



APPENDIX G ABORIGINAL CULTURAL HERITAGE ASSESSMENT

COWAL GOLD MINE EXTENSION MODIFICATION

Cowal Gold Mine Extension Modification Aboriginal Cultural Heritage Assessment

Report

Report to Barrick (Cowal) Limited

August 2013

Local Government Area: Bland/Forbes

Nearest Town: West Wyalong

Author: Dr Colin Pardoe

COLIN PARDOE BIO-ANTHROPOLOGY & ARCHAEOLOGY

16 Hackett Gardens

Turner ACT 2612

Phone: 02 6248 7337

Mobile: 0428 69 2798

Email: colin.pardoe@ozemail.com.au

Executive Summary

Bio-Anthropology and Archaeology (Dr Colin Pardoe) has been engaged by Barrick (Cowal) Limited (Barrick) to prepare an Aboriginal Cultural Heritage Assessment (ACHA) for the Cowal Gold Mine (CGM) Extension Modification (the Modification).

The purpose of this document is to identify the presence and significance of Aboriginal cultural heritage and the Modification's potential impacts on Aboriginal cultural heritage.

The Modification would involve some additional surface development within Mining Lease 1535 and a new pump station to the east of Lake Cowal (herein referred to as the Modification area).

The requirements for the ACHA are to:

- identify and consult with registered Aboriginal stakeholders;
- determine the location and significance of Aboriginal heritage sites and places within the Modification area;
- determine cultural significance of the Modification area by integrating the results of previous studies, the archaeological assessment and consultation with relevant Aboriginal stakeholders; and
- provide advice on mitigation of sites, features or objects should the Modification proceed.

The ACHA was conducted, as applicable, in accordance with and/or following consideration of the relevant requirements of the various regulatory guidelines, including the following:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Part 6 National Parks and Wildlife Act, 1974).*
- *Due Diligence Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales.*
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW.*
- *Draft Guidelines for Aboriginal Cultural Impact Assessment and Community Consultation.*
- The Australia International Council on Monuments and Sites (ICOMOS) Burra Charter.
- *Aboriginal Cultural Heritage: Standards and Guidelines Kit.*
- *Ask First; A Guide to Respecting Indigenous Heritage Places and Values.*
- *NSW Minerals Industry Due Diligence Code of Practice for the Protection of Aboriginal Objects.*

The following individuals and/or groups registered an interest with Barrick in the community consultation process for the Modification:

- Beverly Johnson;
- Condobolin Local Aboriginal Land Council;
- Enid Clarke;
- Ernie Johnson;
- Isabelle Collins nee Johnson;
- Jirrah Freeman;
- Keith Freeman;

- Neville Williams;
- Norma Freeman;
- Sharon Williams;
- Shawn Williams;
- Stuart Cutmore;
- Wayne Williams;
- West Wyalong Local Aboriginal Land Council;
- Wiradjuri Condobolin Corporation; and
- Wiradjuri Interim Working Party.

In addition, three individuals (i.e. Judy Johnson, Cindy Fuller and Janine Thompson) contacted Barrick with an interest in the Modification ACHA after the closing date for registrations. These individuals were included in the consultation process for the Modification ACHA as additional interested stakeholders.

The CGM and surrounding areas have been subject to a number of archaeological surveys, as well as the implementation of various heritage management and mitigation measures in accordance with the existing permits and consents.

Based on the results from previous surveys, three registered Aboriginal heritage sites (sites B [43-4-0021], C [43-4-0022] and E [43-4-0024]) and the Wamboyne Back Plains Site 1 (43-4-0044) are located within the Modification area. Other objects have also been previously recorded and collected from within the Modification area during previous cultural heritage assessments and surveys, however these objects represent a component of the regional background distribution rather than individual sites.

A survey of the Modification area was undertaken on Tuesday 30 April to Friday 3 May 2013. During this survey, the previously recorded sites were inspected along with pedestrian survey of the remainder of the Modification area, including the existing water pipeline alignment to determine the location of the pump station. The distribution of artefactual materials recorded during the 30 April to 3 May 2013 survey was similar to previous surveys undertaken at the CGM.

The *Cowal Gold Mine Indigenous Archaeology and Cultural Heritage Management Plan* sets out the salvage, excavation, monitoring and other management measures for each of the registered sites and other Aboriginal objects within the CGM area (i.e. previously approved disturbance areas) in accordance with the existing permits and consents.

Management and mitigation measures currently employed at the CGM include the following:

- Protocols for recording, salvaging, excavating and/or managing Aboriginal objects and potential archaeological deposits within the CGM area.
- Pre-clearance surveys for CGM surface development areas.
- Protocols in the event of identification of new Aboriginal heritage finds.
- Measures to be implemented in the event of discovery of human skeletal remains.
- Maintenance of the CGM master inventory.
- Reporting and communication protocols.
- Procedures for ongoing consultation and participation in the conservation and management of Aboriginal cultural heritage at the CGM.

It is recommended that the existing management measures currently employed at the CGM continue to be implemented for the Modification.

Specific management measures for registered sites B, C and E, and Wamboyne Back Plains Site 1, as well as other artefactual objects within the Modification area were discussed throughout the consultation process.

The location of the pump station would be designed to avoid impacts to the identified artefactual material.

Following inspection of registered sites B, C, D, E, H and the Wamboyne Back Plains Sites 1 (43-4-0044) and 2 (43-4-0045), it is recommended that a representative sample of Aboriginal objects would be salvaged and collected. A soil sample from all identifiable *in situ* ground ovens is also recommended to be collected. Radiocarbon dates should be taken from a sample of the impacted ovens. Residue analysis should be carried out on a sample of grinding implements.

The existing monitoring process (including surface and subsurface survey) should be applied to the remainder of the Modification area, including Wamboyne Back Plains Site 1.

Table of Contents

<u>Section</u>		<u>Page</u>
1	INTRODUCTION	1
1.1	COWAL GOLD MINE	1
1.2	MODIFICATION SUMMARY	5
1.3	THE MODIFICATION AREA	8
1.4	KEY LEGISLATIVE REQUIREMENTS	8
1.5	STUDY OBJECTIVES	9
2	CONSULTATION	11
2.1	ADVICE FROM APPROPRIATE ORGANISATIONS	12
2.2	ADVERTISEMENTS	12
2.3	NOTIFICATION AND INVITATION TO REGISTER AN INTEREST	13
2.4	LIST OF REGISTERED ABORIGINAL PARTIES	13
2.5	PROPOSED METHODOLOGY	14
2.6	PRESENTATION OF MODIFICATION INFORMATION	14
2.7	FIELD SURVEY AND ATTENDANCE	15
2.8	GATHERING INFORMATION ABOUT CULTURAL SIGNIFICANCE	16
2.9	CONSIDERATION OF COMMENTS RECEIVED DURING THE ACHA	16
	2.9.1 Comments Received on the Proposed Methodology	16
	2.9.2 General Comments Received During the Survey	21
	2.9.3 Comments Received on Draft Report	23
	2.9.3.1 Comments Received Within Response Period	23
	2.9.3.2 Comments Received Outside of Response Period	25
3	ENVIRONMENTAL CONTEXT	27
3.1	CLIMATE	27
3.2	LANDFORMS	27
3.3	ECOSYSTEMS	27
3.4	WATER	28
3.5	MICRO – ENVIRONMENTS	30
	3.5.1 Lake Bed	30
	3.5.2 Ephemeral Creeks and Drainage Lines	30
	3.5.3 Beach	31
	3.5.4 Eastern Lunette	31
	3.5.5 Lake Edge Slope	31
	3.5.6 Lake Edge Ridge	31
	3.5.7 Back Plains	31
	3.5.8 Gilgai Plains	31
	3.5.9 Summary	32
3.6	SOILS	32
	3.6.1 Hard Pedal Red Duplex Soils	32
	3.6.2 Grey, Brown and Red Cracking Clays	33
	3.6.3 Soil Loss	33
3.7	ROCK	34
3.8	ANIMAL AND PLANT RESOURCES	34
4	ABORIGINAL LIFE HISTORICAL CONTEXT	35
4.1	SOCIAL ORGANISATION ACROSS THE LANDSCAPE	35
4.2	DAILY LIFE AND RESOURCES	35
5	CHANGING LAND PATTERNS AND PREVIOUS DISTURBANCE OF LAND	38
5.1	LAND CLEARANCE	38

5.2	AGRICULTURAL PLOUGHING	39
5.3	ROAD CONSTRUCTION	39
5.4	FIRE BREAKS	39
5.5	STOCK	39
5.6	RABBITS	39
5.7	HISTORICAL MINING	39
5.8	SUMMARY OF LAND DISTURBANCE IMPACTS	40
6	ARCHAEOLOGICAL AND CULTURAL CONTEXT	41
6.1	PREVIOUS STUDIES	41
6.1.1	Inspection and Survey February 2011	42
6.2	REGISTERED SITES AND PREVIOUSLY COLLECTED OBJECTS	43
6.3	OTHER REGISTERS	44
6.4	SITE CONSERVATION	44
6.5	BACKGROUND DISTRIBUTION AT LAKE COWAL	46
6.6	BURIALS	47
7	SITE SURVEY/INSPECTION METHODS	48
7.1	PLANNING	48
7.2	SITE SURVEY/INSPECTION	48
7.3	EXPOSURE, VISIBILITY AND COVERAGE	50
7.3.1	Exposure	50
7.3.2	Visibility	50
7.3.3	Coverage Analysis	51
8	SITE SURVEY RESULTS	53
8.1	CONDITION OF THE SURVEY AREA	53
8.2	SITES AND OBJECTS WITHIN THE MODIFICATION AREA	53
8.2.1	Previously Located and Collected Objects	53
8.2.2	Previously Registered Sites	53
8.2.3	Additional Site - Wamboyne Back Plains Site 1 (43-4-0044)	56
8.2.4	Additional Site - Wamboyne Back Plains Site 2 (43-4-0045)	57
8.2.5	Proposed Pumping Station on the Eastern Shore of Lake Cowal	57
8.2.6	Other Objects Identified during the Survey	59
9	CULTURAL AND ARCHAEOLOGICAL SIGNIFICANCE ASSESSMENT	61
9.1	CULTURAL SIGNIFICANCE	61
9.1.1	Comments Provided During the Survey	61
9.1.2	Cultural Significance Summary	62
9.2	ARCHAEOLOGICAL SIGNIFICANCE	63
10	NATURE OF POTENTIAL IMPACTS FROM THE MODIFICATION	66
10.1	POTENTIAL DIRECT AND INDIRECT IMPACTS	66
10.2	CULTURAL HERITAGE POTENTIALLY IMPACTED BY THE MODIFICATION	66
11	MANAGEMENT AND MITIGATION MEASURES	67
11.1	MANAGEMENT AND CONTINGENCY MEASURES	67
11.1.1	Avoidance of Creek Line and Wamboyne Back Plains Site 2	67
11.1.2	Minimisation of Disturbance	67
11.1.3	Management of Sites B, C, E and Wamboyne Back Plains Site 1	67
11.1.4	Management of Background Distribution	68
11.1.5	Contingency Measures for Burials	68
11.2	INDIGENOUS ARCHAEOLOGY AND CULTURAL HERITAGE MANAGEMENT PLAN	68
11.3	SUMMARY RECOMMENDATIONS	69

12	REFERENCES	71
12.1	LITERATURE CITED	71
12.2	LEGISLATION, REGULATIONS AND GUIDELINES	73

LIST OF TABLES

Table 1	Record of Attendance at Field Surveys
Table 2	Registered Aboriginal Stakeholder Comments on the Proposed Methodology
Table 3	Summary of AHIMS sites in a Search Area Surrounding the CGM
Table 4	Summary of AHIMS sites within the Modification Area and Surrounds
Table 5	Proximal Locations of Remaining Registered Aboriginal Heritage Sites within ML 1535
Table 6	Site Survey/Inspection Attendees
Table 7	Visibility Scores
Table 8	Previously Registered Aboriginal Heritage Sites within the Modification Area
Table 9	Raw Materials Identified at Wamboyne Back Plains Site 1
Table 10	Items Identified During 30 April to 3 May 2013 Survey
Table 11	Details of Lithic Items Identified During 30 April to 3 May 2013 Survey

LIST OF FIGURES

Figure 1	Regional Location
Figure 2	Cowal Gold Mine Location and Location of Eastern Pump Station
Figure 3	Modification General Arrangement
Figure 4	Previously Recorded Aboriginal Heritage Sites within the Modification Area
Figure 5	Lachlan Basin Catchment Plan
Figure 6	Aboriginal Heritage Sites Located within the Modification Area and Surrounds
Figure 7	Areas Subject to Survey for Modification in Relation to Final Disturbance Layout
Figure 8	Aboriginal Heritage Sites Located within the Eastern Pump Station Location and Existing Water Pipeline Alignment

LIST OF APPENDICES

Appendix 1	Cowal Gold Mine Indigenous Archaeology and Cultural Heritage Management Plan
Appendix 2	Consultation Log
Appendix 3	Formal Correspondence to Regulators, Organisations and Registered Aboriginal Parties
Appendix 4	Formal Correspondence Received from Regulators, Organisations and Registered Aboriginal Parties
Appendix 5	AHIMS Site Cards
Appendix 6	Sites and Objects Identified During Site Survey/Inspection
Appendix 7	CGM Ground Disturbance Permit
Appendix 8	Ground Disturbance Permit Flow Chart

1 Introduction

Bio-Anthropology and Archaeology has been engaged by Barrick (Cowal) Limited (Barrick) to prepare an Aboriginal Cultural Heritage Assessment (ACHA) for the Cowal Gold Mine (CGM) Extension Modification (the Modification). The investigation was led by Dr Colin Pardoe (BSc [University of Toronto], MA [University of Manitoba], PhD [Australian National University]).

The CGM is located approximately 38 kilometres (km) north-east of West Wyalong in New South Wales (NSW) (Figure 1). Barrick is the owner and operator of the CGM, and is a wholly owned subsidiary of Barrick (Australia Pacific) Limited.

Barrick is seeking approval to modify the Development Consent (DA 14/98) under section 75W of the NSW *Environmental Planning and Assessment Act, 1979* (EP&A Act). The Modification includes the continuation of open cut mining operations at the CGM for an additional operational life of 5 years. The additional areas that would be disturbed by the Modification are presented in Figures 2 and 3 (i.e. additional areas within Mining Lease [ML] 1535 and the proposed pump station).

The purpose of this ACHA is to identify the presence and significance of Aboriginal cultural heritage and the Modification's potential impacts on Aboriginal cultural heritage. Recommended measures to mitigate possible impacts are outlined as well as contingency measures (Section 11).

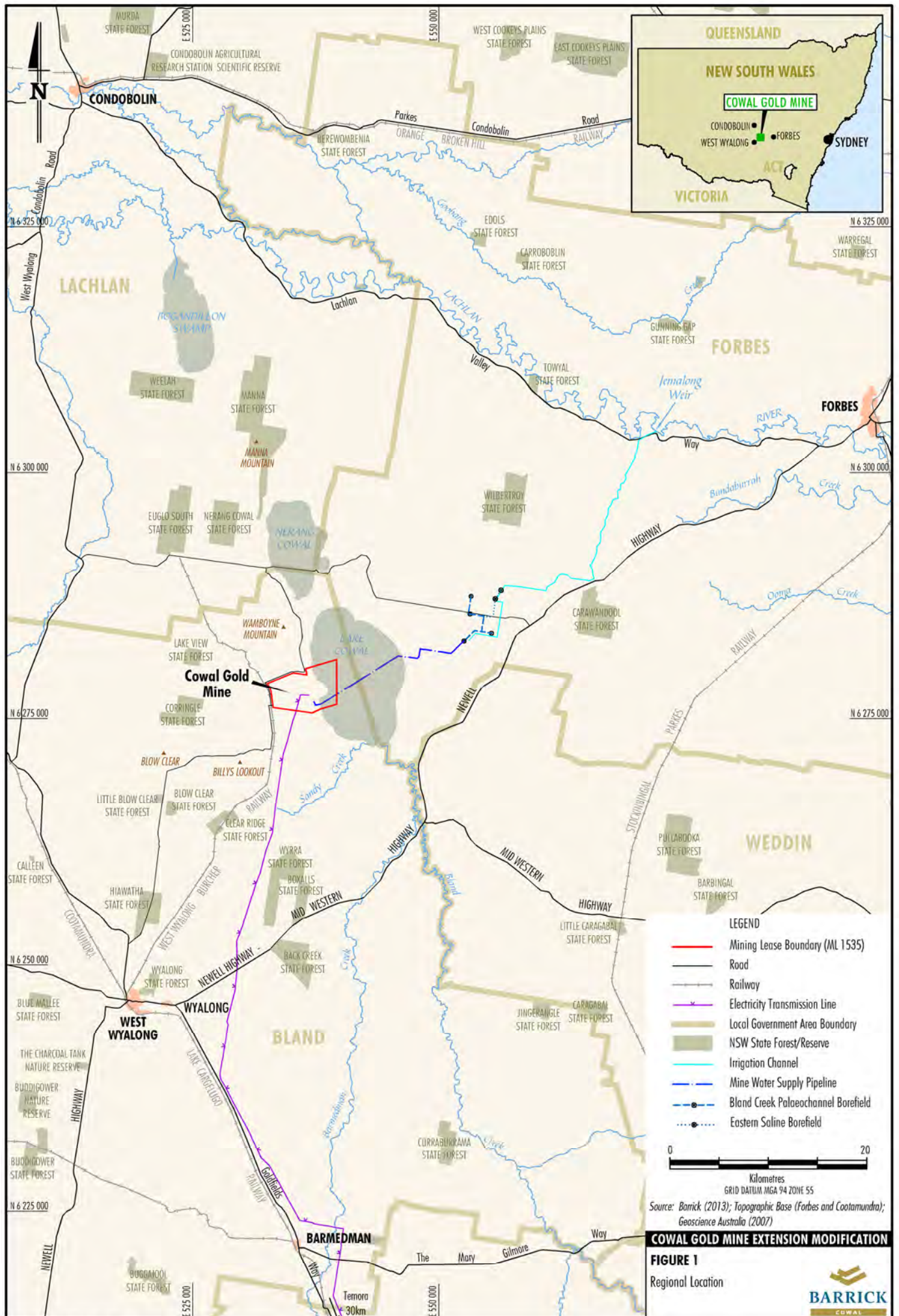
The heritage requirements for this study are to:

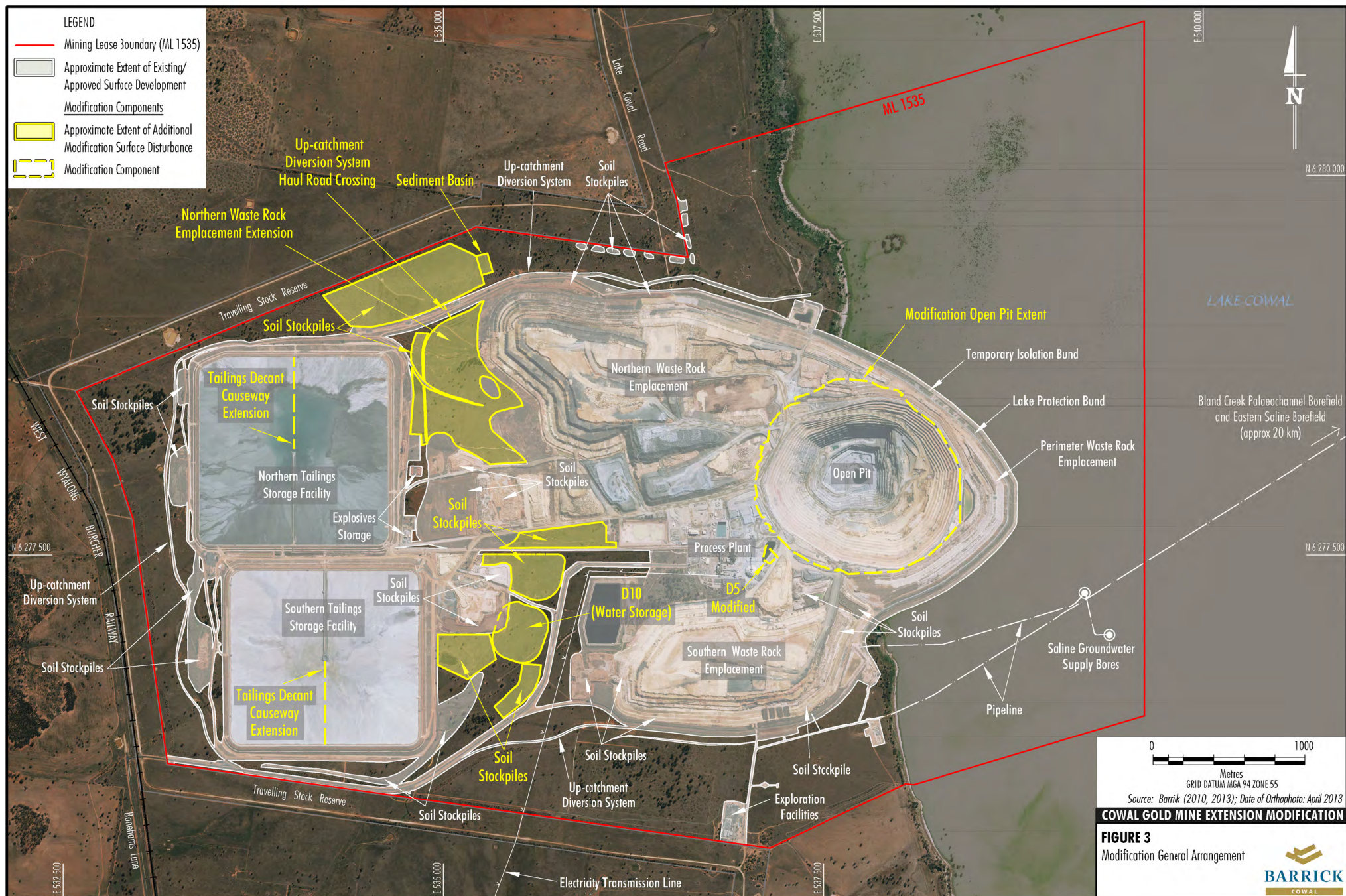
- identify and consult with registered Aboriginal parties in line with the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (NSW Department of Environment and Conservation [DEC], 2005) and *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (NSW Department of Environment, Climate Change and Water [DECCW], 2010a) (the Consultation Guidelines);
- determine the location and significance of Aboriginal heritage sites and places within the Modification area (Sections 7 and 8);
- determine cultural significance of the Modification area by integrating the results of previous studies, the archaeological assessment and consultation with relevant Aboriginal parties (Sections 6 and 7); and
- provide advice on mitigation of sites, features or objects should the Modification proceed (Section 11).

1.1 Cowal Gold Mine

Mining operations at the CGM are currently conducted in accordance with Development Consent (DA 14/98) and the conditions of ML 1535 held by Barrick. The CGM operates 24 hours per day, 7 days per week.

The current open pit mining operations are supported by on-site facilities including water management infrastructure/storages, a process plant and tailings storage facilities. Mined waste rock from the open pit is hauled to waste rock emplacements. Ore mined from the open pit is hauled direct to the primary crusher (adjacent the process plant), run-of-mine pad or low grade ore stockpile prior to processing.





Gold is extracted from the ore using a conventional carbon-in-leach cyanide leaching circuit in the process plant. Tailings are pumped to the tailings storage facilities. The gold product is recovered and poured as gold bars or doré.

Barrick and its heritage advisors obtained permits and consents under the then section 87 and section 90 of the NSW *National Parks and Wildlife Act, 1974* (NPW Act) for the management of Aboriginal heritage artefacts at the CGM including:

- Permit 1468 authorising certain archaeological works in the ML 1535 area, water pipeline area and borefield area.
- Consent 1467 authorising the destruction of Aboriginal objects in the ML 1535 area, water pipeline area and borefield area.
- Permit 1681 authorising certain archaeological works in the road upgrade area and the relocated Travelling Stock Route.
- Consent 1680 authorising the destruction of Aboriginal objects the road upgrade area and the relocated Travelling Stock Route.

The *Cowal Gold Mine Indigenous Archaeology and Cultural Heritage Management Plan* (IACHMP) (Barrick, 2003) (Appendix 1) provides a description of known sites at the approved CGM, which are of potential relevance to the development of the Modification (Appendix 1).

Salvage works and site conservation works have been carried out at a number of sites in accordance with the relevant permit and consent conditions and the IACHMP (Figure 4). The remaining registered Aboriginal heritage sites within ML 1535 are also shown on Figure 4. Objects which have been previously located and collected and which are now stored in a Temporary Keeping Place (Section 6.2) (i.e. they are no longer *in situ*) are shown on Figure 4. Reports documenting various salvage, excavations and archaeological conservation works undertaken at the CGM have been prepared by Dr Colin Pardoe (2009a, 2009b).

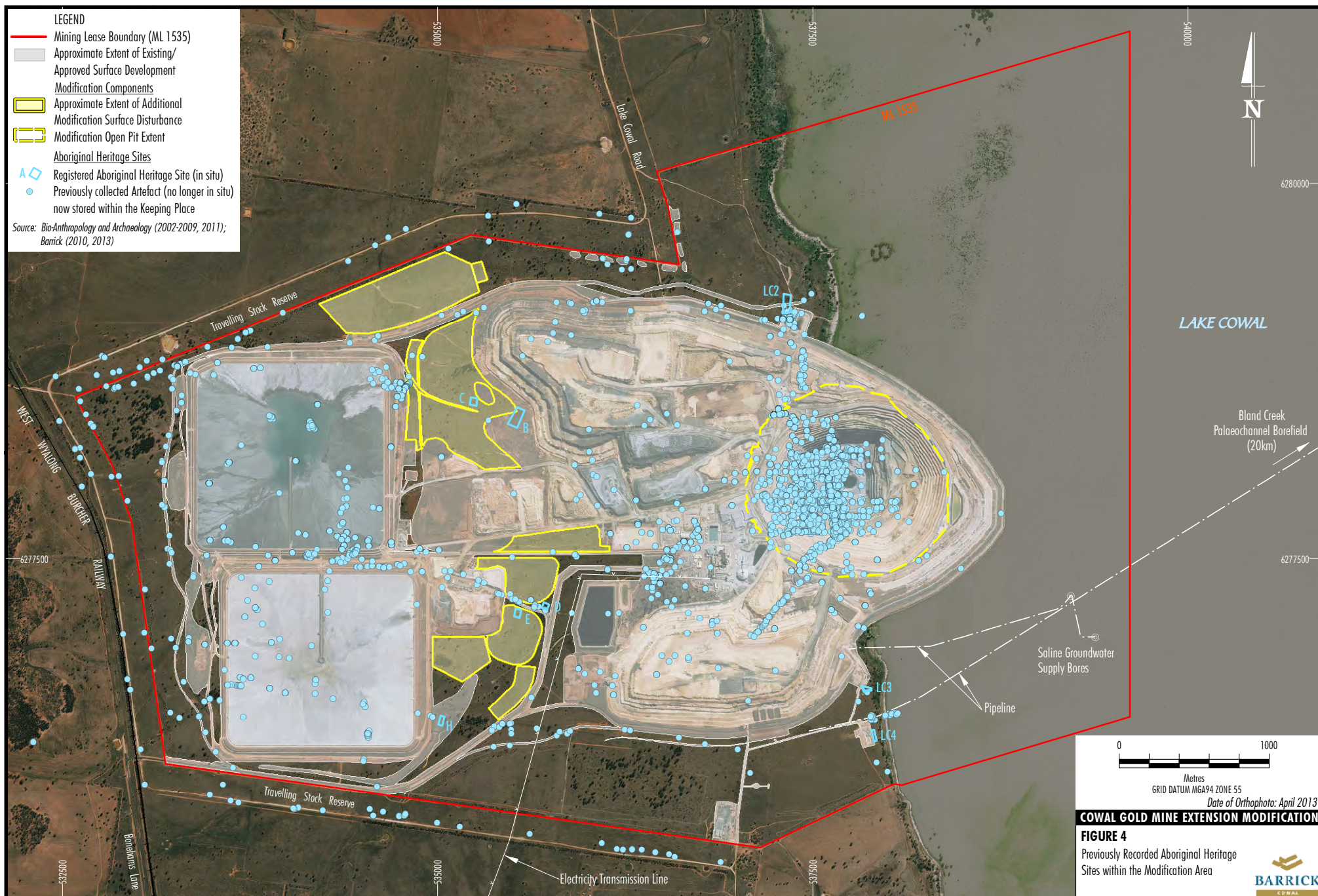
1.2 Modification Summary

The Modification would involve the continued development of open pit mining operations at the CGM for an additional 5 years (i.e. until 2024).

In general, the Modification would not change the functionality of the currently approved CGM, as it would involve the continued and/or expanded use of the existing open pit, waste rock emplacement, tailings storage facilities and ore processing facilities within ML 1535, with some alterations where necessary to enable the increased gold production (i.e. extension to the existing open pit and existing northern waste emplacement) (Figure 3).

In comparison to the existing approved CGM, the Modification would involve:

- continued development of open pit mining operations at the CGM, including expansion of the extent and depth of the existing open pit (Figure 3);
- extension of the operational life of the CGM by an additional 5 years (i.e. until 2024);
- ongoing exploration activities within ML 1535;



COWAL GOLD MINE EXTENSION MODIFICATION

FIGURE 4

Previously Recorded Aboriginal Heritage Sites within the Modification Area



- continued and expanded development of the existing northern and southern waste rock emplacements within ML 1535 for placement of mined waste rock over the life of the CGM, including (Figure 3):
 - raising the maximum design height of the northern waste rock emplacement to 308 metres (m) Australian Height Datum (AHD);
 - raising the maximum design height of the southern waste rock emplacement to 283 m AHD; and
 - extension of the northern waste rock emplacement to the west with an additional disturbance footprint of approximately 39 hectares (ha);
- ongoing utilisation of the existing process plant at the installed capacity to continue ore processing at a rate up to 7.5 million tonnes per annum;
- an increase in total gold production to approximately 3.8 million ounces;
- continued and expanded development of the existing tailings storage facilities within ML 1535 for deposition of tailings produced over the life of the CGM, including raising the maximum design height of (Figure 3):
 - the northern tailings storage facility to 248 m AHD; and
 - the southern tailings storage facility to 255 m AHD;
- continued utilisation of cyanide destruction in tailings prior to deposition in tailings storage facilities;
- continued and expanded development of soil stockpiles as well as development of a new mineralised waste stockpile;
- continued operation of the existing saline groundwater supply bores within ML 1535 during suitable lake conditions;
- continued use of water supplied by other existing approved external water supply sources (e.g. Bland Creek Palaeochannel Borefield, eastern saline borefield and Lachlan River water entitlements via the Jemalong Irrigation Channel);
- continued use of existing CGM water management infrastructure with some additional works including:
 - redesign of the existing contained water storage D5; and
 - construction of a new water supply storage D10;
- minor upgrade works to the mine water supply pipeline including construction of a new diesel powered pump station on the eastern side of Lake Cowal (Figure 2)¹;
- a change to the stability component of the rehabilitation concepts (i.e. the use of rock armouring as part of the cover system to enhance stability of the batters of the tailings storage facilities and waste rock emplacements);
- ongoing environmental monitoring; and
- other associated minor infrastructure, plant, equipment and activities.

It is noted that at the time of the survey there remained a possibility of using an electricity transmission line (ETL) as an alternative power source for the pump station. Although the proposed ETL alignment was surveyed, it is no longer a viable option, has been removed from the Modification application and is, therefore, not considered further in this assessment.

