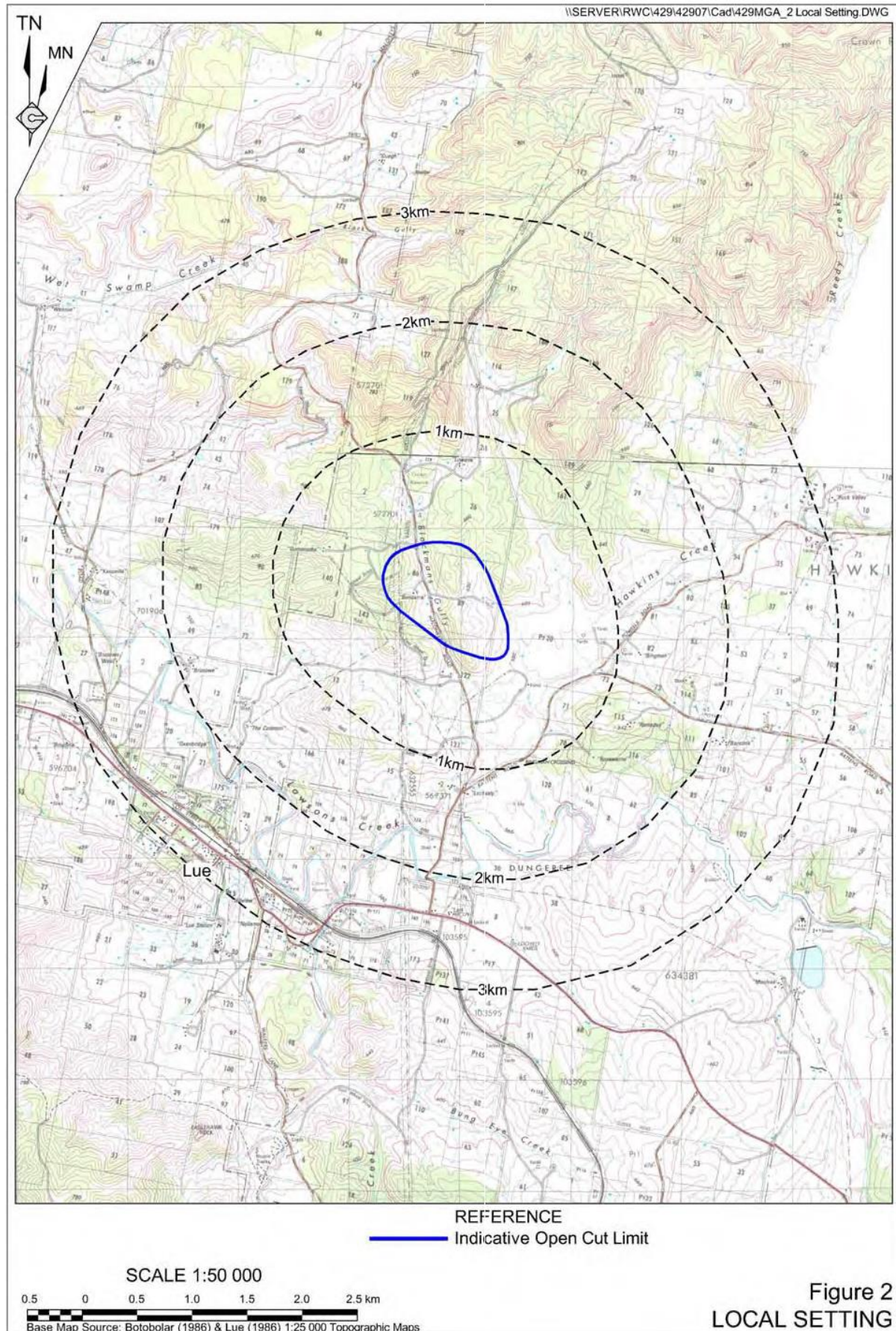
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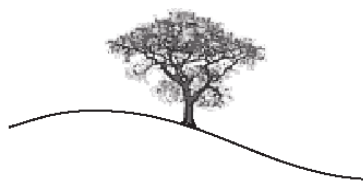
Dr Matt Cupper

PO Box 246 Merbein Victoria 3505

Tel: 0408 006 690 Fax: 03 5025 2549 E-mail: landscape@telstra.com







Landscape

Natural and Cultural Heritage Management

a division of M.L. Copper Pty Ltd

ABN: 48 107 932 918

8 September 2011

Mr Phil Purcell

NSW Office of Environment and Heritage

PO Box 2111

Dubbo 2830

Dear Phil,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Landscape on behalf of Kingsgate would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. Could the NSW Office of Environment and Heritage provide contact details of any known Aboriginal groups or individuals who may hold cultural knowledge relevant to the proposed project area, please?

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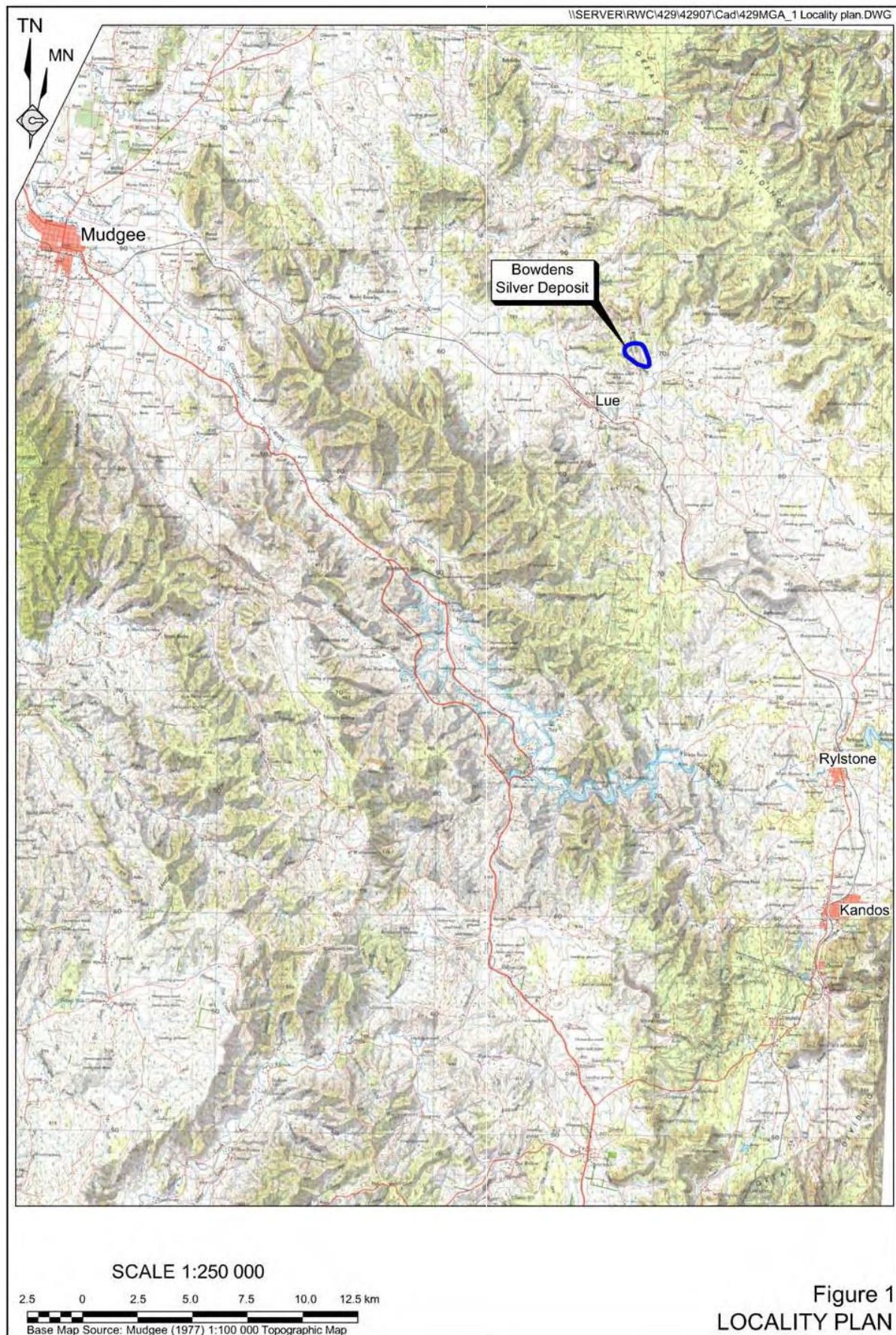
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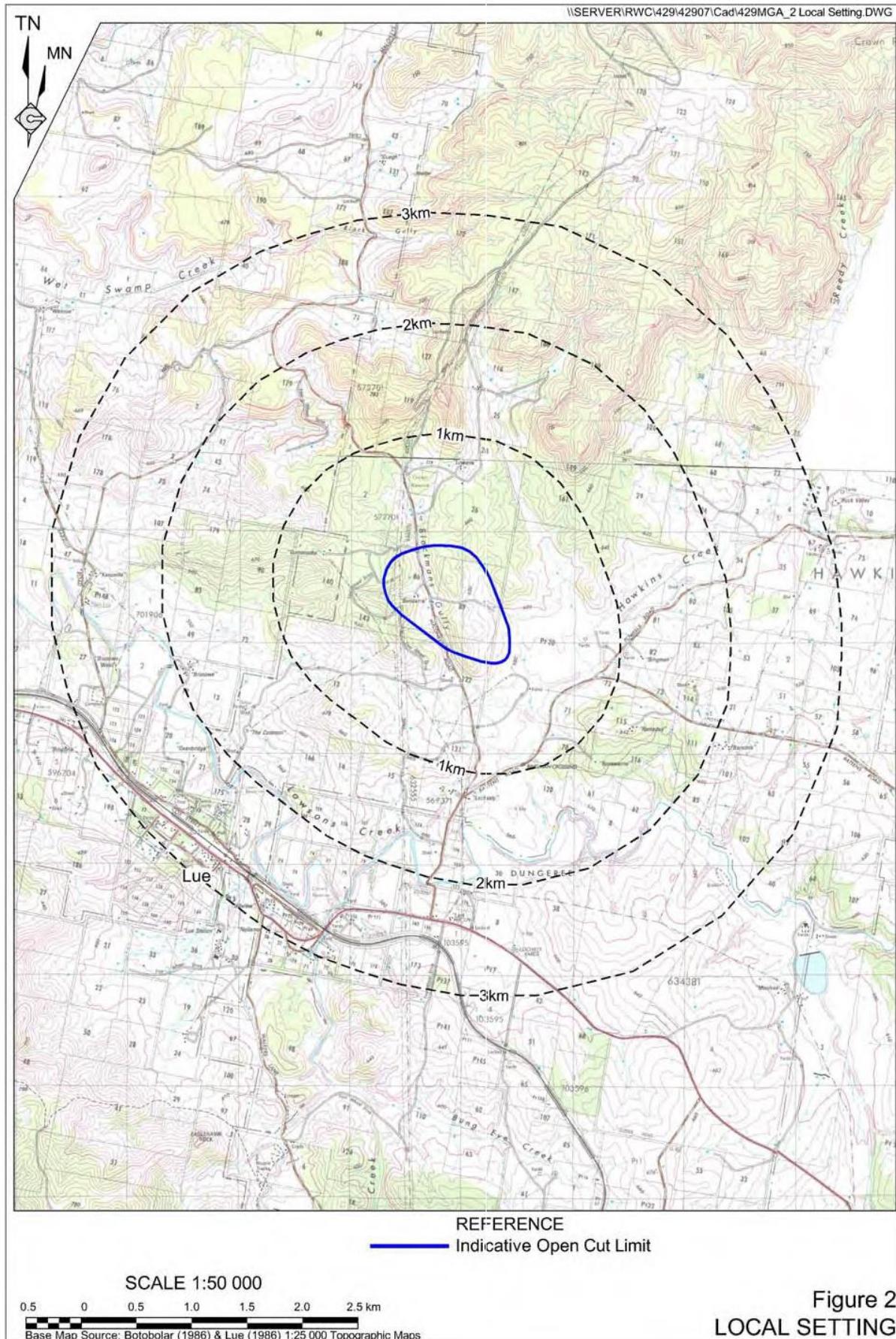
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PO Box 246 Merbein Victoria 3505

Tel: 0408 006 690 Fax: 03 5025 2549 E-mail: landscape@telstra.com







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Chairperson

Gilgandra Local Aboriginal Land Council

PO Box 183

Gilgandra 2827

Dear Sir/Madam,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

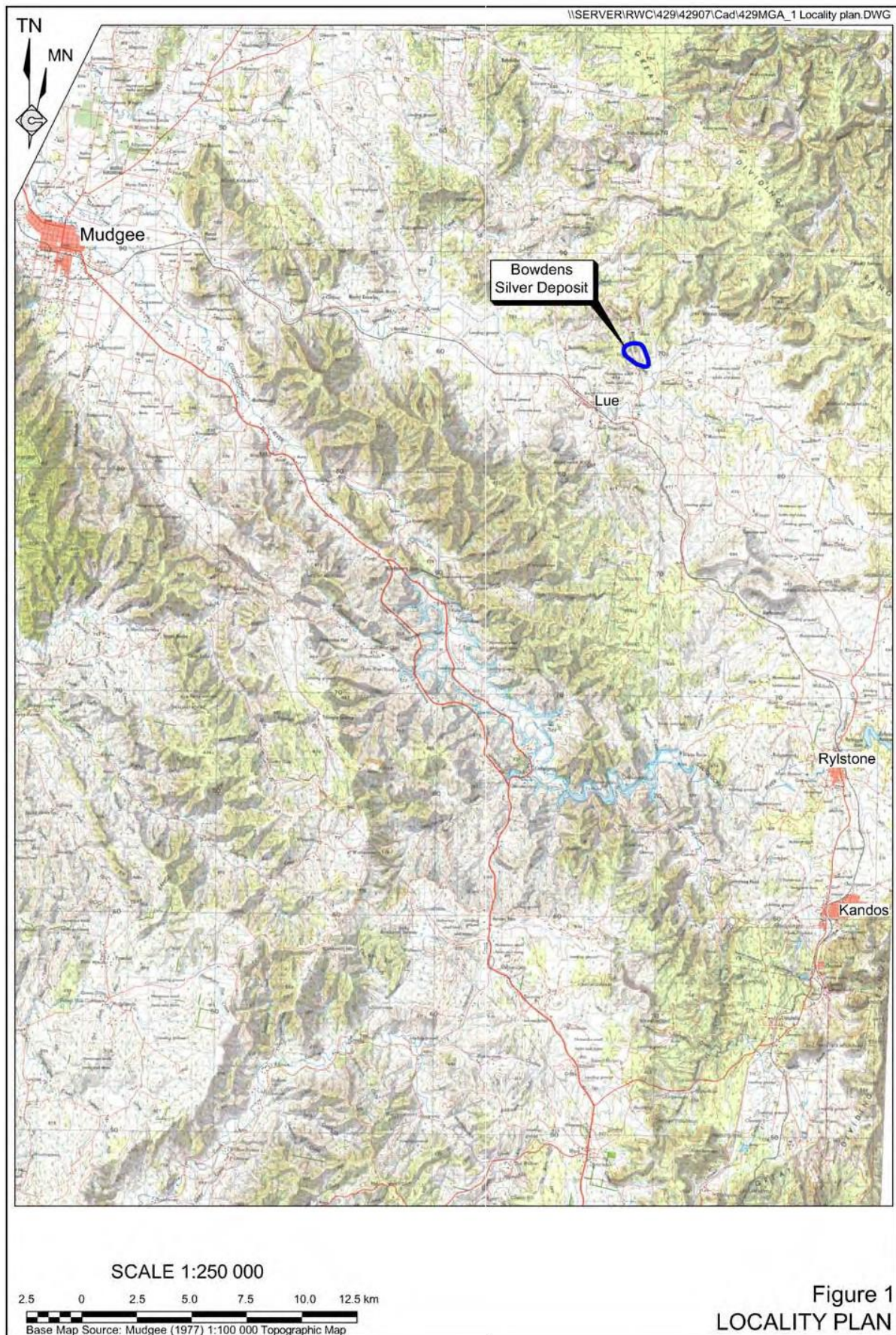
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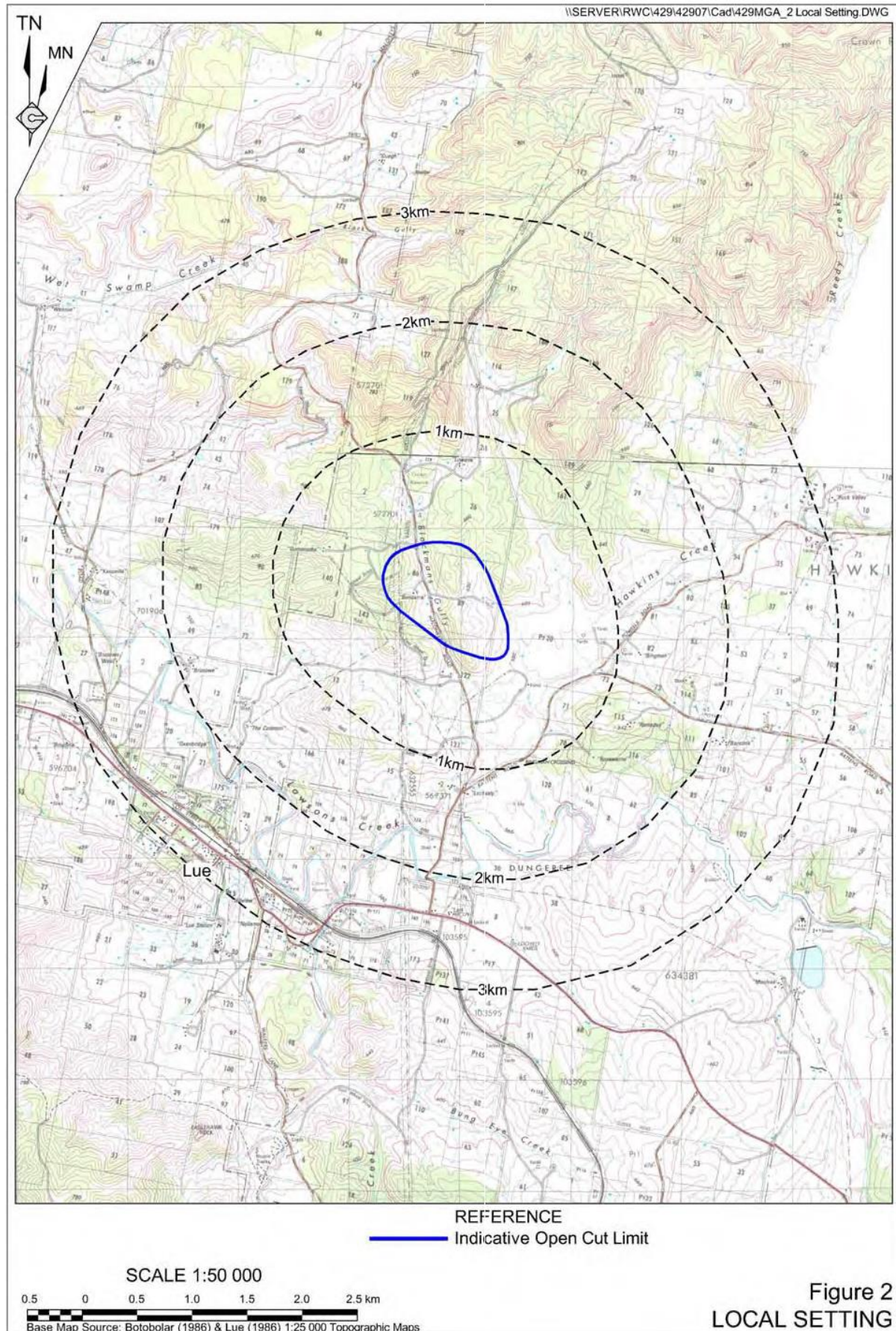
Closing date for registrations of interest is 5:00 pm Monday 10 October 2011.

Yours sincerely,

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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

2 January 2019

National Native Title Tribunal

GPO Box 9973

Perth WA 6848

Dear Sir/Madam,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

Bowdens Silver Pty Ltd is planning to apply for an approval under Division 4.7 (State significant development) of Part 4 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figure 1, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Aboriginal stakeholders have been involved in ongoing cultural heritage assessments for the Project but the scope has been subsequently modified to include a proposed ~70 km long pipeline to obtain surplus water from one of the coal mines in the Ulan area (Figure 1).

Landscape on behalf of Bowdens Silver Pty Ltd would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. Could the National Native Title Tribunal advise if there are any registered native title claimants, native title holders and registered Indigenous Land Use Agreements in the proposed project area, please?

I would appreciate if you could provide any information regarding Aboriginal stakeholders by Wednesday 16 January 2019 to me: Dr Matt Cupper, Landscape, PO Box 1068 Carlton 3053; e-mail: landscape@telstra.com; tel: 0408 006 690.

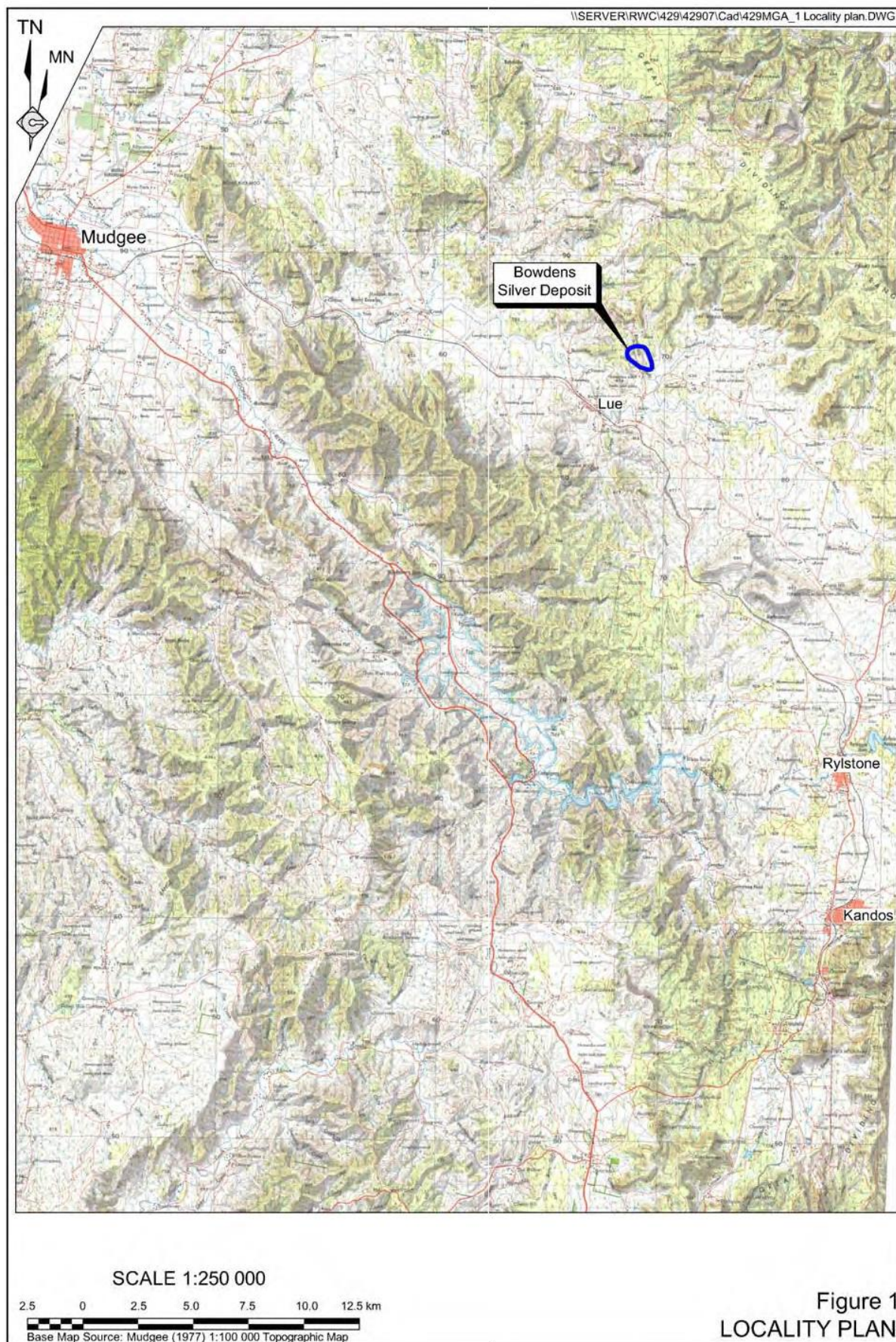
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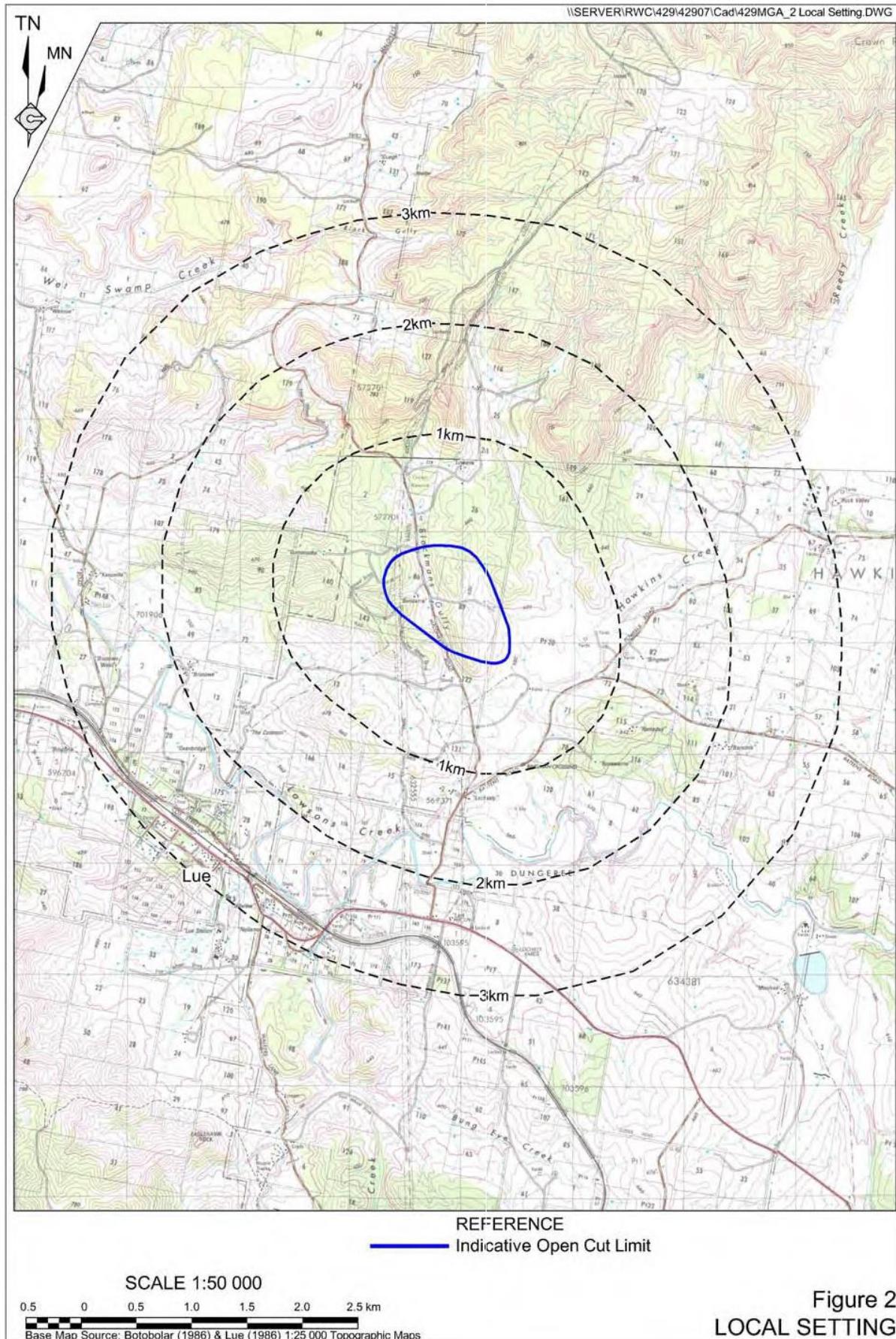
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PO Box 1068 Carlton 3053

Tel: 0408 006 690 E-mail: landscape@telstra.com







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

8 September 2011

Dr Ken Lum
Manager Projects Group
NTSCORP Ltd
PO Box 2105
Strawberry Hills NSW 2012

Dear Dr Lum,

Re: Bowdens Silver Project, Lue – Aboriginal Stakeholder Identification

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Landscape on behalf of Kingsgate would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. Could NTSCORP Ltd provide contact details of any known Aboriginal groups or individuals who may hold cultural knowledge relevant to the proposed project area, please?