¹ The location of the new pump station is not yet finalised. Therefore this report assesses the potential impacts of it being constructed at any location along the existing pipeline alignment.

Some alterations to the Modification summary description provided above may be required in consideration of the results of environmental studies as they become available during the preparation and finalisation of the Modification Environmental Assessment (EA).

The Modification EA would provide the final Modification description for which Barrick would seek approval.

1.3 The Modification Area

The CGM and surrounding areas have been subject to a number of archaeological surveys, as well as the implementation of various heritage management and mitigation measures in accordance with the existing permits and consents issued under the NPW Act and the IACHMP (Barrick, 2003).

The Modification would involve some additional surface development (as discussed in Section 1.2). The Modification area for this assessment therefore includes the areas within ML 1535 that would be disturbed by the development of the Modification, as well as the development areas associated with the pump station (Figures 2 and 3). Other known sites adjacent to the Modification area are also of relevance and are protected and managed according to current permit, consent and management procedures.

1.4 Key Legislative Requirements

The following description of key legislative requirements is based on the summary provided in Section 2.2 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010a) (Consultation Guidelines).

Environmental Planning and Assessment Act, 1979

The EP&A Act is administered by the NSW Department of Planning and Infrastructure, and provides planning controls and requirements for environmental assessment in the development approval process. It also establishes the framework for Aboriginal heritage values to be formally assessed in the land-use planning and development consent processes.

National Parks and Wildlife Act, 1974

The NPW Act is administered by the NSW Office of Environment and Heritage (OEH), and is the primary legislation for the protection of some aspects of Aboriginal cultural heritage in NSW.

One of the objectives of the NPW Act is (s.2A(1)(b)):

the conservation of objects, places or features (including biological diversity) of cultural value within the landscape, including but not limited to: (i) places, objects and features of significance to Aboriginal people ...

The NPW Act provides for the protection of Aboriginal objects and places. Aboriginal objects constitute physical evidence of past use of an area or object. Aboriginal places are defined as “a place that is or was of special significance to Aboriginal culture. It may or may not contain Aboriginal objects”. An Aboriginal place may only be declared by the Minister administering the NPW Act.

Part 6 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to harm them without an AHIP. Under section 90 of the NPW Act, the Director-General may issue an Aboriginal Heritage Impact Permit.

Ethical standards

Ethics standards are applied from the following archaeological organisations:

- Australian Archaeological Association Code of Ethics.
Website: <http://www.australianarchaeologicalassociation.com.au/ethics>
- Australian Association of Consulting Archaeologists, Inc. Code of Ethics.
Website: http://www.aacai.com.au//index.php?option=com_jdownloads&Itemid=55&task=view.download&cid=5

1.5 Study Objectives

The objective of this assessment is to provide Barrick with an ACHA of the Modification suitable for inclusion in an EA in support of an application to modify Development Consent (DA 14/98) under section 75W of the EP&A Act.

Part of this ACHA involves the identification of previous Aboriginal settlement patterns of the Modification area, identifying past Aboriginal land use and potential impacts to Aboriginal heritage as a result of the Modification.

Inherent within the legislative requirements (Section 1.4) is the requirement to conduct the ACHA in accordance with and/or consideration of relevant guidelines and codes of practice.

This assessment has been undertaken in accordance with the following guidelines:

- the Consultation Guidelines;
- *The Burra Charter: The Australian International Council on Monuments and Sites Charter for Places of Cultural Significance* (Australian International Council on Monuments and Sites, 1999);
- *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC, 2005);
- *Ask First; A Guide to Respecting Indigenous Heritage Places and Values* (Australian Heritage Commission [AHC], 2002);
- *Aboriginal Cultural Heritage: Standards and Guidelines Kit* (DEC, 1997); and
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011).

The following codes of practice were also considered:

- *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010b); and
- *NSW Minerals Industry Due Diligence Code of Practice for the Protection of Aboriginal Objects* (NSW Minerals Council, 2010).

The following tasks were undertaken to achieve the objectives of the ACHA:

- Identification of statutory requirements relevant to the Modification.
- Advertisement of the Modification and the identification of Aboriginal parties wishing to be consulted in regard to the assessment.
- A search of the relevant local, state and federal heritage registers and listings.

- A review and analysis of existing studies relating to the Modification area and its immediate environment.
- Consultation with the Aboriginal community and other parties in the area throughout the assessment process.
- Specific consultation with the Aboriginal community in regard to the proposed methodology for the assessment.
- Considering the comments of registered Aboriginal parties on the proposed methodology for the assessment and, where relevant, addressing or incorporating comments in the final methodology.
- Undertaking an archaeological and cultural survey in consultation with the Aboriginal community.
- Assessment of archaeological and cultural heritage values.
- Evaluation of potential impacts of the Modification on cultural heritage.
- Development of proposed mitigation and management strategies.
- Drafting of this ACHA and provision of the draft ACHA to registered Aboriginal parties for comment.
- Considering the comments of registered Aboriginal parties on the draft ACHA and, where relevant, addressing or incorporating comments in the final ACHA.

2 CONSULTATION

Aboriginal community consultation is an integral part of the assessment of Aboriginal cultural heritage significance. Consultation for this ACHA has been conducted in accordance with the Consultation Guidelines (DEC, 2005; DECCW, 2010a). The aims of the consultation process are as follows:

- to identify Aboriginal community groups and individuals with an interest in being involved in the ongoing consultation process;
- to provide people with cultural knowledge relevant to determining cultural significance of Aboriginal objects and/or places in the area of the proposed Modification the opportunity to register their interest as stakeholders;
- to provide representatives of the Aboriginal community with the opportunity to participate in the field assessment process and to inspect and comment on the Aboriginal sites and values of the Modification area;
- to encourage all Aboriginal stakeholders to participate in the cultural heritage assessment process through provision of knowledge that will ensure that sites are avoided, protected and/or any potential damage mitigated;
- to identify the Aboriginal cultural heritage values of the Modification area;
- to provide an opportunity for the registered Aboriginal parties to comment on the outcomes and recommendations of draft heritage assessment reporting; and
- to integrate Aboriginal heritage values and recommendations for management into the assessment report.

In administering its statutory functions under Part 6 of the NPW Act, the OEH requires that proponents consult with Aboriginal people about the Aboriginal cultural heritage values (cultural significance) of Aboriginal objects and/or places within any given development area (DECCW 2010b). The OEH maintains that the objective of consultation with Aboriginal communities about the cultural heritage values of Aboriginal objects and places is to ensure that Aboriginal people have the opportunity to improve ACHA outcomes by:

- providing relevant information about the cultural significance and values of Aboriginal objects and/or places;
- influencing the design of the method to assess cultural and scientific significance of Aboriginal objects and/or places;
- actively contributing to the development of cultural heritage management options and recommendations for any Aboriginal objects and/or places within the proposed Modification area; and
- commenting on draft assessment reports before they are submitted by the proponent to the OEH.

To assist proponents through the required consultation process, the DECCW (2010b) has prepared a guidance document, namely the Consultation Guidelines. The Consultation Guidelines outline a four stage consultation process that includes detailed step-wise guidance as to the aim of the stage and what actions are necessary for it to be successfully completed. The four stages include the following:

- Stage 1 – Notification of Modification proposal and registration of interest.
- Stage 2 – Presentation of information about the proposed Modification.
- Stage 3 – Gathering information about the cultural significance.
- Stage 4 – Review of draft cultural heritage assessment report.

The Consultation Guidelines also outline the roles and responsibilities of the OEH (previously the DECCW), registered Aboriginal parties including the NSW Aboriginal Land Council and Local Aboriginal Land Councils (LALC), and proponents throughout the consultation process. In order to satisfy the requirements of the Consultation Guidelines it is expected that proponents will:

- bring the registered Aboriginal parties or their nominated representatives together and be responsible for ensuring appropriate administration and management of the consultation process;
- consider the cultural perspectives, views, knowledge and advice of the registered Aboriginal parties involved in the consultation process in assessing cultural significance and developing any heritage management outcomes for Aboriginal objects(s) and/or places(s);
- provide evidence to the OEH of consultation by including information relevant to the cultural perspectives, views, knowledge and advice provided by the registered Aboriginal parties;
- accurately record and clearly articulate all consultation findings in the final cultural heritage assessment report; and
- provide copies of their cultural heritage assessment report to the registered Aboriginal parties who have been consulted.

2.1 Advice from Appropriate Organisations

In accordance with Section 4.1.2 of the Consultation Guidelines, Modification notifications were sent on 5 February 2013 to the following organisations, seeking the names of Aboriginal persons or groups who may wish to be consulted in relation to and who hold cultural knowledge of, or have a right or interest in Aboriginal objects, places and/or Aboriginal cultural heritage values in the “Area of Interest” (i.e. Modification area):

- (a) the relevant DECCW regional office (Dubbo EPRG Office);
- (b) the appropriate LALC(s) (West Wyalong, Condobolin);
- (c) the Registrar, *Aboriginal Land Rights Act, 1983*;
- (d) the National Native Title Tribunal;
- (e) Native Title Services Corporation Limited (NTSCORP);
- (f) relevant local councils (Bland Shire Council, Forbes Shire Council); and
- (g) relevant Catchment Management Authority (Lachlan).

Written responses were received from the National Native Title Tribunal, Office of the Registrar for Aboriginal Land Rights Act 1983, NTSCORP and West Wyalong LALC and the Condobolin LALC. A list of potential cultural knowledge holders was compiled from the information collected from the Step 1 notifications.

No Native Title Holder, Native Title Claimants or registered Aboriginal owners exist for the Modification area.

2.2 Advertisements

In accordance with Section 4.1.3 of the Consultation Guidelines, a notice was placed in the following local newspapers seeking registration from any interested Aboriginal parties:

- Condobolin Argus (27 February 2013);
- Daily Liberal (27 February 2013);

- Forbes Advocate (28 February 2013);
- Griffith Area News (27 February 2013);
- Wagga Daily Advertiser (27 February 2013); and
- West Wyalong Advocate (1 March 2013).

Copies of these notifications have previously been provided to the OEH, the West Wyalong LALC and the Condobolin LALC.

2.3 Notification and Invitation to Register an Interest

In accordance with Section 4.1.3 of the Consultation Guidelines, Barrick provided written notification of the Modification to Aboriginal parties identified by the organisations listed in Section 2.1, as well as those stakeholders previously consulted in relation to the CGM. The previous stakeholders and/or Aboriginal parties were invited to register an interest in the community consultation process for the ACHA for the Modification.

2.4 List of Registered Aboriginal Parties

As a result of the above notifications and consultation, the following individuals and groups registered an interest in the community consultation process for the Modification within the requested timeframe:

- Beverly Johnson;
- Condobolin LALC;
- Enid Clarke;
- Ernie Johnson;
- Isabelle Collins nee Johnson;
- Jirrah Freeman;
- Keith Freeman;
- Neville Williams;
- Norma Freeman;
- Sharon Williams;
- Shawn Williams;
- Stuart Cutmore;
- Wayne Williams;
- West Wyalong LALC;
- Wiradjuri Condobolin Corporation (WCC); and
- Wiradjuri Interim Working Party (WIWP).

In addition, three individuals (i.e. Judy Johnson, Cindy Fuller and Janine Thompson) contacted Barrick with an interest in the Modification ACHA after the closing date for registrations. These individuals were included in the consultation process (including attendance at the Information Session and field survey, provision of the Proposed Methodology and the draft ACHA for review and comment and inclusion in discussions regarding cultural significance and proposed management measures) for the Modification ACHA as additional interested stakeholders.

For the purpose of this report, all Aboriginal individuals and groups that expressed an interest in being consulted for the Modification are collectively referred to as Registered Aboriginal Parties.

A consultation log summarising Aboriginal community consultation undertaken for the Modification is provided in Appendix 2. A copy of written correspondence sent to and received from the registered Aboriginal parties is provided in Appendices 3 and 4.

2.5 Proposed Methodology

A Proposed Methodology was prepared for the Modification which outlined the planned consultation and assessment stages and included detailed information about the Modification. In accordance with Section 4.3.2 of the Consultation Guidelines, the Proposed Methodology for the ACHA of the Modification was provided to registered Aboriginal parties for review and feedback in late March 2013 and feedback with respect to the Proposed Methodology was requested by 5.00 pm Monday 22 April 2013. In accordance with Section 4.3.2 of the Consultation Guidelines, 28 days were allowed for registered Aboriginal parties to:

- suggest any protocols to be adopted into the information gathering process and assessment methodology; and
- highlight any other matters such as issues or areas of cultural significance that might affect, inform or refine the methodology.

Comments on the Proposed Methodology were received. These comments have been considered, and a summary of how they have been considered is presented in Section 2.9. A record of consultation and copies of feedback received on the Proposed Methodology are provided in Appendices 2, 3 and 4.

2.6 Presentation of Modification Information

The Consultation Guidelines state that the aim of Stage 2 of the consultation process is (DECCW, 2010a):

To provide registered Aboriginal parties with information about the scope of the proposed project and the proposed cultural heritage assessment process.

In addition to the presentation of information regarding the Modification in the Proposed Methodology, Barrick invited all registered Aboriginal parties to attend an Information Session at the Condobolin RSL Club in Condobolin on Monday 8 April 2013.

Fifteen representatives of various registered Aboriginal parties attended the session. At the Information Session:

- Barrick provided an outline of the CGM and described the nature and scope of the Modification;
- an outline of the impact assessment process was provided, including stages where registered Aboriginal parties are invited to provide input into the ACHA;
- key milestones for the completion of assessment activities were discussed and an indicative timeline for the provision of the draft ACHA report to registered Aboriginal parties for review and comment was outlined;

- Barrick's and registered Aboriginal parties' roles, functions and responsibilities were defined; and
- Barrick encouraged registered Aboriginal parties to identify, raise and discuss any relevant cultural concerns, perspectives and assessment requirements.

Participants in the Information Session were encouraged to identify, raise and discuss any relevant cultural concerns, perspectives and assessment requirements. Appropriate management of cultural information in accordance with suitable protocols was also discussed. No such cultural concerns, perspectives or assessment requirements were raised by registered Aboriginal parties at the Information Session.

2.7 Field Survey and Attendance

All registered Aboriginal parties were invited to participate in the field surveys by providing a representative. The majority provided field representatives for the field survey led by Dr Colin Pardoe from Tuesday 30 April 2013 to Friday 3 May 2013. Representatives who attended the field survey are presented in Table 1.

Table 1
Record of Attendance at Field Surveys

Registered Aboriginal Group	Attendee at Surveys	Dates Attended
Condobolin LALC	Richard Coe	Tuesday 30 April to Friday 3 May 2013
Condobolin LALC	Rebecca Shepherd	Tuesday 30 April to Friday 3 May 2013
N/A	Neville Williams	Tuesday 30 April to Friday 3 May 2013
N/A	Sharon Williams	Tuesday 30 April to Friday 3 May 2013
N/A	Enid Clarke	Tuesday 30 April to Friday 3 May 2013
N/A	Norma Freeman	Tuesday 30 April to Friday 3 May 2013
N/A	Keith Freeman	Tuesday 30 April to Friday 3 May 2013
N/A	Jirrah Freeman	Tuesday 30 April to Friday 3 May 2013
N/A	Ruben Simpson	Tuesday 30 April to Friday 3 May 2013
N/A	Stuart Cutmore	Tuesday 30 April to Friday 3 May 2013
N/A	Isabelle Collins nee Johnson	Tuesday 30 April to Friday 3 May 2013
N/A	Cindy Fuller	Tuesday 30 April to Friday 3 May 2013
N/A	Janine Thompson	Tuesday 30 April to Friday 3 May 2013
N/A	Judy Johnson	Tuesday 30 April to Friday 3 May 2013
N/A	Ernie Johnson	Tuesday 30 April to Friday 3 May 2013
WCC	Terry Williams	Tuesday 30 April 2013
WCC	Eugene Coe	Tuesday 30 April to Friday 3 May 2013
West Wyalong LALC	Leeanne Hampton	Tuesday 30 April to Wednesday 1 May 2013
West Wyalong LALC	Linton Howards	Tuesday 30 April to Wednesday 1 May 2013
West Wyalong LALC	Louise Davis	Thursday 2 May to Friday 3 May 2013
West Wyalong LALC	Braydn Davis	Thursday 2 May to Friday 3 May 2013

Comments were sought and received from the registered Aboriginal parties during the field surveys. These comments have been considered in this ACHA and are discussed in Section 2.9.

2.8 Gathering Information about Cultural Significance

The aim of this stage (i.e. Stage 3 of the consultation process) is to facilitate a process whereby registered Aboriginal parties can (DECCW, 2010a):

- (a) *contribute to culturally appropriate information gathering and the research methodology;*
- (b) *provide information that will enable the cultural significance of Aboriginal objects and/or places on the proposed project area to be determined; and*
- (c) *have input into the development of any cultural heritage management options.*

Information was gathered via the following mechanisms:

- review of the Proposed Methodology by registered Aboriginal parties and provision of comments to Barrick;
- consultation with registered Aboriginal parties regarding the cultural context and value of Aboriginal objects and/or places that may be in the area of the Modification (including appropriate management of any cultural information provided by registered Aboriginal parties that is sensitive or has restricted public access);
- assessment of the significance of Aboriginal objects and/or places located in the Modification area based on the context, Aboriginal heritage values and archaeological assessment; and
- consultation with registered Aboriginal parties regarding management options to avoid or mitigate harm and/or conserve known Aboriginal objects and/or places.

Participants throughout the consultation process were encouraged to identify, raise and discuss any relevant cultural concerns or perspectives. Cultural feedback provided during the site survey as well as written feedback is detailed further in Section 2.9.2.

Participants in the survey were also encouraged to provide feedback on potential management measures for known Aboriginal sites and unknown artefacts that may be present within the Modification area. Following the survey, registered Aboriginal parties were encouraged to contact Barrick to discuss and/or provide comment on the proposed management measures. Feedback from registered Aboriginal parties on potential management measures is discussed in Section 2.9.2.

2.9 Consideration of comments received during the ACHA

2.9.1 Comments Received on the Proposed Methodology

A summary of verbal and written feedback relevant to the content of the Proposed Methodology received by Barrick, and how these comments have been considered is provided in Table 2. Full copies of written feedback received regarding the Proposed Methodology are provided in Appendix 4.

No feedback with respect to the Proposed Methodology was provided by registered Aboriginal parties at the Information Session on 8 April 2013.

Neville Williams provided written feedback on the Proposed Methodology – including a four page letter outlining a number of comments, some on the Proposed Methodology and some in relation to the existing CGM and historic reports. A full copy of this letter is provided in Appendix 4.

Table 2
Registered Aboriginal Stakeholder Comments on the Proposed Methodology

Individual/Group	Date of Feedback	Type of Feedback	Summary of Feedback/Comment	Consideration
West Wyalong LALC	9 April 2013	Email	Indicating support of Proposed Methodology.	Positive comment.
Condobolin LALC	22 April 2013	Telephone	Condobolin LALC representative advised that they have no issues with the Proposed Methodology.	Positive comment.
Beverley Johnson	22 April 2013	Telephone	Indicated that she had no concerns with the Proposed Methodology.	Positive comment.
Ernie Johnson	22 April 2013	Telephone	Indicated that he was generally happy with the Proposed Methodology.	Positive comment.
Neville Williams	22 April 2013	Letter	<i>In Pardoe's 2009 report, p. 13 included in <u>Cowal Gold Mine Phase Cutback Project: Proposed Methodology Aboriginal Cultural Heritage Assessment</u> he says that no artefacts have been found on or in the lake bed, but that if any were there they could have fallen down big cracks in the clay or been trodden in by cattle. This is not correct. Wiradjuri and associated archaeologists have found artefacts and scarred trees on the bed of the lake when it was dry. We obtained an injunction some years ago to stop exploration work and move all machinery off the sites, after broken artefacts were found in the tracks of the drilling rigs. On the survey for the proposed water pipeline we also found artefacts. Also some years ago during the exploration period, microliths were found in soil from beneath surface near a dam on the lake bed. Although this find may have been where the pit void now is, this does not mean that there are not artefacts on or beneath other parts of the lake bed which currently covered by water.</i>	This is considered to be a comment relevant to the archaeological context of the Modification rather than the Proposed Methodology and has been considered in Section 6.
			<i>Farmers have also ploughed the dry lake bed in the past when planting crops. It is possible that they could have broken or dug in artefacts. Farmers may also have collected artefacts off the surface. We know there are private collections of artefacts from the Lake Cowal area. Have any of these private collections been studied to assess the types of artefacts included so that knowledge of them can be added to that included in archaeological reports so far?</i>	This is considered to be a comment relevant to the historical context of the region which is considered in Section 5.

Table 2 (Continued)
Registered Aboriginal Stakeholder Comments on the Proposed Methodology

Individual/Group	Date of Feedback	Type of Feedback	Summary of Feedback/Comment	Consideration
Neville Williams (Continued)	22 April 2013	Letter	<i>The water pipeline goes under the lake so the area of the lake now under water cannot be resurveyed at present for the Phase H Cutback Project. Should the lake dry up again in the future, we recommend another survey of the lake bed to see what artefacts are there as any that were on the surface, or below the surface, could have been moved by the inflow of water since 2010 when the lake filled again.</i>	The Proposed Methodology includes a description of the Modification. The proposed disturbance areas associated with the Modification are located within ML 1535 to the west of Lake Cowal and within agricultural land and road easements east of Lake Cowal. The Modification does not propose any disturbance within Lake Cowal.
			<i>A survey for the Cutback project that doesn't include anything about the artefacts on the lake bed is only part of the story. The sites at Lake Cowal are all linked. It's one big cultural area. One big site all of great cultural significance to us.</i>	This is considered to be a general comment regarding cultural values rather than the Proposed Methodology and has been considered in Section 9.1.2.
			<i>What happened to the scarred trees that were in the lake bed? Who's got them now and what conservation methods are being used?</i>	This is considered to be a comment relevant to archaeological and cultural context rather than the Proposed Methodology and is considered in Section 6.2. One scarred tree has been removed from within ML 1535 to the Wiradjuri Study Centre in Condobolin, in accordance with Permit 1468, Consent 1467 and the IACHMP (Barrick, 2003).
			<i>There are registered Aboriginal sites in the proposed project disturbance area.</i>	All registered sites located within the proposed disturbance areas for the Modification are subject to Permits 1468 and 1681 and Consents 1468 and 1680; which were obtained in consultation with the West Wyalong LALC, Wiradjuri Regional Aboriginal Land Council, Wiradjuri registered native title group, the Condobolin community and the NSW Aboriginal Land Council. This ACHA attempts to determine their significance and propose suitable management recommendations, in consultation with the Aboriginal community.
			<i>What are the proposed dates for further surveys to be made of the area that will be covered under the Phase H.</i>	All areas subject to the proposed disturbance as a component of the Modification were surveyed as a component of this ACHA. Dates for the surveys were provided to all registered Aboriginal parties following the Information Session. The majority of registered Aboriginal parties attended the surveys, including Mr Williams.

Table 2 (Continued)
Registered Aboriginal Stakeholder Comments on the Proposed Methodology

Individual/Group	Date of Feedback	Type of Feedback	Summary of Feedback/Comment	Consideration
Neville Williams (Continued)	22 April 2013	Letter	<p><i>Pardoe claims that no burial sites have been found at the lake. We know there were and are Aboriginal burials at the lake as well as at least one massacre. Wiradjuri Elders say there were old and more recent burials at the lake.</i></p> <p><i>... None of this information is new. It's all been submitted to the courts, so Barrick would have had access to it. We know that there were Aboriginal burials around the lake so appropriate care should be taken during the proposed project should it be approved.</i></p>	<p>This is considered to be a comment relevant to the archaeological and cultural context of the Modification rather than the Proposed Methodology and has been considered in Section 6.6. Further discussions regarding the potential for burials were held during the field surveys. Burials are further discussed in Sections 2.9.2 and 6.6.</p>
			<p><i>Cowal Gold Mine Augmentation Project Aboriginal Cultural Heritage Assessment. Draft Report Prepared for Barrick (Cowal) Limited.</i></p> <p><i>Who was involved in this Aboriginal Cultural Heritage Assessment? One survey in February 2011 is mentioned. Were there others? Why weren't Wiradjuri stakeholders invited to take part? Have copies of the report been sent to Aboriginal stakeholders? If not, why not?</i></p> <p><i>The above survey and report are examples of how not all Wiradjuri, who should be invited to be involved in Aboriginal heritage assessment work, are being involved. As mentioned many times previously, Aboriginal people are more likely to read The Koori Mail and The Indigenous Times than local newspapers. Why aren't notices placed in these two newspapers about activities at Lake Cowal that should involve Aboriginal stakeholders?</i></p>	<p>Advertisements for the Modification ACHA consultation process were placed in six local newspapers including the Condobolin Argus, Forbes Advocate, West Wyalong Advocate Wagga Daily Advertiser, Daily Liberal and the Griffith Area News (Section 2.2) in accordance with Section 4.1.3 of the Consultation Guidelines. In addition, all Aboriginal groups and individuals that have previously been involved in the CGM were individually notified of the Modification. This exceeds the requirements under the Consultation Guidelines is considered adequate notification.</p>
			<p><i>Not all Aboriginal people living in Condobolin have bloodlines to Lake Cowal. The Wiradjuri Condobolin Corporation (WCC) does not represent all Wiradjuri with cultural connections to Lake Cowal. Wiradjuri with registered interests in Lake Cowal live as far away as Sydney, Cowra, Dubbo, West Wyalong, Young, Canberra, Queanbeyan and very likely throughout New South Wales and other parts of Australia. There is also a Local Aboriginal Land Council at Condobolin not represented by the WCC.</i></p>	<p>As a component of this ACHA, Barrick is required to identify and consult with registered Aboriginal parties in accordance with the Consultation Guidelines, which prescribe a process whereby all interested parties can register and be consulted.</p>

Table 2 (Continued)
Registered Aboriginal Stakeholder Comments on the Proposed Methodology

Individual/Group	Date of Feedback	Type of Feedback	Summary of Feedback/Comment	Consideration
Neville Williams (Continued)	22 April 2013	Letter	<p><i>Other Wiradjuri have a right to copies of any agreements between Condobolin Wiradjuri and Barrick. Has the latest review of the agreement been signed? If so, who signed it and when? Why haven't other Wiradjuri stakeholders been given copies of the agreement or agreements?</i></p> <p><i>What is the latest on the Keeping Place? Are all artefacts and scarred trees still at Barrick's office at Lake Cowal? How are they being stored? What will happen to them in the future?</i></p>	<p>This comment is not considered to be relevant to the Proposed Methodology. These comments were also raised at the Information Session and during the field surveys. The agreement between Barrick and the WCC is commercial in confidence and is the result of an open Native Title process undertaken early in the CGM life. Similarly, the Keeping Place is controlled by the WCC and Barrick does not have the right or authority to open it without authorisation from the WCC. Notwithstanding, following a request by one of the registered Aboriginal parties during the field surveys, the WCC offered the Keeping Place to any interested person the opportunity to inspect it and the material salvaged to date.</p> <p>During the field surveys for the Modification, all groups who attended the survey were invited to and inspected the Keeping Place, including the Condobolin LALC, the WCC, the West Wyalong LALC, Neville Williams, Sharon Williams, Enid Clarke, Norma Freeman, Keith Freeman, Jirrah Freeman, Ruben Simpson, Stuart Cutmore, Isabelle Collins nee Johnson, Cindy Fuller, Janine Thompson, Judy Johnson and Ernie Johnson.</p>
			<p><i>We are sick of the damage, disturbance and destruction of our cultural heritage that the Cowal Gold Project has brought about not only in the Mining Lease Area but many kilometres outside it. We would prefer that the project did not go ahead, but if it does get approved, then we would need to make decisions at the time of any surveys about the future of artefacts and any scarred trees located as we don't know now what we might be find.</i></p>	<p>Surveys of the proposed disturbance areas were undertaken at the Cowal Gold Mine from Tuesday 30 April 2013 to Friday 3 May 2013. Majority of the registered Aboriginal parties attended the surveys, including Neville Williams. Proposed management measures were discussed at the surveys and have been detailed in Section 11 for review. No scarred trees were identified within the Modification area.</p>
WCC	22 April 2013	Telephone	<p>WCC representative advised that although he had not read through the Proposed Methodology, their major concern from the information session was that existing sites would be covered by the soil stockpiles and destroyed.</p>	<p>As discussed above, any sites located within the proposed disturbance areas for the Modification are subject to Permits 1468 and 1681 and Consents 1468 and 1680; which were obtained in consultation with the West Wyalong LALC, Wiradjuri Regional Aboriginal Land Council, Wiradjuri registered native title group, the Condobolin community and the NSW Aboriginal Land Council. Proposed management measures are provided in Section 11.</p>

2.9.2 General Comments Received During the Survey

Presence of Traditional Food Sources

There was some discussion regarding the presence of traditional bush food sources within the proposed disturbance areas, including Ruby Saltbush (*Enchylaena tomentosa*), Yellow Saltbush, bush tomatoes (*solanum quadriloculatum*) and Nardoo (*Marsilea* sp.).

Consideration of the above comments

These comments have been considered in this ACHA as a component of the historical context of the region (Section 4.2).

Ground Visibility

A number of concerns were raised regarding the level of ground cover and the poor ground visibility within ML 1535 during the survey work. A number of the registered Aboriginal parties identified that they would prefer the area to be burnt prior to further survey work, and identified their opposition to using a blade to remove some of the ground cover due to the risk of damaging any potential artefacts.

Consideration of the above comments

It is noted that all areas subject to survey within ML 1535 as part of the Modification have been previously surveyed, during which the ground visibility was considered to be significantly better than it is now. The surveys carried out as part of this Modification were designed to provide an opportunity for registered Aboriginal parties to visit the site and inspect the lands subject to potential impact. These surveys covered all the identified areas, with participants walking. Notwithstanding, as described in Section 11.2 the disturbance area would be subject to a surface cultural heritage clearance survey, which is designed to inspect the relevant land and identify surface objects from which a representative sample would be collected.

Cultural Values

Neville Williams expressed the opinion that even though some areas of the landscape do not contain any artefacts, the land is still extremely valuable to the Wiradjuri people.

Consideration of the above comments

The above comment has been considered in the cultural significance assessment (Section 9).

Creek Line Disturbance

Representatives from the Condobolin LALC expressed concerns regarding the disturbance to the creek line in the north of the ML 1535. The creek line was identified as an area of high cultural significance with a lot of history relating to the site, and it was suggested that a fence line be constructed around the site to protect it, with an adequate buffer to minimise any disturbance. This suggestion was supported by a number of the representatives present. The Condobolin LALC also identified that due to the significance of the creek line, test excavations should be undertaken along the creek line, with appropriate representatives present to monitor any disturbance.

Consideration of the above comments

The above comment has been considered and it is noted that the proposed area of disturbance does not directly encroach on the creek line. Notwithstanding, the above comment has been considered in

the impact assessment presented in Section 10, and the management and mitigation measures presented in Section 11.

Monitoring and Management of Sites

Representatives from the West Wyalong LALC raised concerns regarding the current management and monitoring practices undertaken at the CGM, and suggested the inclusion of more individual stakeholders in the monitoring process.

Representatives from the Condobolin LALC and other stakeholders present raised concerns regarding the management of sites in areas proposed disturbance areas. The representatives identified that an appropriate mitigation procedure would be to collect all artefacts in any proposed disturbance areas (i.e. complete salvage of all sites and no sites to be destroyed), and to sieve the ground completely for any residual artefacts.

There was discussion during and following the site survey of management work and how these might be undertaken. With regard to monitoring post-approval, there was a consistent view that ground ovens or their remnants should be excavated and samples of the contents taken as part of future works should the Modification be approved.

Consideration of the above comments

The monitoring and management of registered sites and any other sites located within the disturbance footprint of the CGM is undertaken in accordance with the CGM IACHMP (Barrick, 2003) and the Condition 3.3 of the Development Consent (DA 14/98). The above comments received during and following the site survey relevant to mitigation and management measures are consistent with the recommendations provided in Section 11.

Updated Management Plans

Representatives from the West Wyalong LALC raised concerns regarding the current IACHMP, and it was suggested that the plans should be updated as an outcome of the approval relating to the Modification.

Consideration of the above comments

Section 11 described the proposed management measures and updates to the IACHMP.

Areas Subject to Survey

Judy Johnson raised concerns that not enough guidelines were provided to the representatives as to which areas would be specifically subject to disturbance and which areas would be subject to survey. Concerns were also raised by Judy Johnson that no documentation was produced on the existing sites within the survey areas and that all information provided was produced from memory rather than through clear documentation.

Consideration of the above comments

The areas that were subject to survey were clearly defined on maps, which were made available in the field and which were discussed each day prior to the commencement of any fieldwork. Documentation regarding the existing registered sites at the CGM was provided to all registered Aboriginal parties in the Proposed Methodology.

Potential for Burials

There was discussion and marked differences between some registered Aboriginal parties regarding the potential for ancestral burials to occur within the CGM area. Comments of this nature included the following:

- Neville Williams and Judy Johnson indicated there were burials in the CGM area (based on published literature).
- A Condobolin LALC representative and Neville Williams indicated there were at least two massacres.

Representatives of various stakeholders groups indicated the high cultural significance of ancestral burials.

Consideration of the above comments

Archaeological consideration of the likelihood of burials occurring within the Modification area is provided in Section 6.6.

2.9.3 Comments Received on Draft Report

A draft of this report was provided to all registered Aboriginal stakeholders on 11 June 2013 and comments were requested by 10 July 2013. To assist with the provision of comments a meeting was held for all registered Aboriginal parties on 8 July 2013. During the review period calls were made to all registered Aboriginal parties requesting comments and offering to take verbal comments over the phone if that was preferred over providing written comments.

2.9.3.1 Comments Received Within Response Period

As at 23 July 2013 (finalisation of this report), no written comments had been received. The text below provides the verbal comments received and how they have been considered in finalizing this report.

Test Excavations

There was some discussion regarding the depth to which test excavations associated with earthworks were undertaken at the Cowal Gold Mine. Suggestions were made that the excavations should be taken to a deeper level within the soil profile.

Consideration of the above Comments

The management of Aboriginal heritage sites at the Cowal Gold Mine, including the monitoring process, is detailed in the IACHMP (Appendix 1). As detailed in Section 5.4 of the IACHMP, an archaeologist will continue to be on site to monitor any construction earthworks to the maximum depth that Aboriginal objects are likely to exist (this may range from 10 cm on the lake bed, to 50 cm in other areas) depending on the relative age and depth of the soil.

Should any indication of subsurface deposits (e.g. stone tools or flakes) or subsurface evidence of past occupation (e.g. a ground oven) be identified, that location would be subject to excavation to the depth of the deposit/extent of evidence. Irrespective of the potential depth of deposit, the process of monitoring initial ground disturbance allows identification of evidence that a subsurface deposit exists (i.e. because evidence of past extraction of soil for a ground oven or a burial would be evident) regardless of the find depth of that deposit.

Archaeological Team

A suggestion was made by Judy Johnson, and supported by other representatives including Enid Clarke that an additional archaeologist be included in the survey team during the monitoring process.

Consideration of the above Comments

This comment has been noted and will be considered during planning for future fieldwork undertaken at the Cowal Gold Mine. The number of Aboriginal representatives present during the Modification surveys was unusually high due to Barrick wanting to provide an opportunity for all registered Aboriginal parties to be involved. Salvage works generally have lower numbers of participants as it is more focused work compared to general landscape surveys. Personal fitness and OHS considerations must also guide decisions on the number of monitors on the ground in the presence of earthmoving equipment operating in potentially hot and dusty conditions, with uneven ground surface.

As detailed in the IACHMP (Appendix A), a cultural heritage officer is on site to monitor construction earthworks in addition to an archaeologist. This would continue for the Modification areas.

Keeping Place

A comment was made by Judy Johnson, and supported by other representatives including Isabelle Collins nee Johnson and Enid Clarke that all artefacts identified at the Cowal Gold Mine (including the registered sites) should be collected and stored in the Temporary Keeping Place, and returned to the rehabilitation landform at the completion of mining. This would continue for the Modification area.

Consideration of the above Comments

This comment has been noted. In accordance with Special Condition 13 of Permit 1468 and Special Condition 5 of Permit 1681, all collected Aboriginal objects must be kept in the Temporary Keeping Place. As detailed in the IACHMP, collected surface Aboriginal objects would be replaced on the final landform at the completion of mining.

Potential for Burials

During the meeting held regarding the draft report, there was discussion regarding the potential for ancestral burials to occur within the CGM area. Comments of this nature that were provided at the meeting included the following:

- Judy Johnson indicated that there was a possibility of burials in the CGM area (based on evidence found at surrounding locations, including Lake Cargelligo).
- A Condobolin LALC representative indicated that massacres had previously occurred in the area.

Consideration of the above comments

This topic was discussed at length at the meeting. Archaeological consideration of the likelihood of burials occurring within the Modification area is provided in Section 6.6. Sections 11.1 and 11.2.2 describe a process that would be undertaken prior to and during disturbance activities associated with the Modification relating to burials.

Monitoring Process

A suggestion was made by Enid Clarke that additional monitors should be presented for any future earthworks at the Cowal Gold Mine, including all registered Aboriginal stakeholders.

Consideration of the above Comments

As detailed above, the monitoring and management of registered sites and any other sites located within the disturbance footprint of the CGM is undertaken in accordance with the CGM IACHMP (Barrick, 2003) and the Condition 3.3 of the Development Consent (DA 14/98). This would continue for the Modification area.

Recommendations

During the meeting, a number of representatives indicated support for the recommendations detailed in Section 11.3 of the report.

This comment is noted.

2.9.3.2 Comments Received Outside of Response Period

On 30 July 2013 (outside of the required response period), a letter was received from Neville Williams providing comments on the draft report. The letter raised a number of concerns that are considered to be outside of the scope of the ACHA for the Modification. These concerns include:

- on-going employment at the Cowal Gold Mine;
- availability of the agreement between Barrick and the Wiradjuri Condobolin Native Title Claim group;
- availability of the master inventory of artefacts recorded at the Cowal Gold Mine and stored in the Keeping Place;
- attendance at the Cowal Gold Mine Community Environmental Monitoring and Consultative Committee;
- involvement in the Lake Cowal Conservation Centre; and
- availability of reports relating to ecology monitoring.

These are considered outside the scope of the ACHA as they relate to general operational matters at the CGM. Notwithstanding, Barrick will address these concerns directly with Mr Williams outside of this assessment. Further, it is noted that as detailed in Section 6.2, a master inventory of artefacts stored in the Keeping Place is currently maintained and recommendations regarding access to the Keeping Place have been detailed in Section 11.3.

Mr Williams refers in his letter (dated 30 July 2013) to 2019 as being the end of mine life once extended by the proposed Modification. As described in the Proposed Methodology, the information session and the draft ACHA, the Modification is seeking to extend the operational life of the CGM (currently 2019) by an additional 5 years (i.e. to 2024).

The letter from Mr Williams also raised a number of relevant concerns that were also identified by other Aboriginal stakeholders and/or by Mr Williams during the development of this ACHA. These concerns relate to:

- the level of advertisement undertaken by Barrick requesting Aboriginal parties to register an interest in the ACHA consultation process;
- the level of ground visibility during the surveys;

- disturbance to the creek line in the north of ML 1535;
- the depth of test excavations undertaken during salvage works;
- updates to the IACHMP;
- burials at Lake Cowal; and
- the inventory of artefacts recorded at the CGM.

As described above, all of these concerns have been previously raised. As such, they are considered and addressed in the responses detailed in Sections 2.9.2 and 2.9.3 and Table 2.

Notwithstanding that the letter was received outside the response period, a full copy is included in Appendix 4.

3 Environmental Context

Physical environment and climate are the two most important factors determining the nature and distribution of the archaeological record, as well as its preservation. In this section the landforms that determine the placement of rivers, plains, animals and plants are shown to have evolved in a time span relevant to the archaeological record.

A summary of environment and the region sets the scene for how people might make a living in different parts of their tribal country and at different times of the year.

3.1 Climate

Total annual rainfall recorded at the Cowal Automatic Weather Station in 2012 was approximately 484.8 mm, with the highest total rainfall recorded during February (129.2 mm) and the lowest recorded in April (15.6 mm). The data indicates that conditions were relatively wet throughout the 2011 monitoring period, which saw Lake Cowal with a steady supply of water for most of the year.

3.2 Landforms

In order to orient the reader, this section outlines the land involved the proposed Modification and the micro-environments within it.

Lake Cowal is an ephemeral lake on the eastern edge of the Riverine plain. It is situated in central NSW, between West Wyalong and Condobolin, and is part of the Murray–Darling Basin. Elevation of the lake is approximately 200 m above sea level. The surrounding plain varies between 205 and 225 m. Low isolated hills may be 290 m high, while peaks of the surrounding ridges are typically 400 m (Mount Wambo 412 m; Jemalong Ridge 378 m).

The lake, like all ephemeral lakes in Australia, is very shallow for its size. It is incised into the surrounding plain on the western shore. On the eastern shore is the typical arcuate sand dune created by prevailing winds that drive sand up from the eastern beach into a lunette. The lunette is not pronounced and is nowhere more than 5 m in height.

3.3 Ecosystems

The approved CGM (and Modification area) is located in the central north-west of the South Western Slopes Bioregion, part of the International Biogeographic Regionalisation of Australia (Commonwealth Department of Environment, Water, Heritage and the Arts, 2011). The South Western Slopes Bioregion is an extensive area of foothills and isolated ranges comprising the lower inland slopes of the Great Dividing Range (Appendix D of the EA).

Part of this is the Mid Lachlan subregion, characterised by open plains, low north-south trending ranges and cross-cut by the Lachlan River and associated channels. Rivers start as small streams in the Alpine region before quickly coalescing into the main rivers that trend west through the region. Many smaller streams feed these.

Lake Cowal is an ephemeral fresh water lake. It forms part of the Wilbertroy-Cowal Wetlands and is in the lower reaches of the Bland Creek Catchment. It also receives periodic inflows from the Lachlan River during periods of high flow when flood waters enter the Lake via two main breakout channels from the north-east. Inflows from the Lachlan River occur when flows at Jemalong Weir exceed 15,000 to 20,000 megalitres per day (North Limited, 1998). The area is drained by ephemeral drainage lines which flow to Lake Cowal. Bland Creek and other tributaries of Lake Cowal are also ephemeral.

The Wilbertroy-Cowal Wetland system has been described as one of the most significant water bird areas in NSW by the AHC (1992). Like many other lakes in Australia, Lake Cowal's value to bird life relates to its shallow depth and to the cycles of flooding and drying that have occurred over a long period of time (Appendix D of the EA). The Lake Cowal Wetland system provides intermittent habitat for wetland birds and associated wetland species that is of national significance (Appendix D of the EA).

The open plains to the west of Lake Cowal probably historically consisted of native grassland with Wilga, Rosewood and Belah open woodland.

3.4 Water

Water is one of the main determinants of the location and nature and distribution of Aboriginal residence and land use as seen in the archaeological record. Rainfall, water flow and evaporation are all relevant to water availability at Lake Cowal.

Lake Cowal is an ephemeral, fresh water lake. Lake Cowal has recently become inundated with water after being dry for a period of approximately 10 years owing to above average rainfall during 2010. The lake is part of a northerly trending drainage system nestled between the two ridges. It receives water from three sources (Figure 5):

- Sandy and Bland Creeks emptying into Lake Cowal from the south;
- floodwaters of the Lachlan River coming from the north-east; and
- local drainages typified by small creeks that drain the immediate catchment.

Flood waters drain to the north through the River Red Gum (*Eucalyptus camaldulensis*) woodland and a Lignum (*Duma florulenta*) understorey into Nerang Cowal, another large ephemeral lake, then into the Lachlan River.

A small drainage line crosses the Modification area and has been the subject of previous investigations within ML 1535.



3.5 Micro – Environments

The local ecology at Lake Cowal is dominated by three main factors, namely, the lake itself, the local variation in soil and topography, and the flow of local drainages. These combine to delineate micro-environments that vary, and would have varied in the past, in the nature and distribution of plants, animals and available rock. These would provide all the material requirements for Aboriginal people. Their use of these resources would have been planned and patterned, and we might expect that the distribution of the archaeological record would reflect that use.

Many of these micro-environments have evolved over the time that people have been living alongside the lake. Some, like the back plains, have changed most in the last 175 years, losing their topsoil. The lake edge has probably been carved back by wave and water erosion. Some areas have probably changed little. The beach area may have moved, but has probably been a belt of highly productive land from which grass seeds could be harvested for an extended period of time.

The use of micro-environments has been a part of assessment and heritage works at the CGM from the start of assessment/operation (Cane 1995a, 1995b; Pardoe, 2009a). The area of the ML 1535 has been characterised by the micro-environments described below.

3.5.1 Lake Bed

The lake bed consists of cracking grey clays that are approximately 5 m deep. The surface has intermittent drifts of washed and well-sorted beach sands, typically no more than 10 centimetres (cm) thick. When there is water in the lake, these drifts are moved around by wave and current action.

The cracking grey clays build up slowly and accordingly, age would be expected to increase quickly with depth. Artefacts were not found at any depth (that is, below about 10 cm, where cattle treadage in wet clay may churn the clay to this depth). Large cracks are found in the clay during dry periods, and it would be possible for artefacts to fall down the cracks.

3.5.2 Ephemeral Creeks and Drainage Lines

There are several ephemeral creeks on the western shore of Lake Cowal and a small drainage line that crosses ML 1535. These appear to be of considerable antiquity, since the land must have drained in a similar fashion for millions of years. The creeks may change course in the space of thousands of years, as has been seen for larger river channels like the Lachlan and Murrumbidgee. Such changes in course are more likely towards the lake, where sediment build-up would choke particular channels, forcing the watercourse to a new position.

The drainage line is very sinuous at the lake edge, and there are probably older channels near the lake. The present channel is probably several thousand years old. The distribution of lithic items follows the main course fairly closely. There are billabongs along the channel, and it appears that concentrations of artefacts occur near these. The channel is incised. Although Holocene aged channels of major rivers are usually incised, those of small creeks are generally thought to post-date, and to be a product of erosion from the pastoral industry.

It is reasonable to infer that the channel has become incised within the last 150 years or so, but that small billabongs were already in existence and these have been deepened by subsequent erosion.

Artefacts found along the creek beds are therefore of unknown age, but were most likely moved by water and erosion within the last 150 years.

3.5.3 Beach

The beach consists of coarse, well-sorted light coloured sand intermixed with organic materials washed up as flotsam and jetsam. These beach sands are found all along the western shore and derived from sand washed into the lake, which is then moved around by waves and current, until it is deposited as a shallow unit at the high water mark. The western beach differs from the eastern lunette in several features. The former is water borne, while the latter is air borne.

3.5.4 Eastern Lunette

Lake Cowal's lunette is fairly typical of ephemeral lakes in the region. It is low and wide, appearing to consist of at most two units. The sand is light coloured, and deposited by wind. Particle size is smaller than the western beach sands, and contains a greater organic fraction.

3.5.5 Lake Edge Slope

The slope at the Lake edge has been almost completely scoured by erosion, leaving a 'B' horizon of under-lying clay with some pisolith gravel on the surface. At the toe of the slope where it flattens to become the beach there is a talus of slope-wash. This sediment is likely to be the mixed result of materials up slope, as well as being affected by high water wave action and beach formation. Dates are therefore likely to be inconsistent and unreliable.

3.5.6 Lake Edge Ridge

The lake-edge ridge was defined for archaeological rather than geomorphological reasons. It is part of the surrounding plains.

3.5.7 Back Plains

Although the most visible features are the north-south trending ranges, the surrounding plains form the largest environment surrounding the lakes. The plains are nestled between the ranges. These flat plains were originally attractive for stock. They were eroded in the 1800s, when up to 300 mm of topsoil was lost from wind erosion. Mechanized agricultural methods opened much of these plains to arable in the 20th century. This also contributed to loss of topsoil. The back plains of ML 1535 reverted to stock and the ground surface stabilised with a lag surface of gravel except in low lying areas that maintained a thicker layer of topsoil.

3.5.8 Gilgai Plains

Gilgai plains are features that were first observed in Wiradjuri country, and the word is a Wiradjuri one, the original term "gilgaay", meaning waterhole. The term has since been used for these features around the world.

*Though it wasn't a heavy storm it was enough to put water in gilgai holes and scatter the horses
(Tom Cole 1995: 160).*

A Gilgai (plural Gilgais) describes a hollow in the ground surrounded by a raised rim. Gilgais occur on plains of heavy clay soil, where the terrain is of low relief, and they are characterised by the presence of hollows, rims, and mounds. They are formed by alternating periods of expansion during wet weather and contraction (with deep cracking) during hot, dry weather. The type of terrain is described as gilgaed. A single hole is known as a gilgai, or gilgai hole. Such holes are also known as crab-holes, dead-men's graves, or melon holes.

Gilgai plains are generally covered by tree or large shrub canopy to an extent of about 30%. There are about 10 trees/ha on average. Many herbs and grasses surround Gilgais, several of which are amphibious and are able to take advantage of ephemeral inundation. These plants provide food for animals and particularly birds, which are able to travel quickly to take advantage of short-lived resources.

3.5.9 Summary

Although the archaeological record present on the Modification area would have been affected by micro-environments of the wider region, there are two that occur on it. These are the Back Plains, and Gilgai Plains. The archaeological record associated with each of these has been described elsewhere (Pardoe, 2009a) and is summarised in Section 6.

3.6 Soils

There are four main soil types in the CGM area, of which two occur in the ML 1535 area. These are hard pedal red duplex soils and grey, brown and red cracking clays (North Limited, 1998; Cane 1995a, 1995b).

3.6.1 Hard Pedal Red Duplex Soils

The hard pedal red duplex soils occur mainly on very gently sloping (1% slope) stagnant alluvial plains. There is a distinct texture contrast between topsoil and subsoil. Topsoils are thin (<10 cm), dull reddish brown with a fine sandy loam to clay loam texture. This soil covers most of the Modification area.

Surface soils are typically neutral to strongly acid (pH 7.3 – 5.1). Subsoils shallower than about 1 m are generally neutral to very strongly alkaline (pH 6.8 – 9.5). Manganese may occur as nodules and veins below about 50 cm.

Topsoil characteristics of hard pedal red duplex soils include the following:

- very low salinity;
- low to moderate organic matter (1.8% - 2.9%);
- neutral to strong acidity (pH 7.3 – 5.1);
- generally sodic;
- moderate permeability; and
- hard setting.

3.6.2 Grey, Brown and Red Cracking Clays

There are three distinct areas of these soils within the Modification area. The soils have a uniform fine-textured profile that cracks periodically upon drying. They are similar to hard pedal red duplex soils, occurring on gently sloping, stagnant alluvial plains. The topsoil is typically 5 cm – 10 cm deep, moderate to strongly structured and has a medium clay texture. Colour varies from greyish olive brown to dark reddish brown. There is a clear to gradual change to the underlying strongly pedal subsoil.

Gilgais are common. Soft or nodular carbonates occur in the subsoil. Surface soils are moderately acid to moderately alkaline (pH 5.8 – 8.3). Subsoils shallower than about 1m are generally neutral to very strongly alkaline (pH 6.9 – 9.3).

Topsoil characteristics of grey, brown and red cracking clays include the following:

- very low to moderate salinity;
- low to moderate organic matter (1.9% - 2.8%);
- moderate acidity to moderate alkalinity (pH 5.8 – 8.3);
- generally sodic;
- very low permeability; and
- hard setting.

3.6.3 Soil Loss

The soils of many parts of inland Australia are old. They build slowly, and on the flat plains near the low hills that are the remnants of the Great Dividing Range, they contain cobbles, pebbles and gravels that have eroded over millennia. The arrival of pastoralists changed the face of the country, which in the Cowal region was probably savannah woodland. Clearing of the open canopy and introduction of sheep removed the trees and grasses holding the soil together. During the 1860s, the first of the major droughts experienced in the region allowed the wind to remove large quantities of topsoil. The remnants are visible today as a 'thin red line' in the New Zealand glaciers.

Ploughing became more common with the advent of mechanization in the 20th century. This contributed to soil loss, and disturbed the context of archaeological sites by churning the soil. Other disturbances include road building and quarrying, as well as less visible influences from water management.

Evidence for topsoil loss can be seen today in the tree roots of older trees standing proud, in the gravel lag surface over much of this back plains country, and in the archaeological record itself. Ground ovens are common throughout this country. They are small holes dug into the ground, in which people would cook by placing a layer of termite nest (which acts like heat beads, since it contains lignin or cellulose from the plants chewed by termites) over the fire, then food and then covered by greens and soil. Today we see the termite bed layers of these ovens on the present day ground surface. Yet they would have been dug about 300mm into the ground. The lithic items seen across the plains have also dropped onto the present day ground surface. The age of this surface is more than 60,000 years, and so all the objects (barring the odd one that slid down a crack) that we see on the surface encompass the whole of Wiradjuri residence.

3.7 Rock

Lake Cowal lies between two ridges of low hills that are the remnants of the east-west compression that folded the land to create the Dividing Range. These are the Jemalong Ridge to the east and the Wamboyne Ridge to the west. The sedimentary layers angle up to the west along the Wamboyne Ridge, exposing several types of rock. By happy circumstance, several of these rock types are very useful for various stone tool technologies.

- Silurian conglomerates contain slightly metamorphosed quartz cobbles, which produce high quality quartz that is more glass-like than the usual crystal form of white quartz.
- Devonian quartzite cobbles have also been metamorphosed and produce exceptionally tough hammers.
- Volcanic stone produces high quality stone for the production of axe heads.
- A silicified volcanic stone (tachylite) that is fine grained and of exceptional quality for flaking. This has been called black chert in other studies, on account of its mechanical and flaking similarities to chert.
- Indurated sandstone may be procured in large, tough sheets that are very thin, and hence portable.

3.8 Animal and Plant Resources

Animal and plant resources provided food and materials. The distribution of animals and plants is determined by soil, topography, water, ecology (i.e. the other animals and plants in the immediate vicinity), as well as the larger scale determinants of latitude, position on the continent (precipitation) and elevation. The variety and distribution of animals and plants would change over the time periods under consideration. This is the archaeological perspective. The Lake Cowal region was not always in the semi-arid plains of the greater southeast. During the last glacial period, from about 13,000 years ago back to about 50,000 years ago when people first colonised this area, the Lake Cowal region was located in the arid zone. Temperatures were lower. Rainfall may have been less, but so too was evaporation. Major rivers probably flowed in a more strongly seasonal pattern. It is likely that the area was open plain with considerably more grassland and fewer trees, except along waterways.

Such changes in the distribution of animal and plant resources would have an effect on the distribution of people. Lake Cowal was present and functioning during the whole history of human occupation, and so provides a stable point of reference for our understanding of the archaeological record.

4 Aboriginal Life Historical Context

4.1 Social Organisation across the Landscape

Wiradjuri is one of the largest language groups in NSW, however most sources suggest that people generally lived in smaller groups, some of whom spoke different dialects of their main language.

R.H. Mathews (1895), a land surveyor who travelled widely with Aboriginal people throughout NSW in the late 1800s, described the Wiradjuri social organisation as 'a vast confederation'. He wrote that this confederation was made up of a number of independent groups, each with its 'recognized hunting grounds' and that each group was named after some local feature in its district or other distinguishing name. These named groups spent much of the year divided into smaller groups, such as an extended family, most of who were born in that locality and owned its forests and streams as a common hunting ground by virtue of their birth-right (Mathews, 1906: 941-2).

Pearson (1984) did extensive research into a range of historical Wiradjuri sources which led him to the conclusion that each family group or clan would generally be based on a particular waterway or drainage catchment area with its river flats and open land where resources are plentiful and houses easy to construct.

The literature examined by Pearson, although more relevant to groups to the east, suggests that the size of groups varied according to the seasons and might fluctuate between small family groups and gatherings of between 80-150 individuals. According to evidence from early settlers, the territory of these larger groupings had a radius of up to 65 km (Pearson, 1981:65, 75-76). They would split into smaller groups of about 20 individuals, hunting and collecting different foods on a daily basis along the rivers or in the hills and ranges. When seasonal resources were good, they would meet together in well-known places for feasting as well as ceremonial and social activities. Sometimes, they would meet up with neighbouring Wiradjuri clans for important ceremonies, such as 'the burbung' (Mathews, 1895), or for the purpose of warfare against a common enemy. At other times, though, there would be disputes between clans, particularly over trespass or the abduction of women (Pearson, 1984:66; Folster, 1988: 47).

4.2 Daily Life and Resources

The size of people's territories and the distances travelled in the seasonal round would vary depending on resource availability including plant and animal foods and the proximity to water, stone sources, medicinal plants, plants for fibre, specific timbers and so on. Groups would vary in size at different times of the year, sometimes living in small, semi-permanent villages, sometimes moving between resources in smaller groups, and sometimes coming together in large central gatherings for ceremony, trade and governance.

Most clans or local groups would build substantial huts in their core areas. These villages would act as the home base from which people ventured on their seasonal round. Houses were made of saplings covered with bark panels stripped from trees. Seasonal residences would have been smaller and less permanent but built on the same principles.

Food from the rivers was supplemented with kangaroos, wallabies, bandicoots, emus, turkeys, snakes and lizards, especially in those seasons when people moved from the rivers into the ranges or plains. According to Thomas Mitchell, possums formed a significant part of people's diet, as well as being used for making warm winter cloaks, arm bands and other items of clothing. Mitchell, Surveyor-General of the Colony of NSW, conducted several expeditions into the area in the 1830s and 1840s. He wrote that possums were found in the hollow trunks of upper branches of tall trees which were climbed by cutting new notches (since according to Mitchell Aboriginal people never reused old ones). He wrote that cutting marks were very common on trees and described their distribution:

[O]n my journeys in the interior I knew, by their being in a recent state, when I was approaching a tribe; or when they were not quite recent how long it was since the natives had been in such parts of the woods; whether they had any iron hatchets or used still those of stone only; etc The notches made in climbing trees are cut by means of a small stone hatchet and, as already observed, with each hand alternately. By long practice a native can support himself with his toes on very small notches, not only in climbing but while he cuts other notches, necessary for his further ascent, with one hand, the other arm embracing the tree. The elasticity and lightness of the simple handle of the mogo or stone hatchet employed are well adapted to the weight of the head and assist the blow necessary to cut the thick bark with an edge of stone (Mitchell 1839).

Vegetable foods formed an important part of the diet. While the western Wiradjuri groups towards the riverine plains country made extensive use of bulrush roots (*Typha*) and grass seeds (*Panicum decompositum*) as staple foods (Gott, 1999a, 1999b; Tindale, 1974, 1976); the eastern Wiradjuri who lived on the western slopes and incised plateaux had a rather different diet. Their country tended to be colder and wetter, and grass seeds were not as consistent or nutritious. Daisy yams or 'myrnong' (*Microseis scapigera*), though, grew in abundance as did a range of other roots and tubers, including lily and orchid tubers and Kurrajong roots (*Brachychiton populneum*) (Gott, 1983; White, 1985: 57-58). Kurrajong and Acacia seeds would be ground for flour, as would certain grass seeds, such as oat grass or kangaroo grass (*Themeda australis*).

Trees were important in Wiradjuri life as a source of fuel, but also for the manufacture of tools and implements such as spears, shields, axe hafts, digging sticks, clubs and shovels. Bark was another important resource that was readily accessible to build houses, or to make canoes, coolamons and other containers. These activities have left their evidence on some of the remaining older trees in the area.

The many varieties of reeds and rushes that grew along the waterways not only provided food but were also extensively used to make mats, bags, baskets, nets, belts and headbands.

Mitchell described the widespread use of red and white ochre to decorate tools, weapons and clothing. He noted that men and women often wore a woven net band round their heads and/or waists and that the headband was invariably coloured with white or red ochre in the same way as a European soldier might whiten his belt. Oxley too (4 May 1817; 1820) describes meeting a number of Wiradjuri men wearing possum skin cloaks and 'neatly worked nets bound round their hair'. He noted that all the men had one front tooth missing, no doubt as a result of tooth avulsion, and that their faces were decorated with red and yellow ochre.

Trade in raw materials, as well as manufactured items, was common between neighbours.

Wiradjuri are well known for the elaborate burial ceremonies conducted on the death of important members of the group. These burial grounds were described in considerable detail by Oxley (1820) and Mitchell (1839). The graves of important people comprised a large, raised central tomb, often with a hut on top, made of poles and bark sheets, where close family members used to keep vigil for a period of time. The tombs were often surrounded by three raised ridges of earth. The height of the ridges seemed to vary. Oxley described them as raised seats, suggesting that they are large but Mitchell (1839) described them as small. It was common for trees facing these burials to be elaborately carved with designs that were either specific to the individual or to their clan or group. One of these burial grounds “Yuranigh” (one of Mitchell’s most important guides on his expeditions), can be found at Molong on the Mitchell Highway.

Lake Cowal Occupation Model

Availability of water is one of the main factors that determine where people choose to live and what activities are carried out. Most sites are found close to water. The distance of stone artefacts to the lake edge and to the several streams follows a typical distribution, where most are close, tailing away as one moves away from the water source. Grinding dishes and topstones (as well as mortars and pestles) are typically found closer to water on average.

Other factors influencing residential location include resource availability. The raw stone resources of the Manna Mountain – Wamboyne ridge are close to hand. The bird breeding grounds of Lake Cowal are found at the northern end, while the two local streams, Sandy and Bland Creeks, empty into the lake at the southern end. The eastern shore would be most popular during summer, when the whole lake would be turned into an evaporative cooler with the hot south-westerly winds being cooled as they crossed the lake waters. For this reason we find larger residential areas on the south-east and north-east quadrants of the lake. Conversely, in winter it would be best to avoid the winds whipping across the lake, and so we find larger sites on the western side, typically where small local drainages empty into the lake.

5 Changing Land Patterns and Previous Disturbance of Land

Early Europeans entering into the area described open grasslands and stands of trees, ideal pasture for the stock they were moving in. Most of them assumed that the landscape that they were observing was natural. Surveyor-General, Thomas Mitchell was one of the few who recognised the role that Aboriginal people played in constructing their landscape:

Fire, grass, kangaroos, and human inhabitants, seem all dependent on each other for existence in Australia; for any one of these being wanting, the others could no longer continue. Fire is necessary to burn the grass, and form those open forests, in which we find the large forest-kangaroo; the native applies that fire to the grass at certain seasons, in order that a young green crop may subsequently spring up, and so attract and enable him to kill or take the kangaroo with nets. In summer, the burning of long grass also discloses vermin, birds' nests, etc., on which the females and children, who chiefly burn the grass, feed. But for this simple process, the Australian woods had probably contained as thick a jungle as those of New Zealand or America, instead of the open forests in which the white men now find grass for their cattle (Mitchell 1848).