I would appreciate if you could provide any information regarding Aboriginal stakeholders by Friday 23 September 2011 to me: Dr Matt Cupper, Landscape, PO Box 246, Merbein 3505; e-mail: landscape@telstra.com; tel: 0408 006 690.

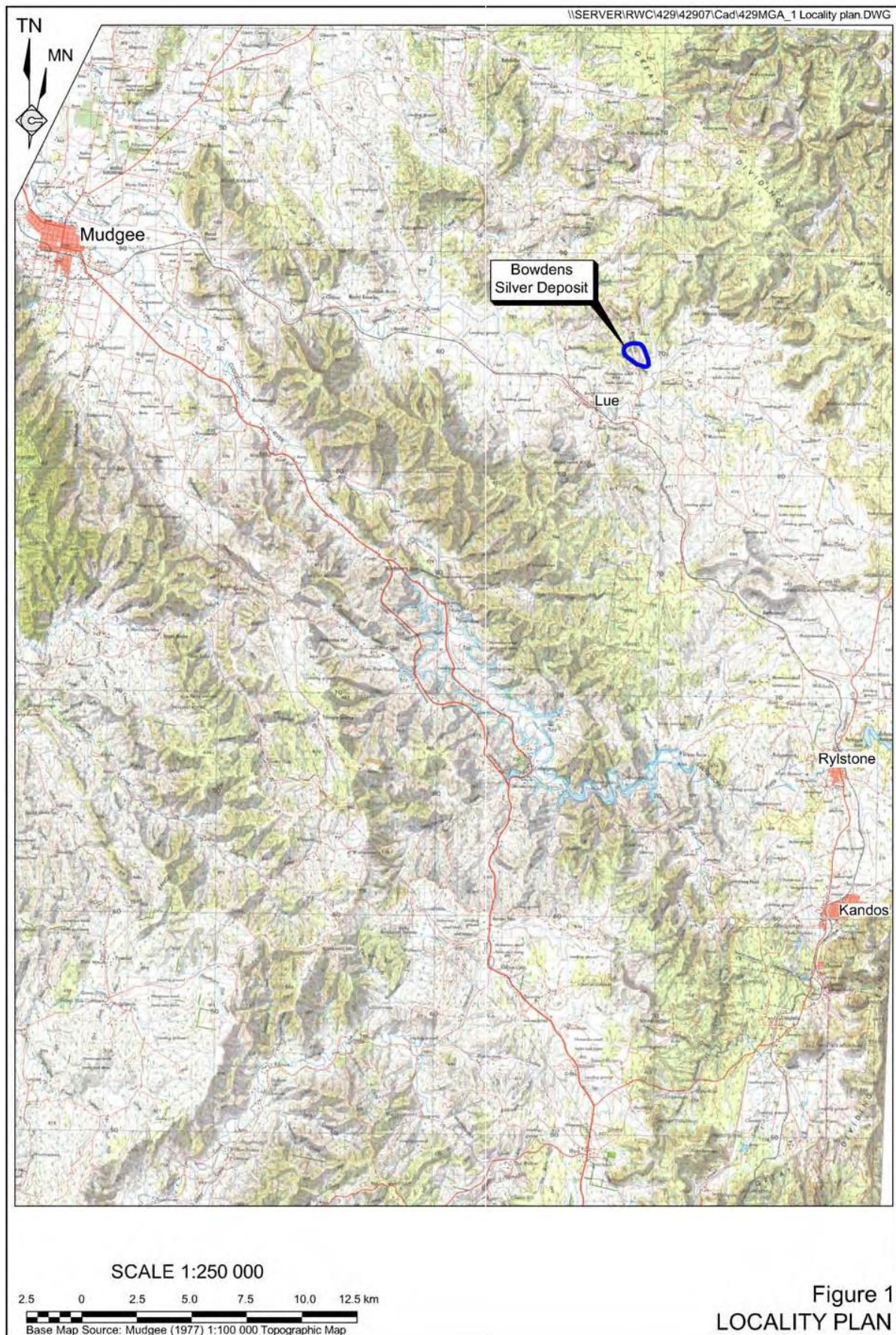
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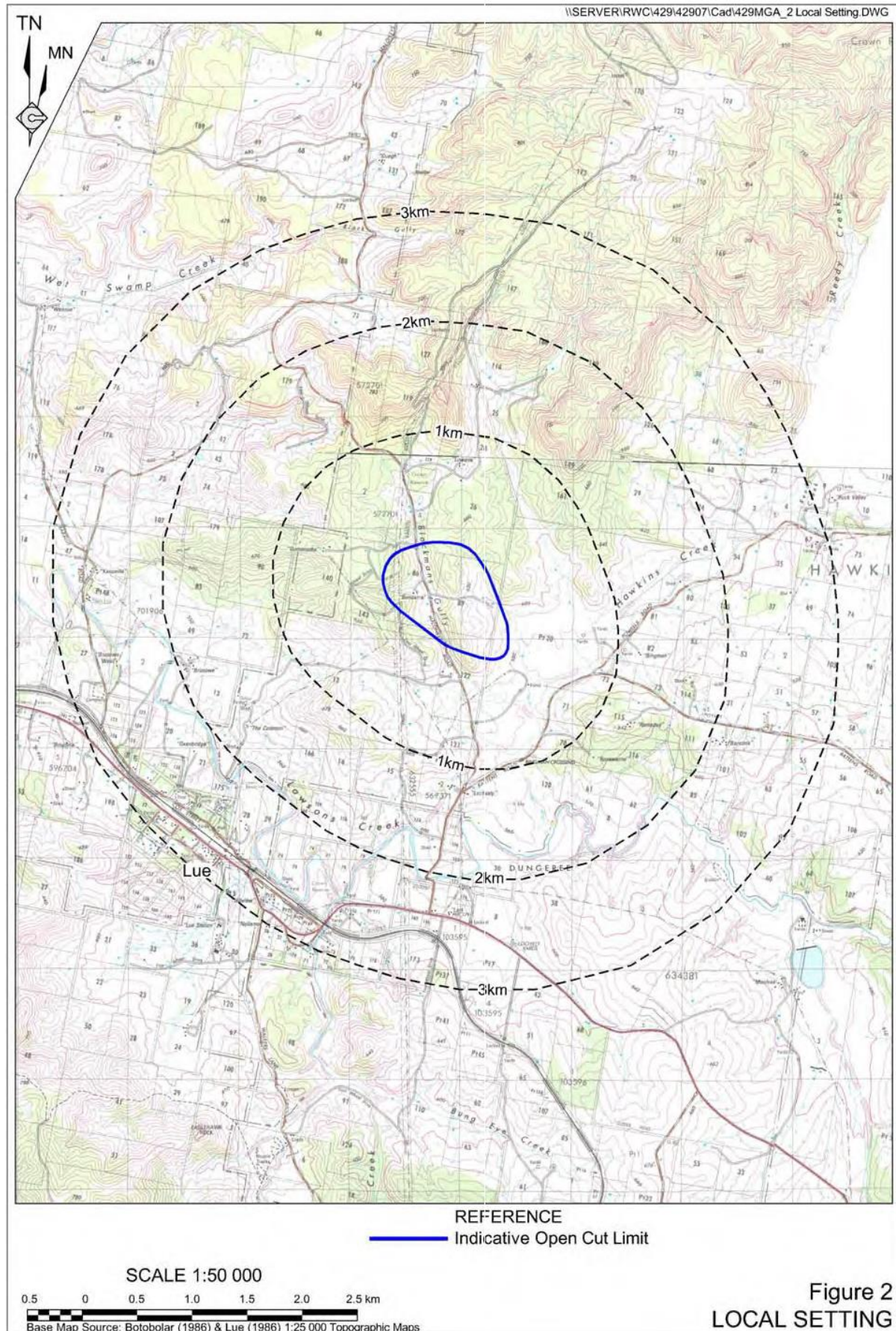
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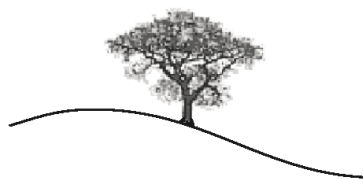
Dr Matt Cupper

PO Box 246 Merbein Victoria 3505

Tel: 0408 006 690 Fax: 03 5025 2549 E-mail: landscape@telstra.com







Landscape

Natural and Cultural Heritage Management

a division of M.L. Copper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Mr Lance Syme
Warrabinga Native Title Claimants Aboriginal Corporation
Suite 215, 4 Hyde Parade
Cambelltown 2560

Dear Mr Syme,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

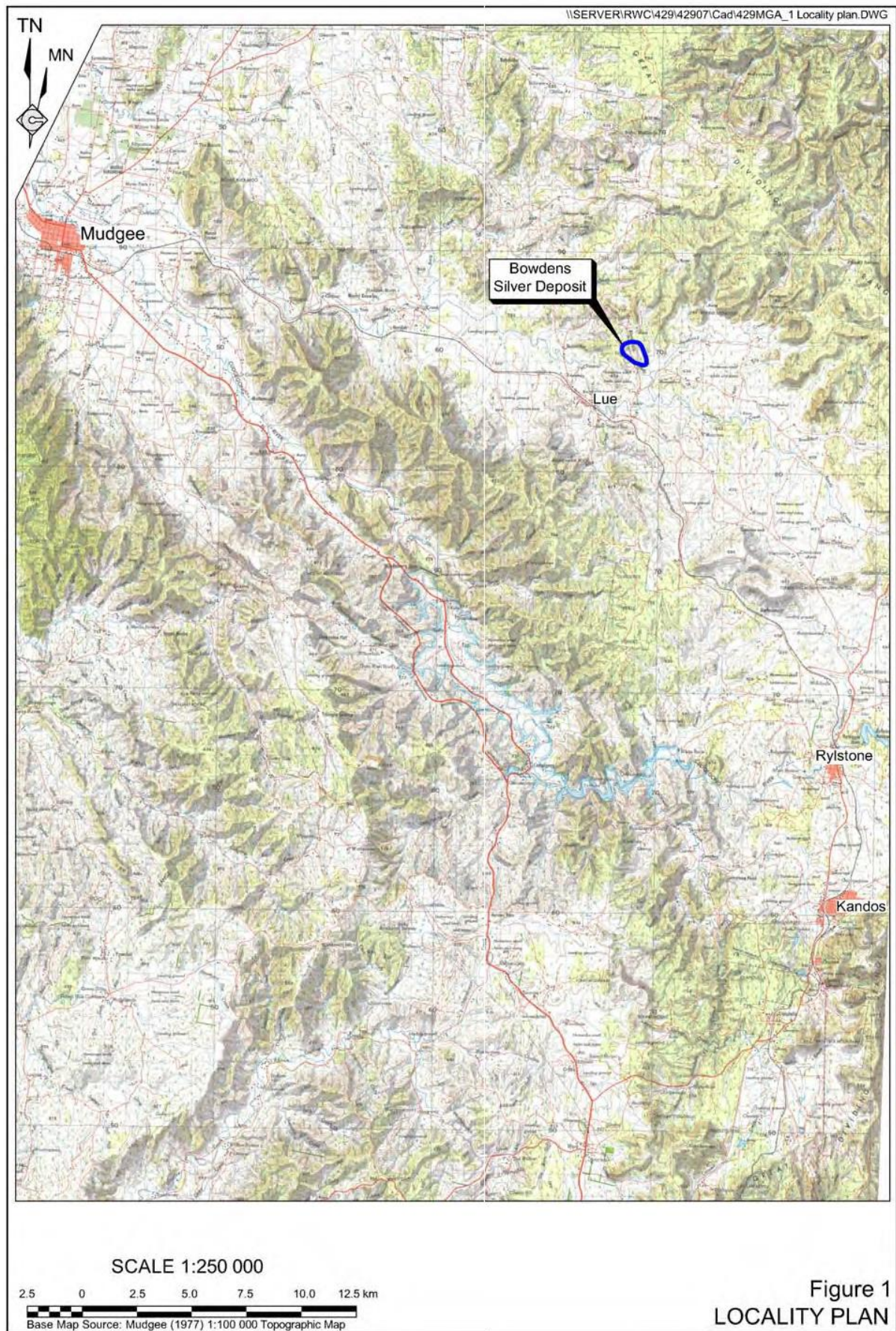
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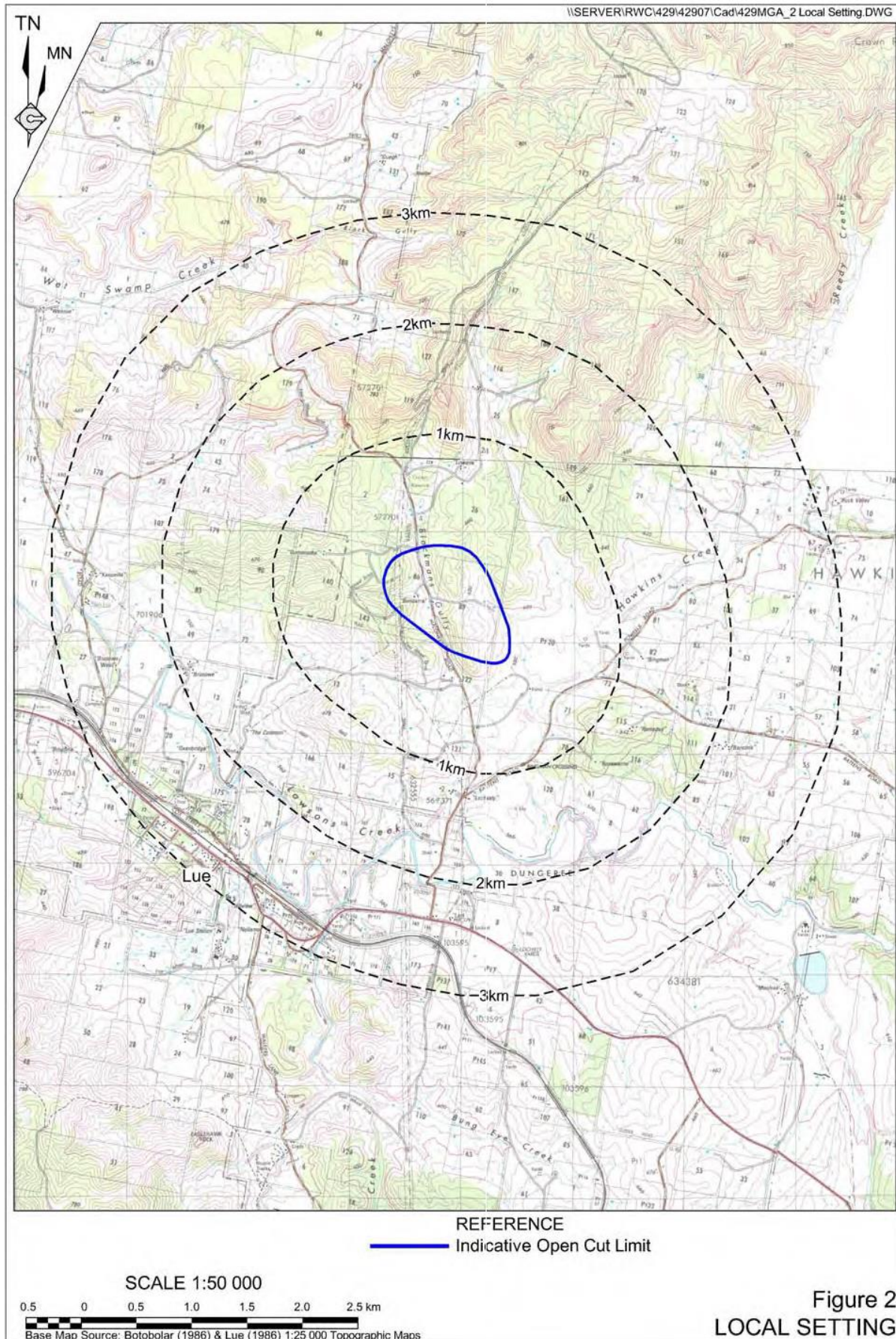
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Yours sincerely,

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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Ms Helen Riley
Mingaan Aboriginal Corporation
38 Tweed Road
Lithgow 2790

Dear Ms Riley,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

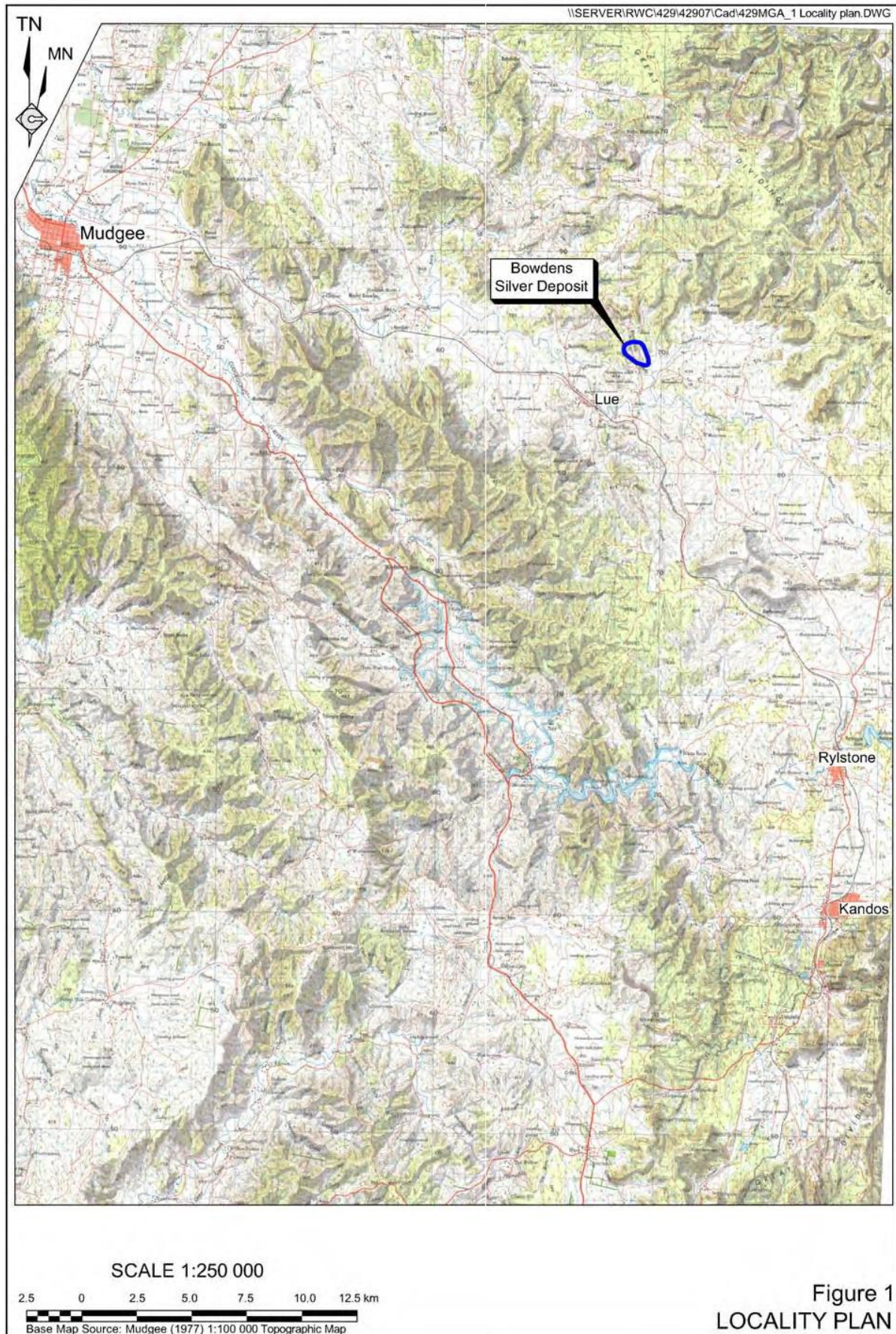
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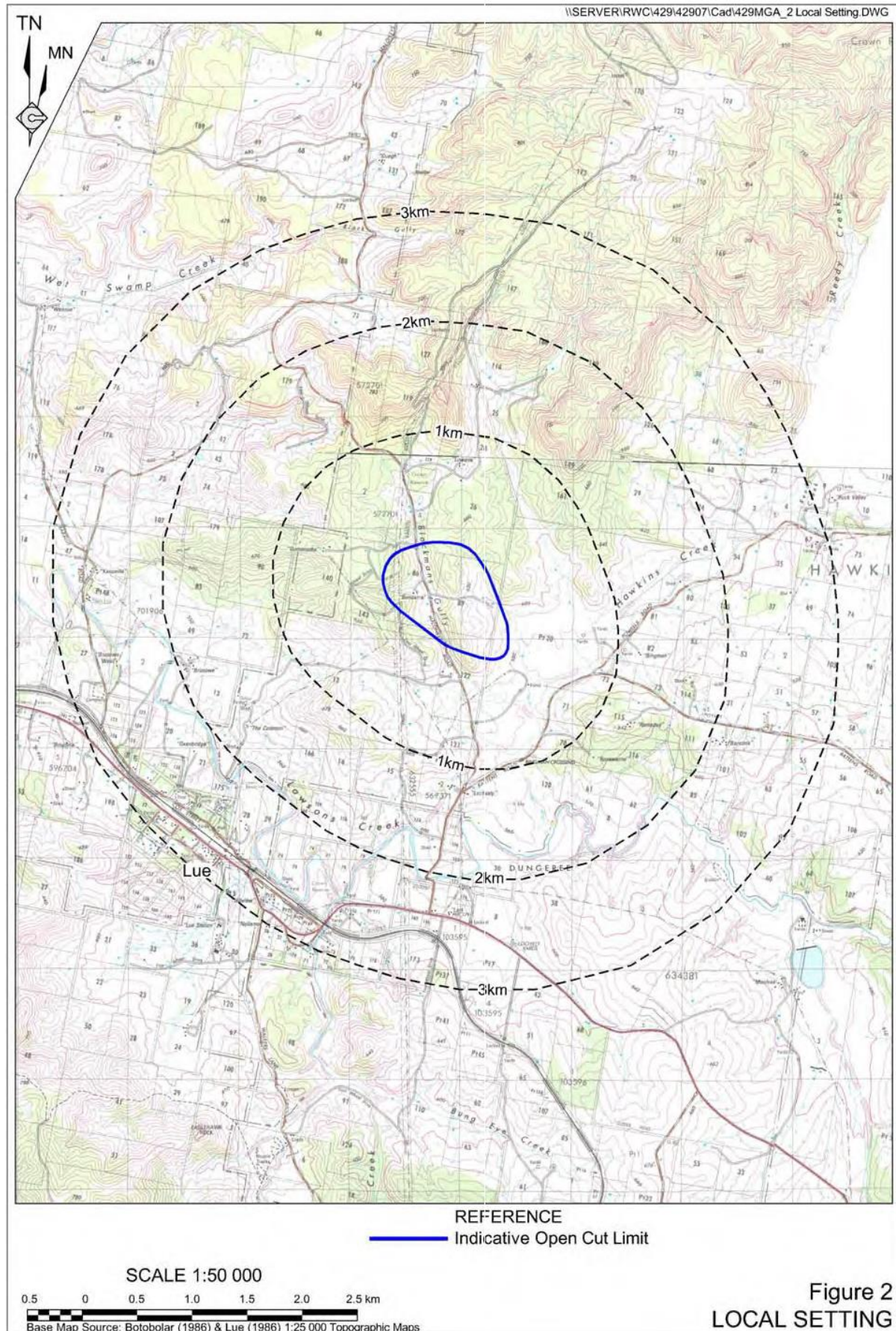
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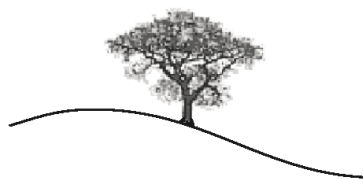
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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Copper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Mr John Riley

Wellington Valley Wiradjuri Aboriginal Corporation

PO Box 508

Wellington 2820

Dear Mr Riley,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

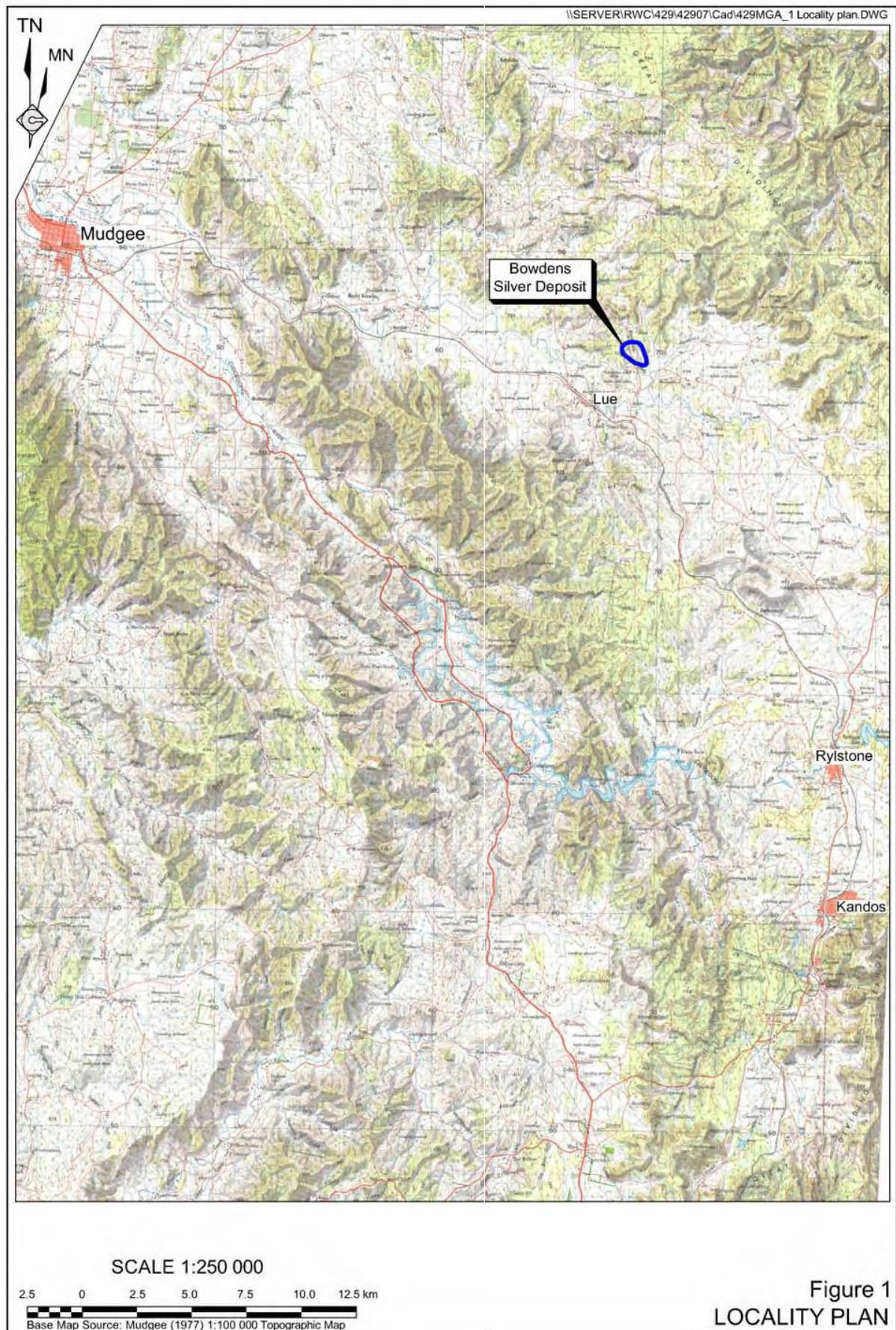
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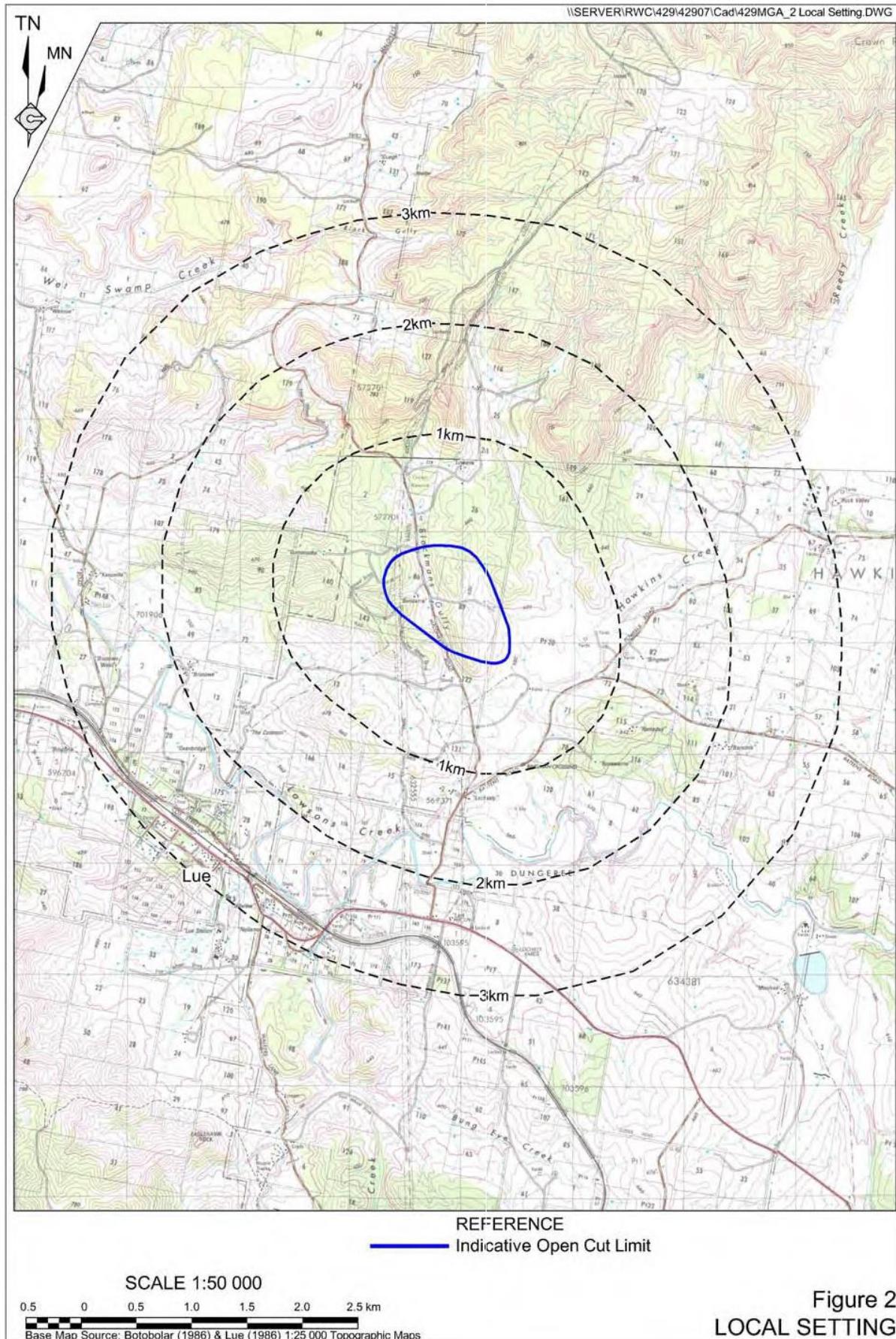
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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Ms Darlina Verrills
6 Robertson Road
Mudgee 2850

Dear Ms Verrills,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

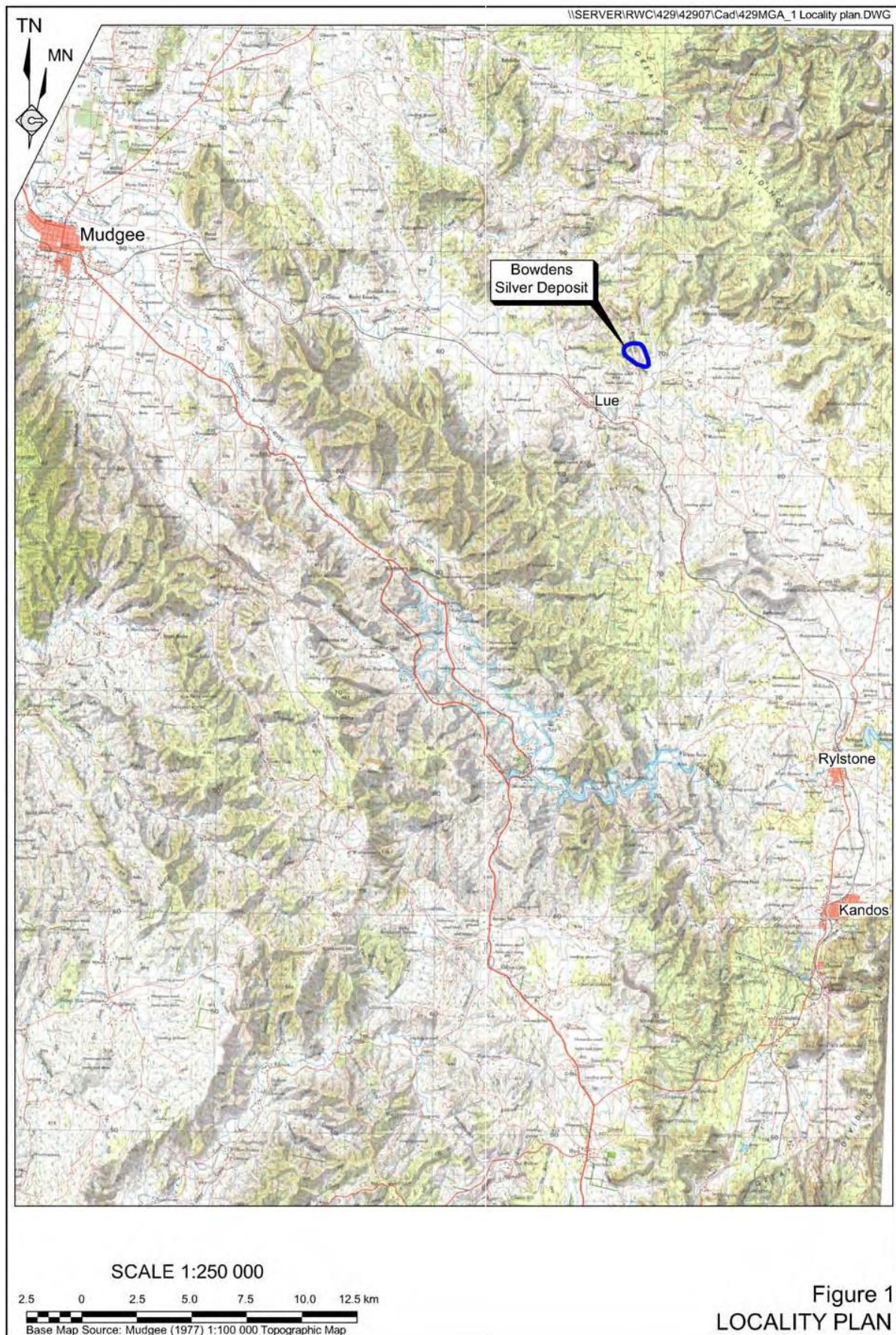
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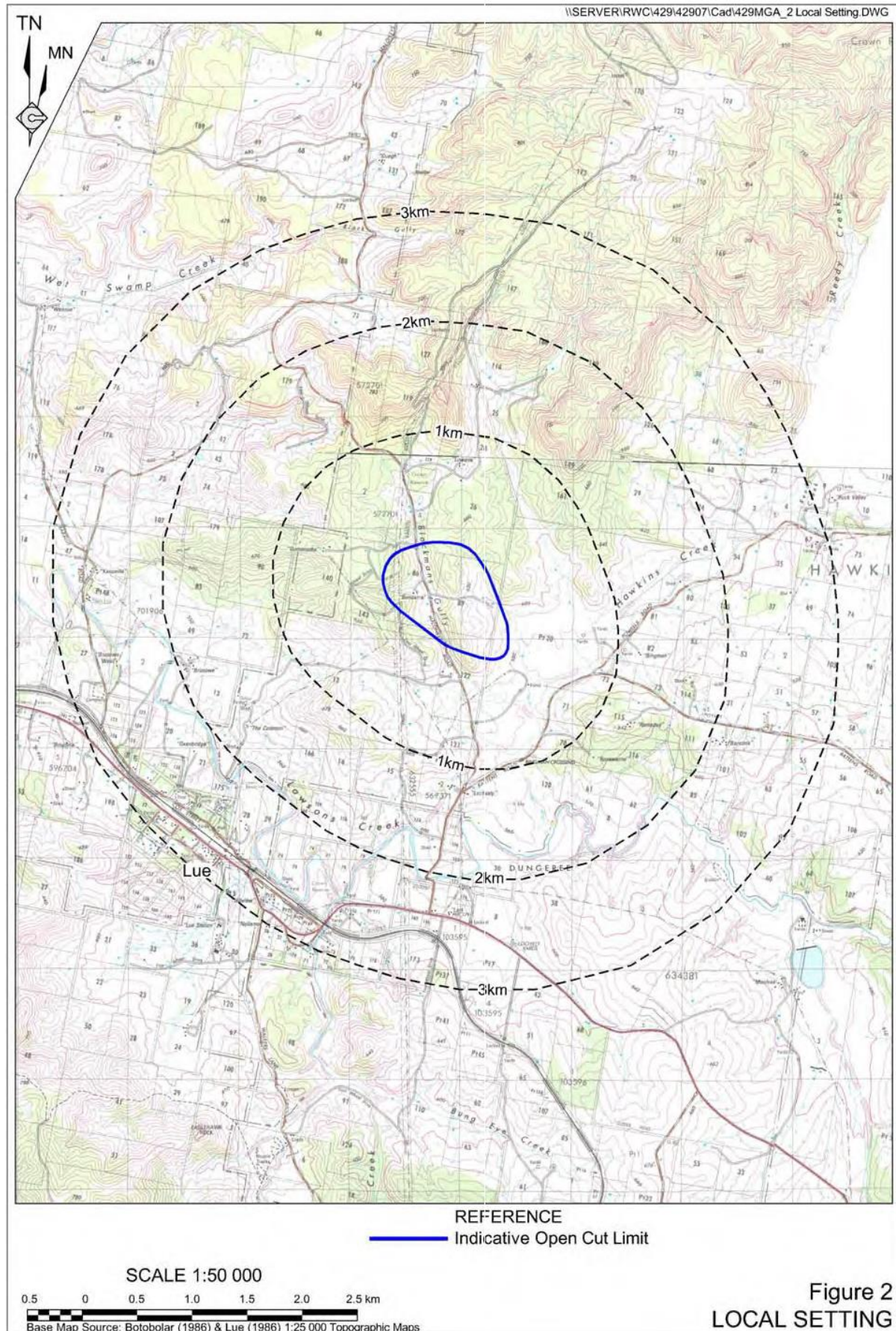
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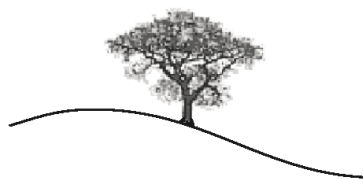
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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Chairperson

Dhuuluu-Yala Aboriginal Corporation

63 Stanley Street

Bathurst 2795

Dear Sir/Madam,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

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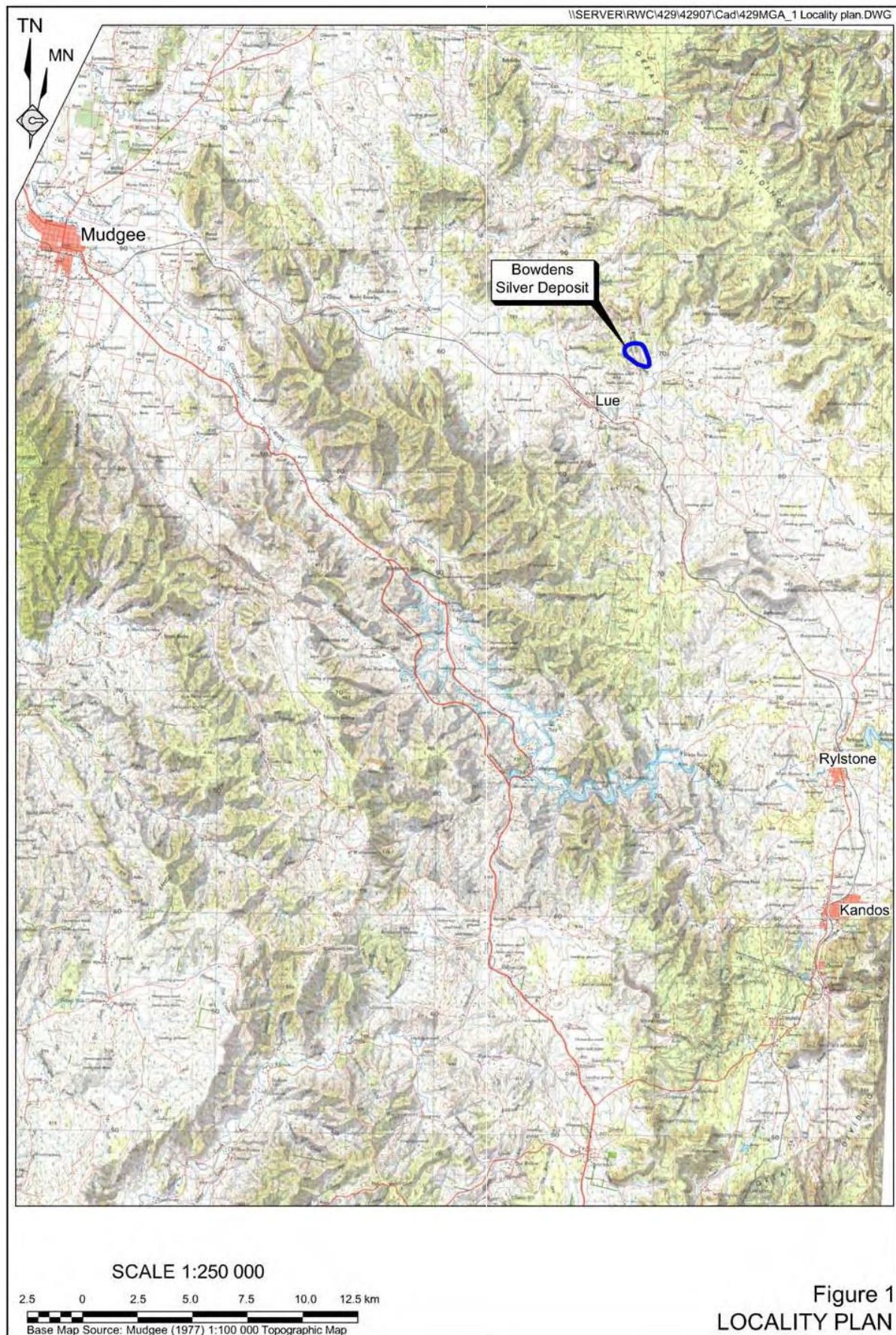
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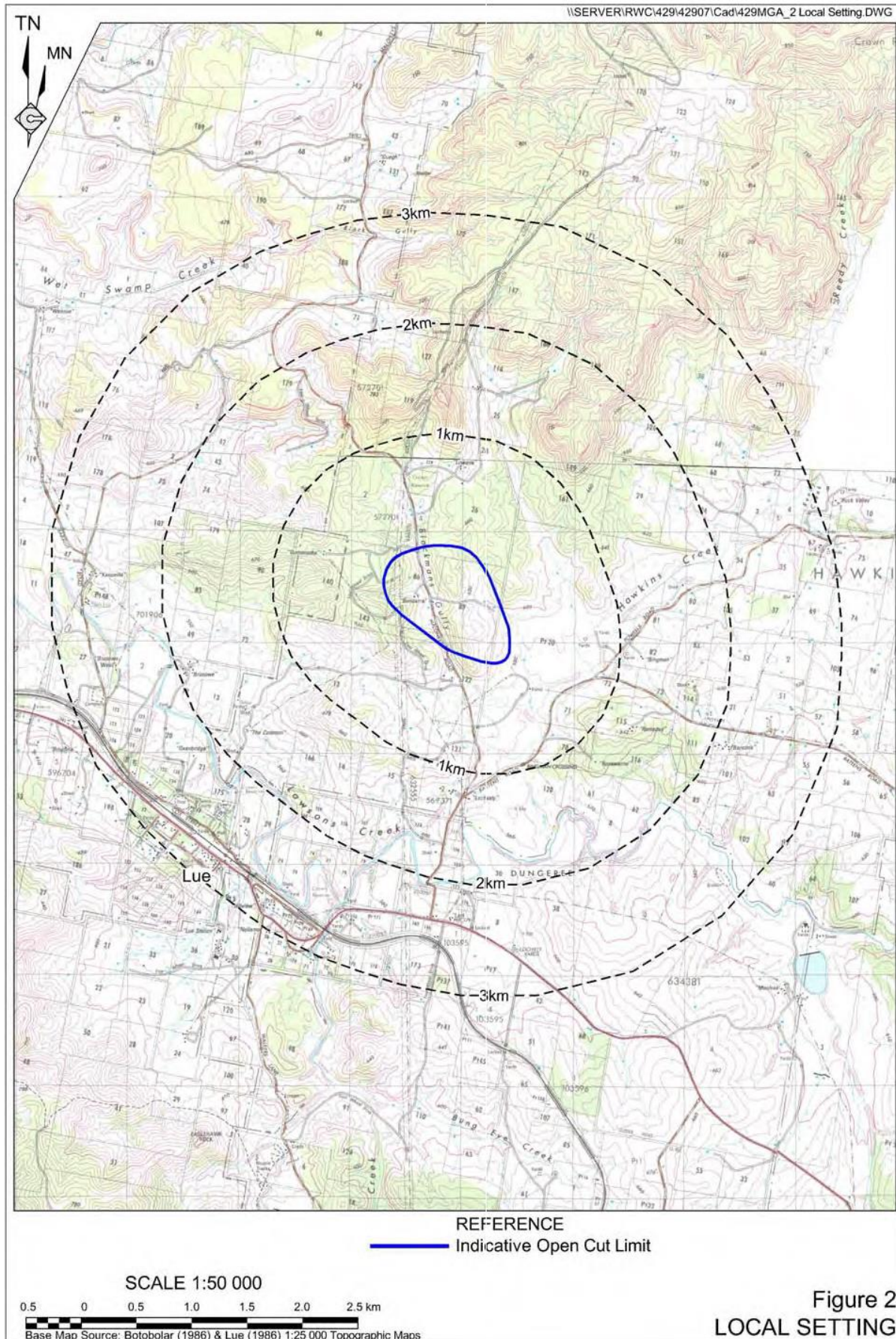
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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Mr Bill Allen
75 Cory Place
Windradynne 2795