The Wiradjuri landscape in the 1820s was not a natural wilderness. It had been carefully managed for thousands of years by people who had learned how to look after their country to ensure the continued supply of its resources. A number of different land development practices have taken place in the region over the last 200 years.

Some land has previously been subject to major disturbances including road and track construction, trenching activities, irrigation ditches, tree clearing and stock, and arable agriculture. The region has been subject to tree clearance since the pastoral industry first became established in the 1820s. Arable agriculture became more widespread from the 1870s.

Soil has been lost from some areas, particularly the higher ground, cleared land and from incision of river channels. Much of the region has been subject to ploughing. All of these may affect the integrity of sites and features. Lithic items, common in the region, would be unlikely to be damaged by the plough unless they were larger items such as grinding dishes. Features such as earth ovens and earthen mounds would often be totally destroyed by ploughing, depending on depth, which is often in the range of 20 cm to 25 cm. Even though ploughed, earthen mounds may still be visible, if present.

Some areas of soil aggradations are the result of erosion toward the waterways. These may obscure objects that were previously on the surface, but would not have affected earthen mounds or scarred trees.

5.1 Land Clearance

Land clearance in the 19th and early 20th centuries was widespread and had a major impact. Clearance of trees by chain, chopping and fire was widespread and had a considerable impact on Aboriginal cultural heritage.

This was exacerbated by the uprooting of trees by digging, horse team, or later by the use of motorized tractors, which disturbed the ground to considerable depth. Remnants of the forested areas are seen where road reserves have not been cleared, and in small pockets scattered across the country, particularly in the low ranges. However, regrowth has occurred along many road reserves. There were always large areas of open grassy plain which would not have been affected in this way, but which were subject to damage from stock and agricultural plough.

As pastoralists cleared the land and moved in their stock, local waterholes and creeks became fouled, native fauna were driven away and the vegetation was eaten out.

5.2 Agricultural Ploughing

Agricultural ploughing has taken place over much of the Modification area. Although generally restricted to certain soils that were either low lying or which had more potential for intermittent flooding from ephemeral creeks, ploughing was a considerable impact. Increasing mechanization associated with broad acre agricultural ploughing has destroyed the detailed archaeological context of many sites in the region. On a wider scale, western NSW lost much of its topsoil due to the combination of stock and the plough, with soils blown away in the dust-storms that we thought were a memory until the later years of the last drought.

5.3 Road Construction

Construction of formed roads took place from early times. There was a Travelling Stock Reserve to the east of the Modification area. It was relocated as part of the approved CGM and extends around the northern, western and southern extents of ML 1535.

5.4 Fire Breaks

Fire breaks are usually ripped along road sides and fence lines. Fire breaks generally avoid mature trees. Ripping may cause damage to archaeological sites, particularly ovens and residential areas defined by culturally modified soils. Individual lithic items are generally not damaged by ripping, although the larger the item, the more likely it is to be damaged. It should be noted that while the fabric of the object may not be damaged, its archaeological context of location, stratigraphy and relation to other objects and features is disrupted.

5.5 Stock

Damage to sites, features and objects from trampling has occurred. Sheep and cattle, with their harder hooves, broke up the soil, and were a major contributor to the loss of topsoil discussed at the beginning of this section. Sheep were the major stock animal in the region. The historic levels of stocking may be appreciated by inspection of the large shearing sheds and ancillary buildings, built from local stands of cypress pine.

5.6 Rabbits

With the decline in rabbit numbers following Myxamatox and Calicivirus controls, few rabbits are currently seen in the region. Records from the late 1800s, however, document the severe damage to the environment that was wrought by the explosion of rabbit numbers (Rolls, 1984). Virtually all sandy rises were subject to infestation with rabbit warrens. The sandy lunette on the east side of the lake was particularly susceptible. Soils of the western back plains were rather more resistant, given their hardness and the presence of rocky layers at shallow depths.

5.7 Historical Mining

While highly localised, mining was likely to have had a significant impact on Aboriginal quarries and associated working areas in nearby hills.

5.8 Summary of Land Disturbance Impacts

Past land disturbance has had a significant and often under-appreciated impact on the land. Clearing has probably destroyed some mounds that may have been near rivers, and certainly most of the culturally modified trees, leaving only rare specimens from before 1820s. Most culturally modified trees recorded probably date from after this time.

Significant ground disturbance from many of these impacts would have contributed to the disturbance and destruction of many archaeological sites. Stratigraphic integrity may be lost, as well as detailed evidence from soils including charcoal and ash that may define residential areas, small bones and plant remains (where soil conditions allow for preservation). Sites would then only be recognised from the presence of lithic items and/or heat retainers. Heat retainers share characteristics with naturally burnt termite nest and clay from within tree trunks.

Many of these impacts were wide-spread, and it is possible that disturbance to the surface over a large area may have taken place at any given location. It may not be possible to identify any damage today.

As ML 1535 is a developed mine site, a significant area of the native vegetation within ML 1535 has been cleared (Appendix D of the EA).

6 Archaeological and Cultural Context

The CGM and surrounding areas have been subject to a number of archaeological surveys (Section 6.1), as well as the implementation of various heritage management and mitigation measures in accordance with the existing permits and consents issued under the NPW Act and the IACHMP (Section 11).

This section reviews previous work. There has been considerable archaeological investigation in the Modification area over the last 20 years (Paton, 1989; Cane 1995a, 1995b; Pardoe 2009a, 2009b), but little in the wider region (Aboriginal Heritage Information Management System [AHIMS] Search January 2011, Harvey Johnston, DECCW Regional Archaeologist, personal communication).

It is recommended that the document *Archaeological Investigations at Lake Cowal* (Pardoe, 2009a) be consulted for a detailed analysis of previous archaeological work. This study compares findings by micro-environment and details the background distribution across the CGM. Conservation measures for registered sites B, C, D, E and H are documented in Pardoe (2009a).

6.1 Previous Studies

An archaeological survey of the ML 1535 area, in particular the open pit area, was undertaken by Cane (1995a; 1995b) in 1995. The field survey was conducted with the assistance of Roley Williams from Wiradjuri Regional Aboriginal Land Council. Bill Rutter from West Wyalong LALC also made a site visit towards the end of the survey.

A total of ten Aboriginal sites were recorded during the field survey. Two sites were recorded within the open pit area, Site P1, an artefact concentration and Site P2, a scarred tree. The remaining eight sites (Sites LC1-LC5, LC6a, LC6b and SC1), all open sites defined by a small concentration of stone artefacts, were recorded along the margins of Lake Cowal beyond the open pit area.

A further study was carried out on the back plains country on the western part of ML 1535. Further analysis of site LC1 was carried out and sites A to H were documented.

Huys and Johnston were commissioned in 1995 to undertake an archaeological survey of the routes for an access road, water pipeline and 132 kilovolt (kV) transmission line. The field survey was conducted with the assistance of Roley Williams from Wiradjuri Regional Aboriginal Land Council and Bill Rutter from the West Wyalong LALC.

Seven Aboriginal sites, all open artefact concentrations, were recorded during the field survey. Six of these sites (FAS1-FAS6) were located either on or in close proximity to the proposed 132 kV transmission route. The remaining site (FAS7) was located in the vicinity of the road access route to the mine site. No sites were recorded along the water pipeline route.

The Culture and Heritage Report was included in the *Cowal Gold Project Environmental Impact Statement* (North Limited, 1998). This report summarised the findings of five previous reports (Paton, 1989; Cane, 1995a; 1995b; Huys and Johnston, 1995; Nicholson, 1997) commissioned by the then proponent at different stages of the environmental assessment process for the CGM. The previous surveys summarised in this report covered the following CGM disturbance areas:

- the open pit area (western edge of Lake Cowal);
- mining infrastructure areas (lake shore);
- tailings storages (gilgai plains to the west of Lake Cowal);

- the water pipeline (to the north-east of Lake Cowal);
- the ETL (south of Lake Cowal); and
- the road realignment (west of Lake Cowal).

The Culture and Heritage report (North Limited, 1998) also includes the following:

- a summary of the consultation undertaken with Aboriginal groups during the various surveys;
- a description of the archaeological material discovered during the surveys;
- archaeological and cultural interpretations of the sites; and
- recommendations regarding management of the known sites.

An archaeological survey was conducted along a number of potential corridors for a transmission line from Temora to the CGM (Nicholson, 1998).

Consultation with the Aboriginal community was carried out as part of the broader study being undertaken for the CGM. The field survey was conducted with the assistance of Roley Williams from Wiradjuri Regional Aboriginal Land Council. Bill Rutter from the West Wyalong LALC was kept informed on the progress of the field survey and representatives from the LALC provided additional field assistance.

A total of seven artefact concentrations were recorded during the survey (TL1–TL4, TL6, TL7 and TL8). An isolated grinding stone was also found on a creek bed and one scarred tree (TL5) was recorded. Five other potentially sensitive areas were identified (SA1–SA5). These included three creeks and a lagoon where vegetation hindered the identification of archaeological materials. The fifth area (SA5) was a creek crossing near Lake Cowal where archaeological material had been recorded during the survey by Cane in 1995 (Site LC6a).

6.1.1 Inspection and Survey February 2011

Several of the areas forming part of the Modification area were examined in February 2011 as part of a preliminary assessment. Many of the registered Aboriginal parties present for the current assessment participated.

A number of items were recorded during the February 2011 survey. One flake and several heat retainers were observed within the Modification area and outside of Wamboyne Back Plains Site 1. This is consistent with the background distribution (Section 6.5). The heat retainers were not in their original position and may have come from this site.

Artefacts and ovens have been previously documented along the small drainage line within the Modification area. The distribution of artefacts seen during this examination is similar to other surveys. The lithic items are typical of the region, with a similar distribution of quartz to siliceous materials. The density of materials as estimated from the two scalds is similar to densities across the back plains.

Quartz is the one of the most common materials found within the Modification area, and may sometimes be considered problematic for archaeological identification and analysis. It is necessary to be able to distinguish between humanly produced pieces of quartz and those that are the product of natural erosion, agricultural cultivation or road grading. Criteria for identification and analysis have been developed and were used during this assessment (Pardoe, 2008; 2010).

The oven stone (heat retainers) that were found in isolation require verification because baked materials can be produced naturally. It is possible to tell the difference with examination of the item and its context, if undisturbed (Pardoe, 2008).

Two other objects were identified during the February 2011 survey. These were a fragment of grinding dish and half of a hammer. These objects are fairly commonly distributed across ML 1535, with more than 250 pieces of grinding dishes collected. Hammers are also very common within ML 1535 (i.e. a total of 85 collected) reflecting the variety of raw materials close to hand.

Evidence of ovens was found at five locations. One of which was the base of an oven whilst the other four items were individual pieces of heat retainer (i.e. baked clay [two items] and termite nest [two items]). These were not located *in situ* and therefore do not necessarily indicate the presence of a ground oven, merely that there is or was a ground oven in the vicinity and that it had probably been ploughed or scuffed by stock.

6.2 Registered Sites and Previously Collected Objects

A search of the OEH AHIMS register was undertaken on 17 May 2013 for registered Aboriginal cultural heritage sites.

Thirty-three registered sites were recorded in an approximate 24 km x 12 km search area covering ML 1535, the pump station and surrounds. The AHIMS results included registered sites comprising 30 artefact concentrations or isolated artefacts, two sites were carved or scarred trees and one site was a stone quarry artefact site (Table 3).

Archaeological evidence previously recorded in the CGM area and surrounds consisted mainly of lithic items, ovens and scarred trees (Pardoe, 2009a). The great variety of stone, including quartz and quartzite cobbles, indurated sandstone sheets, and silicified volcanic material suitable for flaking resulted in a variety of tools distributed across the region. More than 5,000 objects were collected, of which the majority were debitage (Pardoe, 2009a). Representative samples of surface Aboriginal objects (Figure 4) are stored in the Temporary Keeping Place in accordance with the NPW Act permits and a CGM master inventory of artefacts is maintained. One scarred tree has been moved to the Wiradjuri Study Centre in Condobolin, in accordance with Permit 1468, Consent 1467 and the IACHMP (Barrick, 2003).

Table 3
Summary of AHIMS Sites in a Search Area
Surrounding the CGM

Site Type	Number
Artefact concentration or Isolated Find	30
Modified Tree (Carved or Scarred)	2
Stone Quarry	1
Totals	33

The AHIMS results show that 21 registered sites have been recorded within the ML 1535 and nine sites have been recorded near the water pipeline and borefield areas to the east of Lake Cowal. The majority of the sites recorded were artefact concentrations or isolated artefacts (Table 4). Two scarred trees (P2 and L-C-3) have been recorded within ML 1535 (Table 4).

Table 4
Summary of AHIMS Sites within the CGM Area and Surrounds

Site Type	Number
Artefact concentration or Isolated Find	27
Modified Tree (Carved or Scarred)	2
Stone Quarry	1
Totals	30

The majority of the registered sites within ML 1535 have been the subject of management and mitigation measures in accordance with the CGM permits and consents (Section 11).

Three registered sites are located within the Modification area (sites B [43-4-0021], C [43-4-0022], and E [43-4-0024]) (Figure 6). The two remaining registered sites (sites D [43-4-0023] and H [43-4-0027]) are located within the CGM but outside of the disturbance areas associated with the Modification (Figure 6). The AHIMS site cards for all five sites are provided in Appendix 5.

Other registered sites within the wider area are found on the back plains and on the lake edge (Table 5). These sites are more than 1 km distant and will not be directly impacted by the proposed development.

Table 5
Proximal Locations of Remaining Registered Aboriginal Heritage Sites within ML 1535

Site	Distance (m)
LC2	2,000
LC3	2,200
LC4	2,500

6.3 Other Registers

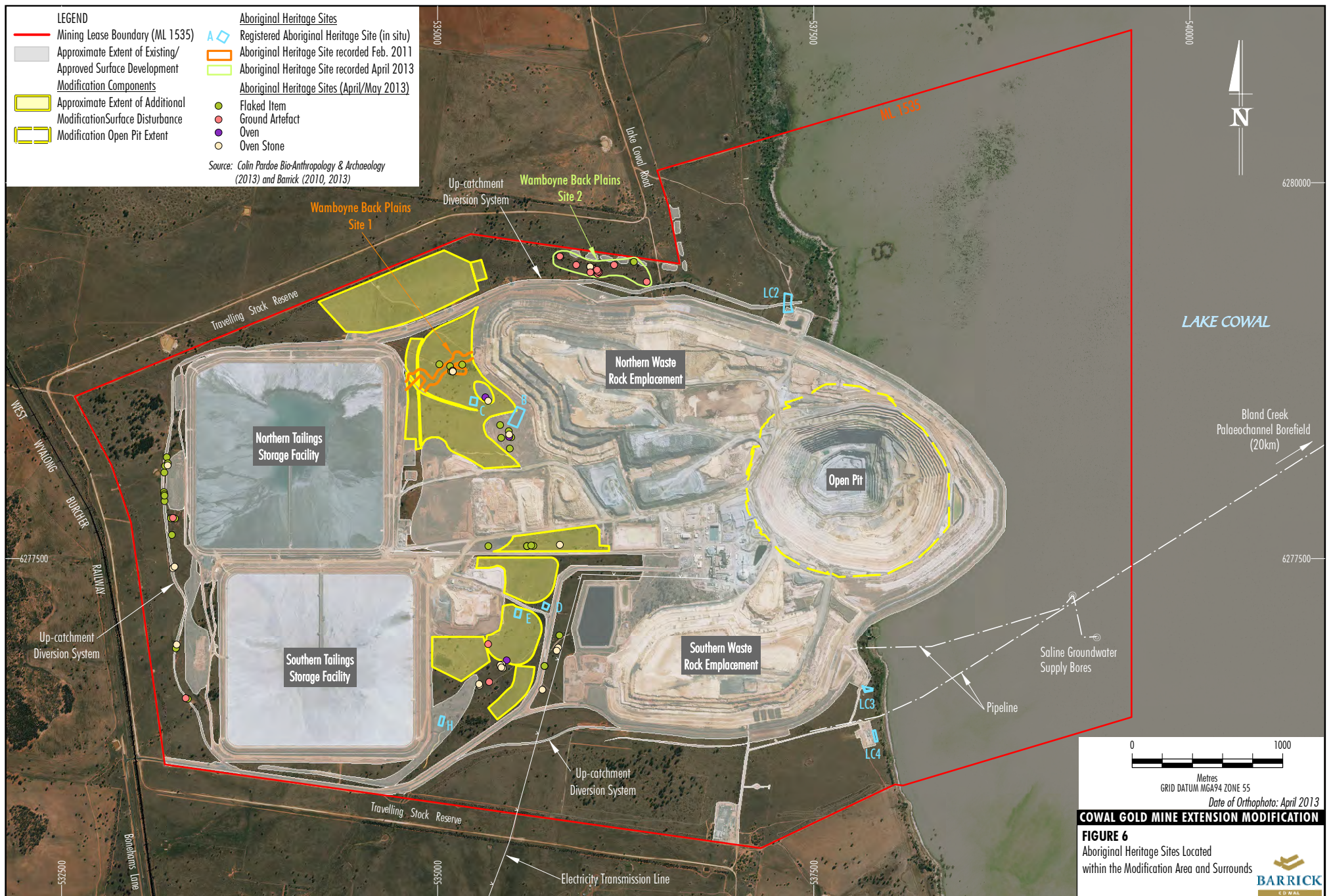
Searches of the National Heritage List, Commonwealth Heritage List and the NSW State Heritage Register conducted in May 2013 did not identify any Aboriginal cultural heritage sites in the vicinity of the CGM.

Lake Cowal is listed on the Register of the National Estate. The listing includes the following statement:

Indigenous values are known to exist in this area. As yet these values have not been identified, documented or assessed for national estate significance by the Commission.

6.4 Site Conservation

As described in Section 1.1, Barrick and its heritage advisors obtained permits and consents under the then section 87 and section 90 of the NPW Act for the management of Aboriginal heritage artefacts at the CGM. Special and specific conditions in Permit 1468 requires avoidance, monitoring, excavation and other mitigation measures.



Permit 1468 requires five registered sites to be conserved in the following manner:

- Sites B, C, E and H shall be covered by a geo-textile blanket extending a minimum of 2 m beyond all visible artefacts defining their boundaries. A layer of loam or sand, a minimum of 200 mm thick, shall be hand spread over this blanket, working progressively over fill as it is placed. That is, traffic directly on the blanket shall be avoided. A secondary geo-textile blanket shall cover the loam and be pegged down at the edges.
- Topsoil stockpiles may be placed over these protected sites. If so, removal of top soil from the stockpiles for rehabilitation works shall stop when the first (top layer) of geo-textile is encountered. This blanket shall then be removed to facilitate hand scarifying of the loam for reconstitution and subsequent revegetation in accordance with the mine rehabilitation plan.
- Site D lies on or very close to an existing drainage contour. A permit holder shall in consultation with design engineering staff determine if the contour can be shifted to avoid the site. The maximum area of the site that can reasonably be conserved shall be protected in the manner described for B, C, E and H.
- After the completion of the above conservation works, the protected areas shall be sign-posted.
- These measures shall be undertaken within 90 days of the period commencing 19 May 2003.

Conservation works at sites B, C, D, E and H were undertaken as required and described above.

As discussed in Section 10, the registered sites B, C and E are proposed to be disturbed as a result of the Modification. In accordance with Permit 1468, 21 days written notice will be given to the Director-General of the OEH, and inspection, salvage and collection will be undertaken in accordance with Permit 1468 and as described in Section 11.2.1 of this report.

6.5 Background Distribution at Lake Cowal

Due to the large number of archaeological surveys and studies undertaken in the Lake Cowal region, it is possible to differentiate between unique sites and those sites and isolated finds that represent a component of the regional background distribution.

The background distribution evident at Lake Cowal consists mainly of lithic items found across the land at low densities. The density is generally measured on surface exposure, allowing for a comparison with nominated sites. Sites generally consist of areas with both larger numbers and greater density of lithic items (Pardoe, 2009a).

The density of lithic items (consisting mainly of flakes and cores with a large amount of debitage) appears to be greatest between drainage lines. There are low-density areas apparent throughout the Back Plains. There is a cluster of higher density areas on the western side of ML 1535 and a slight trend to higher density toward the north (Pardoe, 2009a).

The main sources of material within the Lake Cowal area were quartz and black chert. The indurated sandstone is the source material of the grinding implements and fragments. The coarse quartz sandstone conglomerate is a cemented sandstone of very coarse water worn sand/gravel. These pieces are rare, and have no worked surfaces, but are clearly manuports. It is not known what they would have been used for. Stone tools and debitage are distributed across the land, with a background distribution that is higher than seen in many other areas (Pardoe, 2009a).

6.6 Burials

Burials are not commonly encountered in the Lake Cowal region. There is mention of 'burial grounds along the western bank of Nerang Cowal', the ephemeral water body to the north of Lake Cowal (Fitzgerald, 1979: 4). This comment could not be evaluated, as no survey or excavation was carried out on Nerang Cowal, which lies outside ML 1535 and Barrick property. Burials are most commonly encountered on the eastern side of lakes, where the wind has blown an arcuate sand dune or lunette (see Pardoe and Martin, 2002 for instance).

No burials have been identified at the CGM during any of the archaeological investigations, monitoring and management works to date (Pardoe, 2009a, 2009b; Paton, 1989; Cane, 1995a, 1995b; Huys and Johnston, 1995; Nicholson, 1997). In addition, the topography and soils in the back plains area associated with the Modification area are not suitable for Aboriginal burials.

It can be reiterated here that there is a vanishingly low likelihood of burials being located within the Modification area. The reasons for this include the following:

- previous inspections that have not identified any burial sites;
- there has been considerable historical loss of soil;
- the nature of the underlying sediment and local topography is unsuitable for burial; and
- the nature of the historical occupation of the area.

Notwithstanding, Sections 11.1 and 11.2.2 describe a process that would be undertaken prior to and during disturbance activities associated with the Modification relating to burials.

7 Site Survey/Inspection Methods

7.1 Planning

Prior to the field survey, a meeting was held with the registered Aboriginal parties, where they were provided with a description of the ACHA process and an overview of the previous archaeological work undertaken at the CGM. Diagrams showing the distribution of registered sites recorded across ML 1535 and the relationship to landforms and proximity to Lake Cowal also provided. An overview of the existing CGM archaeological management measures was provided at various locations during the survey to contextualise the survey.

Areas where there was considered to be a likelihood of cultural heritage were identified from previous assessments and aerial photographs/maps prior to the survey (and later during the course of the survey – refer Section 7.2). These included previously registered Aboriginal cultural heritage sites and land within 25 m of the drainage line located within the Modification area. Areas subject to survey within ML 1535 during April/May 2013 are shown on Figure 7.

The existing registered sites (sites B, C, and E – Section 6.2) in the Modification area and those registered sites in proximity to the Modification area were a focus of discussion during the meeting, and proposed mitigation options for these sites were discussed (Section 11). Information on the cultural values of objects and places was also requested from the representatives (Section 9.1).

7.2 Site Survey/Inspection

A number of registered Aboriginal parties provided field representatives for the survey led by Dr Colin Pardoe, and carried out between Tuesday 30 April and Friday 3 May 2013. Representatives who attended the site survey/inspection are listed below in Table 6. Attendance on the each day of the survey period is detailed in Table 1.

Table 6
Site Survey/Inspection Attendees

Registered Aboriginal Party	Attendee
Condobolin LALC	Rebecca Shepherd Richard Coe
N/A	Stuart Cutmore
N/A	Isabelle Collins nee Johnson
N/A	Neville Williams
N/A	Sharon Williams
N/A	Enid Clarke
N/A	Norma Freeman
N/A	Keith Freeman
N/A	Jirrah Freeman
N/A	Ruben Simpson
N/A	Cindy Fuller
N/A	Judy Johnson
N/A	Janine Thompson
N/A	Ernie Johnson
WCC	Terry Williams Eugene Coe
West Wyalong LALC	Leeanne Hampton Linton Howards Louise Davis Braydn Davis



Best practice requires the re-examination of registered sites. As discussed during the pre-survey meeting, the five registered Aboriginal heritage sites B, C, D, E and H had been covered previously with geo-textile matting as required by Permit 1468 and it was therefore not possible to observe the ground. However, a detailed description of the sites and the process undertaken previously was provided in the field at each location.

A small drainage line located within the Modification area was assessed on foot following standard practice to ensure effective coverage. The ground survey identified features and objects on the surface along the margins of the drainage line to a distance of approximately 25 m.

As a result of comments received from the representatives regarding the likelihood of culturally modified trees being present in the Modification area (Section 2.9.2), all mature trees of an age sufficient to bear evidence of traditional practices were examined.

The location of all previously unrecorded Aboriginal objects found during the course of the survey were recorded using a hand held GPS. All site locations were recorded using region 55H and GDA94 co-ordinates and UTM projection.

7.3 Exposure, Visibility and Coverage

In making records of surveys, standard practice includes the documentation of exposure, visibility and survey coverage. These are measured on a scale of 0 – 10, with 10 being the highest and certain to allow the observation of any archaeological evidence that may be present.

7.3.1 Exposure

Exposure refers to the nature of the ground itself, whether it has been eroded and scoured or whether soil has been built up either by erosion or other natural processes. In a typical situation where pastoral and arable activities take place, soil may be moved down slope improving exposure on the upper reaches and reducing the exposure on the lower reaches. Ploughing increases exposure (Gaynor, 2004; Roper, 1976) in the sense that while objects may be obscured and culturally modified soils destroyed, objects from throughout the potential sediment (the upper 25 cm or so) are brought to the surface.

During the field surveys over the period Tuesday 30 April 2013 to Friday 3 May 2013, there were minimal areas of exposure due to extensive ground cover. Despite this, previous survey efforts were undertaken during conditions of significantly higher levels of exposure (Section 8). Accordingly, low exposure rates are not a major concern for the purposes of this assessment as the majority of identifiable material has previously been identified.

7.3.2 Visibility

Visibility refers to the amount of ground surface that can be observed during a survey, and refers to the amount of ground cover that obscures observation. Vegetation is the main factor, although dust must also be considered for smaller artefacts. Visibility is also affected by ground condition (e.g. scald, ploughed paddock, etc), and factors that might obscure particular items (e.g. quartz artefacts in a naturally occurring broken quartz field, size of artefact expected, etc.).

For many surveys in NSW, visibility is estimated from the amount of ground that is not covered by vegetation or soil. A scale of 0 – 10 may be used or a coarser grained scale may be used (Table 7).

Table 7
Visibility Scores

% of Ground Visible	Scale
0	No visible ground surface
0-10	Very poor
0-30	Poor
30-50	Fair
50-70	Good
70-90	Very good
90-100	Excellent

As with the level of exposure, visibility during the field surveys conducted from Tuesday 30 April 2013 to Friday 3 May 2013 was minimal due to extensive ground cover. Previous survey efforts were undertaken during conditions of significantly higher visibility (Section 8), and therefore the low visibility is not a major concern for the purposes of this assessment as the majority of identifiable material has previously been identified.

7.3.3 Coverage Analysis

Coverage analysis takes into account the expectation of observing items and sites given exposure of the land surface and visibility of the ground (Sections 7.3.1 and 7.3.2). These factors contribute to reduce the actual amount of ground able to be adequately observed.

Coverage analysis is carried out to provide a more accurate estimate of site distribution. Coverage is calculated by adjusting the area examined for amounts of visibility and exposure. Coverage estimates rarely differentiate between the objects, features or sites that form the archaeological record. Coverage varies, however, according to the item or site.

Trees, for instance, are always visible in this region, whether standing or fallen. Coverage for scarred trees will therefore be of the order of 100%.

For individual objects (almost exclusively pieces of quartz which form part of the background distribution of lithic items and which do not constitute sites as generally recognised in Australian archaeology, but which are protected as Aboriginal objects in the NPW Act), coverage is difficult to estimate.

For larger individual objects such as axes, mortars, hammers and the like, coverage would appear difficult to assess. These objects are probably over-represented, because any cobble-sized object seen would be more visible and more likely to be identified.

For sites defined only by a distribution of lithic items on the surface, ploughing, visibility and obscuring natural stone are critical factors. Coverage analysis of such sites has been assessed through controlled experiment that accounts for method of inspection (Gaynor, 2004). Given the nature of the land, the state of ploughed paddocks and bare ground, and the nature of sites and features to be expected, it is reasonable in surveys such as this to calculate coverage as above. The coverage analysis provides a more accurate indication of the distribution of sites across the landscape, allowing considered inferences to be made on the likelihood of the presence of Aboriginal cultural heritage.

Due to the extensive nature of previous archaeological surveys undertaken across the CGM and the Modification areas, it is considered the survey was effective in identifying remaining sites and artefacts. In addition to the inspection of all areas of possible ground disturbance associated with the Modification, the registered Aboriginal parties inspected existing registered sites within the Modification area. The coverage of the field survey undertaken 30 April to 3 May 2013 is therefore considered to be adequate and effective for the purposes of this assessment as the majority of identifiable material has previously been identified.

8 Site Survey Results

8.1 Condition of the Survey Area

The field survey of the proposed disturbance areas associated with the Modification was carried out over a period of four consecutive days (30 April to 3 May 2013). During this time, the weather was fine.

The field survey team consisted of representatives of the registered Aboriginal parties (Table 6), Dr Colin Pardoe (archaeologist), and Barrick representatives. The survey team was driven to the survey areas in buses, and the inspection proceeded on foot. Some members of the survey team did not walk over the land, but were happy to observe the proceedings, provide comment and participate in discussions of findings with the other representatives during the course of works.

Vegetation cover in the survey areas consisted of grasses and a small amount of shrubs, mainly saltbush (*Atriplex* sp.). Visibility during the surveys was hampered by the level of vegetative cover (Section 7.3), and was consistently very low ($V=1$) with only occasional scalds and open areas. Trees are sparse in this region. Exposure throughout the Modification area was a maximum of 10/10.

The survey was carried out on foot, and the spacing between the survey participants varied from 2 m to 5 m, giving excellent observation over most of the ground along the creek margins. Spacing between the survey participants varied between the survey units, however, was appropriate for the purposes of this assessment (Section 7). Visibility along the creek margins was an average of 10/10 for scalds, which covered approximately 5% of the area, and 5/10 for treed areas (which covered approximately 5% of the area) and 1/10 for grassed areas (which covered approximately 70% of the area).

Following recent heavy rainfall across the region, it was noted that the ground visibility encountered during the survey was very poor over much of the Modification area, as much of the area was grassed and visibility on areas away from erosion features was generally low. However, the discussions and information presented before the survey work (Section 7.1) acknowledged that the Modification area has been subject to a number of previous archaeological surveys, inspections and excavations that have documented the likely extent and nature of artefact distribution within the back plains (Section 6.1) and this knowledge helped mitigate the issue of survey visibility.

8.2 Sites and Objects within the Modification area

8.2.1 Previously Located and Collected Objects

As described in Section 6.2, a number of the previously recorded objects at the CGM and within the Modification area have since been collected and are currently stored in the Temporary Keeping Place (i.e. they are no longer *in situ*).

8.2.2 Previously Registered Sites

Table 8 indicates that all previously registered sites within and in proximity to the Modification area were inspected by the registered Aboriginal parties during the 30 April to 3 May 2013 fieldwork.