Dear Mr Allen,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

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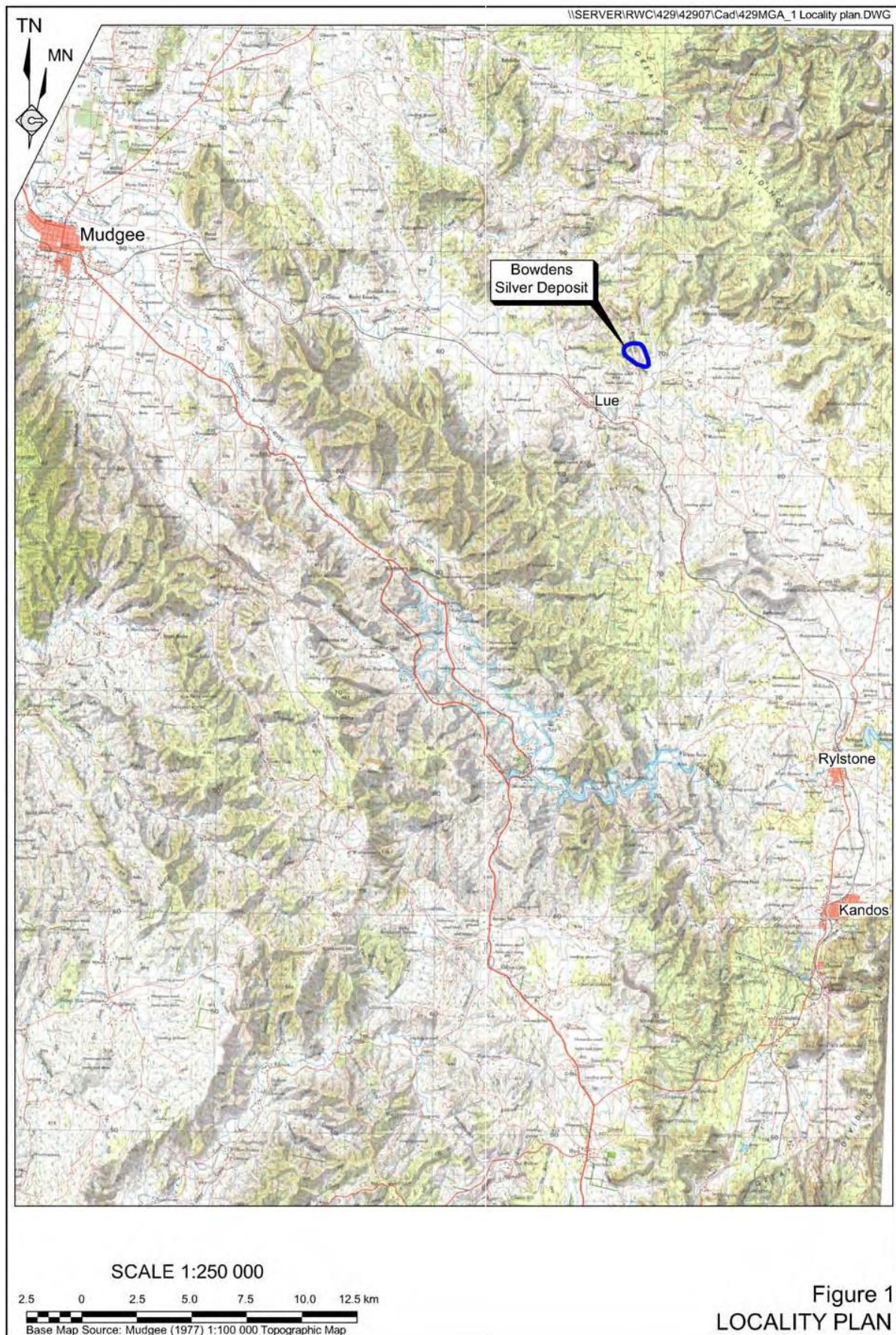
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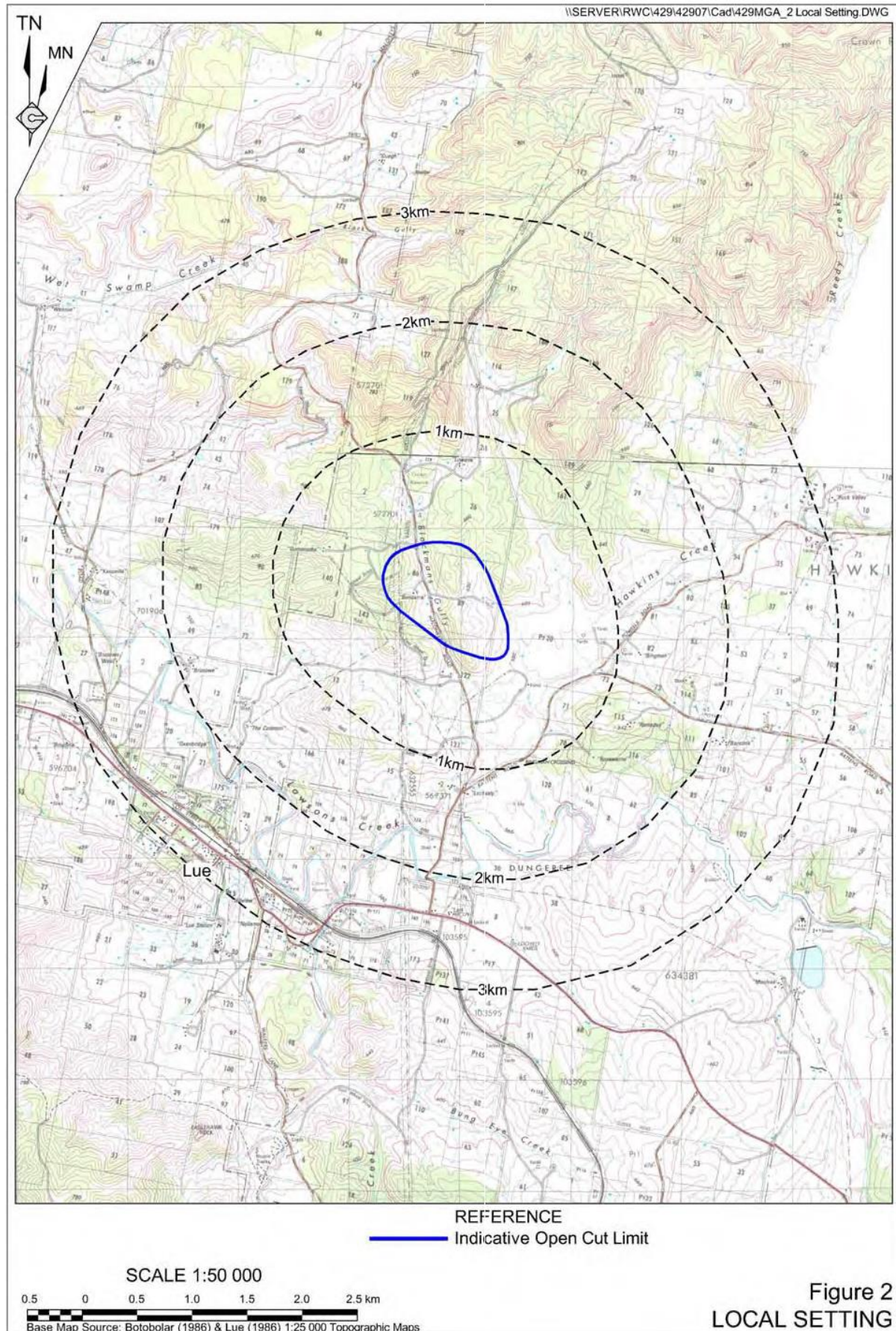
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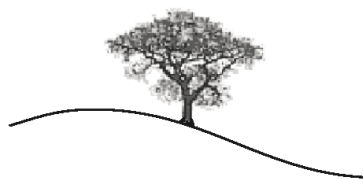
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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Chairperson

Wanaruah Local Aboriginal Land Council

PO Box 127

Muswellbrook 2333

Dear Sir/Madam,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

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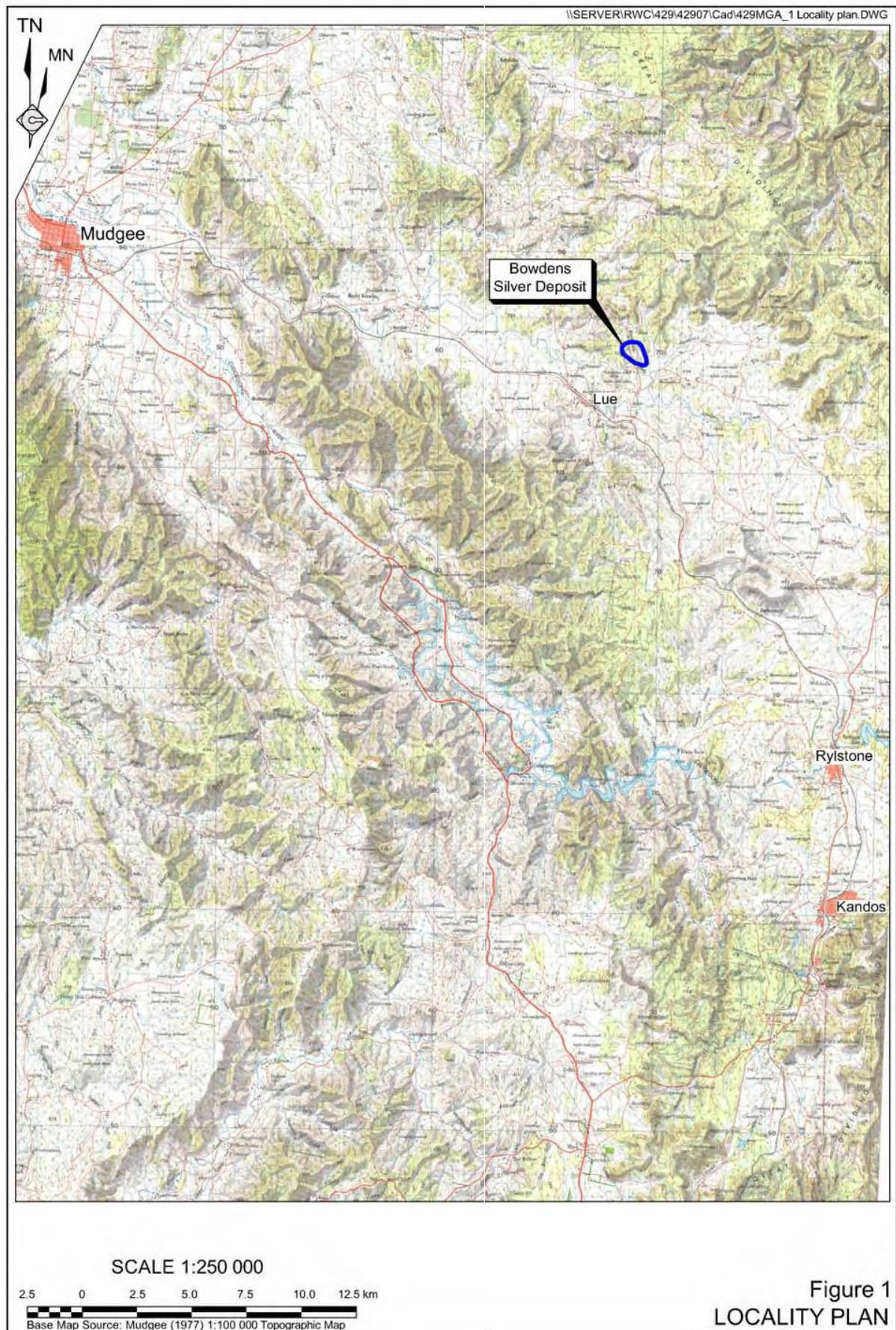
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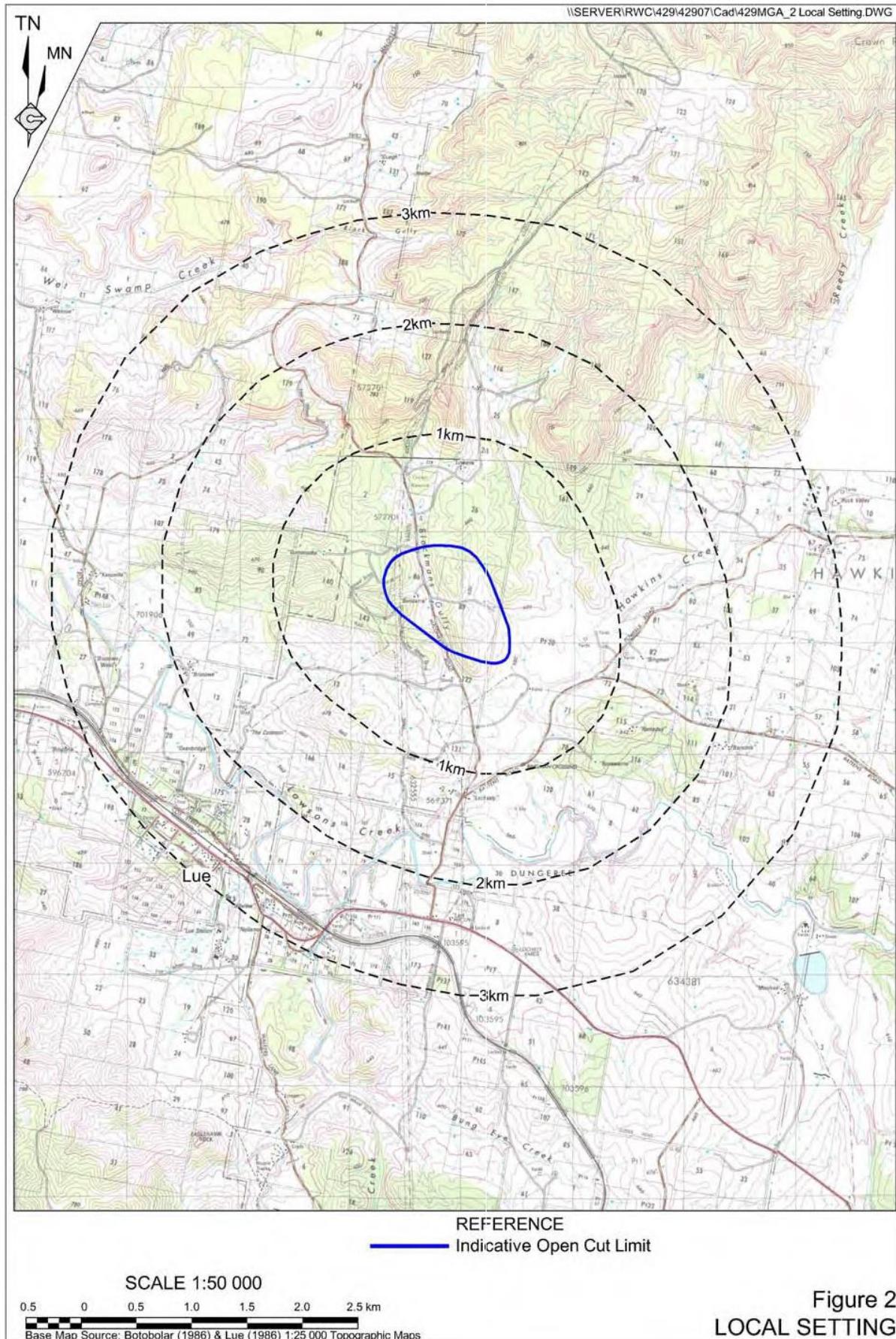
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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Chairperson

Bathurst Local Aboriginal Land Council

PO Box 1500

Bathurst 2795

Dear Sir/Madam,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

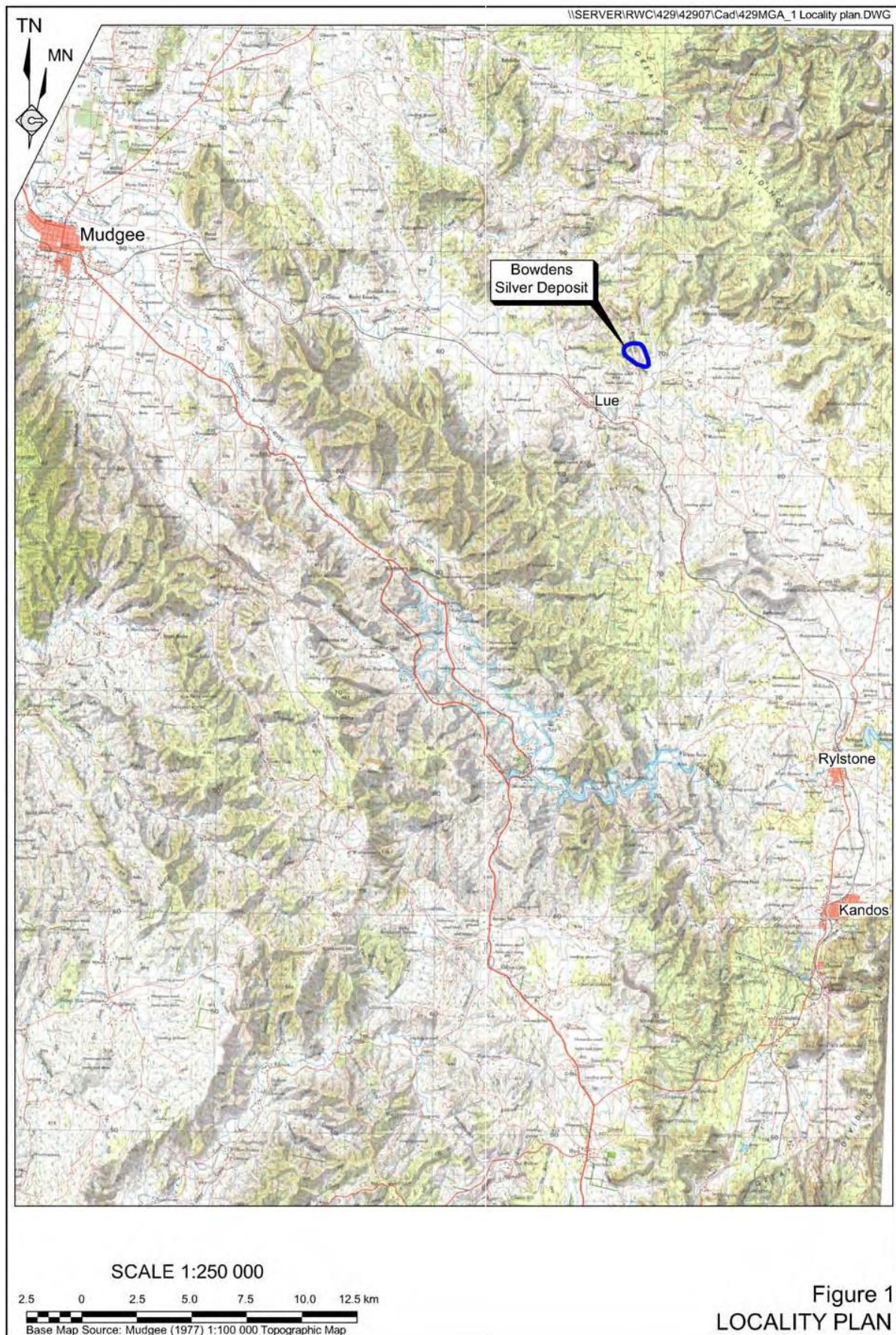
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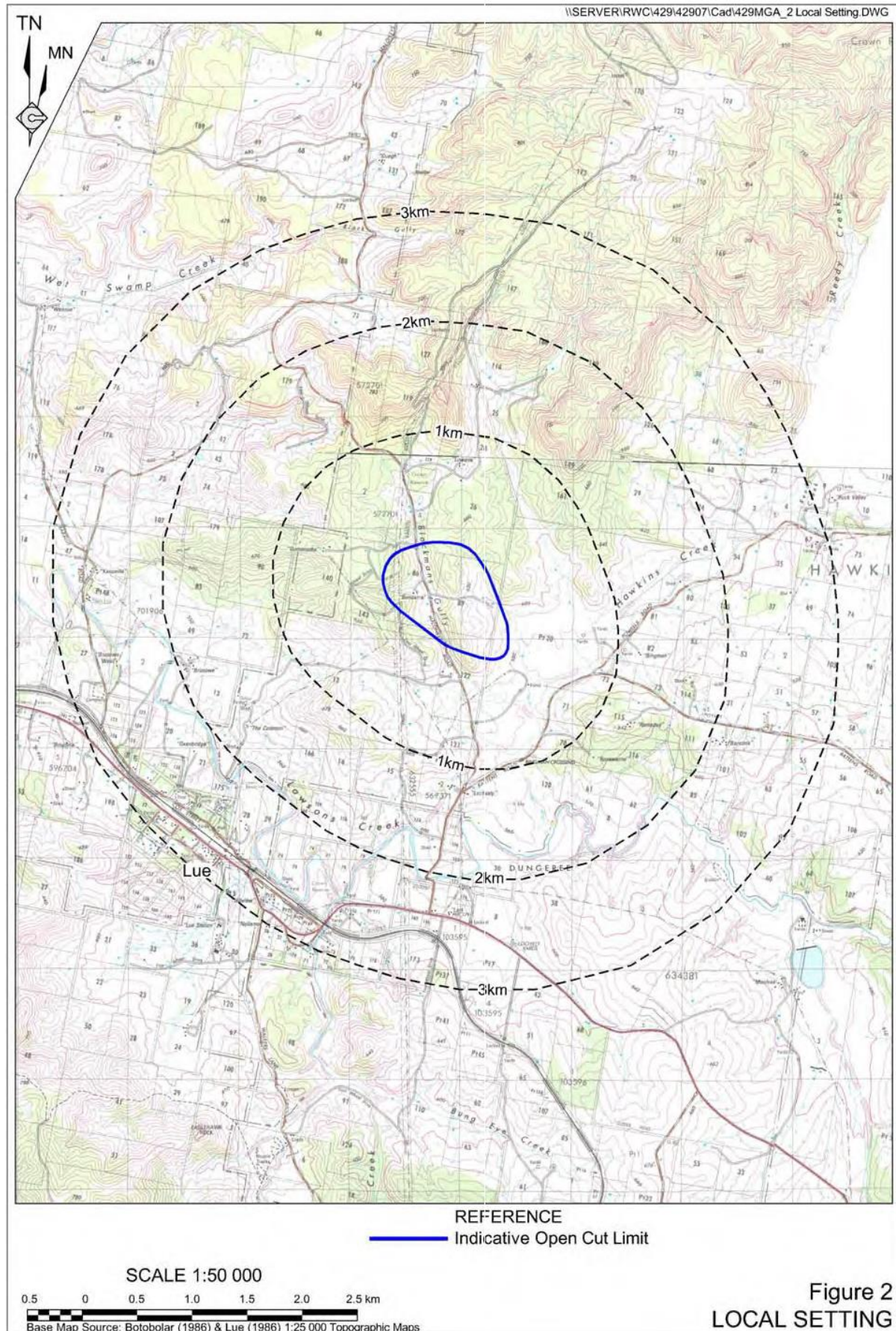
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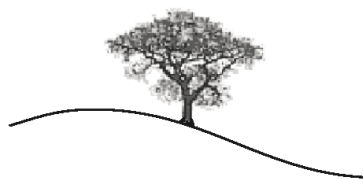
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Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Copper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Ms Jean Thornton
6 Winbourne Street
Mudgee 2850

Dear Ms Thornton,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

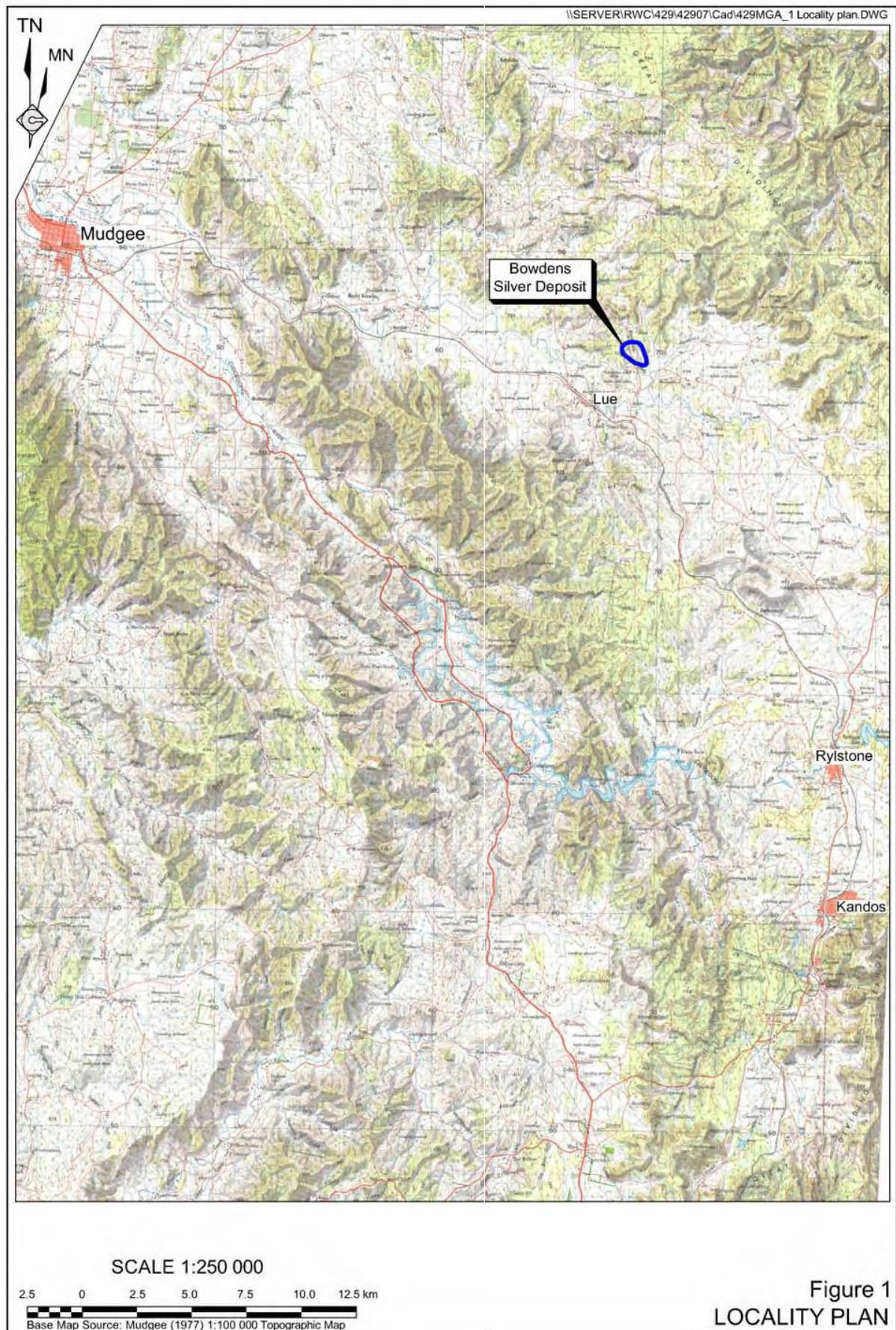
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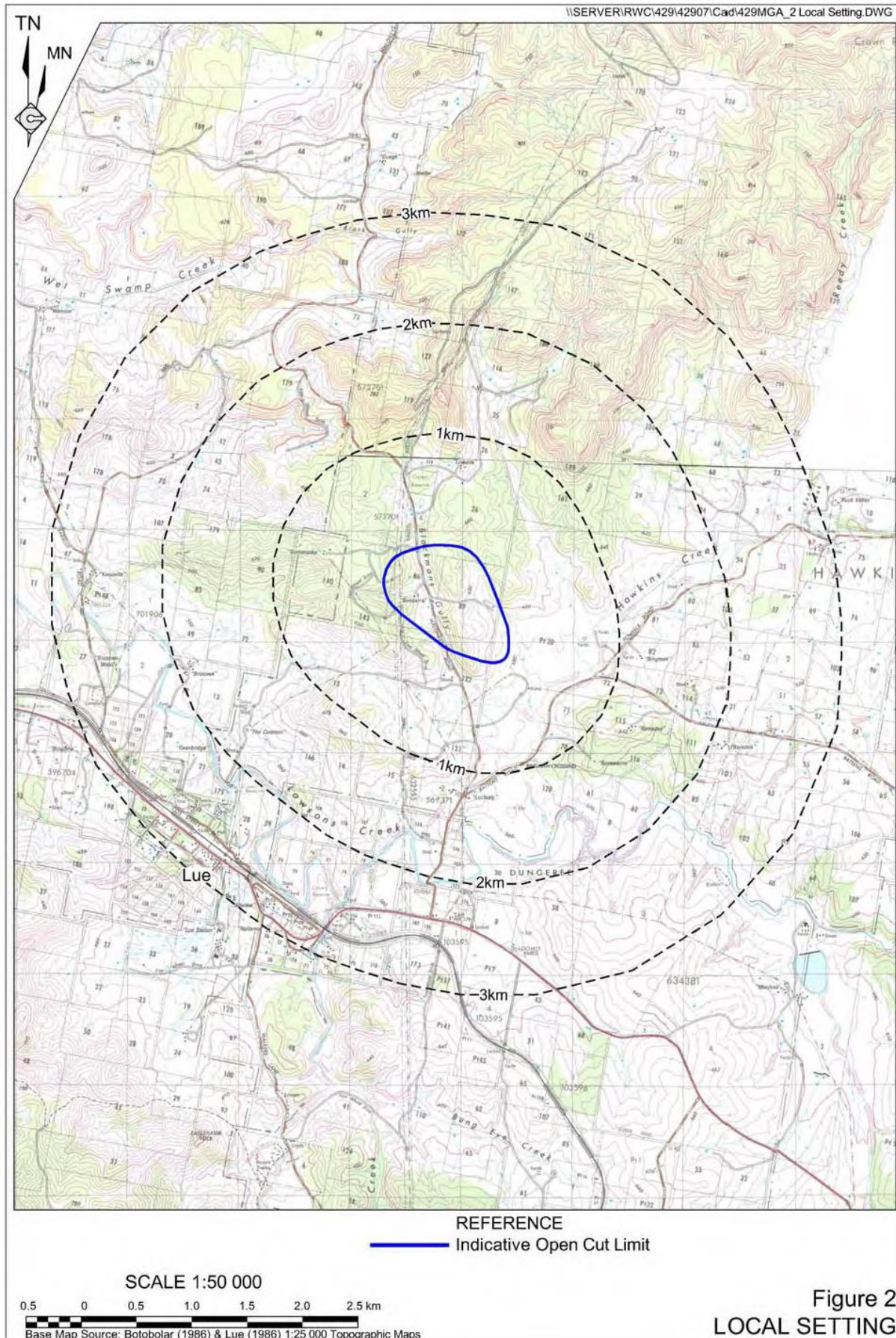
Closing date for registrations of interest is 5:00 pm Monday 10 October 2011.