Table 8
Previously Registered Aboriginal Heritage Sites within the Modification Area

AHIMS Site ID	Site Name	Site Type	Inspected during Field Inspection
43-4-0021	B	Stone Artefact Concentration	Yes*
43-4-0022	C	Stone Artefact Concentration	Yes*
43-4-0023	D	Stone Artefact Concentration	Yes*
43-4-0024	E	Stone Artefact Concentration	Yes*
43-4-0027	H	Stone Artefact Concentration	Yes*

After: AHIMS (28/10/2010) and Pardoe (2009a).

* Inspection of protection works.

A brief summary description of each of the known Aboriginal heritage sites within and in proximity to the Modification area, is provided below (Figures 6 and 8).

Site B

Site B (DECCW site registration number 43-4-0021) is located on the back plains area of ML 1535 (Figure 6) and covers an area of approximately 300 square metres (m²).

The IACHMP indicates that site B comprises approximately 13 artefacts, however the previous documentation of this site indicates that site B has only 12 artefacts, reflecting the variable visibility/exposure at this site from the time of its original recording in 1995.

The artefacts consist of flaked quartz debitage (the by-product of tool manufacture) and one fragment of grinding dish (Cane, 1995a). Density of the site is approximately 3.4 pieces/100 m². Average density of items on the back plains varies between zero and 29 pieces/100 m², with an average density of 9.4 pieces/100 m². Site B is clearly a less dense area that was defined on the basis of a scald that allowed for excellent visibility at the time of original survey.

Site C

Site C (DECCW site registration number 43-4-0022) is located on the back plains area of ML 1535 (Figure 6) in the midst of Gilgais, and covers an area of approximately 750 m².

The IACHMP indicates that site C comprises approximately 26 artefacts, however the previous documentation of this site indicates that Site C has only 33 artefacts, reflecting the variable visibility/exposure at this site from the time of its original recording in 1995.

The artefacts consist mainly of flaked quartz debitage (the by-product of tool manufacture) as well as siliceous volcanic, silcrete and quartzite flakes and 1 fragment of grinding dish (Cane, 1995a). Density of the site is approximately 4.6 pieces/100 m². Average density of items on the back plains varies between zero and 29 pieces/100 m², with an average density of 9.4 pieces/100 m². Site C is clearly a less dense area that was defined on the basis of a scald that allowed for excellent visibility at the time of original survey.

Site D

Site D (DECCW site registration number 43-4-0023) is located on the back plains area of ML 1535 (Figure 6) in the midst of Gilgais, and covers an area of approximately 55 m².

Site D was recorded as consisting of 19 artefacts, however visibility has varied from the time of its original recording in 1995.



The artefacts consist mainly of flaked quartz debitage (the by-product of tool manufacture) as well as 1 hammer (Cane, 1995a). Density of the site is approximately 34.5 pieces/100 m². Average density of items on the back plains varies between zero and 29 pieces/100 m², with an average density of 9.4 pieces/100 m². Site D is a less dense area that was defined on the basis of a scald that allowed for excellent visibility at the time of original survey.

Site E

Site E (DECCW site registration number 43-4-0024) is located on the back plains area of ML 1535 (Figure 6) in the midst of Gilgais, and covers an area of approximately 19 m².

Site E was recorded as consisting of 39 artefacts, however visibility has varied from the time of its original recording in 1995.

The artefacts consist mainly of flaked quartz debitage (the by-product of tool manufacture) as well as 1 grinding dish fragment (Cane, 1995a). Density of the site is approximately 205 pieces/100 m². Average density of items on the back plains varies between zero and 29 pieces/100 m², with an average density of 9.4 pieces/100 m². Site E is a dense concentration that was defined on the basis of a scald that allowed for excellent visibility at the time of original survey.

Site H

Site H (DECCW site registration number 43-4-0027) is located on the back plains area of ML 1535 (Figure 6) on the edge of Gilgais, and covers an area of approximately 5 m².

Site H was recorded as consisting of 30 artefacts, however visibility has varied from the time of its original recording in 1995.

The artefacts consist mainly of flaked quartz debitage (the by-product of tool manufacture) as well as 1 grinding dish fragment (Cane, 1995a). Density of the site is approximately 600 pieces/100 m². Average density of items on the back plains varies between zero and 29 pieces/100 m², with an average density of 9.4 pieces/100 m². Site E is a dense concentration that was defined on the basis of a scald that allowed for excellent visibility at the time of original survey.

8.2.3 Additional Site - Wamboyne Back Plains Site 1 (43-4-0044)

Information was recorded at 28 GPS locations during the February 2011 survey – ranging from single lithic items to scalded areas along the creek with up to 37 lithic items. No Potential Archaeological Deposits (PADs) were identified.

The Wamboyne Back Plains Site 1 (Figure 6) consists of lithic items and ground ovens distributed along the drainage line that crosses the Modification area (Appendix 6).

The Wamboyne Back Plains Site 1 is identified from exposures approximately 25 m either side of the drainage line, giving a total width of 50 m.

A total of 65 flaked pieces were recorded at Wamboyne Back Plains Site 1. The distribution of materials (Table 9) is similar to most other places on ML 1535, with near equal representation of white quartz and black siliceous volcanic making up more than 90% of all objects. The remainder consists of silcrete and quartzite. Most of the material was debitage.

This site has been lodged with AHIMS.

Table 9
Raw Materials Identified at Wamboyne Back Plains Site 1

Material	Number	%
Quartz	30	46
Quartzite	1	2
Silcrete	4	6
Silvol	30	46
Total	65	100

8.2.4 Additional Site - Wamboyne Back Plains Site 2 (43-4-0045)

A small concentration of lithic items was recorded during the 30 April – 3 May 2013 inspection (Figure 6). These occur to the east of the northern soil stockpile, on the northern side of the ephemeral drainage between Wamboyne Back Plains Site 1 and Site LC2. All items were recorded on the eroded land surface (Section 5) and not *in situ*. No PADs were identified, although ground ovens have been recorded in the vicinity.

The Wamboyne Back Plains Site 2 consists mainly of grinding implements including the following:

- Seed grinding dish fragment with two facets and grass sheen on both. Although heavily weathered, indicating some antiquity of possibly thousands rather than hundreds of years, there was some grass sheen still evident.
- Two topstones recycled from dish fragments. These are the pieces held in the hand for seed grinding with a larger dish.
- Two pestles consisting of quartzite cobbles, both broken. One pestle had grass sheen on one of the facets.
- Hammer with two grinding facets. Hammering damage on the edge is visible. The hammer had been broken, a common result when used as an anvil for detail work on stone tools.
- Axe blank. There is minor grinding on the working edge, but the rest has only been roughed out.
- Whetstone, found in two pieces.
- Several flaked lithic items.
- Several oven stones, or heat retainer pieces. These are ant bed, the most common material on the Plains back from the lake.

These items are consistent with residential activities such as the manufacture of flour from grasses and acacias, among other plants; manufacture of items for trade and for home use; possible use of an axe for cutting bark for dishes; sharpening, manufacture and maintenance of tools; and cooking.

This site has been lodged with AHIMS.

8.2.5 Proposed Pumping Station on the Eastern Shore of Lake Cowal

Inspection of the proposed pumping station location on the eastern shore of Lake Cowal took place on Thursday 2 May 2013. As the final location of the pump station was not known at the time of the survey, the entire length of the water supply pipeline was surveyed (Section 1.2).

The registered Aboriginal parties examined the water supply pipeline alignment for the pumping station placement. The alignment was walked on foot, with the provision of a bus when people wanted to rest. However, all parts of the alignment were inspected by at least a few members of the survey team.

With the exception of the survey work undertaken on crown land and private property, the alignment for the most part was within the road easement,

Several items were identified within the beach area, along with three scarred trees. The items and trees were documented for information purposes at the request of the registered Aboriginal parties. The scarred trees are located south of the existing water supply pipeline and outside of the Modification survey area. They are, therefore, not shown on figures in this report or discussed further.

The items recorded along the beach are located along the water supply pipeline, however, are outside of the proposed location for the pump station. Their location is, therefore, shown on Figure 8 as “ground artefact” represented as a single location, due to scale.

The items recorded included the following:

- A fragment of grinding dish, with flaked and abraded edge. There were two flat facets for grinding with grass sheen on both.
- A small flake of weathered grey siliceous volcanic which had been snapped (a pestle). The weathering is consistent with having been in the water for some time.
- A quartz core.

In the privately-owned paddock adjacent to Lake Cowal, the land had been subject to ploughing and wind erosion for decades. Visibility and exposure were both maximum (V=10, E=10). Several items were recorded within the paddock (none *in situ*) (Figure 8):

- A small ‘bipolar’ quartz core, about 40 mm long. These are the product of fracturing on an anvil to produce small, roughly parallel sided slivers useful for composite knives, spear barbs and the like. The anvil pits commonly noted on hammers are caused by splitting of these cores, and that is also why men would commonly have two hammers, a larger and a smaller, which could be used to grind small amounts of seed if they were away from hearth and home.
- A weathered sandstone cobble. Although broken, and the surface having been heavily abraded by wind, this is almost certainly a pestle or upper stone for grinding and pounding.
- Weathered oven stone of ant bed.

Should the pump station be located in this paddock, the above items should be avoided. The rest of the surveyed alignment was located within the road easement where the land had been more or less completely disturbed by previous activities including the following:

- Fencing.
- Grading to move topsoil.
- Excavation of ditches either side of the road.
- Raising of the road, using the excavated soil.
- Trenching (pipeline and Telstra cable).

No artefactual material was identified within the road easement.

Although single items including stone artefacts and termite mound heat retainers might still be present within the alignment, the land has been completely disturbed and no further damage to any remaining sites could be envisaged.

It is therefore recommended that no further mitigation be carried out within the road easement, regardless of the final pump station location.

Several additional items are located in paddocks adjacent to the road easement. These are shown on Figure 8, however, would not be impacted by the Modification and are, therefore, not discussed further in this report.

8.2.6 Other Objects Identified during the Survey

A number of additional items were recorded during the 30 April to 3 May 2013 survey. Some of these were located outside the extent of the Modification area, however, were recorded at the request of the registered Aboriginal parties (Figure 6). The numbers indicated in Table 10 represent the total amount of artefacts recorded for the 30 April to 3 May 2013 survey period.

Table 10
Items Identified During 30 April to 3 May 2013 Survey

Items Recorded	Number
Flaked item	37
Ground artefact	24
Oven	3
Oven stone	22
Total	86

The items listed in Table 10 are consistent with previous findings within ML 1535, the borefield and associated pipeline on the eastern side of Lake Cowal and the wider region. The oven stones are almost all baked ant bed and most are likely to be from ovens disturbed by soil loss, stock treadage, and ploughing activities. Some may be natural pieces resulting from the burring of trees.

A breakdown of the flaked items and ground artefacts recorded (Table 10) is presented in Table 11. Grinding implements are common, indicating a heavy reliance on seed for flour. Both hard seed (mortar and pestle) and soft seed (dish and topstone) grinders are represented. Hammers, cores, flakes and debitage are present across the entire Modification area, although particular spots for stone tool manufacture have also been identified. Tools are relatively uncommon, given that these are taken away from the production spot. They are then used, sometimes re-touched, and then discarded when broken or worn out. One blade and one quartz lamellate were recorded during the 30 April to 3 May 2013 survey period, however neither artefact appears to have been used.

Table 11
Details of Lithic Items Identified During 30 April to 3 May 2013 Survey

Items Recorded	Number
Grinding fragment	11
Pestle	2
Cobble	2
Hammer	5
Lithic	2
Flake	23
Core	6
Blade	3
Lamellate	2
Debitage	1
Axe	1
Topstone	2
Whetstone	1
Total	61

A large weathered flake was noted to the north-east of Wamboyne Back Plains Site 2 (waypoint 68: E 536306, N 6279473). Although this artefact represents an isolated object, the amount of weathering on the quartzite flake was noteworthy. The flake was large, which is typical of manufacture on quartzite cobbles, where the material is very hard and somewhat grainy. It is considered that this item would be of some antiquity and it is recommended that it be collected and stored in the Temporary Keeping Place.

Isolated oven stones were noted across the Back Plains. This is consistent with previous survey findings at the CGM and the background distribution of the region. Most of these appear to derive from earth ovens. The criteria for differentiation between earth oven heat retainers and natural baked termite nest or baked earth/clay are often clear and have been described previously (Section 6.1.1).

The background distribution on the Back Plains west of Lake Cowal has been discussed in some detail (Pardoe 2008, 2009) (Section 6.5). Of more importance to Aboriginal people and archaeologists, is the interpretation of this background distribution as evidence of the ubiquitous nature of land use and occupancy. The background distribution is of low and varying density, and may be considered co-terminous with higher density locations that we can identify as sites (in the widest sense). These sites may then be interpreted as more desirable locations for residence, based on the usual criteria of access to particular resources, comfort (i.e. freedom from burrs or insects, soft soil, and so on), wider social relations and land ownership, historical affiliation, or aspect.

A selection of photographs of typical Aboriginal heritage sites located within the Modification areas are provided in Plates 1 to 4.

Plates 5 to 8 provide an example of the typical landscape of the Modification areas.

9 Cultural and Archaeological Significance Assessment

9.1 Cultural Significance

9.1.1 Comments Provided During the Survey

The following is a summary of statements or comments regarding cultural significance that were made by registered Aboriginal parties during recent field surveys, both in regard to individual sites/objects and the general heritage values at the Modification site.

Comments on Individual Sites

Registered Sites B, C, D, E, and H

At these registered sites, a number of comments were made by registered Aboriginal parties during the February 2011 surveys, regarding potential management measures for the sites including:

- A West Wyalong LALC representative commented that artefacts lose their significance when removed and then subsequently replaced on rehabilitated areas – as they are out of their original context.
- A Condobolin LALC representative commented that not expanding the mine was also an option.
- A Wiradjuri Council of Elders representative (registered and involved in previous assessments at the CGM although did not register an interest for the Modification) requested that he would like to go on record that his preference was collection of the artefacts at the registered sites and replacement of the artefacts on the rehabilitated landforms.
- A WCC representative commented that the artefacts are already buried (i.e. by existing conservation works) so there was not much to gain by salvaging them.

Comments from the WCC during the February 2011 survey period about the mitigation of the two sites indicated that they should have been left as is and covered by the waste rock emplacement. Percy Knight and Peter Knight were of the opinion that the extensive efforts required by the OEH had been a “waste of time, unnecessary and alienating”. Given that the sites contained items that were typical of the background distribution in this particular area and more widely, they considered that the items should not be collected and that they could easily stay where they were, even though they would be covered by a large amount of waste rock.

Comments from registered Aboriginal parties about sites B and C indicate that while cultural significance is difficult to rate, the sites themselves were not considered to be exceptional. Comments indicated that the objects on the surface were typical of what was seen in the area and what had been collected previously from the surrounding area.

Wamboyne Back Plains Site 1

At this site, a number of comments were made by Aboriginal stakeholders during the February 2011 surveys. These included:

- A West Wyalong LALC representative indicated the likely presence of food and resources (i.e. would be lots of mussels and yabbies, plus nearby emus and goannas, Wilga trees, etc. - after European settlement, arrived there may also have been rabbits and goats).

- A West Wyalong LALC representative commented on the nature of artefacts being found (i.e. lots of waste materials or bi-products from tool making similar to the shavings found in a cabinetmakers workshop, in what was probably a tool workshop area).
- A West Wyalong LALC representative commented on the likely distribution of labour on the creekline (i.e. likely to have been women and children getting yabbies and mussels in creek - with men working in nearby workshop area).
- A West Wyalong LALC representative commented on the extent and definition of the site (i.e. identified the remnant creekline area as one site – with different areas being exposed at different times, it would be possible to find more or different artefacts due to erosion).
- A West Wyalong LALC representative commented on the likely number and duration of Aboriginal occupation (i.e. may have been a few people for a long time or a large number of people for a short time).
- A WCC representative commented on potential mitigation measures for artefact scatter areas (i.e. if all artefacts were to be collected, it would be very time consuming and unnecessary).

Comments from Aboriginal stakeholders about Wamboyne Back Plains Site 1 and the other objects indicate that while cultural significance is difficult to rate, the site and objects were considered to be typical of such settings and what had been collected previously from the surrounding area.

Wamboyne Back Plains Site 2

Although small, consisting of only several items, this site was considered extremely interesting because of the variety of valued items. Registered Aboriginal parties from Young, NSW, were particularly impressed by the whetstone and axe, as well as the number of grinding implements. The proximity of the site to the drainage line linked this site to other sites and localities from the lake edge, through Wamboyne Back Plains Site 1, back to the Gilgai plains.

Other Objects

While it is a given that the whole of the land is of some cultural value, individual items were often considered to represent a link between the registered Aboriginal parties and their ancestors who fashioned them. In particular, those items reflecting the elbow grease of continued use were most highly valued. These include axes, mortars and pestles, dishes and topstones, and hammers.

General Comments

General comment received from the registered Aboriginal parties during the 2013 consultation process are presented in Section 2.9.

9.1.2 Cultural Significance Summary

Observations made during the 30 April to 3 May 2013 survey (see Section 9.1.1), written responses provided during the consultation process and comments provided as part of previous studies at the CGM show that all Aboriginal objects and sites are important to the Aboriginal community.

Specific comments from the registered Aboriginal parties and/or historic sources regarding cultural significance at the CGM include the following:

- *The sites at Lake Cowal are all linked. It's one big cultural area. One big site all of great cultural significance to us* (Neville Williams, Table 2).

- Traditional bush food sources are located within the proposed disturbance areas including Ruby Saltbush, Yellow Saltbush, bush tomatoes and Nardoo (multiple registered Aboriginal parties, Section 2.9.2).
- Some areas of the landscape do not contain any artefacts, however the land is still extremely valuable to the Wiradjuri people (Neville Williams, Section 2.9.2).
- The creek line in the north of ML 1535 was identified as an area of high cultural significance with a lot of history relating to the site (representative from Condobolin LALC, Section 2.9.2).
- *Musgrave (1979) refers to initiation rites of the “Lachlan and Murrumbidgee tribes” and that “the place where these initiation services took place is now the township of Wyalong”. The ceremonial ground was accidentally discovered by a man called John Rogan and “the custom ceased then, as it was considered by the black that the ground had been desecrated” (North Limited, 1998).*

Gammage (1986) notes that the Lachlan River and the Milky Way had the same spirit (gular) and this may have extended as far south as Lake Cowal. He specifically notes a Wiradjuri interest in the solar system (especially the Milky Way) and H.P. (1896) records that the people on the Bland had myths about the Sun and the Moon and “repeat a number of stories about the stars, and have names for all the bright ones” (North Limited, 1998).

These comments are also included in Section 2.9 (including Table 2), where relevant along with an explanation of how they have been considered. The level of cultural significance associated with the CGM area and sites within it is considered to be typical of the surrounding area.

9.2 Archaeological Significance

Significance is an undefined term. As such it has great utility in everyday speech. The term has not been well defined in contexts of archaeological interpretation. OEH does not define significance. In this section several standard criteria are discussed. These criteria are applied to each site and summarised to arrive at a significance assessment.

Cultural heritage significance with reference to archaeology is fraught with difficulty in definition. It is the case, however, that significance with regard to archaeology typically refers to the informative value of an object.

Several organisations attempt to define significance or to set out criteria for assessment. OEH describes significance in terms of social, historic, aesthetic and scientific criteria and assesses significance in terms of educational or demonstrative potential, regional and local rarity, and how representative a site or object might be.

The AHC has developed the following detailed criteria for defining places valued by communities for cultural reasons (Pearson and Sullivan, 1995:157):

- a community landmark or signature;
- strong symbolic qualities defining a community;
- spiritual or traditional connection between past and present;
- represents or embodies important community meanings;
- association with events having a profound effect on a community;
- symbolically represents the past in the present;
- represents attitudes, beliefs, behaviours fundamental to community identity;
- essential community function leading to a special attachment; and
- longevity of use or association, including continuity to the present.

It is common to use four criteria for the evaluation of archaeological significance. These criteria include quantity, quality, associations and antiquity, to which has been added a fifth criteria, namely, distribution.

- The quantity of objects is generally used as an indicator of significance. We associate rarity with value. Common objects are not considered as significant as those that are rare.

There is, however, an anomaly in the consideration of quantity. The distribution of common classes of objects in the landscape may have considerable levels of significance. For this one criterion (the distribution of the objects), the significance of each given object would then be $1/n$ of the total significance. For example, the distribution of lithic items within a site may have a highly rated significance. Each lithic item, for this particular assessment of significance, would have an individual component of $1/n$, where n is the total number of lithic items under consideration.

If there were 10,000 objects, individual significance would be $1/10,000$ – a very small number. Paradoxically, if one were to provide a permit for destruction of individual objects based on individual assessments, the assumed highly rated significance would be degraded.

The same holds true for the distribution of sites across a region. The total distribution of sites provides information beyond that found in any single site, something that has been commented on by several Aboriginal representatives during the course of this assessment. If one were to suggest that each site contributed $1/n$ to the total significance of site distributions, then again this would be a very low value.

- Quality often refers to ‘finished’ objects or those that show effort of manufacture. Complete objects may inspire greater empathy and may better demonstrate manufacturing techniques and the use of the object. They may be more informative and therefore of greater interest. When applied to scarred trees, quality refers to the condition of the tree and scar.
- Site integrity. This criterion has been applied to stone artefact concentrations based on the amount of ground disturbance and concomitant loss of stratigraphic context. When applied to single objects, this criterion is usually expressed in terms of whether an object is in its original position or has been moved.
- Association refers to the spatial relationship of an object to surrounding objects and places. Site integrity is a criterion of significance within a site, while association is a criterion of significance of a site with its immediate or local cultural landscape.
- Variety is calculated only for stone artefact concentrations. Lithic diversity is calculated with regard to material and identifiable tools. Debitage is not considered to be part of the calculation of variety, although it may be included in identification of raw materials.
- Antiquity refers to the age of objects. Although the age of an object itself is considered to be relevant, it is also the rarity of older objects that must be factored in. There are other considerations of antiquity, however, that should not be overlooked. Relatively recent objects may have particular significance because of their place in time. For example, Aboriginal people may find an object of relatively greater importance if it comes from the last of traditional times or demonstrates continuity during the last two centuries.

Registered sites B, C, and E, and other objects within the Modification area are considered to be of limited archaeological significance. The sites and the lithic items of which they are composed are typical of small lithic concentrations in the region. The lithicdebitage contains little archaeological information. All items are represented in the collections made within ML 1535. The condition of the sites is poor, having been degraded by erosion and loss of stratigraphic context, and the antiquity is unknown.

The best estimate would be that the sites date to the time period covered by the radiocarbon dates previously identified. There were no stone artefacts thought to be of greater antiquity (Pardoe 2009a: 52-53). The associations of the sites and the distribution of similar sites has been recorded as part of past archaeological investigations.

Wamboyne Back Plains Sites 1 and 2 are of limited archaeological significance on account of the loss of stratigraphic integrity. However, there are several factors that would improve the value of these sites, including the following:

- the variety of items;
- the possibility of getting datable materials from ground oven remnants; and
- the relation of sites along this small ephemeral drainage line.

It is recommended that several analyses be carried out on the Wamboyne Back Plains Sites 1 and 2. These analyses would maximise the value of the sites and provide an interpretation relevant to the surrounding region. Specifically, the following analyses would take advantage of new applications of biochemical and other technologies that are transforming archaeological science:

- Radiocarbon dating. Improvements to the technology have brought prices down to between \$600 and \$1,000 with greater accuracy.
- Biochemical analysis. Grinding implements are particularly well-suited for these studies, which take samples of residues trapped in the grains and cracks of the grinding facets. These are analysed using:
 - microscopy for elements such as bone fragments, seed starches, phytoliths (identifiable to species), cells from a number of sources, fur and skin; and
 - further analysis used biomolecular targeting to identify collagens, cellulose, proteins and starches.
- Use-wear studies. Grinding implements often show characteristic microscopic patterns of abrasion from particular plant parts (seeds, husks, etc.), animal bone, ochre, etc.

10 Nature of Potential Impacts from the Modification

In accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011), the principles of ecologically sustainable development were considered in assessing the likely harm of the Modification to Aboriginal objects.

The Modification would directly and indirectly impact the Aboriginal cultural heritage of the Modification area. Potential negative direct impacts may include the destruction of the sites via earthworks or indirect physical (e.g. dust deposition) or aesthetic affects.

10.1 Potential Direct and Indirect Impacts

Aboriginal heritage sites/objects located within the Modification Area would potentially be directly and indirectly impacted to some extent by the Modification development. The Modification would result in the direct disturbance of approximately 122 ha of land.

In areas where the proposed works for the Modification would not involve significant earthmoving (e.g. vehicle movements, etc.), impacts would be limited to only minor indirect disturbance. Potential indirect impacts to archaeological sites could include the following:

- deposition of dust generated by mining;
- accidental disturbance by peripheral activities (e.g. vehicle movements, etc.); and
- the inappropriate visitation or unauthorized removal of Aboriginal objects.

10.2 Cultural Heritage Potentially Impacted by the Modification

Depending on the location of the sites within the Modification area, potential impacts may include disturbance attributable to the passage of vehicles and mobile equipment, soil stripping and general excavation works, disposal of waste rock and soil stockpiling.

The previously registered sites B, C, and E and Wamboyne Back Plains Site 1, are located within the Modification area (Figure 6) and would therefore be subject to direct disturbance associated with mining activities as a result of the Modification.

There is very little potential for damage to *in situ* lithic artefacts not associated with the above sites (i.e. artefacts that are part of the background distribution) due to the movement of equipment, as well as damage to artefacts during soil stripping and excavation works and the subsequent reclamation and spreading of stockpiled soils.

Any ground ovens that are located within the soil or subsoil profile would be potentially disturbed during soil stripping activities. Any dateable material contained in these ovens would be removed from its context and generally combined with stockpiled soil materials.

If some artefacts were to be collected, they could be used for teaching and research purposes as Wiradjuri people saw fit. If they were to be returned following mine closure and landscape rehabilitation, they could be replaced near to their original position (albeit on waste rock emplacements or other built structures). Any objects not collected would be stored with the temporary topsoil stockpiles (as a function of the topsoil being collected and stored for later use), to be used in rehabilitation and returned across the landscape, albeit not in their original position.

11 Management and Mitigation Measures

11.1 Management and Contingency Measures

11.1.1 Avoidance of Creek Line and Wamboyne Back Plains Site 2

During the April 30 to 3 May 2013 survey period, the area along the creek line in the north of ML 1535 (north of the Northern Tailings Facility) and Wamboyne Back Plains Site 2 were examined. During this inspection, discussions were held with the registered Aboriginal parties regarding the significance of the area, and the need to minimise disturbance in the vicinity of these sites.

Consistent with feedback received (Section 2.9.2), the disturbance areas proposed as part of the Modification were re-designed, in order to avoid any disturbance to the creek line and Wamboyne Back Plains Site 2.

Notwithstanding, a recommendation has been made that an artefact be collected from Wamboyne Back Plains Sites 2, and analyses be conducted as detailed in Section 11.3.

11.1.2 Minimisation of Disturbance

During the April 30 to 3 May 2013 survey period, a large survey area within ML 1535 was covered than was required for the Modification disturbance. This allowed for some flexibility in the design of the Modification to allow for the avoidance and minimisation of impacts on Aboriginal heritage.

Accordingly, the disturbance areas associated with the Modification are significantly smaller than those areas surveyed (Figure 7), and their design has been informed by the location and density of the artefacts and sites recorded as well as the feedback received from the registered Aboriginal parties.

11.1.3 Management of Sites B, C, E and Wamboyne Back Plains Site 1

During the site inspection/survey conducted on 30 April to 3 May 2013 and in conjunction with the registered Aboriginal parties, a number of options for the management of sites B, C, and E were canvassed including:

- place waste rock materials directly over the sites;
- collection of the artefacts with soil for use in rehabilitation; or
- removal of the current protective soils and geo-textile fabric to allow collection of a representative sample of artefacts from within these sites.

There were differences of opinion in the Aboriginal community about the most appropriate management measure for these within the Modification area and these differences are acknowledged.

Permit 1468 allows for the resumption of B, C and E pursuant to the following conditions:

- A permit holder shall give 21 days' written notice to the Director-General of their intention to undertake the archaeological works referred to below, together with evidence of Barrick's consultation with the Aboriginal community about the proposed archaeological works and any compensatory measures proposed to be undertaken by Barrick.
- A permit holder and/or his instructed delegates shall carry out inspection, salvage and collection works at each site in accordance with the procedure contained in special condition 6.

Under special condition 6 (see below):

- *A representative sample of Aboriginal objects should be collected.*

Following an inspection of the sites, a representative sample of Aboriginal objects would be salvaged and collected. This same approach is proposed for Wamboyne Back Plains Site 1.

11.1.4 Management of Background Distribution

It is noted that the background distribution of artefactual material, whether already recorded or identified during the development of the CGM would be managed in a manner consistent with existing sites within the CGM and the IACHMP (Section 11.2).

With regard to the pump station and associated access track, these Modification components would be located to avoid known artefacts.

11.1.5 Contingency Measures for Burials

In addition, in the unlikely event that human skeletal remains are identified during the life of the CGM (including the Modification), ground disturbance works in the vicinity of the human skeletal remains must cease immediately. The discovery must be immediately reported to the NSW Police. If it is suspected that the remains may be of Aboriginal origin then this should also be reported to the NSW Police and Barrick should then contact the OEH and representatives of the Aboriginal community.

11.2 Indigenous Archaeology and Cultural Heritage Management Plan

The IACHMP is an existing document that sets out the salvage, excavation, monitoring and management measures for archaeological sites and other Aboriginal objects located at the CGM, in accordance with the existing Permits and Consents.

The IACHMP describes measures that are currently employed at the CGM for the management of surface disturbance activities. These measures include the following:

- Protocols for recording, salvaging, excavating and/or managing Aboriginal objects and PADs within the CGM area.
- Pre-clearance surveys for CGM surface development areas.
- Protocols in the event of identification of new Aboriginal heritage finds.
- Measures to be implemented in the event of discovery of human skeletal remains.
- Maintenance of the CGM master inventory.
- Reporting and communication protocols.
- Procedures for the ongoing consultation and participation in the conservation and management of Aboriginal cultural heritage at the CGM.

The monitoring process is guided by the CGM Ground Disturbance Permit (GDP), a blank copy of which is provided in Appendix 7. This permit clearly defines the location and nature of the earthworks activity, with steps required to enable ground survey by Wiradjuri monitors.

There are two steps to the process:

- A surface cultural heritage clearance survey, which is designed to inspect the relevant land and identify surface objects from which a representative sample would be collected.
- A sub-surface cultural heritage clearance survey, which allows for inspection once the topsoil has been removed. Typically at the CGM, this is accomplished by grading several centimetres of topsoil to enable identification of objects and other items (kept with the soil) for collection and storage.

The rationale for this is based on the original archaeological assessments, where it was deemed necessary to verify that no sites or features might be unwittingly destroyed. Standard test-pit excavation by hand was not considered a feasible strategy to deliver this certainty for Wiradjuri. This process is set out in Permit 1468:

All areas where soil stripping occurs shall be further inspected following this operation in the event that datable materials might be revealed. Samples shall be obtained by a permit holder and/or his instructed delegates and be submitted for chronological analysis. Costs for such analysis shall be borne by Barrick Australia Limited.

The process for ground disturbance is set out in the GDP flow chart (Appendix 8).

It is recommended that the existing management measures currently employed at the CGM described above continue to be implemented for the Modification. The specific management measures proposed for the Aboriginal heritage sites and objects within the Modification area, as described in Section 11.1, would be incorporated into the IACHMP.

11.3 Summary Recommendations

Based on the results of this cultural heritage investigation, previous cultural heritage investigations and consultation with representatives of the local Aboriginal community, the following recommendations are made:

- Existing management measures currently employed at the CGM continue to be implemented for the Modification.
- The collection and storage in the Temporary Keeping Place of the large weathered flake to the north-east of the Wamboynne Back Plains Site 2 which is considered to be of some antiquity (Section 8.2.6).
- Several analyses be carried out on the Wamboynne Back Plains Sites 1 and 2 (including radiocarbon dating, use-wear studies and biochemical analysis) (Section 8.2).
- Any items collected should be included in the analytical requirements that have been followed during the development works at the CGM. These include measurement of the artefacts to describe the nature and variation of the lithic items.
- That conditions of access to the Temporary Keeping Place be re-negotiated among all registered Aboriginal parties, with a Barrick representative and Archaeologist present to provide advice as required. The intent would be to make reasonable access easier for all parties.
- The new pump station would be located to avoid known artefacts/isolated finds.
- Barrick continue to involve the registered Aboriginal parties in matters regarding the Modification and the CGM.
- That the IACHMP be modified to incorporate the additional management measures proposed by this assessment.

It has been concluded that no further mitigation measures are required to be undertaken within the road easement, should the pump station be located within it.

In consideration of Permits 1468 and 1681 and Consents 1467 and 1680, it is considered that the avoidance and mitigation measures discussed in this report appropriately address the impacts to Aboriginal heritage that would result from the Modification.

12 References

12.1 Literature Cited

- Australian Heritage Commission. 1992. *Register of the National Estate*. Detailed Place Report for Lake Cowal. Australian Heritage Commission, Canberra.
- Australian Heritage Commission. 2002. *Ask First; A Guide to Respecting Indigenous Heritage Places and Values*.
- Barrick. 2003. *Indigenous Archaeology and Cultural Heritage Management Plan*.
- Cane, S.B. 1995a. *Camp sites at Lake Cowal: an archaeological survey in central New South Wales*. Culture and Heritage, South Australia. Report to NSR Environmental Consultants.
- Cane, S.B. 1995b. *Camp sites at Lake Cowal: a Supplementary Report*. Culture and Heritage, South Australia. Report to NSR, Environmental Consultants.
- Department of Environment, Water, Heritage and the Arts. 2011.
Website: <http://www.environment.gov.au/parks/nrs/science/bioregion-framework/ibra/index.html#ibra>
- Fitzgerald, M. 1979. *Where the line ends. A history of the Burcher District*. Advocate Print: West Wyalong, NSW.
- Folster, W. n.d. [1988]. *W. Folster's Articles*. Cabonne Printers, Molong, NSW. Published by Paul Weathersten, Orange, NSW.
- Gaynor, P.J. 2004. *Three Seasons of Cultivating Stone Artefacts with Farming Implements in Northwest New South Wales*. Paper presented at the AAA conference.
Website: <http://www.archeo.biz>
- Gott, B. 1983. Murnong – *Microseris scapigera*: a Study of a Staple Food of Victorian Aborigines. *Australian Aboriginal Studies* 1983/2: 2-18.
- Gott, B. 1999a. Cumbungi, Typha Species: A Staple Aboriginal Food in Southern Australia. *Australian Aboriginal Studies* 1999/1: 33-50.
- Gott, B. 1999b. *Fire as an Aboriginal Management Tool in South-Eastern Australia*. Proceedings of the Australian Bushfire Conference, July 1999, Albury New South Wales.
Website: <http://www.csu.edu.au/special/bushfire99/papers/gott/>
- Huys, S. and Johnson, D. 1995. *An Archaeological Survey of Areas between Forbes and Lake Cowal*. A report to North Limited. Australian Archaeological Survey Consultants.
- Mathews, R.H. 1895. 'The Burbung of the Wiradthuri tribes'. *Journal of the Royal Anthropological Institute* 25: 295-318.

- Mathews, R.H. 1906. Australian Tribes: their Formation and Government. *Zeitschrift fur Ethnologie* 38:939-946
- Mitchell, T.L. 1839. *Three Expeditions into the Interior of Eastern Australia; with Descriptions of the Recently Explored Region of Australia Felix, and of the Present Colony of New South Wales* [1831, 1832, 1835 and 1836] by Major T.L. Mitchell, F.G.S. and M.R.G.S. Surveyor-General. Second Edition, Revised, Volume 1 [1831, 1832, 1835] and Volume 2 [1835-1836 trip to the Darling], T. and W. Boone, London.
Website: <http://freeread.com.au/ebooks/e00035.html#mitchell1-2344>
Accessed: 10/10/2009
Website: <http://freeread.com.au/ebooks/e00036.html#mitchell2-40>
Accessed: 10/10/2009.
- Mitchell, T.L. 1848. *Journal of an Expedition into the Interior of Tropical Australia In Search of a Route from Sydney to the Gulf of Carpentaria* [1845-1846] by Lt. Col. Sir Thomas Livingstone Mitchell Kt. D.C.L. (1792-1855) Surveyor-General of New South Wales.
Website: <http://freeread.com.au/ebooks/e00034.html#trop-05>.
Accessed: 9/10/2009.
- Nicholson, A.F. 1998. *An Archaeological Survey of a Proposed Transmission Line between Temora and Lake Cowal*. Report to Resource Strategies and North Limited.
- North Limited. 1998. *Cowal Gold Project Environmental Impact Statement*.
- Oxley, J. 1820. *Journals of Two Expeditions into the Interior of New South Wales, by Order of the British Government in the Years 1817-1818*. Project Gutenberg eBook.
Website: <http://www.gutenberg.org/dirs/etext04/xpns10.txt>
Accessed: 9/10/2009.
- Pardoe, C. 2008. *Wimmera Mallee Pipeline Project, Supply Systems 3 (Birchip) and 4 (Wycheproof) Cultural Heritage Management Plan*. Report to GWM Water, Horsham, Victoria.
- Pardoe, C. 2009a. *Archaeological Investigations at Lake Cowal*. Report to Barrick Gold of Australia Limited.
- Pardoe, C. 2009b. *Archaeological Excavations at Lake Cowal*. Report to Barrick Gold of Australia Limited.
- Pardoe, C. 2010. *Young to Wellington Gas Pipeline Cultural Heritage Assessment and Consultation*. Report to ERM Power Pty Ltd.
- Pardoe, C. and S. Martin. 2002. *The Nature and Distribution of Archaeology at the Menindee Lakes*. Report to Department of Land & Water Conservation, New South Wales.
- Paton, R. 1989. *Preliminary Archaeological Inspection of Lake Cowal Mining Exploration Lease*. Report to NSR Environmental Consultants, Melbourne.
- Pearson, M. 1981. *Seen through Different Eyes*. PhD thesis, Department of Archaeology and Anthropology, Australian National University, Canberra.
- Pearson, M. 1984. Bathurst Plains and Beyond; European Colonisation and Aboriginal Resistance. *Aboriginal History* 8; 63-79.
- Pearson, M. and S. Sullivan. 1995. *Looking After Heritage Places*. Melbourne University Press. Rolls, E.C. 1984. *They All Ran Wild: the Animals and Plants that Plague Australia*. Sydney: Angus & Robertson.

- Roper, D. C. 1976. Lateral Displacement of Artefacts due to Ploughing, *American Antiquity*, 41:372-375.
- Rolls, E.C. 1984. *They All Ran Wild: the Animals and Plants that Plague Australia*. Sydney: Angus & Robertson.
- Tindale, N.B. 1974. *Aboriginal Tribes of Australia. Their Terrain, Environmental Controls, Distribution, Limits and Proper Names*. The Australian National University Press: Canberra.
- Tindale, N.B. 1976. *Adaptive Significance of the Panara or Grass Seed Culture of Australia*. In *Stone Tools as Cultural Markers*, edited by R.V.S. Wright. Canberra: Australian Institute of Aboriginal Studies.
- White, I. 1985. *Dimensions of Wiradjuri: An Ethnohistoric Study*. Canberra: Australian National University, Dept. of Archaeology and Anthropology, Litt.B. Thesis.

12.2 Legislation, Regulations and Guidelines

- Australia International Council on Monuments and Sites (ICOMOS). 1999. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 1999*. Australia ICOMOS Inc.
- Department of Environment and Conservation. 1997. *Aboriginal Cultural Heritage Standards and Guidelines Kit*.
- Department of Environment and Conservation. 2005. *Draft guidelines for Aboriginal Cultural Impact Assessment and Community Consultation, for Assessing Potential Impacts on Aboriginal Cultural Heritage for Development Applications Assessed under Part 3A of the Environmental Planning and Assessment Act, 1979*.
- Department of Environment, Climate Change and Water. 2010a. *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Part 6 National Parks and Wildlife Act, 1974)*.
- Department of Environment, Climate Change and Water. 2010b. *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*.
- New South Wales Minerals Council Ltd. 2010. *New South Wales Minerals Industry Due Diligence Code of Practice for the Protection of Aboriginal Objects*.
- New South Wales Office of Environment and Heritage. 2011. *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales*.

PLATES



Plates 1 and 2: Artefactual material identified within ML 1535.



Plate 3: Cobble identified within ML 1353.



Plate 4: Bipolar quartz core identified within ML 1535.



**Plate 5: Typical landscape of Modification area within ML 1535.
Existing stockpiles and waste rock emplacements visible in background.**



Plate 6: Highly disturbed drainage line in Modification area within ML 1535.



Plate 7: Creek line in north-east of ML 1535, being avoided by the Modification.



**Plate 8: Typical landscape of Modification area within ML 1535.
Existing waste rock emplacements visible in background.**

APPENDIX 1

COWAL GOLD MINE INDIGENOUS ARCHAEOLOGY AND CULTURAL HERITAGE MANAGEMENT PLAN

Cowal Gold Project

Indigenous Archaeology and Cultural Heritage Management Plan

October 2003



COWAL GOLD PROJECT
INDIGENOUS ARCHAEOLOGY AND CULTURAL HERITAGE MANAGEMENT
PLAN
OCTOBER 2003



TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1 INTRODUCTION	1
1.1 LAND SUBJECT TO THIS IACHMP	1
1.2 PERMITS AND CONSENTS RELEVANT TO THIS IACHMP	1
1.3 BARRICK CORPORATE POLICIES & COMMITMENTS	2
1.3.1 Corporate Policies	2
1.3.2 Involvement of Aboriginal people in cultural heritage management activities in the Cowal Gold Project Area	2
1.4 OBJECTIVES AND PURPOSE	2
2 LEGISLATIVE FRAMEWORK	4
2.1 DEVELOPMENT CONSENT	4
2.2 NATIONAL PARKS & WILDLIFE ACT 1974	4
2.3 DEC GUIDELINES – MINING INDUSTRY	5
3 CONSULTATION UNDERTAKEN IN PREPARATION OF THIS IACHMP	6
4 ARCHAEOLOGICAL SITES WITHIN COWAL GOLD PROJECT AREA	7
4.1 ARCHAEOLOGICAL SURVEYS AND ASSESSMENTS WITHIN THE COWAL GOLD PROJECT AREA	7
4.2 LAKE BED ZONE	8
4.3 BEACH ZONE	8
4.3.1 Site P2	8
4.4 SLOPE ZONE	8
4.5 LAKE EDGE RIDGE ZONE	8
4.5.1 Site P1	9
4.5.2 Site LC1	9
4.5.3 Site LC2	9
4.5.4 Site LC3	10
4.5.5 Site LC4	10
4.6 BACK PLAIN ZONE	10
4.6.1 Exposure A	11
4.6.2 Exposure B	11
4.6.3 Exposure C	11
4.6.4 Exposure D	11
4.6.5 Exposure E	11
4.6.6 Exposure F	11
4.6.7 Exposure G	11
4.6.8 Exposure H	11
4.6.9 Exposure I	12
4.6.10 Exposure J	12
4.6.11 Exposure K	12
4.6.12 Exposure L	12
4.6.13 Exposure M	13
4.6.14 Exposure N	13
4.7 WATER PIPELINE AND BOREFIELD (PART OF THE BACK PLAINS ZONE)	13

4.8	ROAD UPGRADE AREA (PART OF THE BACK PLAINS ZONE)	14
4.9	2002-2003 SURVEY RESULTS	14
4.10	INTERPRETATION OF SURVEY RESULTS	15
5	MANAGEMENT OF REGISTERED SITES AND OTHER ABORIGINAL OBJECTS IN THE COWAL GOLD PROJECT AREA	16
5.1	BACKGROUND	16
5.2	MANAGEMENT OF REGISTERED SITES	17
5.3	MANAGEMENT OF OTHER ABORIGINAL OBJECTS	19
5.3.1	Lake Bed Zone	19
5.3.2	Beach Zone	20
5.3.3	Slope Zone	20
5.3.4	Lake Edge Ridge Zone	20
5.3.5	Back Plain Zone	20
5.4	FURTHER MANAGEMENT MEASURES (INCLUDING MONITORING) AFTER MAJOR STEPS IN 5.2 AND 5.3 HAVE BEEN TAKEN	20
5.5	STUDY OF COLLECTED ABORIGINAL OBJECTS	21
5.6	CURATION OF COLLECTED ABORIGINAL OBJECTS – KEEPING PLACE	21
5.7	ROLES AND RESPONSIBILITIES FOR CULTURAL HERITAGE MANAGEMENT	22
6	CULTURAL HERITAGE DISSEMINATION AND OFFSETS	25
6.1	RECOMMENDATIONS IN EIS	25
6.2	OFFSET CONDITIONS IN CONSENT 1467	25
6.3	REPORTING WIRADJURI HERITAGE MANAGEMENT	26
6.3.1	Briefings to the Wiradjuri Condobolin community on cultural heritage issues	26
6.3.2	Mining Rehabilitation and Environmental Management Process (MREMP)	26
	<i>Mining Operations Plan (MOP)</i>	26
	<i>Annual Environmental Management Report (AEMR)</i>	26
6.4	AHIMS	27
7	REFERENCES	27

LIST OF TABLES

Table 1	Cowal Gold Development Consent Condition 3.3
Table 2	Summary of Artefacts & Materials - Lake Edge Ridge Zone
Table 3	Summary of Artefacts & Materials – Back Plain Zone - western side of ML Area and Relocated TSR Area
Table 4	Summary of Artefacts & Materials – Back Plain Zone - further survey of western side of ML Area and Relocated TSR Area
Table 5	Summary of Artefacts & Materials – Back Plain Zone - Eastern End of the Water Pipeline and Borefield
Table 6	Primary Activities Registered Sites
Table 7	Summary of Management Measures for Registered Sites
Table 8	Roles and Responsibilities

LIST OF FIGURES

Figure 1	Cowal Gold Project Area
Figure 2	Barrick Australia Limited Environment, Health and Safety Policy

Figure 3 Barrick Australia Limited Indigenous Peoples Policy
Figure 4 Registered Sites within the Cowal Gold Project Area

LIST OF APPENDICES

Appendix 1 Permit 1468
Appendix 2 Consent 1467
Appendix 3 Permit 1681
Appendix 4 Consent 1680
Appendix 5 Research Design and Study Plan

1 INTRODUCTION

In 1999, the NSW Minister for Planning granted Development Consent for the Cowal Gold Project, located 38 km northeast of West Wyalong in New South Wales (a map of the Cowal Gold Project Area is at Figure 1).

The Cowal Gold Project (the **Project**) is owned by Barrick Australia Limited (**Barrick**). The Project involves the development of an open pit gold mine adjacent to and within a small section of Lake Cowal.

The Development Consent granted by the Minister included conditions which were formulated at the culmination of an environmental impact assessment process which commenced in 1995 and included:

- an Environmental Impact Statement and Development Application lodged in 1996;
- a Commission of Inquiry in 1996;
- an Environmental Impact Statement and Development Application lodged in 1998; and
- a Commission of Inquiry in 1998/99.

The Development Consent conditions included the requirement to prepare an Indigenous Archaeology and Cultural Heritage Management Plan (**IACHMP**) for the development consent area to address Aboriginal cultural heritage issues. The detail of the conditions was derived from the Aboriginal heritage surveys and assessments undertaken specifically for the Cowal Gold Project EIS.

1.1 LAND SUBJECT TO THIS IACHMP

This IACHMP applies to the following land:

- the land the subject of the Cowal Gold Project Development Consent as follows:
 - the area of Mining Lease No. 1535 (Act 1992) (**ML Area**) (granted in satisfaction of Mining Lease Application No.45);
 - the area of the 4 proposed bores west of the ML Area (the **borefield**);
 - the area of the proposed water pipeline from the ML Area to the borefield;
 - the area of the proposed relocated travelling stock reserve; and
- the land the subject of the approved road upgrade from Wamboyne Road to the ML Area (approved by Bland Shire Council under Part 5 of the *Environmental Planning and Assessment Act 1979* on 21 April 1999 (No.83/98) (**road upgrade area**),
(the **Cowal Gold Project Area**).

1.2 PERMITS AND CONSENTS RELEVANT TO THIS IACHMP

Barrick and its consultant archaeologists have obtained permits and consents under s 87 and s 90 of the *National Parks and Wildlife Act 1974* (NSW) (the **NPW Act**) for the Project. They are:

- Permit 1468 authorising certain archaeological works in the ML Area, water pipeline area and borefield area;
- Consent 1467 authorising the destruction of Aboriginal objects (in certain circumstances) in the ML Area, water pipeline area and borefield area;
- Permit 1681 authorising certain archaeological works in the relocated travelling stock reserve area and road upgrade area;
- Consent 1680 authorising the destruction of Aboriginal objects (in certain circumstances) in the relocated travelling stock reserve area and road upgrade area.

1.3 BARRICK CORPORATE POLICIES & COMMITMENTS

1.3.1 Corporate Policies

This IACHMP has been prepared in accordance with Barrick's Environment Health and Safety, and Indigenous People's Policies, wherein Barrick:

- respects the relationship indigenous people have with their traditional country and acknowledges their entitlement to have this properly considered in Barrick's on-going activities; and
- is committed to protect the environment by conducting all its activities in an environmentally acceptable manner with continual improvement in environmental performance.

Barrick's Environment Health and Safety Policy and Indigenous People's Policy are presented in Figures 2 and 3 respectively.

1.3.2 Involvement of Aboriginal people in cultural heritage management activities in the Cowal Gold Project Area

The Cowal Gold Project Area falls within the traditional country of the Wiradjuri people, and in particular the Wiradjuri people of Condobolin.

Barrick acknowledges that under the traditional laws and customs of the Wiradjuri Condobolin people, custodianship and responsibility for cultural heritage places in Wiradjuri Condobolin country lies with the Wiradjuri Condobolin people.

Barrick entered into an agreement with the registered native title claim group for the ML Area (N6002/02), who represent the Wiradjuri Condobolin people, on 15 April 2003 pursuant to the right to negotiate process of the *Native Title Act 1993* (Cth) (the **Native Title Agreement**). The Native Title Agreement contains extensive commitments regarding cultural heritage management.

Pursuant to the Native Title Agreement, Barrick has agreed to fund the establishment of a Wiradjuri Cultural Heritage Company (the **CH Company**) by the registered native title claim group to provide cultural heritage services in Wiradjuri Condobolin country (including the Cowal Gold Project Area). Barrick will seek to contract with the CH Company to provide the services of Wiradjuri Condobolin persons to assist in the conduct of cultural heritage management activities within the Cowal Gold Project Area, including persons to act as cultural heritage officer, field assistants and monitors. If the CH Company is not established, or advises Barrick that it does not wish to provide the above services, the Native Title Agreement provides that Barrick may seek to retain Wiradjuri Condobolin people directly to assist in the conduct of cultural heritage management activities in the Cowal Gold Project Area.

1.4 OBJECTIVES AND PURPOSE

The objective of this IACHMP is to identify future salvage, excavation and monitoring of archaeological sites within the Cowal Gold Project Area prior to and during development and to address Aboriginal cultural heritage issues (see condition 3.3(a)(ii) of the Development Consent).

This IACHMP addresses the following :

- statutory requirements (Section 2);
- consultation undertaken in the preparation of the IACHMP (Section 3);
- archaeological sites in the Cowal Gold Project Area (Section 4);
- management of Registered Sites and other Aboriginal objects (Section 5);
- dissemination of cultural heritage information and offsets (Section 6).

Compliance with this IACHMP is mandatory for all Barrick employees and contractors working at the Cowal Gold Project.

2 LEGISLATIVE FRAMEWORK

2.1 DEVELOPMENT CONSENT

The Project was approved by the Minister for Planning under the *Environmental Planning and Assessment Act 1979* (**EP&A Act**), as a State significant project. In accordance with the EP&A Act, approval for operation of the Project required development consent and any relevant approvals listed in Section 91 of the EP&A Act.

Consent under Section 90 of the *National Parks and Wildlife Act 1974* (**NPW Act**) was included as an approval requirement. Put simply, obtaining development consent under the EP&A Act did not negate the requirement to obtain consent under the NPW Act for any damage to or destruction of "Aboriginal objects", or "Aboriginal Places" within the meaning of those terms in the NPW Act.

The Development Consent includes the following relevant Aboriginal heritage consent conditions:

Table 1
Cowal Gold Project Development Consent Condition 3.3

Condition	
3.3	HERITAGE ASSESSMENT AND MANAGEMENT
(a)	<p>The Applicant shall prior to the commencement of construction works:</p> <ul style="list-style-type: none"> i) prepare a Heritage Management Plan (HMP) to address non-indigenous heritage issues. The HMP shall be prepared in consultation with Bland Historical Society, BSC and Lake landholders/residents and to the satisfaction of the Director-General; ii) prepare an Indigenous Archaeology and Cultural Management Plan (IACMP) to identify future salvage, excavation and monitoring of any archaeological sites within the DA area prior to and during development, and to address Aboriginal cultural heritage issues. The IACMP shall be prepared in consultation with NPWS, the Local Aboriginal Land Council, a consultant archaeologist, any other stakeholders identified by NPWS, and to the satisfaction of the Director-General; iii) retain a Cultural Heritage Officer approved by the West Wyalong Local Aboriginal Land Council who is to be available on site during construction and earthworks; and iv) submit to and have approved by the Director-General of NPWS, a consent to Destroy application under section 90 of the <i>National Parks and Wildlife Act 1974</i> for Aboriginal archaeological sites that have been identified to be damaged or destroyed as a result of the development prior to consent and/or by the archaeology and cultural management plan.
(b)	In the event that artefacts not previously identified, are identified in the DA area during development through earthworks, construction or operation of the mine, the Applicant shall immediately contact the NPWS and cease work in the relevant location pending investigation and assessment of its heritage value.

2.2 NATIONAL PARKS & WILDLIFE ACT 1974

The NPW Act governs the management of "Aboriginal objects" and "Aboriginal places" in New South Wales. An "Aboriginal object" is any deposit, object or material evidence (not being a handicraft made for sale) relating to indigenous and non-European habitation of New South Wales (see s 5 NPW Act). An "Aboriginal place" is a place declared by the Minister as an Aboriginal place pursuant to s 84 of the NPW Act. There are no Aboriginal places in the Cowal Gold Project Area. There are numerous Aboriginal objects.

Aboriginal objects are the property of the Crown. The Director-General of the Department of Environment and Conservation (**DEC**) is responsible for the protection of Aboriginal objects in New South Wales (see ss 83 and 84 NPW Act). The Cultural Heritage Branch of the DEC maintains the Aboriginal Heritage Information Management System (**AHIMS**), which contains a record of all recorded

Aboriginal sites in New South Wales. The term "Aboriginal site" is not defined in the NPW Act. However, the DEC has guidelines for the registration of Aboriginal sites (*Standards Manual for Archaeological Practice in Aboriginal Heritage Management*). The AHIMS includes a wide variety of sites, including places that comprise "Aboriginal objects" as defined in the NPW Act.

The NPW Act provides that certain permits and consents are required before carrying out work that will disturb, damage or destroy Aboriginal objects. A permit under Section 87 of the NPW Act is required before a person:

- disturbs or excavates any land, or causes any land to be disturbed or excavated, for the purpose of discovering an Aboriginal object; and
- disturbs or moves on any land an Aboriginal object that is the property of the Crown, other than an Aboriginal object that is in the custody or under the control of the Australian Museum Trust.

A consent under Section 90 of the NPW Act is required before a person knowingly destroys, defaces or damages, or knowingly causes or permits the destruction or defacement of or damage to, an Aboriginal object.

Carrying out the above without a permit or consent is an offence under the NPW Act.

Barrick and its consultant archaeologists have obtained permits and consents under s 87 and s 90 of the NPW Act for the Cowal Gold Project. They are:

- Permit 1468 authorising certain archaeological works in the ML Area, water pipeline area and borefield area;
- Consent 1467 authorising the destruction of Aboriginal objects (in certain circumstances) in the ML Area, water pipeline area and borefield area;
- Permit 1681 authorising certain archaeological works in the relocated travelling stock reserve area and road upgrade area;
- Consent 1680 authorising the destruction of Aboriginal objects (in certain circumstances) in the relocated travelling stock reserve area and road upgrade area.

A copy of these permits and consents is at Appendix 1, 2, 3, and 4.

2.3 DEC GUIDELINES – MINING INDUSTRY

In addition to the requirements of the NPW Act, the DEC has issued Guidelines for Aboriginal Heritage Impact Assessment in the Exploration and Mining Industries (DEC, 1997). The objectives of these guidelines are to:

- ensure that the actual management of Aboriginal heritage assessment processes by the exploration and mining industries follows a predictable path which leads to improved results for both Aboriginal heritage conservation and the industry; and
- to assist the exploration and mining industries to plan and conduct projects that may impact on Aboriginal heritage in an informed and responsible manner.

The guidelines outline that the DEC may approve a consent application conditionally or unconditionally or refuse it, depending on the significance of the sites and the justification for the action.

3 CONSULTATION UNDERTAKEN IN PREPARATION OF THIS IACHMP

This IACHMP was prepared after consultation with the Cultural Heritage Branch of DEC, the West Wyalong Local Aboriginal Land Council, the Wiradjuri Regional Aboriginal Land Council, the New South Wales Aboriginal Land Council, the Wiradjuri Council of Elders, the Wiradjuri registered native title claim group and the Wiradjuri community in Condobolin. It incorporates the views and comments raised during consultation undertaken during the 1995 and 1997 EIS proceedings, Barrick's applications for section 87 permits and section 90 consents in 2002 and the negotiation of the Native Title Agreement in 2002-2003.

Consultation for this project commenced in late 1994 via discussions with the Wiradjuri Regional Aboriginal Land Council and West Wyalong Local Aboriginal Land Council. Representatives of both Land Councils participated in archaeological surveys and management discussions in relation to the Cowal Gold Project EIS. Management options were formalised in a draft report circulated to the Wiradjuri Regional Land Council and the West Wyalong Local Aboriginal Land Council for comment. These were endorsed in 1998 and incorporated into the EIS.

In May 2001 Barrick acquired the Project and recommenced consultation with Aboriginal groups. Introductory meetings were held with representatives of the Wiradjuri Council of Elders, West Wyalong Local Aboriginal Land Council and the New South Wales Aboriginal Lands Council. In these meetings Barrick committed to honour EIS commitments and to consult with Aboriginal people.

During 2002 Barrick conducted extensive consultation with interested parties with respect to Barrick's applications for permits and consents under s 87 and 90 of the NPW Act for the Project. This consultation included the West Wyalong Local Aboriginal Land Council, the Wiradjuri Regional Aboriginal Land Council, the New South Wales Aboriginal Land Council, the Wiradjuri Council of Elders, the Wiradjuri registered native title claim group and the Wiradjuri community in Condobolin. Attempts were also made to consult the Mooka Traditional Owners Council. The views of these parties and persons were included in the various applications under s 87 and s 90 lodged by Barrick with DEC.

The negotiation of the Native Title Agreement between April 2002 and April 2003 dealt extensively with cultural heritage management in the Cowal Gold Project Area and the commitments in that agreement are reflected in this IACHMP.

The abovementioned consultation fulfils the requirement of Condition 3.3(a)(ii) of the Development Consent as well as the requirements of DEC policies.

4 ARCHAEOLOGICAL SITES WITHIN COWAL GOLD PROJECT AREA

4.1 ARCHAEOLOGICAL SURVEYS AND ASSESSMENTS WITHIN THE COWAL GOLD PROJECT AREA

A total of five different archaeological surveys and assessments have been conducted in the vicinity of the Cowal Gold Project Area since 1989. Further archaeological surveys were conducted in 2002-2003.

Preliminary archaeological inspections were made at Lake Cowal in 1989 by Paton (Paton 1989). In 1995 project feasibility studies were approved and detailed archaeological surveys along the lake shore and in the vicinity of the gold bearing ore and the potential infrastructure of the mine were conducted by Scott Cane and Roley Williams (Wiradjuri Regional Aboriginal Land Council) (Cane 1995a). Subsequent development planning led to another archaeological survey of a possible access road, a water pipeline and a transmission line for the proposed mine (Huys and Johnston 1995). A further archaeological investigation was conducted in the area west of the Lake later that year by Scott Cane assisted by Roley Williams (Wiradjuri Regional Aboriginal Land Council) and a member of the West Wyalong Aboriginal community (Cane 1995b).

Following the refusal of the Development Application in 1995, another archaeological survey of new locations for tailings storages, part of the water pipeline, a small road realignment and a new electricity transmission line route to the south of the lake was undertaken (Nicholson 1997).

Since recommencement of exploration activities there have been a number of further surveys conducted by archaeologists Dr Colin Pardoe, Dr Johan Kamminga, emeritus Professor Jim Allen, emeritus Professor Richard Wright, Dr Peter Hiscock, Dr Sally Brockwell, Mr David Johnston and Mr Francis Shawcross.

The areas of the Cowal Gold Project Area investigated by archaeological surveys include:

- the ML Area;
- the area of the 4 proposed bores west of the ML Area;
- the area of the proposed water pipeline from the ML Area to the borefield;
- the area of the proposed relocated travelling stock reserve; and
- the road upgrade area.

A number of sites containing Aboriginal objects were identified during the archaeological surveys and assessments referred to above and registered with DEC.

Barrick's consultant archaeologist, Dr Colin Pardoe, prepared a Research Design and Study Plan describing the archaeological works proposed for the Cowal Gold Project Area which was attached to Barrick's application for Permit 1468 and Permit 1681. This identifies 5 zones of management within the Cowal Gold Project Area delineated by their local environment, including soils, potential erosion impact, observed archaeological record and potential for subsurface sites/features/Aboriginal objects. The zones are also practical landform units useful for both management purposes and archaeological investigation.

The management zones are:

- lake bed zone;
- beach zone;
- slope zone;
- lake edge ridge zone;
- back plain zone.

A copy of the Research Design and Study Plan is at Appendix 5.

Summaries of the survey results and the registered Aboriginal sites identified in each management zone are outlined in sections 4.2 through to 4.10, below and identified on Figure 4.

4.2 LAKE BED ZONE

No sites were identified in this zone by any of the surveys.

4.3 BEACH ZONE

During the 1995 survey (Cane 1995a), 1 site was identified in the beach zone, Site P2 (refer to Figure 4).

4.3.1 Site P2

Site P2 is a scarred tree on the southwest margin of the proposed mining pit. The tree, an older red gum, is located on the edge of the Lake floor. The scar is 35 centimetres wide, 1.2 metres long and is broadly oval in shape. Regrowth has extended 10 centimetres in from the original scar outline into the inner wood. This wood is now dead, and the top of the scar can be seen as a convex crack in the dead wood.