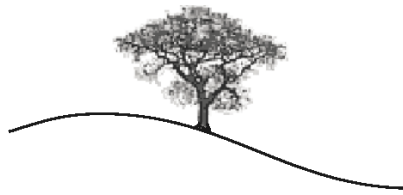
Yours sincerely,

A handwritten signature in black ink, appearing to read "Matt Cupper", with a long horizontal flourish extending to the right.

Dr Matt Cupper







Landscape

Natural and Cultural Heritage Management

a division of M.L. Cupper Pty Ltd

ABN: 48 107 932 918

23 September 2011

Mr David Maynard
91 Inglis Street
Mudgee 2850

Dear Mr Maynard,

Re: Bowdens Silver Project, Lue – Notification to Register Interest

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

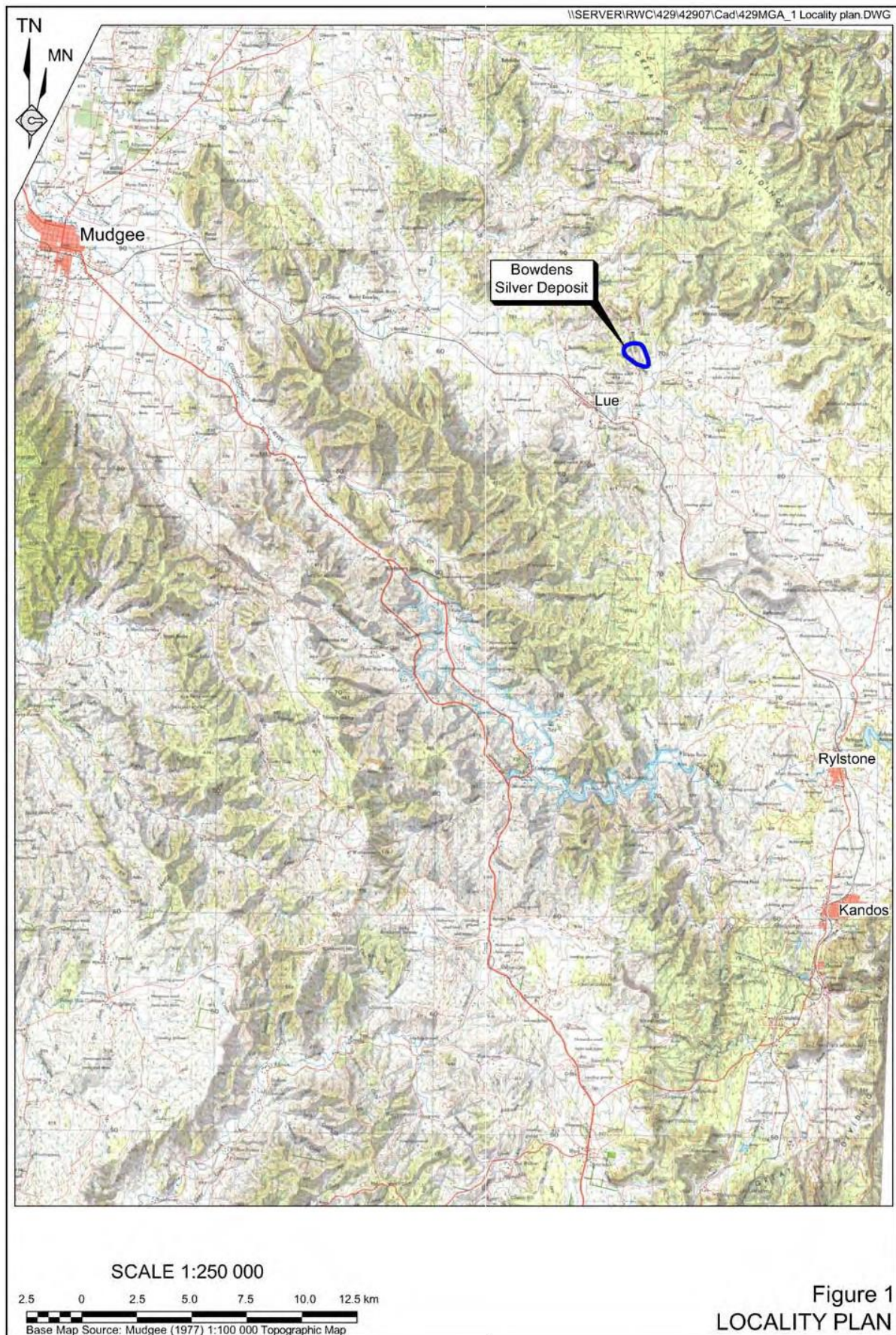
Landscape on behalf of Kingsgate would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. The purpose of the consultation is to assist Kingsgate in the preparation of an application for an Aboriginal Heritage Impact Permit and to assist the Director General of the NSW Office of Environment and Heritage in his or her consideration and determination of the application. Any persons or groups who would like to be consulted are invited to contact me: Dr Matt Cupper, Landscape, PO Box 246, Merbein 3505; e-mail: landscape@telstra.com; tel: 0408 006 690.

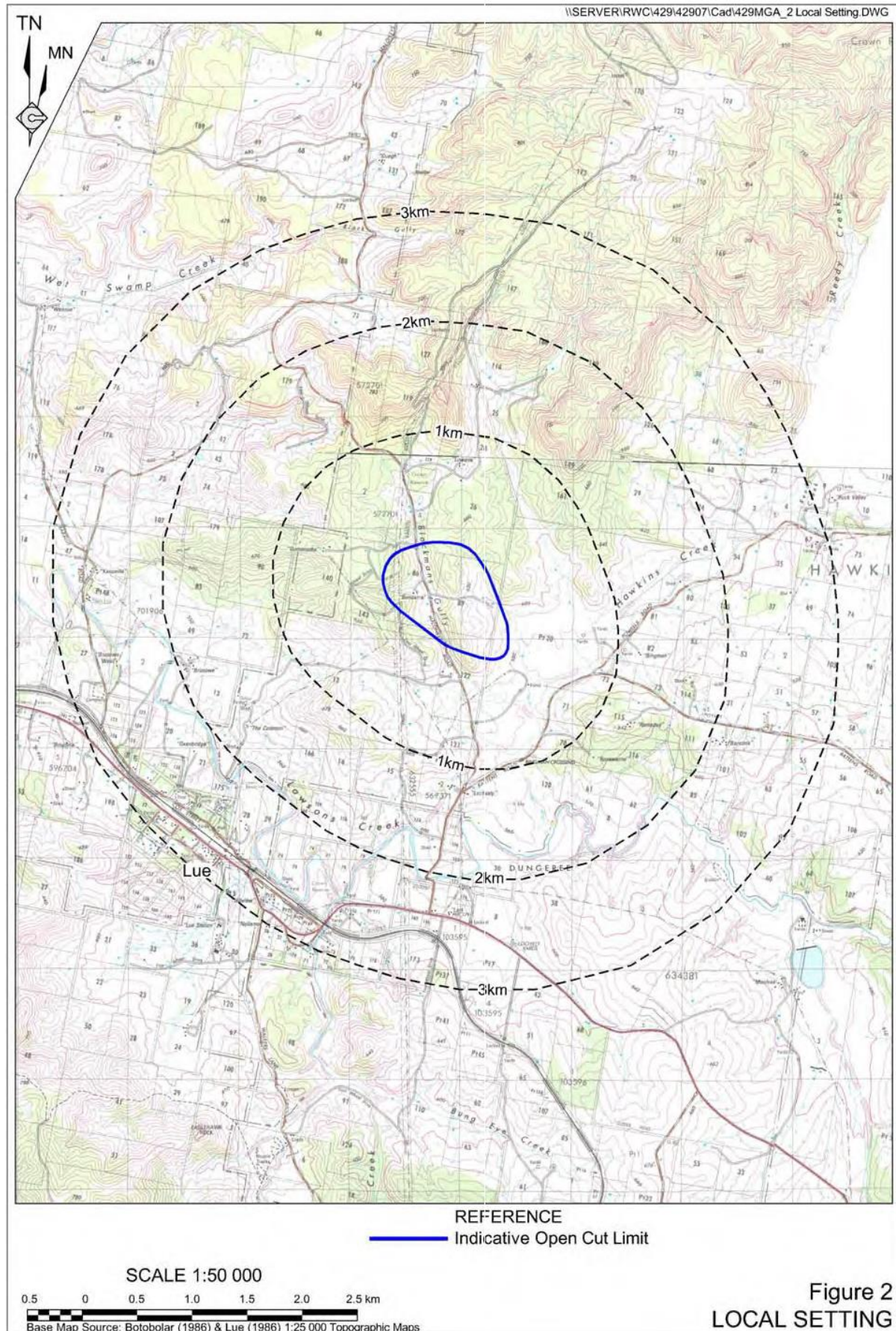
Closing date for registrations of interest is 5:00 pm Monday 10 October 2011.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Matt Cupper', with a long, sweeping horizontal line extending to the right.

Dr Matt Cupper





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Annexure 2

Public Notices

(Total No. of pages including blank pages = 4)

Note: This Appendix is only available on the digital version of this document

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**Bowdens Silver Project Lue
Notice to Register Interest**

Bowdens Silver Pty Ltd is planning to develop and operate an open cut silver mine at Maloney's Road, Lue. The project would involve an open cut mine and ancillary infrastructure including a proposed approx. 70 km pipeline to obtain surplus water from one of the Ulan coal mines.

Landscape on behalf of Bowdens Silver would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the project area. The purpose of the consultation is to assist Bowdens Silver in the preparation of an application for an Aboriginal Heritage Impact Permit and to assist the Director General of NSW Office of Environment and Heritage in his or her consideration and determination of the application.

Contact details: The Secretary, Landscape, PO Box 1068 Carlton 3053.

Closing date for registrations of interest: 5 pm Friday 1 February 2019.

Mudgee Guardian 18 January 2019

**BOWDENS SILVER PROJECT, LUE
NOTIFICATION TO REGISTER
INTEREST**

Kingsgate Consolidated Limited is planning to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 3km northeast of Lue township. It is envisaged the project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancilliary infrastructure.

Landskape on behalf of Kingsgate would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. The purpose of the consultation is to assist Kingsgate in the preparation of an application for an Aboriginal Heritage Impact Permit and to assist the Director General of NSW Office of Environment and Heritage in his or her consideration and determination of the application.

Contact details:

The Secretary
Landskape
PO Box 246
Merbein 3505

Closing date for registrations of interest is:

5:00pm Monday 10 October 2011

Mudgee Guardian 26 September 2011

Annexure 3

Formal Responses from Aboriginal Stakeholders to Notification

(Total No. of pages including blank pages = 20)

Note: This Appendix is only available on the digital version of this document

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DOC19/12969-1

Matt Cupper
Landscape
PO Box 1068
CARLTON VIC 3053
landscape@telstra.com

Dear Matt

**WRITTEN NOTIFICATION AS REQUIRED UNDER OFFICE OF ENVIRONMENT AND HERITAGE
(OEH) ABORIGINAL CULTURAL HERITAGE REQUIREMENT FOR PROPONENTS 2010 – FOR
PROPOSED BOWDENS SILVER MINE LUE AND ASSOCIATED WATER PIPE LINE FROM
ULAN, NEAR MUDGEE, NSW**

I refer to your letter dated 2 January 2019 to the Office of Environment and Heritage (OEH) regarding the above matter.

A list of known Aboriginal parties that OEH considers is likely to have an interest in this development is attached as Attachment 1 (overleaf). Please note this list is not necessarily an exhaustive list of all interested Aboriginal parties and receipt of this list does not remove the requirement of a proponent/consultant to advertise in local print media and contact other bodies seeking interested Aboriginal parties, in accordance with the requirements of Section 80C of the National Parks and Wildlife Regulation 2009.

Should you require further information regarding issues that are the responsibility of the OEH please contact Paul Houston, Aboriginal Heritage Planning Officer on (02) 6883 5361 or email paul.houston@environment.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink that reads 'Samantha Wynn'.

SAMANTHA WYNN
Senior Team Leader Planning - North West
Conservation and Regional Delivery

9 January 2019

Contact officer: PAUL HOUSTON
02 6883 5361

PO Box 2111 Dubbo NSW 2830
Level 1, 48-52 Wingewarra Street Dubbo NSW 2830
Tel: (02) 6883 5330 Fax: (02) 6884 8675
ABN 30 841 387 271
www.environment.nsw.gov.au

ATTACHMENT 1

Table 1: List of Aboriginal stakeholder groups within the Mid Western Regional Local Government Area - that may have an interest in the project; provided as per the "OEH Aboriginal cultural heritage requirement for proponents 2010".

Organisation/Affiliation	Name/Title	Address
Bill Allen		1/1a Miriyan Drive, Kelso NSW 2795
Binjang Wellington Wiradjuri heritage Survey	Jamie Grey	260 Myall St, Dubbo NSW 2830
Darlina Verrills		6 Robertson Road, Mudgee NSW 2850
David Maynard		91 Inglis Street, Mudgee NSW 2850
Deborah Foley		9 Inglis Street, Mudgee NSW 2850
Dhuuluu-Yala Aboriginal Corporation	Chairperson	63 Stanley Street, Bathurst NSW 2795
Jean Thornton		6 Winbourne Street, Mudgee NSW 2850
Jodie Mckinnon		100 Stock Road, Gunnedah NSW 2380
Katrina Mckinnon		33 Hinton Drive, Gunnedah NSW 2380
Larry Foley		9 Inglis Street, Mudgee NSW 2850
Lyn Syme	North-East Wiraduri	PO Box 29, Kandos NSW 2848
Mingaan Aboriginal Corporation	Helen Riley	38 Tweed Road, Lithgow NSW 2790
Mooka	Neville Williams	PO Box 70, Cowra NSW 2794
Mudgee LALC	Chairperson	PO Box 1098, Mudgee NSW 2850
Murong Gialinga Aboriginal & Torres Strait Islander Corporation		PO Box 1097, Mudgee NSW 2850
Natasha Rodgers		7 Toy Court, Wodonga VIC 3690
North- Eastern Wiradjuri		PO Box 29, Kandos NSW 2848
Paul Brydon		166 Minore Street, Narromine NSW 2821
Trevor Robinson		PO Box 73, Peak Hill NSW 2869

Wamarr Cutural Consultants	Craig Riley	17 Marsh Street, Wellington NSW 2820
Warrabinga Native Tittle Claimants Aboriginal Corporation	The Board of Directors	PO Box 282, Mudgee NSW 2850
Wellington Valley Wiradjuri Aboriginal Corporation	Chairperson	PO Box 2290, Orange NSW 2800
Wiradjuri Council of Elders	Robert Clegg	28 Hodges Street, Parkes NSW 2870
Wiradjuri Interim Working Party		PO Box 73, Peak Hill NSW 2869
Wiradjuri traditional Owners Central West Aboriginal Corporation	Chairperson	14 Duramana Road, Eglington NSW 2795
Wurrumay Consultants	Kerrie Salter	PO Box 817, Singleton NSW 2330

From: Ilija Susnja Ilija.Susnja@midwestern.nsw.gov.au
Subject: FW: Identification of Aboriginal stakeholders Bowdens Silver Project Lue
Date: 15 January 2019 at 8:58 am
To: Matt Cupper landscape@telstra.com

IS

Matt,

As a follow on from the email I sent yesterday, I have been informed that it is also advisable to contact the NSW Office of Environment and Heritage (OEH) – this is because all Aboriginal parties who wish to be consulted about projects need to register with OEH. An up-to-date list of all registered interested persons can be sourced from Paul Houston of OEH at PO Box 2111, Dubbo NSW 2849.

It is also advisable to contact the National Native Title Tribunal to establish whether anything on their registers will affect the project.

Yours faithfully,

Ilija Susnja
Senior Town Planner
Mid-Western Regional Council

From: Ilija Susnja
Sent: Monday, 14 January 2019 3:13 PM
To: 'Matt Cupper' <landscape@telstra.com>
Cc: Lindsay Dunstan <Lindsay.Dunstan@midwestern.nsw.gov.au>
Subject: RE: Identification of Aboriginal stakeholders Bowdens Silver Project Lue

Matt,

The following link provides a PDF image of the land covered by the various Local Aboriginal Land Council's in NSW:

<http://alc.org.au/media/119304/state%20alc%202013.jpg>

The proposed silver mine site and the pipeline are located within the area covered by the Mudgee Local Aboriginal Land Council. Their contact details are:

Mudgee Local Aboriginal Land Council
PO Box 1098
Mudgee NSW 2850

Phone: 02 6372 3511
Fax: 02 6372 3522

Email: mudgeelalc@bigpond.com

If you have any further enquiries in relation to this matter, please contact me on (02) 6378 2850 or by replying to this email.

Yours faithfully,

Ilija Susnja
Senior Town Planner
Mid-Western Regional Council

Mid Western Regional Council

From: Matt Cupper <landscape@telstra.com>
Sent: Wednesday, 2 January 2019 6:33 AM
To: Council <Council@midwestern.nsw.gov.au>
Subject: Identification of Aboriginal stakeholders Bowdens Silver Project Lue

Dear Sir/Madam,

Bowdens Silver Pty Ltd is planning to apply for an approval under Division 4.7 (State significant development) of Part 4 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figure 1, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Aboriginal stakeholders have been involved in ongoing cultural heritage assessments for the Project but the scope has been subsequently modified to include a proposed ~70 km long pipeline to obtain surplus water from one of the coal mines in the Ulan area (Figure 1).

Landscape on behalf of Bowdens Silver Pty Ltd would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. Could you provide contact details of any known Aboriginal groups or individuals who may hold cultural knowledge relevant to the proposed project area, please?

I would appreciate if you could provide any information regarding Aboriginal stakeholders by Wednesday 16 January 2019 to me: Dr Matt Cupper, Landscape, PO Box 1068 Carlton 3053; e-mail: landscape@telstra.com; tel: 0408 006 690.

Yours sincerely,
Matt

Dr Matt Cupper
Principal
Landscape

Tel: 0408 006 690

PRIVATE AND CONFIDENTIAL - MIDWESTERN REGIONAL COUNCIL

This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you are not the intended recipient you are hereby notified that any dissemination, distribution or copying of this email is strictly prohibited. If you have received this email in error please disregard the contents of the email, delete the email and notify the author immediately. Thank you.

From: WVVAC Contact Officer <WVVAC@hotmail.com>

Subject: Re: Site Card #1

Date: 17 January 2019 at 5:45 pm

To: Matt Cupper <landskape@telstra.com>

WO

Hi Matt

I personally am registering my interest in the project. Please see below for contact details

Regards,

Bradley R. Bliss J.P.

Traditional name - Booral Maliyan

1 Golden Place

Orange NSW 2800

brad4975@hotmail.com

Mobile: 0427321016

From: Matt Cupper <landskape@telstra.com>

Sent: Thursday, 17 January 2019 12:10:12 PM

To: WVVAC Contact Officer

Subject: Re: Site Card #1

Dear Brad,

Happy new year.

Just advising the OEH are requiring Bowdens Silver to re-advertise for Aboriginal stakeholder registration for the Lue project because the scope has expanded to include a proposed water pipeline to Ulan (figure attached). The involvement of Wellington Valley Wiradjuri Aboriginal Corporation in the assessment process is of course ongoing and I look forward to continuing to work with you on further assessment over the coming year.

All the best,

Matt

Dr Matt Cupper

Principal

Landskape

Tel: 0408 006 690

On 26 Nov 2018, at 7:25 pm, WVVAC Contact Officer <WVVAC@hotmail.com> wrote:

Regards,

Bradley R. Bliss J.P.

WVVAC CEO and Contact Officer

Gallangabang Aboriginal Corporation Director

Wiradjuri Council of Elders Member

Senior Aboriginal Cultural Heritage Field Officer

Senior Aboriginal Cultural Mentor and Educator

Traditional Owner Clan Descendant

Mobile: 0427321016

<36-6-1001 Goorari Grinding Grooves 18.04.2018.pdf>

From: WVVAC Contact Officer <WVVAC@hotmail.com>

Subject: Re: Bowdens Silver

Date: 17 January 2019 at 5:39 pm

To: Matt Cupper <landscape@telstra.com>

Cc: amadeuas@hotmail.com, Naeah95@hotmail.com, Paul melohm@bigpond.com, pcampion@well-com.net.au

WO

Hi Matt

Hope you had a great festive break and New year.

WVVAC would like to update our details and Gallangabang Aboriginal Corporation will formally be registering our interest.

Regards,

Bradley R. Bliss J.P.
WVVAC CEO and Contact Officer
Gallangabang Aboriginal Corporation Director
Wiradjuri Council of Elders Member
Senior Aboriginal Cultural Heritage Field Officer
Senior Aboriginal Cultural Mentor and Educator
Mobile: 0427321016

From: Matt Cupper <landscape@telstra.com>

Sent: Thursday, 17 January 2019 12:10:12 PM

To: WVVAC Contact Officer

Subject: Re: Site Card #1

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Happy new year.

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All the best,
Matt

Dr Matt Cupper
Principal
Landscape

Tel: 0408 006 690

On 26 Nov 2018, at 7:25 pm, WVVAC Contact Officer <WVVAC@hotmail.com> wrote:

Regards,

Bradley R. Bliss J.P.
WVVAC CEO and Contact Officer
Gallangabang Aboriginal Corporation Director
Wiradjuri Council of Elders Member
Senior Aboriginal Cultural Heritage Field Officer
Senior Aboriginal Cultural Mentor and Educator
Traditional Owner Clan Descendant
Mobile: 0427321016
<36-61001 Goorari Grinding Grooves 18.04.2018.pdf>



11-13 Mansfield Street
Glebe NSW 2037
PO Box 112, Glebe NSW 2037
P 02 9562 6327 F 02 9562 6350

Dr Matt Cupper
LANDSKAPE
PO Box 246
Merbein NSW 3505

Dear Matt

Re: Request - Search for Registered Aboriginal Owners

I refer to your letter dated 8th September 2011 regarding Aboriginal stakeholders in Lu, NSW.

I have searched the Register of Aboriginal Owners and the project area described does not appear to have Registered Aboriginal Owners pursuant to Division 3 of the *Aboriginal Land Rights Act 1983 (NSW)*.

I suggest you contact the Mudgee Local Aboriginal Land Council. They may also be able to assist you in identifying other Aboriginal stakeholders for this project.

Yours sincerely

Tabatha Dantoine

Administration Officer

Office of the Registrar, *Aboriginal Land Rights Act (1983)*

9 September 2011

**Murong Gialinga Aboriginal and Torres Strait Islander
Corporation**

C/O PO Box 1097

Mudgee NSW 2850

Ph: 02 63720859

Email: muronggialinga@hotmail.com

3/1/12

To

Whom it may concern

I Larry Foley am writing to you on behalf of Murong Gialinga as I was an employee for them when we worked at the Lue silver mine in the time I worked there it was only Two Days I found this area to be very Cultural and very important to our people .. I would like to recommend these items

1/ That the area where stock are grazing be fenced off as the Aboriginal artifacts will be damaged or destroyed by the stock I did say this to Matt when we were out there working as did Debbie Foley on behalf of MLALC.

2/ That an Aboriginal site officer be present when the /if the fencing takes place.

3/ All sites found when work was taking place /also the sites found earlier when Aleshis Longsdale & David Maynard did a survey are registered and placed on the AIMS site also proof of this given to all Aboriginal registered stake holders.

4/ That all Aboriginal stake holders are kept informed on all the progress of mine.

5/ It stated in your draft that the Artifacts be placed at the MLALC I would like to see the Artifacts placed somewhere that they will not be impacted in the mine area also a agreement that a Aboriginal site officer from each group registered be present and place the artifacts in the area decided on . A meeting with all stakeholders might be a good idea as all views can be heard /discussed and a good opportunity to hear what the other groups found as only being there Two days and not getting feedt ack what the other groups found so everyone knows what exactly was recorded also what area was covered if the area was covered 100%would be good.

Thank you for your time we look forward to working with you in the future.

Regards

Larry Foley





PO BOX 508
Wellington NSW 2820
ABN: 7755 4814 3187
ICN: 7398

Landscape
PO Box 246
Merbein 3505

The Secretary

Re: Kingsgate Consolidated Limited open cut silver mine at Maloneys Road Lue

Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC) would like to register our interest as a Stakeholder to the above project. WVWAC has officially taken responsibility of all Culture and Heritage within our Native Title area from Gallangabang Aboriginal Corporation as of 22nd May 2010.

On the 18/12/09 the Wellington Valley Wiradjuri Claimants were successful in attaining registration of our Native Title Claim NC09/4 which encompasses a large portion of the North Wiradjuri Nation. A Registered Native Title Claim provides our traditional organisation with the sole authority on all Aboriginal Culture and Heritage issues within our defined region. The Wellington Valley Wiradjuri represents fourteen traditional families with identified apical ancestry pre European occupation. We know our culture, country and continue with our association with our traditional lands.


WVWAC has been established as a Prescribe Body Corporation to represent and administer our Native Title for the Claimants. Our charter is to protect Aboriginal culture and our heritage on our country and our aim is to work with all relevant parties to achieve our objectives.

Following the closure of the stakeholder notification period, WVWAC would appreciate you providing WVWAC with a list of the organisations and/or persons who have registered as aboriginal stakeholders and their respective contact details. Additionally we would appreciate early notice as to the proposed dates and location for the initial consultation meeting.

WVWAC does not object to our details being given to OEH, WVWAC do not wish you to advise any other organisation of our interest to this project.

WVWAC look forward to participating in the above project, sharing our knowledge of county and to ensure our Heritage is protected.

Yours faithfully

 26.9.2011

Stephen Parkes
WVWAC
Board Member

Mudgee Local Aboriginal Land Council

PO Box 1098
Mudgee NSW 2850
Phone: 02 63723511 Fax: 02 63723522
Email: mudgeelalc@bigpond.com

Matt Cupper
Landscape Natural and Cultural Heritage Management
Po Box 246
Merbein VIC 3505

24th January 2011

Dear Matt

Re: Aboriginal Cultural Heritage Assessment - Bowdens Silver Project, Lue.

On behalf of the Mudgee LALC I would like to thank you for the opportunity to participate in the Aboriginal Cultural Heritage Assessment of the abovementioned project.

We feel that the region has significant cultural heritage values for the local Aboriginal community and as such we have the following recommendations based upon the advice received from our Sites Officer:

- That a meeting of the Aboriginal stakeholders involved in the Aboriginal Cultural Heritage Assessment be organised so that stakeholders can discuss outcomes of the survey. We feel that this is important as it is very difficult to make informed decisions about the cultural heritage values of the whole project area when we have not been involved in the full survey. We are quite happy for this meeting to take place at our office.
- Action needs to be taken to ensure that all sites identified in previous surveys are recorded on the AHIMS database
- We recommend that site identified in grazing land as discussed onsite be fenced off to avoid further damage by stock and that an Aboriginal cultural heritage officer be present during this work.
- Where ever possible it is preferable that action be taken to avoid impacts to Aboriginal sites. Where it is not possible to avoid impacts to sites we recommend that artefacts be relocated to avoid damage. Whilst the report recommends the artefacts be placed in the care of the Mudgee LALC we feel this should only be a last resort. It is preferable to relocate the artefacts to a safe area onsite (such as a conservation area) which will not be disturbed as we feel that these items should remain as close as possible to their original location for cultural reasons.

- We would appreciate being kept up to date with the progress of the mine.

On behalf of the Mudgee LALC I would like to thank you again for giving us the opportunity to participate in the Aboriginal Cultural Heritage Assessment and we look forward to working with you in the future. If you have further queries please do not hesitate to contact me.

Yours in Unity



Tony Lonsdale

A/g CEO

WARRABINGA

Native Title Claimants Aboriginal Corporation

PO Box 771

Picton NSW 2574

MOBILE: 0409 966 371 or 0409 966 163

FAX: 02 4677 0454



24th October, 2011

Dr. Simon McDonald,
Project Manager – Bowdens Silver Project
Kingsgate Consolidated Limited,
Suite 801, Level 8
14 Martin Place,
Sydney. NSW 2000

Dear Dr. McDonald

Registration of Interest Aboriginal Cultural Heritage Management Bowdens Silver Project, Lue

Warrabinga Native Title Claimants Aboriginal Corporation wish to register our interest in the above project.

Membership of our organisation is open to adult Aboriginal persons who are descendants of Dabee, Mudgee, Capertee, Coxes River, Goulburn River, Cudgegong River, Gulgong, Cassilis, Bylong, Lithgow, Abercrombie, Jenolan and Wombeyan Caves and Wollemi and Oberon Clans.

Warrabinga Native Title Claimants Aboriginal Corporation was established to represent the interests of a large number of individual Aboriginal clan groups in the areas outlined above.

Broadly our organisation has members with native title interests over the lands and waters associated with the Cox's River, Goulburn River and the Cudgegong River and other waterways within these boundaries .

Our organisation consists of a number of members with knowledge essential to completing Aboriginal cultural heritage assessments and our executive committee make determinations for the most suitably qualified individual(s) for any field work.

Warrabinga is fully insured for both Public Liability and Workers Compensation (Certificates of currency are available upon request, should they be required for any work).



24th October, 2011

Dr. Simon McDonald,
Project Manager – Bowdens Silver Project
Kingsgate Consolidated Limited,
Suite 801, Level 8
14 Martin Place,
Sydney. NSW 2000

Dear Dr. McDonald

**Registration of Interest
Aboriginal Cultural Heritage Management
Bowdens Silver Project, Lue**

North East Wiradjuri Co. Ltd. wish to register our interest in the Aboriginal Cultural Management the above project.

North East Wiradjuri Co. Ltd. is a company that was established to represent the North Eastern Wiradjuri Native Title Party of the Bathurst, Lithgow, Mudgee area. The company was established to conduct business associated with a number of successful N.T. negotiations via Section 31 Ancilliary Deed Agreements. These agreements were the outcome of the Right to Negotiate Process after having passed the Registration Test in the NNTT. Our NT Party has passed the registration test on at least six occasions.

I can be contacted on 0425332434 should you require any further information.

Yours faithfully,

Lyn Syme,

PO Box 29,
KANDOS. NSW. 2848
0425332434
ABN: 18125329526



9 September 2011

Matt Cupper
Landskape Natural & Cultural Heritage Management
PO Box 246
Merbein VIC 3505

**South-East & Central Registry
Sydney Office**

Level 25, 25 Bligh Street
Sydney NSW 2000
GPO Box 9973
Sydney NSW 2000
Telephone (02) 9227 4000
Facsimile (02) 9227 4030

Our Reference: 4461/11nt

Your Reference: -

Dear Mr Cupper

**Native Title Search Results of Lue near Mudgee within Mid-Western Regional Council Local
Government Area**

Thank you for your letter of 8 September 2011.

My search on 9 September 2011 found:

Register Type	NNTT Reference Numbers
National Native Title Register	Nil.
Register of Native Title Claims	NC09/4
Unregistered Claimant applications	Nil.
Register of Indigenous Land Use Agreements	Nil.

I have included register extract, map attachment and a NNTT Registers fact sheet to help you understand the search result.

Please note that there may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed in the Federal Court may not appear on the Tribunal's databases.

If you need additional information please call me on 1800 640 501.



Resolution of native title issues over land and waters.

Freecall 1800 640 501
www.nntt.gov.au

BOWDENS SILVER PTY LIMITED

*Bowdens Silver Project
Report No. 429/25*

SPECIALIST CONSULTANT STUDIES

*Part 13: Aboriginal Cultural and
Historical Heritage Assessment*

Yours sincerely



Nakari Thorpe
Senior Case Management Assistant

Telephone (02) 9227 4004

Facsimile (02) 9227 4030

Email Nakari.thorpe@nntt.gov.au

Encl

SPECIALIST CONSULTANT STUDIES

*Part 13: Aboriginal Cultural and
Historical Heritage Assessment*

BOWDENS SILVER PTY LIMITED

*Bowdens Silver Project
Report No. 429/25*

From: Mingaan Lithgow <mingaan.lithgow@gmail.com>
Subject: Re: Bowdens Silver Project Lue – Notification to Register Interest
Date: 26 September 2011 2:16:03 PM AEST
To: Matt Cupper <landscape@telstra.com>
Reply-To: Mingaan Lithgow <mingaan.lithgow@gmail.com>

Hi Matt Mingaan Aboriginal Corporation would like to be consulted at all times as interested party.

regards

Helen Riley

Mingaan Aboriginal Corporation

From: Matt Cupper <landscape@telstra.com>
To: mingaan.lithgow@gmail.com
Sent: Friday, 23 September 2011 2:31 PM
Subject: Bowdens Silver Project Lue – Notification to Register Interest

Dear Ms Riley,

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Landscape on behalf of Kingsgate would like to consult with all Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area. The purpose of the consultation is to assist Kingsgate in the preparation of an application for an Aboriginal Heritage Impact Permit and to assist the Director General of the NSW Office of Environment and Heritage in his or her consideration and determination of the application. Any persons or groups who would like to be consulted are invited to contact me: Dr Matt Cupper, Landscape, PO Box 246, Merbein 3505; e-mail: landscape@telstra.com; tel: 0408 006 690.

Closing date for registrations of interest is 5:00 pm Monday 10 October 2011.

Yours sincerely,

Matt

Dr Matt Cupper
Principal
Landscape

PO Box 246
Merbein 3505

Tel: 0408 006 690
Fax: 03 5025 2549

BOWDENS SILVER PTY LIMITED

Bowdens Silver Project

Report No. 429/25

SPECIALIST CONSULTANT STUDIES

Part 13: Aboriginal Cultural and

Historical Heritage Assessment

From: Linda.Shreeve@midwestern.nsw.gov.au
Subject: Identification of Aboriginal Stakeholders Bowdens Silver Project Lue
Date: 14 September 2011 3:09:09 PM AEST
To: landscape@telstra.com

1 Attachment, 46 KB

- (sorry this does not want to attach at the bottom for some reason)

Hello Matt,

ABORIGINAL CULTURAL HERITAGE CONSULTATION – PROPOSED BOWDENS SILVER PROJECT LUE

I refer to the above matter and to your e-mail received by Council on 8 September 2011.

Please find attached a list of known Aboriginal groups with a cultural interest in the area of the proposed Silver Mine project. This list has been compiled from information provided by Office of Environment & Heritage (formerly DEECW) and parties who have contacted Council directly. Council would advise that you also contact OHE directly for an updated list.

It should be noted that Mid-Western Regional Council is overlaid by seven Local Aboriginal Land Council areas. The Mudgee LALC covers the majority of the western portion of the LGA with the Bathurst LALC covering the majority of the eastern portion. However, to varying degrees the other LALCs cover portions of the outer edges of the municipality. In this particular instance it is likely that Mudgee LALC will cover most of the project area, however the other LALCs should be included in your consultation.

Should you have any queries in relation to this matter please contact Linda Shreeve on 6378 2850.

Linda Shreeve
Senior Environment Officer

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[Contact List....doc \(46 KB\)](#)

Annexure 4

Proposed Methodology for Aboriginal Cultural Heritage Assessment

(Total No. of pages including blank pages = 14)

Note: This Appendix is only available on the digital version of this document

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BOWDENS SILVER PROJECT
DRAFT METHODOLOGY
ABORIGINAL CULTURAL HERITAGE ASSESSMENT

4 February 2019

1 INTRODUCTION

Bowdens Silver Pty Ltd is planning to apply for an approval under Division 4.7 (State significant development) of Part 4 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figure 1, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Aboriginal stakeholders have been involved in ongoing cultural heritage assessments for the Project but the scope has been subsequently modified to include a proposed ~70 km long pipeline to obtain surplus water from one of the coal mines in the Ulan area (Figure 1).

This document presents a draft methodology for the Aboriginal cultural and archaeological assessment of the proposed pipeline.

This draft methodology has been designed to conform to the relevant requirements of various advisory documents and guidelines. These guidelines and documents include:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Part 6 National Parks and Wildlife Act, 1974)* (DECCW, 2010);
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010); and,
- The Australia ICOMOS Burra Charter (Australia ICOMOS, 1999).

The remainder of this document is structured as follows:

- Section 2: Outlines the objectives of Aboriginal community consultation.
- Section 3: Describes the consultation steps undertaken to date for the Project.
- Section 4: Provides a description of the proposed cultural heritage assessment methodology.
- Section 5: Describes the proposed archaeological assessment methodology.
- Section 6: Provides an overview of the proposed content of the Aboriginal Cultural Heritage Assessment report.
- Section 7: Lists the references cited in this report.

2 OBJECTIVE OF COMMUNITY CONSULTATION

The objective of community consultation is for Aboriginal people to have the opportunity to improve assessment outcomes by:

- providing relevant information about the cultural significance and values of the Aboriginal object(s) and/or place(s);
- influencing the design of the method to assess cultural and scientific significance of Aboriginal object(s) and/or place(s);
- actively contributing to the development of cultural heritage management options and recommendations for any Aboriginal object(s) and/or place(s) within the study area; and
- commenting on the draft assessment report before it is submitted to government.

3 CONSULTATION TO DATE

A summary of the consultation undertaken to date in accordance with the Section 4.1 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010) for the Bowdens Silver Project is outlined below.

The following organisations were asked for names of Aboriginal persons or groups who may hold cultural knowledge of, or have a right or interest in Aboriginal objects, places and/or Aboriginal cultural heritage values in the study area or surrounds:

- OEH Dubbo Environmental Protection and Regulation Group;
- Mudgee Local Aboriginal Land Council;
- The Register, Aboriginal Land Rights Act 1983;
- The National Native Title Tribunal;
- Native Title Services Corporation Limited (NTSCORP Limited);
- Mid-Western Regional Council; and
- Central West Local Land Services.

Bowdens Silver Pty Ltd provided written notification of the proposed Project to Aboriginal stakeholders identified by the organisations listed above. These stakeholders were invited to register an interest in the process of community consultation with Bowdens Silver Pty Ltd regarding the Aboriginal cultural heritage assessment of the proposed Project.

In addition to the written notifications, a notice was placed in the Mudgee Guardian (18 January 2019) seeking registrations from any additional interested Aboriginal stakeholders.

4 CULTURAL ASSESSMENT METHODOLOGY

The objectives of the consultation process are described in Section 2.

In accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010), Kingsgate Consolidated Limited requests that registered Aboriginal stakeholders provide, where relevant, during the conduct of the Aboriginal Cultural Heritage Assessment, cultural information regarding:

- whether there are any Aboriginal objects of cultural value to Aboriginal people in the study area or surrounds; and
- whether there are any places of cultural value to Aboriginal people in the study area or surrounds.

This may include places of social, spiritual and cultural value, historic places with cultural significance, and potential places/areas of historic, social, spiritual and/or cultural significance.

The cultural assessment and consultation process will involve the following:

- distribution of this proposed assessment methodology to registered Aboriginal stakeholders;
- review of the proposed assessment methodology by registered Aboriginal stakeholders who may wish to advise any matters such as issues/areas of cultural significance that might affect, inform or refine the assessment methodology;

- consultation with registered Aboriginal stakeholders regarding the cultural context and value of Aboriginal objects and/or places that may be in the study area or surrounds (including appropriate management of any cultural information provided by registered Aboriginal stakeholders that is sensitive or has restricted public access);
- assessment of the significance of Aboriginal objects and/or places located in the study area or surrounds based on the context, Aboriginal heritage values and archaeological assessment;
- consultation with registered Aboriginal stakeholders regarding potential management options to avoid or mitigate harm and/or conserve known Aboriginal objects and/or places; and
- documentation of feedback received as part of the cultural assessment from registered Aboriginal stakeholders for presentation in the final cultural heritage assessment report (subject to the sensitivity of the information provided).

Sensitive Cultural Information - Management Protocol

In the event that a registered Aboriginal party has sensitive or restricted public access information it is proposed that Bowdens Silver Pty Ltd would manage this information (if provided by the Aboriginal community) in accordance with a sensitive cultural information management protocol. It is anticipated that the protocol will include making note of and managing the material in accordance with the following key limitations/requirements as advised by Aboriginal people at the time of the information being provided:

- any restrictions on access to the material;
- any restrictions on communication of the material;
- any restrictions on the location/storage of the material;
- any cultural recommendations on handling the material;
- any contextual information;
- any names and contact details of persons authorised within the relevant Aboriginal group to make decisions concerning the Aboriginal material and the degree of authorisation;
- any details of any consent given in accordance with customary law;
- the level of confidentiality to be accorded to the material; and
- any access and use by the registered Aboriginal parties, of the cultural information in the material.

5 ARCHAEOLOGICAL ASSESSMENT METHODOLOGY

The archaeological assessment will involve the following:

- a search of the NSW Office of Environment and Heritage (OEH) AHIMS database;
- literature review of relevant cultural heritage and archaeological reports and publications;
- site inspection/survey of known sites within the study area and the study area with the assistance of registered Aboriginal stakeholders;
- archaeological significance assessment based on existing information and additional information collected during the site inspections/survey and consultation with Aboriginal stakeholders; and
- preparation of an Aboriginal Cultural Heritage Assessment report.

Information from previous archaeological investigations at the Bowdens Silver Project will inform the site inspection/survey of the study area and will also be incorporated into the archaeological significance assessment.

6 ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT

Following consultation on the methodology of the cultural heritage assessment and the undertaking of any required field components, a draft Aboriginal Cultural Heritage Assessment report will be prepared. The draft Aboriginal Cultural Heritage Assessment report will be provided to registered Aboriginal stakeholders for review and feedback and will include:

- details of the objects and places identified within the study area and an assessment of potential impacts from the Project;
- records of the Aboriginal stakeholder consultation conducted and how any comments received throughout the assessment process were considered; and
- proposed management and mitigation recommendations drawing on information provided by registered Aboriginal stakeholders and the findings of the cultural and archaeological assessments.

7 REFERENCES

Australia ICOMOS (1999) *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter)*. Revised edition. Australia ICOMOS, Canberra.

Department of Environment, Climate Change and Water (2010) *Aboriginal Cultural Heritage Community Consultation Requirements for Proponents*.

Department of Environment, Climate Change and Water (2010) *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.

BOWDENS SILVER PROJECT

DRAFT METHODOLOGY

ABORIGINAL CULTURAL HERITAGE ASSESSMENT

October 2011

1 INTRODUCTION

Kingsgate Consolidated Limited (Kingsgate) is planning to apply for an approval under Part 4.1 of the *Environmental Planning and Assessment Act 1979* to develop and operate the Bowdens open cut silver mine at Maloneys Road, Lue, approximately 25 km southeast of Mudgee in central western NSW (see Figures 1-2).

This document presents a draft methodology for the Aboriginal cultural and archaeological assessment of the Bowdens Silver Project (the Project). The proposed Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

This draft methodology has been designed to conform to the relevant requirements of various advisory documents and guidelines. These guidelines and documents include:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Part 6 National Parks and Wildlife Act, 1974)* (DECCW, 2010);
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010); and,
- The Australia ICOMOS Burra Charter (Australia ICOMOS, 1999).

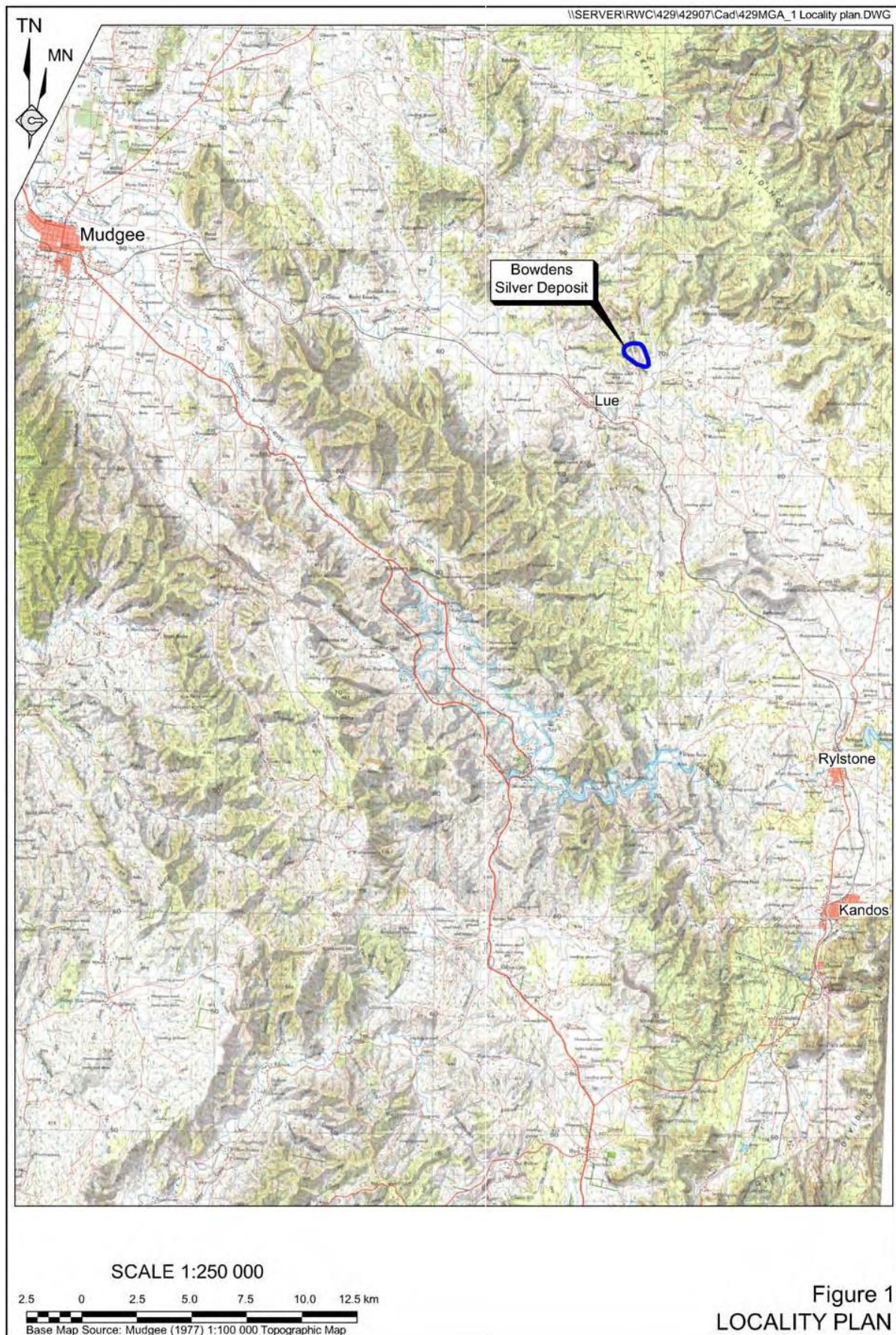
The remainder of this document is structured as follows:

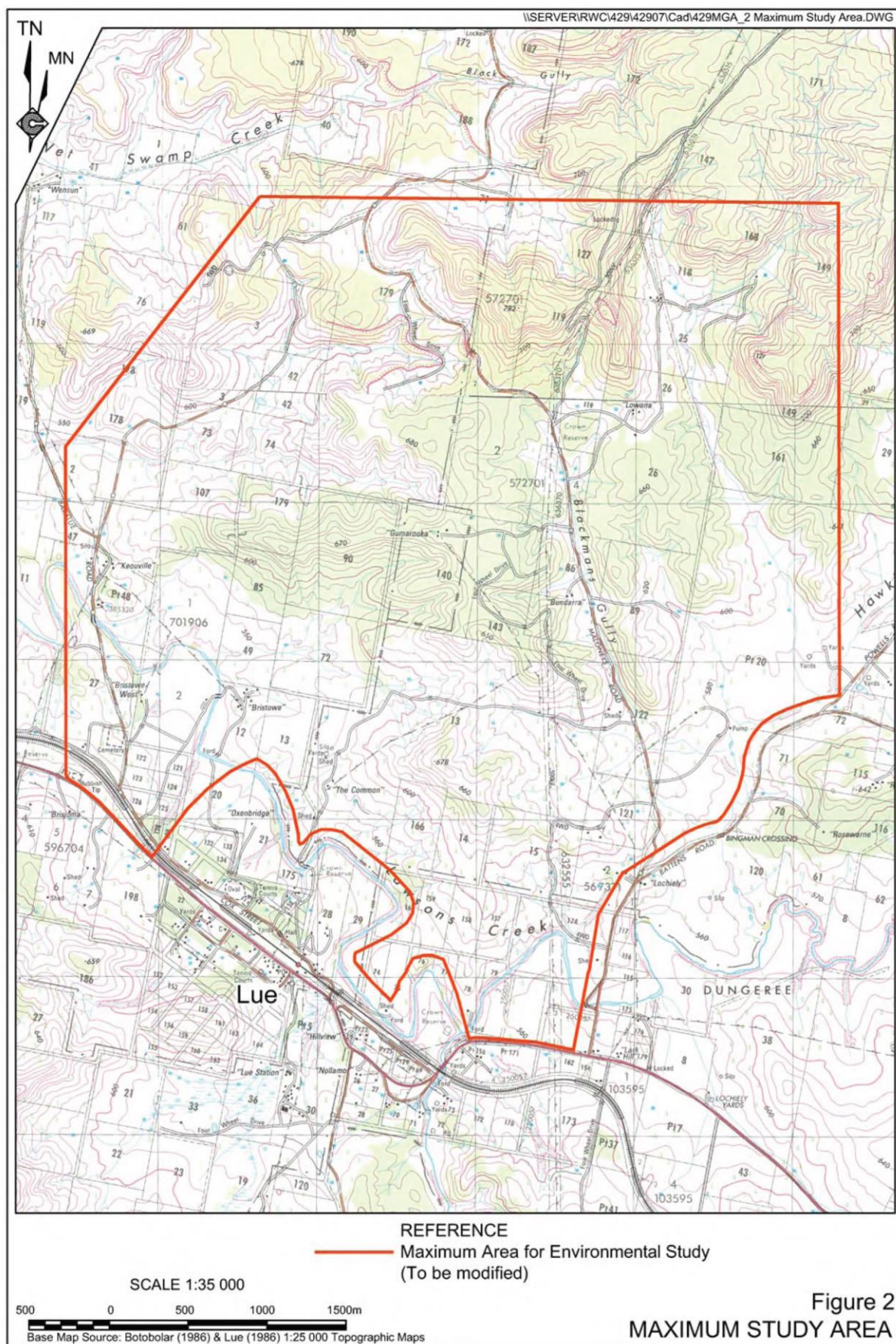
- Section 2: Outlines the objectives of Aboriginal community consultation.
- Section 3: Describes the consultation steps undertaken to date for the Project.
- Section 4: Provides a description of the proposed cultural heritage assessment methodology.
- Section 5: Describes the proposed archaeological assessment methodology.
- Section 6: Provides an overview of the proposed content of the Aboriginal Cultural Heritage Assessment report.
- Section 7: Lists the references cited in this report.