4.4 SLOPE ZONE

No sites were identified in this zone by any of the surveys.

4.5 LAKE EDGE RIDGE ZONE

During the 1995 survey (Cane 1995a), a number of sites were identified in the lake edge ridge zone, Sites P1, LC1, LC2, LC3 and LC4 (refer to Figure 4).

Table 2
Summary of Artefacts & Materials – Lake Edge Ridge Zone

Site	P1	LC1	LC2	LC3	LC4
AMG Easting	537359	537000	537000	537000	537000
AMG Northing	6277700	6278000	6279000	6276000	6275000
Density (#/100 m ²)	3	1/50	100	7	10
Artefacts					
Flake	66%	56%	60%	40%	61%
Flaked Piece	1%	13%	14%	25%	18.5%

Mod Flake	4%		3%	3%	
Core	10%	13%	13%	7%	4.5%
Backed Blade	6%	3.5%	5%	7%	4.5%
B Blade Blank	5%	3.5%			
Blade	4%	4%	1%	7%	4.5%
Hammer	1%	2%	1%	3.5%	
Burin	3%	2%			2%
Adze	1%		1%		4.5%
Adze Slug		1%			
Axe			1%		
Grinding St		2%	2%	2.5%	
Point					
Sharpening St					
Materials					
Indurated mudstone	75%	71%	60.5%	60%	65%
Quartz	19%	17%	27%	32%	28%
Silcrete	4%	4%		4%	
Quartzite	2%	3.5%	1%		7%
Sandstone		3.5%	11.5%	4%	
Volcanic					
Fercrete		1%			

Source: North Limited (1998)

4.5.1 Site P1

Site P1 contains a continuous scatter of artefacts concentrated in a band 50 – 100 metres from the Lake shore. This band is composed principally of unmodified flakes, cores, backed blades, blades, small blades and a burin. Table 2 summarises the artefacts and materials found at this site.

4.5.2 Site LC1

Site LC1 is a comparatively rich site. It contains one artefact for every two to three square metres, twenty times higher than in the pit area just to the south. The site also contains a range of artefacts characteristic of a number of men's activities (adze flakes, burins, cores, and backed blades). Other tools such as seed grinding implements and modified artefacts are notably absent. Three hearths with heat retainers were located. The site is located about 150 metres west of the Lakeshore. It is thought to be a men's activity area (Cane 1995a). Table 2 summarises the artefacts and materials found at this site.

4.5.3 Site LC2

Site LC2 is more typical of a "base camp" with flaked material scattered along both sides of a stream running into Lake Cowal. Artefact densities are as high as four to five per square metre over the larger site area. The raw materials present were typical of the other sites with about 60% of the assemblage composed of fine black chert. Table 2 summarises the artefacts and materials found at this site which include flakes, flaked pieces, cores, modified flakes, backed blades, blades, hand axes, hammerstones, adze flakes and ground artefacts.

4.5.4 Site LC3

Site LC3 is relatively sparse and contains 28 artefacts in a sampled area of 400 square metres. The area has also been disturbed by the construction and use of four dams, camping on the Lake Shore, and vehicle access along fence lines, through gates and around the dams. The site is thus not thought to have a great deal of interpretive value. Table 2 outlines the artefacts and materials found at Site LC3.

4.5.5 Site LC4

Site LC4 is a sparse, small artefact scatter adjacent to a small creek. Forty four artefacts were recorded in an area of 360 square metres (a density of approximately 1 artefact every 10 square metres). The site has been disturbed by dam construction and vehicle movement along fence lines to the lake shore.

Table 2 shows the range of artefacts at LC4 is broadly similar to site LC3 with a high proportion of flaked pieces, blades, backed blades, adze flakes and burins. The artefacts are highly reduced and this may be associated with hunting and woodworking or be the result of artefact breakage through disturbance.

4.6 BACK PLAIN ZONE

This zone has been subject to a number of surveys and assessments, concentrating on different areas.

A survey of the western side of the ML Area and the relocated travelling stock reserve area was undertaken in 1995 (Cane 1995b). Eight sites were located in this area (Exposure A through to Exposure H) as provided in Table 3.

Table 3
Summary of Artefacts & Materials – Back Plain Zone - Western side of ML Area and Relocated TSR Area

Exposure	A	B	C	D	E	F	G	H
AMG Easting	536100	536100	534918	535640	535180	534393	534000	535214
AMG Northing	6278065	6278065	6278000	6277016	6276950	6277443	6277344	6276163
Density	1/350 m ²	1/300 m ²	1/23 m ²	1/55 m ²	1/19 m ²	1/25 m ²	1/8 m ²	1/5 m ²
Artefacts								
Flake	•	11 (92%)	32 (97%)	18 (95%)	38 (97%)	35 (100%)	16 (84%)	29 (97%)
Core	2 (100%)	•	•	•	•	•	•	•
Hammer	•	•	•	1 (5%)	•	•	1 (5%)	•
Grinding St	•	1 (8%)	1 (3%)	•	1 (3%)	•	2 (11%)	1 (3%)
Materials								
Chert	•	17%	9 %	11%	8%	14%	24%	21%
Quartz	50%	75%	79%	84%	90%	86%	59%	68%
Silcrete	•	•	6%	•	•	•	•	•
Quartzite	50%	•	3%	5%	•	•	5%	7%
Sandstone	•	8%	3%	•	2%	•	12%	4%

Source: North Limited (1998)

4.6.1 Exposure A

Exposure A is located on the southeast side of Cowal West Hill. Two artefacts were located in an area measuring 50 m x 40 m. These included one quartz core and one quartzite block with recent fractures (see Table 3).

4.6.2 Exposure B

Exposure B is located to the west of the foot slopes Cowal West Hill near a number of gilgai depressions. Thirteen artefacts were identified in an area of 40 m x 100 m. Most were quartz flakes and the number of artefacts recorded implies a density of about 1/300 square metres (see Table 3).

4.6.3 Exposure C

Exposure C is located half a kilometre to the west of Cowal West Hill. Twenty six artefacts were found exposed in an area measuring 30 m x 25 m under a tree. The artefacts and materials found are summarised in Table 3.

4.6.4 Exposure D

This exposure is located a short distance from a ephemeral drainage line running diagonally across the plains to the west of Cowal West Homestead. Three hearths were noted. Table 3 summarises the artefacts found at Exposure D.

4.6.5 Exposure E

Exposure E is located in a cleared area of 30 m x 25 m under a tree within a large area adjacent to a discrete gilgai. Thirty nine artefacts were recorded, most of which were quartz as shown in Table 3. Five heat retainers were also noted.

4.6.6 Exposure F

Exposure F is located adjacent to a dam, tow wheat silos, water troughs and a gate on the eastern margin of the proposed tailings storage area. Thirty five artefacts were noted in an area of 70 m x 50 m. Quartz made up 86% of the material recorded (refer to Table 3).

4.6.7 Exposure G

Exposure G is located on a scald, next to a small gilgai in the middle of the proposed tailings storage area. Nineteen artefacts were noted in a small area measuring 12 m x 12 m, giving a density of 1/8 square metres. These artefacts included three heat retainers. Table 3 summarises the artefacts found at Exposure G.

4.6.8 Exposure H

Exposure H is located on a track adjacent to the same creek that passes Exposure D. Thirty artefacts were recorded in an area measuring 40 m x 10 m consisting primarily of quartz and chert (see Table 3).

Another survey of the western side of the ML Area and the relocated travelling stock reserve area was undertaken in 1997 (Nicholson 1997). This identified six additional sites (Exposures I to N). A summary of the sites identified in this area is provided in Table 4 below.

Table 4
Summary of Artefacts & Materials – Back Plain Zone - further survey of western side of ML
Area and Relocated TSR Area

Exposure	I	J	K	L	M	N
AMG Easting	533960	533279	533279	533900	534655	534622
AMG Northing	6278262	6278393	6277770	6276590	6276360	6276033
Density	1/15 m ²	1/11 m ²	1/3 m ²	1/200 m ²	1/33 m ²	1/17 m ²
Artefacts						
Flake	62%	8 (38%)	25 (86%)	4 (80%)	6 (40%)	16 (70%)
Flaked Piece	7%	3 (14%)	•	•	3 (20%)	1 (4%)
Mod Flake	7%	3 (14%)	2 (7%)	•	4 (27%)	2 (9%)
Core	10%	•	2 (7%)	•	2 (13%)	3 (13%)
Hammer	•	•	•	1 (20%)	•	•
Axe	•	1 (5%)	•	•	•	•
Grinding St	7%	5 (24%)	•	•	•	1 (4%)
Materials						
Chert	38%	32%	48%	20%	53%	39%
Quartz	38%	10%	38%	60%	7%	35%
Silcrete	10%	•	7%	•	13%	9%
Quartzite	4%	19%	•	20%	27%	4%
Sandstone	10%	29%	•	•	•	4%
Volcanic	•	10%	7%	•	•	9%

Source: North Limited (1998)

4.6.9 Exposure I

Artefacts were found scattered across exposures associated with a track which extends east west through the northern tailings storage. Artefacts were found along the track and on adjacent exposures, across an area measuring 60 m x 20 m. Several hearth features consisting of burnt clay nodules were visible in the exposures next to the track. Table 4 summarises the artefacts found at Exposure I.

4.6.10 Exposure J

This exposure is located on the east west track running through the northern tailings storage, 200 metres to the west of Exposure I. Artefacts were found scattered across an exposure associated with the track and across adjacent grass covered areas. Twenty one artefacts were recorded in a 15 m x 15 m sample area. Table 4 summarises the artefacts found at Exposure J.

4.6.11 Exposure K

This Exposure was identified near a dam on a drainage line to the south of Exposures I and J. A high density scatter of chert and quartz flakes was identified on an eroded area 50 m from the dam (visibility 90%). Twenty nine artefacts were recorded in a 100 square metre area, an average density of 1/3 square meters (see Table 4 below).

4.6.12 Exposure L

A small scatter of artefacts was recorded in the central part of the southern tailings storage. Exposure L was identified in a narrow band of remnant scrub between two cropped paddocks. A broken hammer

stone, three quartz flakes and a chert flake were found scattered over an area of 100 x 10 m along a track (illustrated in Table 4). The artefacts were associated with a gilgai depression.

4.6.13 Exposure M

Artefacts were found scattered along a track, which leads south, through the southern tailings storage area. A drainage line located immediately to the east, outside the tailings storage area. Fifteen artefacts were recorded over a 500 square metre sample area along the track and adjacent exposures. Table 4 indicates an average density of one artefact per 33 square metres. Some cores and several broken quartzite pebbles were identified as well as a cluster of burnt clay nodules indicating the remains of a hearth.

4.6.14 Exposure N

Another Exposure was recorded 200 m to the south of exposure M, on the margin of the tailings storage area. Twenty three artefacts were found scattered over a 120 m length of track, or 400 square metres giving a density of 1/17 square metres. As shown in Table 4, these were mostly flakes with cores and a fragment of ground sandstone also present.

4.7 WATER PIPELINE AND BOREFIELD (PART OF THE BACK PLAINS ZONE)

The route of the proposed water pipeline and borefield was inspected by Johnston and Huys in 1997 and by Dr Pardoe in 2002. No sites were identified by Huys and Johnston. Dr Pardoe identified 16 localities (LCB1 to LCB16) during his inspection of the eastern end of the water pipeline route and borefield. (The western end of the water pipeline route is within the Lake Bed Zone and contains no Aboriginal sites).

A summary of the artefacts scatters identified in this area is provided in Table 5 below. All of these sites were submitted to DEC for registration on the AHIMS.

Table 5
Summary of Artefacts & Materials – Back Plain Zone - Eastern End of the Water Pipeline and Borefield

Site	AMG Easting	AMG Northing	Site Type	Contents
LCB1	554334	6283966	Stone artefact	Flake or flake fragment of black ?indurated mudstone (4.7X2.8X1.8 mm).
LCB2	554401 to 554419	6284412 to 6284528	Open site	Item 1. Conchoidal flake of black ?indurated mudstone (3.8X3.2X1.0 mm). Item 2. Flake fragment of black ?indurated mudstone (about 45 m north of Item 1). Item 3. Flake or flake fragment of black ?indurated mudstone (3.0X2.5X1.5 mm) Item 4. Small flake of black ?indurated mudstone. Items 5-7. Three small flake fragments of black ?indurated mudstone.
LCB3	554419	6284593	Stone artefact	Small flake of black ?indurated mudstone.
LCB4	554485	6284821	Stone artefact	Flake of black ?indurated mudstone from a microblade core.
LCB5	554470	6284845	Stone artefact	Flake of black ?indurated mudstone.
LCB6	554517	6285144	Stone artefact	Fragment of a large microlith of unidentified stone type (fine-grained siliceous stone, dull red in colour).

LCB7	554541	6285295	Stone artefact	Patinated flake; unidentified black stone type.
LCB8	554543	6285318	Stone artefact	Flake of unidentified stone type (fine-grained siliceous stone, dull red in colour).
LCB9	554560 to 554548	6285399 to 6285407	Open site	Item 1. Flake of black ?indurated mudstone. Item 2. Triangular microlith of black ?indurated mudstone. Item 4. Flake of black ?indurated mudstone. Item 5. Flake of quartz. Item 6. Proximal part of flake of ?indurated mudstone. Item 7. Flake of black ?indurated mudstone. Item 8. Flake of black ?indurated mudstone.
LCB10	554045	6285490	Stone artefact	Microblade core of black ?indurated mudstone.
LCB11	553756	6285529	Stone artefact	Flake of ?indurated mudstone.
LCB12	553607	6285559	Stone artefact	Small flake fragment of ?indurated mudstone.
LCB13	553314 to 553181	6285598 to 6285620	Open site	Item 1. Quartz flake. Item 2. Microlith backing flake of grey chert. Item 3. Flake of unidentified grey siliceous stone. Items 4-5. Flake of grey-orange silcrete and flake (probably from a microblade core) of ?indurated mudstone. Items 6-9. Three flakes and a flake fragment of ?indurated mudstone. Items 9-10. A large flake and a proximal portion of a flake.
LCB14	553085 to 553090	6286144 to 6286180	Open site	Items 1-4. A cluster of one small core and three conchoidal flakes of ?indurated mudstone. Item 4. A conchoidal flake of ?indurated mudstone.
LCB15	553143	6286501	Stone artefact	Flake portion of ?indurated mudstone.
LCB16	553269	6287320	Stone artefact	Proximal portion of flake of ?indurated mudstone.

Source: Pardoe (2002)

4.8 ROAD UPGRADE AREA (PART OF THE BACK PLAINS ZONE)

No sites were identified during the survey of this land by Huys and Johnston in 1995.

4.9 2002-2003 SURVEY RESULTS

Since recommencement of exploration activities there have been a number of further surveys conducted by Dr Colin Pardoe, Dr Johan Kamminga, emeritus Professor Jim Allen, emeritus Professor Richard Wright, Dr Peter Hiscock, Dr Sally Brockwell, Mr David Johnston and Mr Francis Shawcross.

Permit 1361 issued in May 2002 authorised the survey and collection of Aboriginal objects from within Lots 23, 24 and the Game Reserve (on the eastern side of the ML Area). The permit allows for the collection of surface Aboriginal objects and the excavation of a 250 x 250 x 250 mm test pit at every proposed drill hole site and collection of any Aboriginal objects contained within. The works conducted under the permit were undertaken in conjunction with Bill Rutter (a representative of the West Wyalong Local Aboriginal Land Council) and Wiradjuri Community representatives..

A survey and collection program was carried out in May/June 2003 and August 2003 pursuant to Permit 1468 on a range of areas within the ML Area and pursuant to Permit 1681 in August 2003 within the relocation travelling stock reserve area. The works conducted under the permits were undertaken in conjunction Wiradjuri Community representatives.

Analysis of the collected Aboriginal objects is to be reported on in due course. The collected Aboriginal objects are currently curated in the temporary keeping place located within the Project compound. Access to this keeping place is restricted to Wiradjuri Community representatives, consultant archaeologists and DEC staff.

4.10 INTERPRETATION OF SURVEY RESULTS

The primary activities displayed at each site have been interpreted by the various archaeologists who undertook the surveys in the Cowal Gold Project Area. A summary of their interpretations are included in Table 6.

Table 6
Primary Activities Registered Sites

Site	Primary Activities
P1	Occupation and hunting activities.
LC1	Residential, including microlithic workshop. Site may date between 4000 and 1500 years – coinciding with the time span of the backed blade tradition in Australia.
LC2	Activities associated with routine subsistence.
LC3 LC4	Hunting areas, quartz-based industries supplementing backed blade industry and occupation within the last 2000 years.
Exposures A to I and L to M	Transient occupation around the principle food and water resource of Lake Cowal itself.
Exposure J	More diverse occupation activities, including tool manufacture and seed grinding.
Exposure K	Tool manufacture and maintenance.
LCB1 - LCB16	By product of stone tool manufacture and unspecified tool use.

The above descriptions give an indication of the potential heritage values of each site.

5 MANAGEMENT OF REGISTERED SITES AND OTHER ABORIGINAL OBJECTS IN THE COWAL GOLD PROJECT AREA

5.1 BACKGROUND

Sites located within the Cowal Gold Project Area will be impacted to some extent by drilling activities, Project construction and/or support activities (including rehabilitation). The requirement to contain all Project components within the ML Area and Development Consent area limits the ability to locate all Project components away from registered sites and other Aboriginal objects. Depending on the activity, impacts/damage may vary from vehicle movements to excavation of land. Barrick aims to minimise impacts at all stages through project design, traffic management and cultural heritage management activities.

Management recommendations approved by the West Wyalong Local Aboriginal Land Council, Wiradjuri Regional Aboriginal Land Council and New South Wales Aboriginal Land Council were contained in the Cowal Gold Project EIS (see page E16 – E-17 of Appendix E). These were discussed during the consultation carried out in 2002 for Barrick's applications for section 87 permits and section 90 consents for the Cowal Gold Project. The parties consulted included the West Wyalong Local Aboriginal Land Council, Wiradjuri Regional Aboriginal Land Council, Wiradjuri registered native title claim group, Condobolin Community and the NSW Aboriginal Land Council.

Taking all of the above into account, Dr Pardoe developed the Research Design and Study Plan referred to in Section 4 of this IACHMP. Barrick's application for Permit 1468, Consent 1467, Permit 1681 and Consent 1680 attached Dr Pardoe's Research Design and Study Plan and sought permission to carry out the archaeological works in that plan.

Permit 1468 and Permit 1681 authorise the archaeological works proposed in the Research Design and Study Plan with a number of modifications. Consent 1468 and Consent 1680 authorise the destruction of certain Aboriginal objects in certain circumstances.

This section of the IACHMP sets out the salvage, excavation, monitoring and other management measures that will be taken for each of the registered archaeological sites and other Aboriginal objects within the Cowal Gold Project Area, in light of the EIS, the Research Design and Study Plan, Permit 1468, Consent 1467, Permit 1681 and Consent 1680.

The management measures include strategies for registered sites and other Aboriginal objects. In general, the strategies include: protection; investigation; collection; excavation; documentation and storage in an onsite "Keeping Place"; and collection and storage during topsoil stripping and stockpiling. The management measures for Aboriginal objects other than the registered sites are consistent within each of the management zones identified in the Research Design and Study Plan. These zones include:

- Lake bed zone;
- Beach zone;
- Slope zone;
- Lake edge ridge zone; and
- Back plain zone.

The general location and description of these zones is discussed in the Research Design and Study Plan.

During the consultation undertaken during 2002, the Wiradjuri people consulted indicated that regardless of archaeological type and characteristics, all sites and Aboriginal objects are of cultural importance and considered significant. This IACHMP has incorporated the outcomes of these consultations.

5.2 MANAGEMENT OF REGISTERED SITES

A summary of the major approved management measures for each of the registered sites is provided in Table 7. The details of the management measures for each registered site is contained in the Research Design and Study Plan as amended by Permit 1468 and Permit 1681. Both documents should be read carefully before the management measures are carried out.

Table 7
Summary of Major Management Measures for Registered Sites

Site Name	Zone and Location Relative to Currently Proposed Disturbance areas	Condition of Permit 1468	Management Summary
Site P1	Lake Edge Ridge Zone Proposed Open Pit	Special Conditions 6, 12 and 13 Special Condition 3	Representative sample of surface Aboriginal objects to be collected, documented and stored at an onsite "Keeping Place". Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. Collected surface Aboriginal objects to be eventually replaced. Excavation of 3 alluvial fans within footprint of proposed open pit and Site P1. A representative sample of sub-surface Aboriginal objects to be collected, documented and stored at an onsite "Keeping Place".
Site P2	Beach Zone Proposed Open Pit	Special Condition 4	Section of the scarred tree to be removed, conserved and stored or displayed at an onsite "Keeping Place".
Site LC1	Lake Edge Ridge Zone Between Northern Waste Emplacement and Open Pit	Special Conditions 6, 12 and 13 Special Condition 5.	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite "Keeping Place". Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. Collected surface Aboriginal objects to be eventually replaced. Excavation of Site LC1. A representative sample of sub-surface Aboriginal objects to be collected, documented and stored at an onsite "Keeping Place".
Site LC2	Lake Edge Ridge Zone Close to Northern Waste Emplacement	Special Conditions 6, 12 and 13	If site can be avoided – fencing and sign posting to protect site. If site cannot be avoided - representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite "Keeping Place". Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.
Site LC3	Lake Edge Ridge Zone Close to Southern Waste Emplacement	Special Conditions 6, 12 and 13	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite "Keeping Place". Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.

Site LC4	Lake Edge Ridge Zone Close to Southern Waste Emplacement	Special Conditions 6, 12 and 13	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite “Keeping Place”. Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.
Exposure A	Back Plain Zone Within Northern Waste Emplacement	Special Conditions 6, 12 and 13	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite “Keeping Place”. Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.
Exposure B	Back Plain Zone Close to Northern Waste Emplacement	Special Condition 8	Conservation works – covering by geo-textile blanket and sign posting to protect site. If Site is proposed to be utilised – procedure in Special Condition 6 is authorised after notice to DEC and consultation with Aboriginal community.
Exposure C	Back Plain Zone Close to Reclaim Water Dam	Special Condition 8	Conservation works – covering by geo-textile blanket and sign posting to protect site. If Site is proposed to be utilised – procedure in Special Condition 6 is authorised after notice to DEC and consultation with Aboriginal community.
Exposure D	Back Plain Zone Close to Service Corridor	Special Condition 8	Conservation works – covering as much as possible of the site by geo-textile blanket and sign posting to protect site. If Site is proposed to be utilised – procedure in Special Condition 6 is authorised after notice to DEC and consultation with Aboriginal community.
Exposure E	Back Plain Zone Close to Southern Tailings Storage	Special Condition 8	Conservation works – covering by geo-textile blanket and sign posting to protect site. If Site is proposed to be utilised – procedure in Special Condition 6 is authorised after notice to DEC and consultation with Aboriginal community.
Exposure F	Back Plain Zone Within Northern Tailings Storage	Special Conditions 6, 12 and 13	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite “Keeping Place”. Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.
Exposure G	Back Plain Zone Within Northern Tailings Storage	Special Conditions 6, 12 and 13	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite “Keeping Place”. Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.
Exposure H	Back Plain Zone Close to Access Road and Southern Tailings Storage	Special Condition 8	Conservation works – covering by geo-textile blanket and sign posting to protect site. If Site is proposed to be utilised – procedure in Special Condition 6 is authorised after notice to DEC and consultation with Aboriginal community.
Exposure I	Back Plain Zone Within Northern Tailings Storage	Special Conditions 6, 12 and 13	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite “Keeping Place”. Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.
Exposure J	Back Plain Zone Within Northern Tailings Storage	Special Conditions 6, 12 and 13.	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite “Keeping Place”. Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.
Exposure K	Back Plain Zone Within Northern Tailings Storage	Special Conditions 6, 12 and 13.	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite “Keeping Place”. Remaining Aboriginal objects to be collected with the top

			soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.
Exposure L	Back Plain Zone Within Southern Tailings Storage	Special Conditions 6, 12 and 13	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite "Keeping Place". Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.
Exposure M	Back Plain Zone Within Southern Tailings Storage	Special Conditions 6, 12 and 13	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite "Keeping Place". Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.
Exposure N	Back Plain Zone Within Southern Tailings Storage and close to Access Road	Special Conditions 6, 12 and 13.	If site can be avoided – fencing and sign posting to protect site. If site cannot be avoided - Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite "Keeping Place". Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. All collected Aboriginal objects to be eventually replaced.
Site LCB9	Back Plain Zone Within water pipeline area/borefield	Special Condition 7	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite "Keeping Place". Excavation of test pits and possible extended excavation. A representative sample of sub-surface Aboriginal objects to be collected, documented and stored at an onsite "Keeping Place". All collected Aboriginal objects to be eventually replaced.
Site LCB14	Back Plain Zone Within water pipeline area/borefield	Special Condition 7	Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite "Keeping Place". Excavation of test pits and possible extended excavation. A representative sample of sub-surface Aboriginal objects to be collected, documented and stored at an onsite "Keeping Place". All collected Aboriginal objects to be eventually replaced.
Site LCB1- LCB8, LCB10– LCB13, LCB15, LCB16	Back Plan Zone Within water pipeline area/borefield	Special Condition 2	No specific archaeological works required.

Source: North Limited (1998); Pardoe (2002)

5.3 MANAGEMENT OF OTHER ABORIGINAL OBJECTS

Management measures are not limited to the Registered Sites. Permit 1468 and Permit 1681 authorise a range of management measures proposed in the Research Design and Study Plan for other Aboriginal objects in the Cowal Gold Project Area that are not contained within the Registered Sites.

A summary of the major approved management measures for other Aboriginal objects is set out below. The details of the management and mitigation measures for other Aboriginal objects is contained in the Research Design and Study Plan as amended by Permit 1468 and Permit 1681. These documents should be read carefully before the management measures are carried out.

5.3.1 Lake Bed Zone

No management measures are required in this area.

5.3.2 Beach Zone

Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite "Keeping Place". Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. Collected surface Aboriginal objects to be eventually replaced. (See Special Condition 10 of Permit 1468).

Excavation of 3 alluvial fans within footprint of proposed open pit and Site P1. A representative sample of sub-surface Aboriginal objects to be collected, documented and stored at an onsite "Keeping Place". (See Special Condition 4 of Permit 1468).

5.3.3 Slope Zone

No management measures are required in this area.

5.3.4 Lake Edge Ridge Zone

Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite "Keeping Place". Remaining Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. Collected Aboriginal objects to be eventually replaced. (See Special Condition 10 of Permit 1468).

5.3.5 Back Plain Zone

Within the ML Area, water pipeline area and borefield area (Permit 1468) - Inspection of land to identify concentrations of surface Aboriginal objects. Where encountered, concentrations to be measured and recorded. Aboriginal objects to be collected with the top soil during soil stripping and temporarily stored in soil stockpiles. Collected Aboriginal objects to be eventually replaced. (See Special Condition 9 of Permit 1468).

Within the road upgrade area and relocated travelling stock reserve area (Permit 1681 – Representative sample of surface Aboriginal objects to be collected, documented and stored for safe-keeping at an onsite "Keeping Place". (See Special Condition 3 of Permit 1681).

5.4 FURTHER MANAGEMENT MEASURES (INCLUDING MONITORING) AFTER MAJOR STEPS IN 5.2 AND 5.3 HAVE BEEN TAKEN

In all areas within the ML Area, water pipeline area and borefield area where soil stripping occurs, the area will be further inspected after the top soil removal to identify "datable materials". Samples will be obtained and submitted for chronological analysis (see Special Condition 11 of Permit 1468).

A cultural heritage officer approved by the West Wyalong Aboriginal Land Council will be available on site to monitor construction earthworks within the Development Consent Area, as required by Condition 3.3(a) of the Development Consent. An archaeologist will also be on site to monitor the construction earthworks to the maximum depth that Aboriginal objects are likely to exist (this may range from 10 cm on the lake bed to 50 cm in other places).

Construction earthworks comprises the following activities:

- vegetation clearance and top soil removal from the surface of the land within the footprint of each facility (tailings dams, processing facilities, waste dumps, temporary bund, permanent bund, pit, pipelines, ancillary infrastructure and roads);
- preparation of stockpile areas;
- construction of roads;
- construction of temporary isolation bund and associated infrastructure;
- initial activities associated with construction of permanent bund (construction to a height of approximately 2 m);
- construction of pipelines;
- earthworks investigations, inspection and monitoring activities;
- preparation of tailings dams footprints, construction of foundations and construction and inspection access; and
- preparation of processing facilities footprint, construction of foundations and construction and inspection access.

If an Aboriginal object (other than human skeletal remains) of a type that has not been previously identified during the archaeological works referred to in section 5.2 and 5.3 above, is identified during construction earthworks, the Aboriginal object will be collected (see Special Condition 10 of Permit 1468 and Special Condition 11 of Permit 1681).

Construction will stop if human skeletal remains are identified, and DEC will be immediately notified (see Special Condition 1 in each of Permit 1468, Consent 1467, Permit 1681 and Consent 1680).

A cultural heritage officer will also periodically monitor works in close proximity to protected Aboriginal sites throughout the construction period.

5.5 STUDY OF COLLECTED ABORIGINAL OBJECTS

Special Condition 12 of Permit 1468 and Special Condition 4 of Permit 1681 provide that all collected Aboriginal objects must be dealt with as follows:

- sufficient data must be taken from each Aboriginal object, including material type and size characteristics, to enable a technological analysis to be undertaken for report purposes;
- this information must form the basis of a master inventory which must be maintained at all times; and
- after collected items have been closely examined and classified, each collected item that has been classified as an Aboriginal object shall be separately bagged and labelled duplicating the above information and placed in a separate, clearly labelled box detailing the specific area of collection.

5.6 CURATION OF COLLECTED ABORIGINAL OBJECTS – KEEPING PLACE

Special Condition 13 of Permit 1468 and Special Condition 5 of Permit 1681 provides that all collected Aboriginal objects must be kept in the existing temporary Keeping Place within the Project Compound. It notes that these are temporary facilities and a more permanent on site Keeping Place may be

required in the future for Aboriginal objects removed from the mine footprint area in the event that this area remains a water filled void.

Special Condition 9 of Consent 1467 provides that Barrick must fund the design and construction of a keeping place for Aboriginal objects collected pursuant to Permit 1468, at a location to be agreed with the registered native title claimants for the ML Area and the West Wyalong Local Aboriginal Land Council. Barrick must reach an agreement with the registered native title claimants for the ML Area and the West Wyalong Local Aboriginal Land Council about the details and scope of the keeping place, but if no agreement is reached before the commencement of construction, the details and scope will be determined by DEC. See section 6 of this IACHMP.

5.7 ROLES AND RESPONSIBILITIES FOR CULTURAL HERITAGE MANAGEMENT

Overall responsibility for the Cowal Gold Project lies with the General Manager of the Cowal Gold Project. The General Manager will ensure that the management measures in this IACHMP are implemented, including by delegation. Permit 1468 and Permit 1681 are held by Barrick's consultant archaeologists Dr Pardoe and Dr Kamminga, and they are responsible for ensuring that the terms and condition of the permits are complied with.