2 OBJECTIVE OF COMMUNITY CONSULTATION

The objective of community consultation is for Aboriginal people to have the opportunity to improve assessment outcomes by:

- providing relevant information about the cultural significance and values of the Aboriginal object(s) and/or place(s);
- influencing the design of the method to assess cultural and scientific significance of Aboriginal object(s) and/or place(s);
- actively contributing to the development of cultural heritage management options and recommendations for any Aboriginal object(s) and/or place(s) within the study area; and
- commenting on the draft assessment report before it is submitted to government.





3 CONSULTATION TO DATE

A summary of the consultation undertaken to date in accordance with the Section 4.1 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010) for the Bowdens Silver Project is outlined below.

The following organisations were asked for names of Aboriginal persons or groups who may hold cultural knowledge of, or have a right or interest in Aboriginal objects, places and/or Aboriginal cultural heritage values in the study area or surrounds:

- OEH Dubbo Environmental Protection and Regulation Group;
- Mudgee Local Aboriginal Land Council;
- The Register, Aboriginal Land Rights Act 1983;
- The National Native Title Tribunal;
- Native Title Services Corporation Limited (NTSCORP Limited);
- Mid-Western Regional Council; and
- Central West Catchment Management Authority.

Kingsgate Consolidated Limited provided written notification of the proposed Project to Aboriginal stakeholders identified by the organisations listed above. These stakeholders were invited to register an interest in the process of community consultation with Kingsgate Consolidated Limited regarding the Aboriginal cultural heritage assessment of the proposed Project.

In addition to the written notifications, a notice was placed in the Mudgee Guardian (26 September 2011) seeking registrations from any additional interested Aboriginal stakeholders.

4 CULTURAL ASSESSMENT METHODOLOGY

The objectives of the consultation process are described in Section 2.

In accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010), Kingsgate Consolidated Limited requests that registered Aboriginal stakeholders provide, where relevant, during the conduct of the Aboriginal Cultural Heritage Assessment, cultural information regarding:

- whether there are any Aboriginal objects of cultural value to Aboriginal people in the study area or surrounds; and
- whether there are any places of cultural value to Aboriginal people in the study area or surrounds.

This may include places of social, spiritual and cultural value, historic places with cultural significance, and potential places/areas of historic, social, spiritual and/or cultural significance.

The cultural assessment and consultation process will involve the following:

- distribution of this proposed assessment methodology to registered Aboriginal stakeholders;
- review of the proposed assessment methodology by registered Aboriginal stakeholders who may wish to advise any matters such as issues/areas of cultural significance that might affect, inform or refine the assessment methodology;

- consultation with registered Aboriginal stakeholders regarding the cultural context and value of Aboriginal objects and/or places that may be in the study area or surrounds (including appropriate management of any cultural information provided by registered Aboriginal stakeholders that is sensitive or has restricted public access);
- assessment of the significance of Aboriginal objects and/or places located in the study area or surrounds based on the context, Aboriginal heritage values and archaeological assessment;
- consultation with registered Aboriginal stakeholders regarding potential management options to avoid or mitigate harm and/or conserve known Aboriginal objects and/or places; and
- documentation of feedback received as part of the cultural assessment from registered Aboriginal stakeholders for presentation in the final cultural heritage assessment report (subject to the sensitivity of the information provided).

Sensitive Cultural Information - Management Protocol

In the event that a registered Aboriginal party has sensitive or restricted public access information it is proposed that Kingsgate Consolidated Limited would manage this information (if provided by the Aboriginal community) in accordance with a sensitive cultural information management protocol. It is anticipated that the protocol will include making note of and managing the material in accordance with the following key limitations/requirements as advised by Aboriginal people at the time of the information being provided:

- any restrictions on access to the material;
- any restrictions on communication of the material;
- any restrictions on the location/storage of the material;
- any cultural recommendations on handling the material;
- any contextual information;
- any names and contact details of persons authorised within the relevant Aboriginal group to make decisions concerning the Aboriginal material and the degree of authorisation;
- any details of any consent given in accordance with customary law;
- the level of confidentiality to be accorded to the material; and
- any access and use by the registered Aboriginal parties, of the cultural information in the material.

5 ARCHAEOLOGICAL ASSESSMENT METHODOLOGY

The archaeological assessment will involve the following:

- a search of the NSW Office of Environment and Heritage (OEH) AHIMS database;
- a search of the National Heritage List, Commonwealth Heritage List and register of the National Estate;
- literature review of relevant cultural heritage and archaeological reports and publications;
- site inspection/survey of known sites within the study area and the study area with the assistance of registered Aboriginal stakeholders;
- archaeological significance assessment based on existing information and additional information collected during the site inspections/survey and consultation with Aboriginal stakeholders; and
- preparation of an Aboriginal Cultural Heritage Assessment report.

Information from previous archaeological investigations at the Bowdens Silver Project will inform the site inspection/survey of the study area and will also be incorporated into the archaeological significance assessment.

6 ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT

Following consultation on the methodology of the cultural heritage assessment and the undertaking of any required field components, a draft Aboriginal Cultural Heritage Assessment report will be prepared. The draft Aboriginal Cultural Heritage Assessment report will be provided to registered Aboriginal stakeholders for review and feedback and will include:

- details of the objects and places identified within the study area and an assessment of potential impacts from the Project;
- records of the Aboriginal stakeholder consultation conducted and how any comments received throughout the assessment process were considered; and
- proposed management and mitigation recommendations drawing on information provided by registered Aboriginal stakeholders and the findings of the cultural and archaeological assessments.

7 REFERENCES

Australia ICOMOS (1999) *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter)*. Revised edition. Australia ICOMOS, Canberra.

Department of Environment, Climate Change and Water (2010) *Aboriginal Cultural Heritage Community Consultation Requirements for Proponents*.

Department of Environment, Climate Change and Water (2010) *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.

Annexure 5

Formal Responses from Aboriginal Stakeholders to Draft Report

(Total No. of pages including blank pages = 22)

Note: This Appendix is only available on the digital version of this document

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From: mudgeelalc@bigpond.com
Subject: Re: Bowdens Silver Lue
Date: 25 February 2019 at 10:45 am
To: Matt Cupper <landskape@telstra.com>

M

Hi Matt,
Just confirming we are happy with the proposed methodology and look forward to working with you in the near future.
Regards
Tony Lonsdale
CEO
Mudgee LALC

Sent from my iPad

On 4 Feb 2019, at 9:01 pm, Matt Cupper <landskape@telstra.com> wrote:

Dear Tony,

Bowdens Silver Pty Ltd is planning to apply for an approval under Division 4.7 (State significant development) of Part 4 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figure 1, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Aboriginal stakeholders have been involved in ongoing cultural heritage assessments for the Project but the scope has been subsequently modified to include a proposed ~70 km long pipeline to obtain surplus water from one of the coal mines in the Ulan area (Figure 1).

Please find enclosed for your review a copy of the Proposed Methodology for the Aboriginal Cultural Heritage Assessment of the proposed pipeline corridor.

Consistent with the NSW Office of Environment and Heritage's *Aboriginal Cultural Heritage Consultation Requirements for Applicants 2010*, I provide the attached proposed methodology for your review and feedback. Your feedback may include the identification of issues or areas of cultural significance that may be used to affect, inform or refine the proposed methodology.

Could you please provide any feedback to me at by e-mail (<landskape@telstra.com>) or telephone (0408 006 690) by 5:00 pm on Tuesday 5 March 2019

I will also contact you in the next month regarding dates and logistics for a field assessment of the proposed pipeline corridor.

Please do not hesitate to contact me if you have any queries.

Many thanks and kind regards,

Matt

Dr Matt Cupper
Principal
Landskape

Tel: 0408 006 690

<Notification Figure 1.pdf>

<Bowdens - ACHA Draft Methodology 4 February 2019.pdf>

On 17 Jan 2019, at 1:29 pm, Murong Gialinga <muronggialinga@hotmail.com> wrote:

Hi Matt Happy new year thanks for that we look forward to working again with you take care Regards Deb

From: Matt Cupper <landskape@telstra.com>
Sent: Thursday, 17 January 2019 12:16 PM

To: muronggialinga@hotmail.com

Subject: Bowdens Silver Lue

Dear Debbie and Larry,

Happy new year. Trust all is well with you both.

Just advising the OEH are requiring Bowdens Silver to re-advertise for Aboriginal stakeholder registration for the Lue project because the scope has expanded to include a proposed water pipeline to Ulan (figure attached). The involvement of Murong Gialinga Aboriginal and Torres Strait Islander Corporation and Mudgee Local Aboriginal Land Council in the assessment process is of course ongoing (you don't need to re-register) and I look forward to continuing to work with you on further assessment over the coming year.

All the best,
Matt

Dr Matt Cupper
Principal
Landscape

Tel: 0408 006 690

From: Murong Gialinga muronggialinga@hotmail.com
 Subject: Re: Bowdens Silver Lue
 Date: 8 March 2019 at 12:57 am
 To: Matt Cupper landskape@telstra.com

MG

Hi Matt sorry we are late replying but i was out of town a fair bit plus have had family health issues Murong Gialinga have some questions. Is the entire project route going to be covered walking including locating and assessing the previously registered sites if so will all registered Aboriginal stakeholders reps be working together or on alternate days we would like to see all reps working on the same days as to discuss matters together and the reps would be able to give daily feedback to their communities? Will both sides of the proposed pipeline be surveyed? The survey area should have the reps walk no further than 10 metres apart any further and you can miss objects. How far per day will the reps have to walk? This water pipeline will require several pumping stations would like to know where they would be situated and these areas be surveyed. Murong Gialinga would like a draft methodology report to be given to all Registered Aboriginal stakeholders so we can show our communities and give you a feed back of their comments and concerns in 28 days. We would also like a meeting with yourself a person from each Registered party and the environment people from Bowdens to discuss any concerns people may have before the survey takes place Kind Regards Debbie on behalf of Murong Gialinga

From: Matt Cupper <landskape@telstra.com>
 Sent: Monday, 4 February 2019 8:57 PM
 To: Murong Gialinga
 Subject: Re: Bowdens Silver Lue

Dear Deb and Larry,

Bowdens Silver Pty Ltd is planning to apply for an approval under Division 4.7 (State significant development) of Part 4 of the *Environmental Planning and Assessment Act 1979* to develop and operate an open cut silver mine near Lue approximately 25 km southeast of Mudgee in central western NSW (see Figure 1, attached). It is envisaged the Project would involve a conventional open cut mine including an out-of-pit waste rock emplacement facility, tailings storage facility, processing plant and other ancillary infrastructure.

Aboriginal stakeholders have been involved in ongoing cultural heritage assessments for the Project but the scope has been subsequently modified to include a proposed ~70 km long pipeline to obtain surplus water from one of the coal mines in the Ulan area (Figure 1).

Please find enclosed for your review a copy of the Proposed Methodology for the Aboriginal Cultural Heritage Assessment of the proposed pipeline corridor.

Consistent with the NSW Office of Environment and Heritage's *Aboriginal Cultural Heritage Consultation Requirements for Applicants 2010*, I provide the attached proposed methodology for your review and feedback. Your feedback may include the identification of issues or areas of cultural significance that may be used to affect, inform or refine the proposed methodology.

Could you please provide any feedback to me at by e-mail (landskape@telstra.com) or telephone (0408 006 690) by 5:00 pm on Tuesday 5 March 2019

I will also contact you in the next month regarding dates and logistics for a field assessment of the proposed pipeline corridor.

Please do not hesitate to contact me if you have any queries.

Many thanks and kind regards,

Matt

Dr Matt Cupper
Principal
Landscape

Tel: 0408 006 690

On 17 Jan 2019, at 1:29 pm, Murong Gialinga <muronggialinga@hotmail.com> wrote:

Hi Matt Happy new year thanks for that we look forward to working again with you take care Regards Deb

From: Matt Cupper <landscape@telstra.com>
Sent: Thursday, 17 January 2019 12:16 PM
To: muronggialinga@hotmail.com
Subject: Bowdens Silver Lue

Dear Debbie and Larry,

Happy new year. Trust all is well with you both.

Just advising the OEH are requiring Bowdens Silver to re-advertise for Aboriginal stakeholder registration for the Lue project because the scope has expanded to include a proposed water pipeline to Ulan (figure attached). The involvement of Murong Gialinga Aboriginal and Torres Strait Islander Corporation and Mudgee Local Aboriginal Land Council in the assessment process is of course ongoing (you don't need to re-register) and I look forward to continuing to work with you on further assessment over the coming year.

All the best,
Matt

Dr Matt Cupper
Principal
Landscape

Tel: 0408 006 690



C/- 1 Golden Place
Orange NSW 2800
ABN: 77 548 143 187
ICN: 7398

WVWAC@hotmail.com

2nd March 2019,

Dr Matt Cupper
Principal
Landscape
Level: 03, Room: 345,
Mccoy Building/Earth Sciences,
Parkville VIC 3052

RE: Bowdens Silver Project – Draft Methodology Aboriginal Cultural Heritage Assessment dated 4th February 2019. (Ulan Coal to Bowdens Silver Water Pipeline)

Dear Dr Cupper,

Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC) and Gallangabang Aboriginal Corporation (GAC) 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 and Gallangabang represent the 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.

WVWAC and GAC object to any other non-traditional aboriginal organizations or people taking part in site surveys, consultation and assessments within our defined 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 (WVWAC) and Gallangabang Aboriginal Corporation (GAC) have the following concerns, comments and or recommendations in regards to the supplied Bowdens Silver Project – Draft Methodology Aboriginal Cultural Heritage Assessment dated 4th February 2019. (Ulan Coal to Bowdens Silver Water Pipeline):

Section 5 Archaeological Assessment Methodology - page 3

The archaeological assessment will involve the following:

- a search of the NSW Office of Environment and Heritage (OEH) AHIMS database;
- literature review of relevant cultural heritage and archaeological reports and publications;
- site inspection/survey of known sites within the study area and the study area with the assistance of registered Aboriginal stakeholders;
- archaeological significance assessment based on existing information and additional information collected during the site inspections/survey and consultation with Aboriginal stakeholders; and
- preparation of an Aboriginal Cultural Heritage Assessment report.

Information from previous archaeological investigations at the Bowdens Silver Project will inform the site inspection/survey of the study area and will also be incorporated into the archaeological significance assessment.

The above is a direct copy of the information from the draft methodology, there is no actual field process detail and information, WVVAC and GAC require further information in regards to this methodology:

- Is the entire project route to be surveyed on foot, including locating and assessing **ALL** previously registered sites,
- Are both sides of the proposed pipeline route to be surveyed or just one side and the parameters of this i.e. a 10m wide easement,
- A water pipeline this long will require pumping stations, where are they proposed to be located and the areas to be surveyed for them i.e. 100mx100m pads allowing for construction and large vehicle turning and site movements,
- How many members will there be in the field survey team and what that consists of i.e. 1 archaeologist and 2 RAP members,

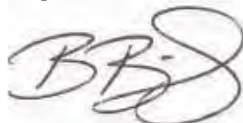
After conversations had with numerous Archaeologists and various people from OEH gave identical feedback in regards to the basic consultation process as detailed below:

- Send a detailed draft methodology to Registered Aboriginal Parties with 28 days to make comment and or recommendations
- Methodology finalized and copies supplied to Registered Aboriginal Parties
- Field survey or other activity completed with Registered Aboriginal Parties
- AHIMS Register updated with new site information
- Draft report issued to Registered Aboriginal Parties within a 3 to 4 month time frame with 28 days to make comment and or recommendations **(As per the contracts emailed recently R W Corkery require this without a draft archaeological report within 1 week post survey).**
- Final report issued and copy sent to Registered Aboriginal Parties
- Final report lodged with OEH
- Final report used in updating of Aboriginal Cultural Heritage Management Plans and or Forms part of an Environmental Impact Statement to be lodged with DP&E.

WVVAC and GAC do not object to our details being given to OEH, however WVVAC do not wish you to advise any other organization of our interest and knowledge relating to this project. WVVAC and GAC 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 and GAC Directors should you require our assistance to address any Aboriginal issues to support your future plans.

Regards,



Bradley R. Bliss J.P.
WVVAC CEO and Contact Officer
Gallangabang Aboriginal Corporation Director
Wiradjuri Council of Elders Member
Senior Aboriginal Cultural Heritage Field Officer
Senior Aboriginal Cultural Mentor and Educator
Traditional Owner Clan Descendant
Mobile: 0427321016

Mudgee Local Aboriginal Land Council

PO Box 1098

Mudgee NSW 2850

Phone: 02 63723511 Fax: 02 63723522

Email: mudgeelalc@bigpond.com

Matt Cupper

Landscape Natural and Cultural Heritage Management

Po Box 246

Merbein VIC 3505

24th January 2011

Dear Matt

Re: Aboriginal Cultural Heritage Assessment - Bowdens Silver Project, Lue.

On behalf of the Mudgee LALC I would like to thank you for the opportunity to participate in the Aboriginal Cultural Heritage Assessment of the abovementioned project.

We feel that the region has significant cultural heritage values for the local Aboriginal community and as such we have the following recommendations based upon the advice received from our Sites Officer:

- That a meeting of the Aboriginal stakeholders involved in the Aboriginal Cultural Heritage Assessment be organised so that stakeholders can discuss outcomes of the survey. We feel that this is important as it is very difficult to make informed decisions about the cultural heritage values of the whole project area when we have not been involved in the full survey. We are quite happy for this meeting to take place at our office.
- Action needs to be taken to ensure that all sites identified in previous surveys are recorded on the AHIMS database
- We recommend that site identified in grazing land as discussed onsite be fenced off to avoid further damage by stock and that an Aboriginal cultural heritage officer be present during this work.
- Where ever possible it is preferable that action be taken to avoid impacts to Aboriginal sites. Where it is not possible to avoid impacts to sites we recommend that artefacts be relocated to avoid damage. Whilst the report recommends the artefacts be placed in the care of the Mudgee LALC we feel this should only be a last resort. **It is preferable to relocate the artefacts to a safe area onsite** (such as a conservation area) which will not be disturbed as we feel that these items should remain as close as possible to their original location for cultural reasons.

- We would appreciate being kept up to date with the progress of the mine.

On behalf of the Mudgee LALC I would like to thank you again for giving us the opportunity to participate in the Aboriginal Cultural Heritage Assessment and we look forward to working with you in the future. If you have further queries please do not hesitate to contact me.

Yours in Unity

Tony Lonsdale

A/g CEO

**Murong Gialinga Aboriginal and Torres Strait Islander
Corporation**

C/O PO Box 1097

Mudgee NSW 2850

Ph: 02 63720859

Email: muronggialinga@hotmail.com

3/1/12

To

Whom it may concern

I Larry Foley am writing to you on behalf of Murong Gialinga as I was an employee for them when we worked at the Lue silver mine in the time I worked there it was only Two Days I found this area to be very Cultural and very important to our people .. I would like to recommend these items

1/ That the area where stock are grazing be fenced off as the Aboriginal artifacts will be damaged or destroyed by the stock I did say this to Matt when we were out there working as did Debbie Foley on behalf of MLALC.

2/ That an Aboriginal site officer be present when the /if the fencing takes place.

3/ All sites found when work was taking place /also the sites found earlier when Aleshis Longsdale & David Maynard did a survey are registered and placed on the AIMS site also proof of this given to all Aboriginal registered stake holders.

4/ That all Aboriginal stake holders are kept informed on all the progress of mine.

5/ It stated in your draft that the Artifacts be placed at the MLALC I would like to see the Artifacts placed somewhere that they will not be impacted in the mine area also a agreement that a Aboriginal site officer from each group registered be present and place the artifacts in the area decided on . A meeting with all stakeholders might be a good idea as all views can be heard /discussed and a good opportunity to hear what the other groups found as only being there Two days and not getting feedt ack what the other groups found so everyone knows what exactly was recorded also what area was covered if the area was covered 100%would be good.

Thank you for your time we look forward to working with you in the future.

Regards

Larry Foley





NORTH EAST WIRADJURI COMPANY LTD

31st January, 2012.

Dr. Matt Cupper,
Principal,
Landscape,
PO Box 246,
MERBEIN. 3505.

Dear Matt,

Kingsgate Bowdens Pty. Limited.

I attended the Bowdens property near Loue on Friday, 25th November. Kevin Williams, representing Warrabinga Native Title Claimants Aboriginal Corporation accompanied me.

I understand that there had been other Aboriginal Stakeholder groups attending on various days earlier in the week.

Executive Summary Response to Recommendations

Agree that Kingsgate arrange to salvage the Aboriginal objects at the seven Aboriginal cultural heritage sites located within the mine and ancillary infrastructure disturbance areas. A suitable qualified archaeologist and representatives of the Aboriginal Stakeholder groups should be engaged to record and collect the Aboriginal objects.

If any of these disturbance areas change, then salvage would also occur in these areas.

Do not agree that these items should be stored in a "Keeping Place" at the Mudgee Local Aboriginal Land Council Office. A "Keeping Place" should be established on site, or alternatively lodged with the Mudgee National Parks Office. These objects should be returned to the landscape when mining has ceased and rehabilitation has occurred. Local Aboriginal Land Councils rely mainly (if not solely) on funding from the NSW Local Aboriginal Land Council. Some LALC's have security of tenure in that own their own

PO Box 29, Kandos, NSW, 2848
0425332434

ABN: 18125329526

1

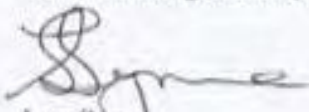
buildings. However, this is not the case with Mudgee LALC and there have been problems in the past with funding and management issues.

Human Skeletal remains – I understand Kevin Williams has addressed this issue in his response and I endorse his comments.

The Aboriginal Cultural Heritage Management Plan should be a living document for the life of the mine and able to be adapted as any changes to the Mining Plan occur. Aboriginal Stakeholder groups should be consulted in the development of this ACHMP.

Kingsgate must provide training to all employees and contractors regarding the ACHMP and Aboriginal cultural heritage issues in general.

Yours in Indigenous Spirit,



Lyn Syme
NEW Co Site Representative.

PO Box 29, Kandos, NSW, 2848
0425332434

ABN: 18125329526

2

From: kevin williams <brunglekev@hotmail.com>
Subject: RE: Cultural Heritage Bowdens Silver Project Luoe
Date: 3 January 2012 9:14:21 AM AEDT
To: Matt Cupper <landscape@telstra.com>

Dear Matt

I enjoyed the experience also.

The wording of Lue has been changed over time without regard to the original owners. A search of the areas from Rylstone to Mudgee will show that the language grouping and the locality names predominately end with a double "ee". I therefore use that spelling.

The Luoe survey connects my coverage of land and country between Ulan and Lithgow.

I have had a personal connection with Lawson Creek for some twenty years so it was good to get a scientific background to the landscape.

Draft Report:

The Lawson Creek survey area covers the upper catchment area of a major tributary of the Cudgegong River. Both the tributary and the Cudgegong have extensive evidence of Aboriginal occupation. In the event that the mine goes ahead we would expect a more detailed survey of the sites in the upper slopes of the mine footprint. Especially where the likely area of the power supply to the mine is located. The geography of the area lends itself to a pathway from the creek through the upper areas of the mine and this area.

Executive Summary (6-7)

Paragraph 3:

The relocation of the 500kV should be accompanied by a further survey and any necessary salvage of cultural material arising out of that survey.

Any increase in traffic from "...typically as 1 truck per day..." should be notified to our organisations.

Paragraph 5:sub paragraph 1

The consultation with the "...local Aboriginal community..." should not hold out that the Aboriginal community is confined to the Local Aboriginal Land Council. Our position is that Native Title legislation (Federal) holds precedence over NSW state legislation. Mudgee Local Aboriginal Land Council (MLALC) is not the peak body in determination of concerns with regard to Aboriginal cultural material in the Luoe area.

Paragraph 5:sub paragraph 4

Our organisations would like to know how the significance of the (potential) sites are to be determined. We need to know the criteria to be applied to this assessment.

Paragraph 5:sub paragraph 6

The consultations should not consider the peak body as MLALC.

Paragraph 6:

Our organisations would appreciate a record of the forty-three Aboriginal cultural heritage sites. We would also prefer to have this in a digital format.

Executive Summary (6-8)

Paragraph 2 (sub Paragraph 1)

"...These items should be properly curated and stored in a "Keeping Place" at the Mudgee Local Aboriginal Land Council office..."

Resonse:

MLALC was reinstated from a three year failure of administration of the current personnel by the efforts of Lyn Syme and myself. I am a former Chairperson of the MLALC and Lyn is a former CEO. We strongly protest on behalf of North East Wiradjuri Company Limited (NEWCO) and Warrabinga Native Title Claimants Aboriginal Corporation (WNTCAC) at the suggestion that MLALC has

authority (with NSW state legislation) over these Native Title (Federal legislation) organisations.

MLALC does not have the experience or the expertise to properly curate or maintain an ongoing "...Keeping Place..." in accordance with your recommendations. We do not believe that the organisation will survive the life of the mine, even less. It therefore means that the "...Keeping Place..." recommendation would in all likelihood not secure the cultural material much beyond the survey conclusion.

Our recommendation would be for an on-site (in country) "...Keeping Place..." that would be a secure long term place that would not be in the hands of people who have demonstrably shown themselves to be unable to administer MLALC. A container would be a suitable option. This remains open to negotiation by the Native Title parties. The proper methods of curation would be open to continuing negotiation and the available science.

Paragraph 2 (sub Paragraph 2)

"...In the unlikely event that human skeletal remains are encountered..."

Response

Our organisations note that this statement is made without any supporting evidence. It remains quite clear that the landscape could clearly lend itself to burials given the evidence of occupation. The science regarding burials remains open to question.

Paragraph 2 (sub Paragraph 2)

"...If the remains are thought to be less than 100 years old the Police or the State Coroners Office (tel: 92 9553 4066) must be notified..."

Response:

There is no scientific evidence provided to support how the remains are "...thought to be less than 100 years old...". If this is available it would be good for our knowledge.

Paragraph 2 (sub Paragraph 2)

Our organisations negotiations with major mines in the Ulan area has resulted in the following agreed outcomes with regard to suspected burial sites:

If human skeletal remains are found within the project area;

- (a) ground disturbance works in the immediate vicinity of the skeletal material cease at once
- (b) workers are to report the find to their immediate supervisor

Reporting process:

- (a) Supervisors will be responsible to report any find to senior management
- (b) Management will inform as soon as practicable:
 - (i) NSW Police
 - (ii) Aboriginal stakeholder groups
 - (iii) Office of Environment and Heritage (OEH)
 - (iv) A physical anthropologist (name(s) will be provided by the community prior to works commencing)
 - (v) Department of Planning (DPI)

If it is discovered that the remains are definitely Aboriginal, the responsibility for the removal and relocation will remain with the Aboriginal community.

Paragraph 2 (sub Paragraph 3)

ACHMP

- (a) The ACHMP is to be regarded as a living document. It is not to be written in a point in time and left there.
- (b) When the document is written there may remain sections on which the ACHMP is silent in the future. Our position is that a

consensus point of view can be found rather than rely on the literal wording of the document.

Paragraph 2 (sub Paragraph 4)

Training

Agreed.

With our experience in other major projects our organisations have developed a Powerpoint presentation that outlines cultural training and how to advise workers on how to deal with our cultural material. It is available for use by the project.

Summary

Our organisations appreciate the efforts of Bowdens Silver Project (Kingsgate) and Landsape in the process of the surveys and the recording of the cultural material.

The important points in our response are as noted earlier. We trust that they are afforded due weight. When the final report is available and when the final mine plan and timetable is available we will comment further.

An important point that I would reiterate is that we would like all future material in digital form for two reasons. One is that it provides us with the opportunity to seamlessly process information. Two is that our organisations are looking to the future and the skilling up of the next generations(s) in the technical skills necessary to see themselves through the life of the mine, or any other project. Initially that will be my responsibility and I will then be training up our members. Any help you can provide in this material would be appreciated.

(Personally, a few points. I say again that I enjoyed the time with you. It is always interesting to come up with the opportunity to meet a new mind. Secondly, the country again was a joy to be in. I look forward to future cooperation in our relationship with the mine. I have also enrolled in a Diploma in Indigenous Archaeology at UNE in the new year. I would like to stay in touch.)

Regards

Kevin

From: landsape@telstra.com
To: brunglekev@hotmail.com
Subject: Re: Cultural Heritage Bowdens Silver Project Lue
Date: Wed, 21 Dec 2011 17:34:29 +1100

Dear Kevin,

Many thanks once again for your assistance with the recent Aboriginal cultural heritage survey at Lue. It was a pleasure to work with you on the project. Please find attached a brief draft summary of the Aboriginal cultural heritage and suggested summary management recommendations. I'll send through a draft detailed assessment report in the new year.

Could you send through a brief summary report detailing your assessment of the study area, please?

Please do not hesitate to contact me if you have any queries.

Have a pleasant Christmas and New Year break.

Many thanks and kind regards,
Matt

Dr Matt Cupper
Principal
Landsape

PO Box 246
Merbein 3505

Tel: 0408 006 690
Fax: 03 5025 2549

DISCUSSIONS WITH ABORIGINAL STAKEHOLDERS 21 MARCH 2013

Present:	Deb Foley	Murong Gialinga Aboriginal & Torres Strait Islander
	Larry Foley	Corporation
	Kevin Williams	Warrabinga Native Title Claimants Aboriginal Corporation
	Lyn Syme	North East Wiradjuri Co. Ltd
	Robyn Williams	
	Chris Mills	Kingsgate Bowdens Pty Ltd
	John Bailey	Kingsgate Bowdens Pty Ltd
	Matt Cupper	Landskape Natural and Cultural Heritage Management
	Rob Corkery	R.W. Corkery & Co Pty Ltd
Apologies:	John Newton	Mudgee Local Aboriginal Land Council
	Edwin Wolferolen	Mingaan Aboriginal Corporation

Introduction

Question: Superimpose sites on map

Matt Cupper

- Up to 25 sites to be disturbed
- Return relics to final landscape

Question: Subsurface investigations

- Stone artefacts disturbed
- In TSF sitting on S/S
- Likely subsurface near creek lines

Elsewhere – sitting on rock

- Targeted areas for test pitting

Question: Tailing SF – top 10cm – inspect after scraping

Question: Responding to Company throughout life

Question: Cultural awareness training – re-skilling

RWC: Statement of Commitment

- Review CHMP every 2 or 3 years

MOP

- Closure Plan
- Consult with changes
- Plan needs to be dynamic
- Review every 3 years

Keeping Place

On-site storage/security – context for final placement – on particular landform – close to original location

Fence **off** sites

Access Protocol – to keeping place

Archival Paper – Site Cards

Care Agreement –

e.g. Poster with artefacts – Moolarben – increases awareness

Include – Access to areas not to be disturbed

Pipeline Access Route

- Targeted survey of road reserve/pipeline route
- TransGrid – cover tower locations 30m diameter
- Timing
 - layout mid May
 - Draft report – early July
 - Feedback from late July

Discuss with Matt

- Surnames of Group
- Care of BL2/BL20 Artefacts
- Copy of submitted AHIP – emailed
- Letter to stakeholders – thank you
- Payment for all stakeholders

**BOWDENS SILVER PROJECT
MEETING WITH WELLINGTON VALLEY WIRADJURI
ABORIGINAL CORPORATION – 22 MARCH 2013**

Present:	Chris Mills	Kingsgate Bowdens Pty Limited
	Rob Corkery	R.W. Corkery & Co Pty Ltd
	Matt Cupper	Landskape Natural and Cultural Heritage Management
<hr/>		
	Violet Carr	
	Joyce Williams	
	Stephen Lamb	Wellington Valley Wiradjuri Aboriginal Corporation
	Billy Stanley	
	Brenn Doherty	
	Robert Stewart	

- Matt Cupper: Introduction
- Rob Corkery: Overview of Proposal etc.
- Timing for survey Bradley is contact for work
- Power Line route – Ilford future work explained
- Matt Cupper explained sites/figure – some not disturbed by current proposal
- Management recommendation collection to a keeping place
- Final Landform/revegetation then artefacts put back
- Rob Corkery discussed documentation – timing June
- Q: Objection to proposal on grounds of Aboriginal Community significance
- Chris Mills – explained his role and live documentation.



WELLINGTON VALLEY WIRADJURI
ABORIGINAL CORPORATION

www.wvwac.com

PO BOX 508
Wellington NSW 2820

ABN: 7754 3187

ICN: 7398

09 February 2013

Dr Matt Cupper
Landscape
P.O. Box 246
Merbein, VIC, 3505

Re: Draft Cultural Heritage Assessment Report dated 15.01.2013 and Draft AHIP Application dated 15.01.2013 - Bowdens Silver Project at Lue, NSW.

Dear Dr. Cupper,

We thank you for your invitation to provide a response for This Aboriginal Cultural Heritage issue relevant to obligations in our native title claim NC09/04.

We advise on the 18/12/09 the Wellington Valley Wiradjuri Claimants were successful in attaining registration of our Native Title Claim NC09/4 which encompasses a large portion of the North Wiradjuri Nation. A Registered Native Title Claim provides our traditional organisation with the sole authority on all Aboriginal Culture and Heritage issues within our defined region. The Wellington Valley Wiradjuri represents fourteen traditional families with identified apical ancestry pre European occupation. We know our culture, country and continue with our association with our traditional lands.

WWWAC has been established as a Prescribe Body Corporation to represent and administer our Native Title for the Claimants. Our charter is to protect Aboriginal culture and our heritage on our country and our aim is to work with all relevant parties to achieve our objectives.

WWWAC objects to any other aboriginal organizations taking part in site surveys, consultation and assessments on its registered claim area as detailed in the WWW claim. Proponents are required to consult with the WWW claimants on the processes which give claimants (and only registered claimants or "native title holders") certain rights and entitlements under Section 24MD of the Native Title Act (Commonwealth) ("NTA").

WWW must be consulted and must be involved in any Cultural & Heritage Assessment in the WWW claim area as any subsequent activities undertaken by the proponent will constitute a Future Act under the NTA and thus involve WWW which is the only registered native title claim in the relevant area.

Wellington Valley Wiradjuri Aboriginal Corporation is fully supportive of any efforts to provide facilities for the community at large within our claim area where it **does not significantly impact on cultural artefacts, heritage sites, the environment including water sources and the sub-terrain water table, endangered or threatened species of flora or fauna.** Proponents must have consulted with WWWAC and negotiated an agreed outcome.

Our position in regards to the afore mentioned Bowdens Silver Project at Lue, Cultural Heritage Assessment is that, **We object.**

WWWAC disagree with the report that the Aboriginal Cultural Artefacts are of Low – Moderate significance as listed by you on Table 10 on page 6 – 59. WWWAC Officers, Field Specialists, Family Representatives and Elders are of a consensus that **these artefacts are of high significance** to our people and are to be **conserved and remain in situ** it is for these reasons that we must also **object to your Draft Aboriginal Heritage Impact Permit** as you seek to lift, remove and store the artefacts which for us destroys all cultural value we place on these artefacts. These artefacts must not leave site and must not be handed to MLALC or other body as they can not speak for our Country, Culture, Sites or Artefacts as they are not the Traditional People of this area. We further recommend that all sites currently identified be fenced and marked to prevent impact and possible destruction by stock, farm vehicles and or mining operations.

WWWAC and the 14 Traditional Owner Families we represent are concerned about the environmental destruction and spills that have already taken place within the Bowdens Silver Project area at Lue by Kingsgate. WWWAC have concerns around this project in regards to pollution from the mining activity on both the natural environment and residential areas with health concerns for residents in these villages.

One of our higher concerns is for the water table and river use within our lands with increased mining activity and the water this project at Lue will be taking away from the environment. It is known by WWWAC that some projects such as the Cobbora Coal Mine, increased production at Wilpinjong Coal, ongoing activities at Moolarben Coal and the proposed Orange to Macquarie pipeline will be directly impacting on natural water flow and absorption which will in turn impact sub terrain water tables in the region. This will have negative flow on consequences and impact on levels in other sections of our traditional lands. We are the traditional owners and protectors of the environment including waterways and natural springs, we take our traditional responsibility seriously.

WWWAC does not object to our details being given to OEH, however WWWAC do not wish you to advise any other organization of our interest to this project. WWWAC look forward to 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 WWWAC Directors should you require our assistance to address any Aboriginal issues to support your future plans.

Yours sincerely,



Bradley R. Bliss J.P.
WWWAC Director & Chairman
0427321016

Cc: The Hon. Andrew Stoner, M.P.
The Hon. Chris Hatcher, M.P.
The Hon. Katrina Hodgkinson, M.P.
The Hon. Robyn Parker, M.P.
Cate Faehrmann, MLC.
Jeremy Buckingham, MLC.
Lue Action Group

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Annexure 6

GBG Australia Pty Limited Report on Geophysical Survey of Historical Cultural Heritage Site

(Total No. of pages including blank pages = 12)

Note: This Appendix is only available on the digital version of this document

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18 Fennell Street,
North Parramatta, NSW. 2151.
Tel: 9890 2122. Fax: 9890 2922.
E-Mail: trent@gbgoz.com.au.

A.B.N. 77 009 550 869.

20th April 2012

Attention: Dr Matt Cupper

Landskape,
PO Box 246
Merbein, VIC.

Reference: GBGA1418

**SUBSURFACE ARCHAEOLOGICAL INVESTIGATION USING GROUND
PENETRATING RADAR AND MAGNETIC GRADIOMETRY, BARRA ROAD,
LUE, NSW.**

1 INTRODUCTION

GBG Australia (GBGA) carried out a geophysical investigation using Ground Penetrating Radar (GPR) and Magnetic methods on the 11th April 2012, on a site in Lue, New South Wales.

The aim of the geophysical investigation was to assist in locating the ruins of a prospectors hut. This involved using various geophysical techniques to identify areas with possible historical significance including the foundations of former buildings.

The investigation area is shown in Figure 1.

The technique used during the investigation is geophysical and as such the results are based on indirect measurements and the interpretation of reflected electromagnetic signals. The findings in this report represent the best professional opinions of the authors, based on experience gained during previous similar investigations and with correlation to visible surface anomalies at the investigation site. No ground truthing of identified geophysical anomalies was conducted during the investigation.



Figure 1: Aerial photograph of the survey area. Limits of survey indicated by the red line. Image courtesy of Google Earth.

2 METHODOLOGY

2.1 Ground Penetrating Radar (GPR)

The data for this investigation was acquired using a GSSI SIR-3000 GPR data collection system with a ground coupled 500 MHz centre frequency antenna mounted on a purpose built survey trolley. The frequency of the antenna used influences the depth of penetration obtainable and the resolution of the collected data. Typically low frequency antennae penetrate deeper with low resolution whilst antennae of high frequency penetrate to shallower depths but can detect smaller targets. The 500 MHz antenna was used after considering the potential size and depth of the target being sought. A brief description on the GPR method is given in Appendix A.

GPR profiles were collected as a series of parallel longitudinal profiles at 0.25 m centres within the target area. The profiles were collected at close line spacing in order to provide a high degree of subsurface target resolution and to ensure that a number of profile lines would transect a potential archaeological feature. This enabled the elimination of point source anomalies, such as rock floaters, as potential targets of interest.

GPR profile lines were collected by pushing the GPR system over the ground surface at a constant rate (Figure 2). The system was set to record a two-way-travel time of 40 ns, with the data recorded with 16-bit resolution, at 512 samples per scan and at a scan rate of 100 scans/m. Distance travelled along the profile line was measured with an odometer system

connected to the trolley that controlled data collection and the position along any particular profile.

On-site quality control of the data was achieved in real-time by viewing profiles during acquisition. The location of each profile and any relevant information on surface or interesting observations in the data were recorded in header information for each line. The profiles were recorded digitally for processing and analysis at GBGA's Sydney office.



Figure 2: Photograph of GPR data collection. The GPR system is mobilised in a cart with the antenna pushed along the ground surface. The data logger / control unit enables the operator to set site specific parameters and to view the collected raw data in real-time for quality control purposes.

2.2 Magnetic Gradiometry

The Magnetics subsurface investigation was undertaken using a Bartington GRAD 601-1 Fluxgate Gradiometer. The system was set to record at the highest sensitivity of 0.1nT which ensured that all responses caused by possible archaeological anomalies could be identified. A description of this method can be found in Appendix B.

Magnetics data collection involved recording a series of profiles at 0.5m centres in longitudinal directions across the whole site. Measurements were recorded every 1m as the operator walked along the profile lines. The gradiometer was held in the vertical orientation which allows for the best resolution of any possible archaeological responses (Figure 3).

Spatial position of the EM data was controlled by taking the corner positions with a Differential Global Positioning System (DGPS) receiver with an accuracy of less than 1m.



Figure 3: Photograph of the Bartington Gradiometer during the collection of data. The Gradiometer was carried 10cm from the ground and the operator walked at a set pace which corresponded with the pace set in the instrument.

3 DATA PROCESSING AND ANALYSIS

3.1 Ground Penetrating Radar (GPR)

The GPR data recorded on the grounds of on site was generally observed to be of moderate quality, however, minor processing of the data was necessary to further enhance the signal. The collected GPR data was processed and analysed using REFLEX for Windows (Sandmeier Scientific Software).

Analysis of two dimensional GPR data was performed by examining each processed GPR profile sequentially. Reflections from anomalies in the ground that were consistent with those expected from archaeological features were targeted. Discriminating between possible footings and other subsurface reflections (such as from bedrock) was achieved by comparing and matching anomalies across the closely spaced profiles. Spurious reflections from isolated objects, such as tree roots, were identified since the target response caused by footings have different characteristics being typically broader and occurring over a number of adjacent profiles.

3.2 Magnetic Gradiometry

The magnetic data was initially processed and analysed with MagMap 2000 developed by Geometrics Inc., and Surfer developed by Golden Software Inc.

The data sets were interpolated using a kriging algorithm. Kriging is a geo-statistical gridding method that produces visually appealing maps from irregularly spaced data sets. After gridding, the magnetic data is transformed to an X, Y, Z data set on a constantly spaced grid. The X and Y being the positions along the transverse and longitudinal lines and Z being the magnetic reading.

The gridded data for the magnetic data set was plotted as a raster image map, which represents the Z values as a continuous colour spectrum. The colour spectrum was centred on the regional magnetic field intensity and the range was set according to surrounding variations in magnetic field intensity.

Owing to the presence of some surface contamination (pieces of scrap metal) that were missed during the initial surface clearing the data set was filtered to remove the contamination. This was done as the responses from these surface contaminations will mask the archaeological responses below them.

4 RESULTS

The results of the investigation are plotted in the following drawings:

Ground Penetrating Radar (GPR)

- i. GBGA1418-01: Interpreted GPR results

Magnetic Gradiometry

- ii. GBGA1418-02: Interpreted Magnetic Gradiometer results.

4.1 Ground Penetrating Radar (GPR)

From the examination of the GPR radiograms a series of anomalies have been identified in the survey area (GBGA1418-01). The four areas outlined in blue with blue hatching indicate areas of disturbance such as where digging may have occurred or backfilling of areas that could have occurred during construction or deconstruction of the prospectors hut (Image 4)

The GPR survey also found a number of large tree roots and these have been marked on the drawing as brown lines.

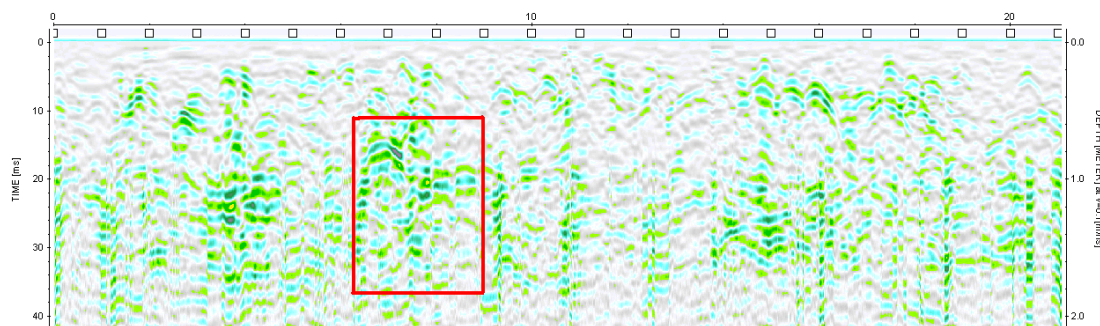


Image 4: A sample radiogram highlighting the response typical of disturbed ground.

4.2 Magnetic Gradiometry

The results from the magnetic gradiometer survey resulted in some interesting anomalies in the south-western portion of the survey area (GBGA1418-02). There are three distinct linear anomalies identified that are potentially the corners of a building. Linear magnetic anomalies do not occur naturally; therefore any such responses are treated as manmade.

Apart from the three highlighted anomalies there are also a series of other anomalies that fall within the boundary of the highlighted anomalies. These anomalies show a similar

response to those highlighted but don't have the same linear nature. These could indicate floor stones within the building which are less contrasting than the boundary stones.

As previously stated the area was contaminated with scrap metal which was removed. However some buried metal could still be present which could be the cause of some of the anomalies seen in the south-eastern part of the survey area.

5 CONCLUSIONS

- A geophysical investigation using Ground Penetrating Radar and Magnetic Gradiometry were carried out near Lue, NSW. The datasets have been processed and a number of colour images produced showing various subsurface features.
- Ground Penetrating Radar was successful at locating tree root and the possible foundations of the prospector's house. A possible burial or excavation was also identified in the GPR data. We recommend that you investigate these areas further in order to determine whether the responses in these areas are the result of buried stone/timber or merely the result of compressed earth.
- Magnetic profiling, although influenced by surface metallic features in some areas, revealed several small areas of interest that could indicate compressed earth or buried material such as brick, stone or timber. It is recommended that you follow up these areas in order to identify the cause of the response.

I hope that this report and the attached drawings provides you with the information required. If you require clarification on any points arising from this investigation do not hesitate to contact me.

For and on behalf of

GBG AUSTRALIA PTY LTD

Trent Bowman

Geophysicist

APPENDIX A: Ground Penetrating Radar (GPR)

Ground Penetrating Radar (GPR) is a non-destructive and non-invasive geophysical technique for rapidly imaging the shallow subsurface (typically up to 10 m depth) and producing high-resolution colour sections in real time.

In principle, the GPR technique is normally operated in the reflection mode with high frequency impulses of electromagnetic energy transmitted into the ground. Typically 100,000 impulses per second are transmitted downwards into the subsurface from an antenna placed close to the surface. These impulses are of very short duration (each pulse has a rise time of typically 1-5 nanoseconds) and contain a wide spectrum of frequencies, typically in the range between 100 MHz and 1 GHz. For shallow geological, environmental and archaeological applications antenna with a centre frequency of between 400 and 200 MHz are normally used, with lower frequency antennae providing increased depth of penetration with decreased resolution.

The transmitted radar signal propagates through the subsurface as a function of the subsurface material's electrical properties, which are in turn dependent on its physical and chemical properties. Reflection of radar energy occurs at boundaries between differing stratigraphic layers or inclusions which have contrasting electrical properties. Conversely, no reflections occur from a homogenous material where there are no internal reflectors. The reflections are detected by the receiving antenna placed adjacent to the transmitter. The depth to the target is proportional to the time (in nanoseconds) taken for the signal to travel from the transmitting antenna at the surface to the target and back to the receiver.

A radar gram profile is built up of continuous scans along selected line path. Each radargram consists of enhanced high frequency radio imaging which provides subsurface information based on the variations in the Dielectric Constants (the electrical conductivity and resistivity) of materials. The recorded reflections can be analysed in terms of shape, phase, travel time and signal amplitude to provide information about a target's size, depth and orientation in relation to the material around it. By collecting multiple parallel GPR profiles at close spacings (0.25 m) a three dimensional analysis of the data can be undertaken providing enhanced visualisation of the data and a high degree of confidence in target recognition.

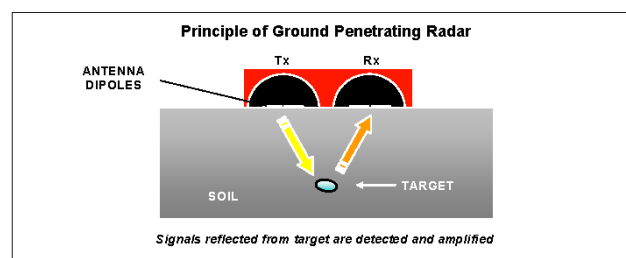


Figure 1: Schematic illustration of the principle of GPR. The antenna unit is composed of a transmitting (Tx) and receiving (Rx) dipoles. Radar wave energy is emitted by the Tx and is reflected at subsurface targets marked by variations in the electrical properties of the subsurface. These reflected waves are detected by the Rx and digitised.

APPENDIX B: Magnetic Gradiometry

Magnetometer Gradiometry is a passive geophysical technique based on the detection of contrasts in the magnetic properties of different materials. The magnetic response from naturally occurring rocks is due to the presence of the most common magnetic mineral, magnetite or its related minerals. Of environmental contamination significance, magnetic responses are observed in fired bricks which obtain a magnetic field during the cooling process, and from man-made ferrous objects which exhibit a high degree of ferromagnetism.

Magnetic gradiometer systems are composed of two sensors (typically caesium vapour type) which are orientated vertically in order to measure small variations in the local magnetic field. The bottom sensor being closer to the subsurface is typically affected more by near surface anomalies, whilst the top sensor gives the broader magnetic response of the subsurface. The magnetic vertical gradient can be calculated from the two sensors giving a more precise representation of the magnetic response in the near surface, and also helping to negate diurnal variations.

Magnetic anomalies are composed of a positive and negative part known as a magnetic dipole. Its shape is related to the structural geometry of the object as well as its direction of magnetisation, and the regional magnetic field. The characteristics of an anomaly also depend on the distance between the object making the anomaly and the measuring sensor, with increased distance resulting in broader, lower amplitude anomalies.

Diurnal variations occur due to time-dependent variations in the earth's magnetic field possibly caused by atmospheric and solar activity. In order to negate the affects of diurnal variations corrections need to be employed during magnetic gradiometer investigations. This includes collecting repeat readings at a nominated base station at set intervals during data collection.



APPENDIX C: Corner Point GPS

<u>Point</u>	<u>Easting</u>	<u>Northing</u>
1	768824.48	6385330.03
2	768843.73	6385334.80
3	768840.41	6385354.37
4	768819.63	6385349.19

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