Barrick no longer intends to employ a "Land, Environment and Wiradjuri Heritage Officer" as referred to in the Research Design and Study Plan. During the negotiation of the Native Title Agreement and the consultation with the registered Wiradjuri claim group about Barrick's application for a section 87 permit and section 90 consent for the Cowal Gold Project, the registered Wiradjuri claim group were not supportive of Barrick directly employing Wiradjuri people to do cultural heritage work. They asked Barrick not to employ a "Land, Environment and Wiradjuri Heritage Officer" or sponsor a Land Council position. Instead, they asked Barrick to fund the creation of the CH Company to contract with Barrick to provide cultural heritage services so that the Wiradjuri Condobolin people could directly exercise their custodial responsibilities for cultural heritage. Barrick agreed to do so in the Native Title Agreement.

Accordingly, Barrick will seek to contract with the CH Company to provide the services of Wiradjuri Condobolin persons to assist in the conduct of the management measures referred to above, including persons to act as cultural heritage officers and Wiradjuri field assistants.

If the CH Company is not established, or advises Barrick that it does not wish to provide the above services, Barrick will retain Wiradjuri Condobolin people directly to act as Wiradjuri field assistants and cultural heritage officers to assist in the conduct of cultural heritage management activities.

The responsibilities for the various roles are set out in the table below.

Table 8
Roles and Responsibilities

Role	Responsibilities
General Manager, Cowal Gold Project	<ul style="list-style-type: none"> ▪ Overall responsibility for the implementation of the cultural heritage management measures required by the Research Design and Study Plan, Permit 1468, Permit 1681 and this IACHMP (including by delegation). ▪ Overall responsibility for the on site Keeping Place. ▪ Liaison with the CH Company to contract for the provision of cultural heritage services, including the provision of Wiradjuri field assistants and cultural heritage officers ▪ Retaining Wiradjuri Condobolin people as Wiradjuri field assistants and cultural heritage officers if CH Company does not wish to provide the services • Engagement of archaeologists • Supervise the Barrick field coordinator (on matters not supervised by the Project Consultant Archaeologist)
Project Consultant Archaeologist (holder of Permit 1468 and Permit 1681)	<ul style="list-style-type: none"> ▪ Conduct archaeological works authorised by Permit 1468 and Permit 1681 and monitor construction earthworks to a depth where Aboriginal objects are likely to exist ▪ Supervise the Barrick field coordinator, cultural heritage officers and Wiradjuri field assistants ▪ Provide technical supervision of the Keeping Place ▪ Carry out technical work and meet reporting obligations in Permit 1468 and Permit 1681 ▪ Assess the effectiveness of conservation and mitigation measures and monitor Registered Sites that are conserved or otherwise not within proposed disturbance areas ▪ Provide any cultural heritage services required as a result of the offset condition in Consent 1467 • Advise Barrick with respect to all cultural heritage matters arising in relation to the Project
Barrick Field Coordinator (Barrick employee)	<ul style="list-style-type: none"> ▪ Liaison with the CH Company ▪ Coordination and management of the archaeological works under the supervision of the Project Consulting Archaeologist or General Manager Cowal Gold Project (as appropriate), including working arrangements for the Wiradjuri field assistants and cultural heritage officers (but not participate in collection works) ▪ Supervise the management and maintenance of the Registered Sites that are conserved or otherwise not within proposed disturbance areas ▪ Supervise the management and maintenance of the onsite Keeping Place
Cultural Heritage Officers ⁽¹⁾ (this role may be split between different personnel,	<ul style="list-style-type: none"> ▪ Act as a point of contact for liaison between Barrick and the Wiradjuri Condobolin people with respect to the conduct of cultural heritage management activities ▪ Provide suitable Wiradjuri persons to act as Wiradjuri field assistants and cultural heritage officers and to provide other cultural heritage services in accordance with the Native Title Agreement

particularly the management/field work elements)	<ul style="list-style-type: none"> ▪ Monitor construction earthworks ▪ Periodically monitor works in close proximity to protected Aboriginal sites throughout the construction period ▪ Monitor the replacement of Aboriginal objects pursuant to Permit 1468 and Permit 1681
Wiradjuri Field assistants (2)	<ul style="list-style-type: none"> ▪ Assist in the conduct of archaeological works under the supervision of the Project Consulting Archaeologist ▪ Assist in the conduct of other management activities

Notes:

- (1) In the event that the CH Company does not wish to provide the above cultural heritage services to Barrick, Barrick will engage a suitable Wiradjuri person directly in the role of cultural heritage officer to carry out these responsibilities.
- (2) In the event that the CH Company does not wish to provide the above cultural heritage services to Barrick, Barrick will engage suitable Wiradjuri people directly in the role of Wiradjuri field assistants to carry out these responsibilities.

6 CULTURAL HERITAGE DISSEMINATION AND OFFSETS

6.1 RECOMMENDATIONS IN EIS

The EIS contains a number of recommendations regarding cultural heritage offsets and dissemination including the establishment of displays reflecting aspects of the cultural heritage at Lake Cowal, sponsoring a booklet that provides a readable account of Aboriginal heritage and history at Lake Cowal and West Wyalong and sponsoring the search for and return of the carved trees originally taken from the Bland.

Barrick committed to providing all of these offsets during the consultation about Barrick's application for a section 87 permit and section 90 consent for the Cowal Gold Project. It also committed to providing a keeping place for Aboriginal objects collected from the Cowal Gold Project Area. These commitments are reflected in the offset conditions of Consent 1467, as set out below.

6.2 OFFSET CONDITIONS IN CONSENT 1467

Special Condition 9 of Consent 1467 is headed "Offset Conditions" and provides as follows:

- 9.1 The obligations contained in this condition are subject to the following:
- (a) subject to subparagraph (b) below, the details and scope of each of the matters referred to in this condition are to be agreed in writing with the [registered native title claimants for the area of MLA45 and the West Wyalong Local Aboriginal Land Council (hereafter, the "**Aboriginal Community**")], unless such agreement is not reached before the commencement of construction, when they will be determined by the Director-General;
 - (b) if the Aboriginal Community advises Barrick Australia Limited and the Director-General in writing that they do not want Barrick Australia Limited to fund one of the obligations referred to in paragraphs 9.2 to 9.5, the obligation contained in the relevant condition immediately ceases;
 - (c) the total amount of funds dedicated to complying with the obligations referred to in paragraphs 9.2 to 9.5 need not exceed \$250,000; and
 - (d) the deadline for completion of any of the obligations referred to in paragraphs 9.2 to 9.5 may be extended by the Director-General if he considers that it is reasonable in the circumstances to do so.
- 9.2 Barrick Australia Limited must fund the design and construction of a keeping place for Aboriginal objects collected pursuant to Permit 1468, at a location to be agreed with the Aboriginal Community. The keeping place must be constructed within 12 months of the commencement of mining operations.
- 9.3 Barrick Australia Limited must fund a regional cultural heritage study and the associated research and publication of a booklet about Wiradjuri cultural heritage and associations with land. The study and booklet must be centred on Lake Cowal and the area between Lake Cowal and the Lachlan River. The scope and methodology of the study shall be agreed with the Director-General. The regional study shall identify areas of cultural significance to Aboriginal people including areas within Barrick Australia Limited's land holdings which may be considered for future conservation. The study must be completed and the booklet published within 3 years of the commencement of construction, subject to any requests for extensions of time by the Aboriginal Community to allow additional study to be carried out. 1000 copies of the booklet must be produced. The booklet must be distributed to the Wiradjuri Council of Elders, the West Wyalong Local Aboriginal Land Council, the Condobolin Local Aboriginal Land Council, the Mooka Traditional Owners Council, the Wiradjuri Regional Aboriginal Land Council, the New South Wales Aboriginal Land Council, NPWS, the Australian Museum, NSW Heritage Office, local public libraries, local councils, local schools, the Mitchell Library and other bodies nominated by the Aboriginal Community

9.4 Barrick Australia Limited must fund the creation of a transportable display consisting of information and material on the Wiradjuri people in the context of Lake Cowal and the region generally, to be available for educational purposes at schools, public libraries, council offices, public buildings and other places nominated by the Aboriginal Community. The display must be completed within 6 months of publication of the booklet referred to in paragraph 9.3 above.

9.5 Barrick Australia Limited must fund a survey to document the whereabouts of Aboriginal objects taken from Wiradjuri land and held in public and private collections around Australia, and support (by financial and other means) any submission by the Aboriginal Community for the return of that material to the Wiradjuri people. The survey must be completed within 12 months from the commencement of construction.

Barrick has commenced negotiations about this agreement with the registered Wiradjuri claim group and the West Wyalong Local Aboriginal Land Council.

6.3 REPORTING WIRADJURI HERITAGE MANAGEMENT

6.3.1 Briefings to the Wiradjuri Condobolin community on cultural heritage issues

In the Native Title Agreement, Barrick agrees to brief the Wiradjuri Condobolin people:

- within 30 days of Board Approval for the project, on matters including cultural heritage issues;
- annually, on matters including cultural heritage issues; and
- on any cultural heritage issues that Barrick reasonably believes they should or might wish to be informed of as soon as possible after they arise, and on any material changes in the circumstances which were the subject of a briefing.

Barrick is also required by the Native Title Agreement to keep the CH Company fully informed about Barrick's intentions and timing with respect to cultural heritage management activities.

6.3.2 Mining Rehabilitation and Environmental Management Process (MREMP)

The environmental management of the Project would be conducted in accordance with the MREMP. The MREMP is a statutory requirement of the Department of Mineral Resources for the operation of a mine. The process requires two forms of statutory documentation, the Mining Operations Plan (MOP) and the Annual Environmental Management Report (AEMR).

Both the MOP and the AEMR provide a means by which compliance with lease conditions and licenses is demonstrated. The environmental monitoring programs provide data for the measurement of compliance.

Mining Operations Plan (MOP)

Barrick will produce a MOP, to give a detailed account of the proposed mine site activities for a nominated term. It will include all mining and rehabilitation operations and relevant environmental controls and procedures necessary for compliance with lease conditions. It will include the relevant Aboriginal heritage management measures to be included during works for the nominated MOP term.

Annual Environmental Management Report (AEMR)

The AEMR, issued by Barrick, will annually report relevant cultural heritage management measures conducted for the previous year. Proposed management measures for the next year will also be reported.

6.4 AHIMS

The DEC maintains a register of known sites including occupation sites (open sites and Aboriginal reserves), rock engravings, carved/scarred trees, ceremonial grounds, stone arrangements to mark special sites, quarry sites, stone tools and workshops, axe-grinding grooves, burials and natural sacred sites, called the AHIMS (DEC, 1997).

Results of previously conducted and future surveys would be made available to DEC for inclusion on the AHIMS.

7 REFERENCES

Cane, S.B. 1995a *Camp sites at Lake Cowal: an archaeological survey in central NSW*. Culture and Heritage, SA. Report to NSR, Environmental Consultants.

Cane, S.B. 1995b *Camp sites at Lake Cowal: a supplementary report*. Culture and Heritage, SA. Report to NSR, Environmental Consultants.

Huys, S. and Johnson, D. 1995 *An archaeological survey of areas between Forbes and Lake Cowal*. A report to North Limited. Australian Archaeological Survey Consultants.

Kamminga, J. 2002 *Archaeological survey of the borefield for the Cowal Gold Project, NSW*. National Heritage Consultants Draft Report to Barrick Australia Ltd. August 2002.

Nicholson, A.F. 1997 *An archaeological survey of a proposed transmission line between Temora and Lake Cowal*. Report to Resource Strategies.

North Limited., 1998 Cowal Gold Project, Environmental Impact Statement.

Pardoe, C 2002 *Supplementary archaeological survey of part of the proposed borefield and pipeline for the Cowal Gold Project, Lake Cowal, NSW*. Draft Report to Barrick Australia Ltd.

Paton, R. 1989 *Preliminary archaeological inspection of Lake Cowal Mining Exploration Lease*. Report to NSR Environmental Consultants, Melbourne.

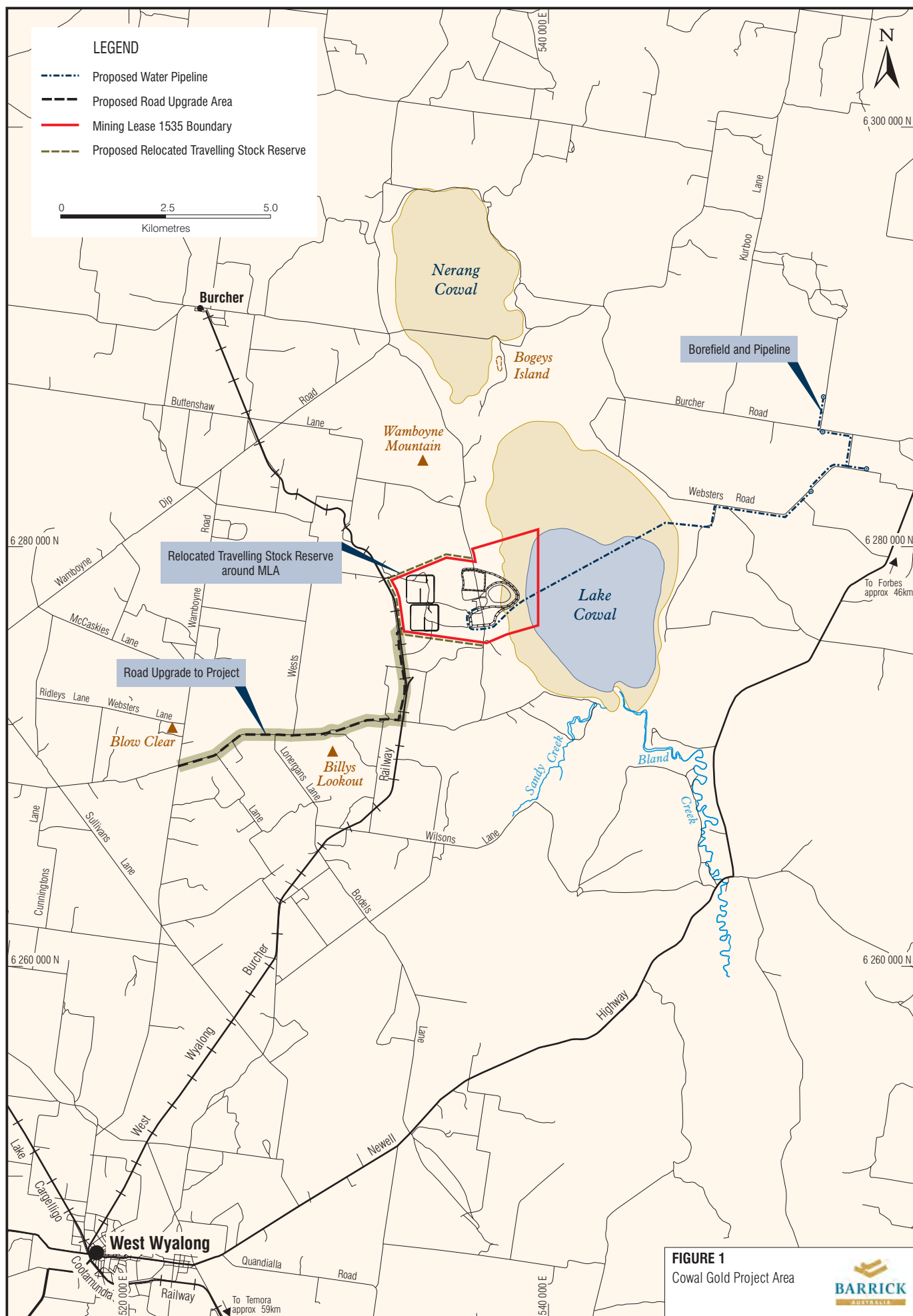


FIGURE 1
Cowl Gold Project Area





ENVIRONMENT, HEALTH AND SAFETY POLICY

Barrick Gold of Australia is committed to protect the environment by conducting all its activities in an environmentally acceptable manner with continual improvement in our environmental performance. It is Barrick's policy that all employees and contractors are provided with a safe and healthy workplace.

To accomplish this, Barrick Gold of Australia:

- Ensures compliance with all environment, health and safety laws and regulations as the minimum standard for its management practices;
- Establishes positive co-operative relationships with government agencies that regulate its business;
- Establishes annual goals for improvement of each operation and assigns responsibilities and accountability for environment, health and safety performance;
- Establishes standards and procedures to protect the environment and to protect employee and public safety and health;
- Works to mitigate the effects of its activities on people, the environment and natural resources;
- Maintains and tests its ability to respond effectively to emergencies;
- Contributes to the economic and social well being of its employees and communities in which it operates;
- Audits its environment, health and safety performance, regularly reports the results and makes appropriate improvements;
- Keeps its stakeholders informed.

FIGURE 2
Environmental, Health and
Safety Policy





INDIGENOUS PEOPLES POLICY

Barrick respects the relationship Indigenous people have to their traditional country and acknowledges their entitlement to have this properly considered in its on-going activities.

Barrick's principles in dealing with land access are:

- Establish and maintain constructive, long term relationships with Indigenous communities.
- Identify the Indigenous interests in the areas where we operate and define whether such interests are based on cultural traditions, historical association, occupation, social or economic need.
- Strive for a timely and fair resolution of issues. Proceed by way of negotiated outcome, wherever possible.
- Any compensation for the granting of tenements should, to the extent practicable, be community oriented, sustainable and include employment, training, facilities and services.
- When conducting Indigenous heritage surveys, give representatives from all those Indigenous groups having a traditional connection with the land concerned an opportunity to be consulted.

Barrick also recognises that there are broader responsibilities associated with its activities and, as such, approaches issues relating to Indigenous people in a progressive and inclusive way. In particular, Barrick provides:

- Opportunities to Indigenous people to participate in employment and to supply goods and services necessary for Barrick's local activities.
- Culturally sensitive training and education to enable employees dealing with Indigenous people and issues to understand the potential impact of Barrick's activities on Indigenous people.

Overall, as well as complying with all laws and regulations relating to Indigenous people, Barrick aims to conduct its operations in a way that fosters the support of the Indigenous communities.

FIGURE 3
Indigenous People Policy



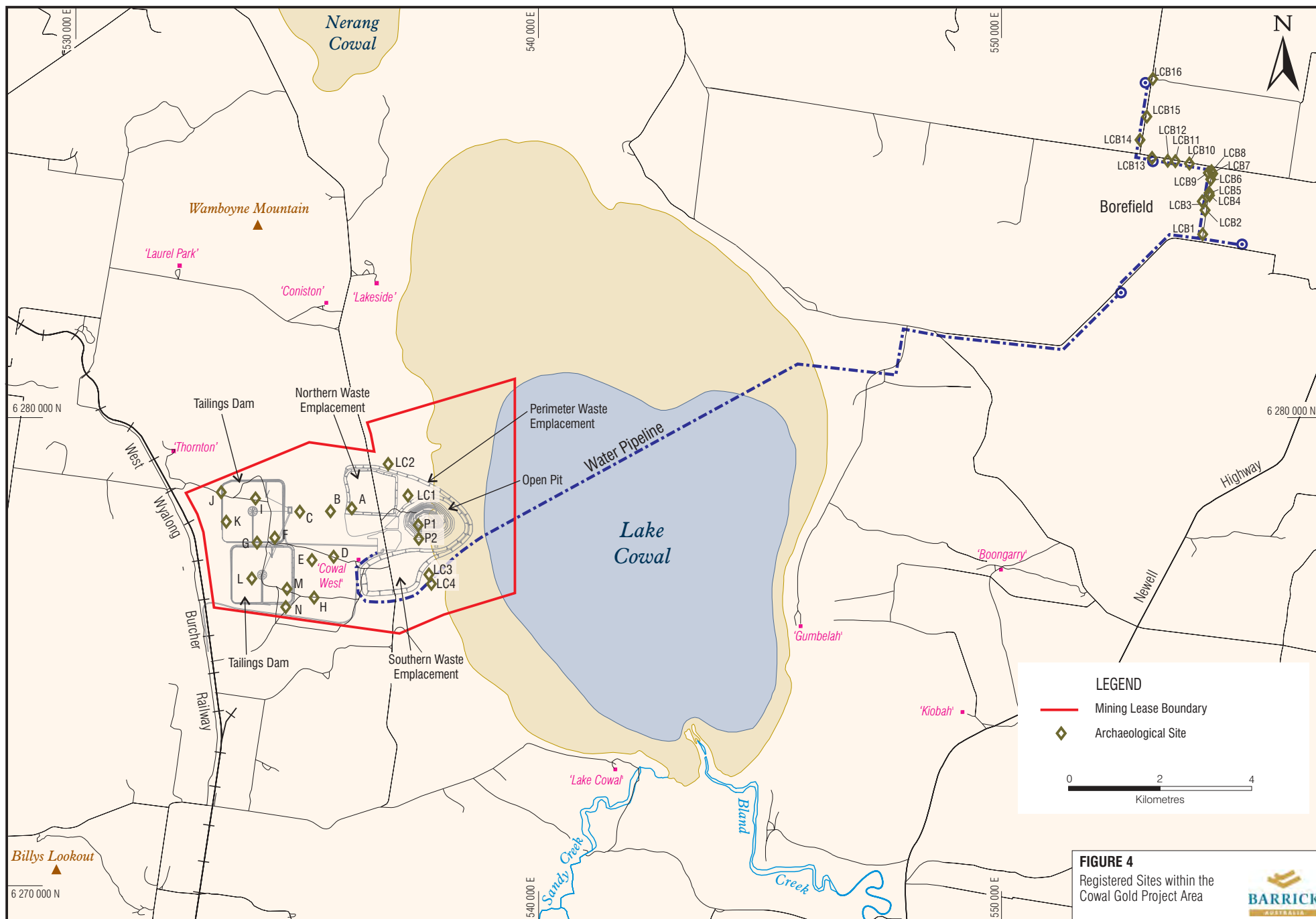


FIGURE 4
Registered Sites within the
Cowal Gold Project Area



Appendix 1

Permit 1468

21-OCT-2003 MON 10:45

LOWER DARLING AREA

FAX NO. 61350222037

P. 08

27/10 '03 MON 09:20 FAX 61 02 88 84 7883

007

PERMIT #: 1468
(HO use only)NATIONAL PARKS AND WILDLIFE ACT 1974
SECTION 57 (1)

PERMIT (AMENDED)

PERMIT TO CARRY OUT PRELIMINARY RESEARCH, EXCAVATE, SALVAGE and COLLECT

PERMIT ISSUED TO:

1 Dr Colin Pardoe
Bio-anthropology and Archaeology
3 Rose Street
Gilberton
Sth Australia, 50812 Dr Johan Kramminga
National Heritage Consultants
34 Simpson Street
Watson
ACT, 2602Postal Address:
As Above

AUTHORITY is hereby given for the person/s named above to:

- disturb or excavate any land, or cause any land to be disturbed or excavated, for the purpose of discovering an Aboriginal object within the meaning of that term in section 5(1) of the National Parks and Wildlife Act 1974 (NSW) ("Aboriginal object"); and
- to disturb or move on any land an Aboriginal object that is the property of the Crown, in the course of undertaking research, excavation, salvage, collection and storage/curation of Aboriginal objects as described in the Research Design and Study Plan for the Barrick Australia Limited Cowal Gold Project which was Attachment 5 to the application for this permit dated 15 August 2002 (the "Application"), as modified by the special and specific conditions contained in this permit.

AREA COVERED by Permit for purpose as named above: as described in Schedule B of Consent # 1467 issued in conjunction with this permit.

TERM OF PERMIT: As specified in Specific Condition 5 of Consent #1467 issued in conjunction with this permit.

TERMS AND CONDITIONS OF THIS PERMIT

This permit is issued subject to the General Terms and Conditions covering archaeological permits and consents, as well as those Specific and Special Terms and Conditions pertaining to each type of permit as determined by the Director-General, which may appear hereunder: See attached page.

DATED at

this 27th day of October 2003

Director-General of the Department of Environment and Conservation

Terry Korn A/Director Control
27-10-03

SPECIAL and SPECIFIC CONDITIONS

1. The permit does not cover human skeletal remains. Should human remains be uncovered all work at the particular location shall cease and the Department of Environment and Conservation, Cultural Heritage Branch, archaeologist at Dubbo shall be notified immediately.
2. All work shall be carried out in accordance with the Research Design and Study Plan that is Attachment 5 to the Application (the "Research Design and Study Plan") as modified by the Special and Specific Conditions applying to the permit.
3. This permit allows for test pit investigations and extended excavation (if warranted) of three alluvial fans within the footprint of the proposed open cut pit and site P1 (NPWS# 43-4-7). It further allows for the salvage, collection and storage/curation of a representative sample of Aboriginal objects located during these works in accordance with Special Condition 12. These works must be carried out in the following manner:
 - Excavation need not proceed beyond the test pit investigation stage in the absence of any cultural material.
 - All test pits and excavations shall be conducted in accordance with the Research Design and Study Plan except that test pits for the alluvial fans on the open cut footprint shall be placed as follows. A 10 metre (or less) x 1 metre trench shall be placed on the fan on any axis as determined by the permit holders and/or their instructed delegates who must be qualified archaeologists. This shall be intersected by a second trench of the same dimensions perpendicular to the first such that the trenches will define and fall within the boundaries of an extended 10 m x 10 m excavation should cultural material be encountered.
4. The scarred tree known as P2 (NPWS # 43-4-8) shall be treated as per the Research Design and Study Plan with the following qualifications:
 - The tree shall be cut a minimum of 40-50 cm above and below the scar (where possible). Where this is not possible cuts will be made as far away from the scar edge as practicable.
 - The cut surfaces of the scarred sections shall be bored with a number of holes which shall be filled with an insecticide to provide termite resistance. The holes should then be plugged and the surfaces sealed to exclude moisture.
 - The tree shall be temporarily stored in the temporary keeping place (as approved for Section 87 permit no 1361) in a manner that will provide freedom from incidental damage yet allow for continuous air circulation. That is, the tree shall not be wrapped or constrained in any manner that prevents the timber from breathing or causes it to become wet such that it may be subject to undue cracking or fungal attack.
 - The final location of the tree shall be determined in consultation with the Wiradjuri Condobolin Corporation. The final location of the tree must satisfy the following. A concrete slab or similar shall be laid and the super structure of the shelter be prefabricated and ready for immediate installation before moving the object to the selected location. This is to avoid any undue exposure to the weather that may negatively impact upon the integrity of the object. Said shelter shall be constructed in a manner that provides security but visual access only to the object.
 - Interpretive signage shall be provided by Barrick Australia Limited to the shelter briefly explaining the traditional function of the object.
5. This permit allows for the excavation of site LC 1 (NPWS# 43-3-21). It further allows for the salvage, collection and storage/curation of a representative sample of Aboriginal objects located during these works in accordance with Special Condition 12. The excavation shall be undertaken in accordance with the Research Design and Study Plan by a specialist archaeologist nominated by the registered native title claimants for the area of MLA 45 as specified in the Research Design and Study Plan. If the registered native title claimants for the area of MLA 45 advise the permit holders in writing that they do not wish to nominate a specialist archaeologist to undertake these works, the excavation works shall be undertaken by the permit holder and/or his instructed delegates who must be qualified archaeologists. The excavations will however be overseen by a holder of this

permit and the nominated archaeologist must comply with any directions from the permit holders.

6. Salvage works at sites LC1, LC2, LC3, LC4, PL, A, F, G, I, J, K, L, M and N, defined in Attachment S of the Application and situated on the land described in Schedule B of Consent # 1467 shall be completed in the following manner:
 - A permit holder and/or his instructed delegates shall inspect the land in these site locations and identify surface Aboriginal objects. The Wiradjuri Condobolin Corporation, West Wyalong Local Aboriginal Land Council and Mooka Traditional Owners Council (hereafter the "Aboriginal community") shall be notified of the programme and a representative/s shall be invited to observe and where appropriate participate in recording and collection works.
 - A representative sample of Aboriginal objects from each site shall be taken. Their position shall be recorded by a GPS and they shall be bagged and temporarily stored in accordance with Special Condition 13 until they are dealt with in accordance with the procedures outlined in Special Condition 12.
 - The collected Aboriginal objects shall be replaced in a location as close as possible to their original location at a time when the works within the specific area do not pose a future threat to them. Replacement will be supervised by a permit holder and/or his instructed delegates. The Aboriginal community shall be notified of the programme and a representative/s shall be invited to observe and where appropriate participate in replacement works.
 - Remaining Aboriginal objects shall be collected with the soil during soil stripping operations and temporarily stored in soil stockpiles before being replaced during rehabilitation activities.
 - A Cultural Heritage Officer retained by Barrick shall undertake routine monitoring following replacement as a threat abatement measure. Should this officer identify a likely threat, the officer shall be empowered to halt proceedings. Barrick Australia Limited shall immediately upon notification, investigate the matter, and should the threat be verified, take necessary action to remove or mitigate the threat.
7. Salvage works at sites LCB9 and LCB14 defined in Attachment S of the Application and situated on land described in Schedule B of Consent # 1467 shall be completed in the following manner:
 - A permit holder and/or his instructed delegates shall inspect the land in these site locations and identify surface Aboriginal objects. The Aboriginal community shall be notified of the programme and a representative/s shall be invited to observe and where appropriate participate in recording and collection works.
 - A representative sample of surface Aboriginal objects from each of these sites shall be collected. Their position shall be recorded by a GPS and they shall be bagged and temporarily stored in accordance with Special Condition 13 until they are dealt with in accordance with the procedures described in Special Condition 12.
 - a permit holder and/or his instructed delegates who must be qualified archaeologists shall excavate test pits of the width of the pipeline trench x 50 cm long x 50 cm deep, in 5 cm spits, at 5 metre intervals along that part of the proposed pipeline trench that is within Sites LCB9 and LCB14 to determine the existence of sub-surface cultural materials;
 - If sub-surface cultural materials are identified, an extended excavation shall be carried out along the length of the proposed pipeline trench within the relevant site to a maximum depth of 1 metre;
 - a representative sample of Aboriginal objects located during the test pit excavations and extended excavations (if any) shall be collected. Their position shall be recorded by a GPS and they shall be bagged and temporarily stored in accordance with the procedures described in Special Condition 12.
 - During the pipe laying activities, the trench and spoil shall be monitored for the incidence of sub-surface Aboriginal objects during removal. A representative sample of any Aboriginal objects so located shall be collected and treated in the manner set out above.
 - At the completion of pipe laying activities, the Aboriginal objects shall be replaced as near as practicable to their original location. The Aboriginal community shall be notified

of the programme and a representative /s shall be invited to observe and where appropriate participate in replacement works.

8. The following five sites defined in Attachment S of the Application and situated on the land described in Schedule B of Consent # 1467 shall have conservation works effected as follows:
 - Sites B, C, E and H shall be covered by a geo-textile blanket extending a minimum of two metres beyond all visible artefacts defining their boundaries. A layer of loam or sand, a minimum of 200 mm thick, shall be hand spread over this blanket, working progressively over fill as it is placed. That is, traffic directly on the blanket shall be avoided. A secondary geo-textile blanket shall cover the loam and be pegged down at the edges.
 - Topsoil stockpiles may be placed over these protected sites. If so, removal of top soil from the stockpiles for rehabilitation works shall stop when the first (top layer) of geo-textile is encountered. This blanket shall then be removed to facilitate hand sowing of the loam for reconstitution and subsequent revegetation in accordance with the mine rehabilitation plan.
 - Site D lies on or very close to an existing drainage contour. A permit holder shall in consultation with design engineering staff determine if the contour can be shifted to avoid the site. The maximum area of the site that can reasonably be conserved shall be protected in the manner described for B, C, E and H.
 - After the completion of the above conservation works, the protected areas shall be sign-posted.
 - These measures shall be undertaken within 90 days of the period commencing 19th May 2003.
 - However, if the area of any of these sites is proposed to be utilised by Barrick Australia Limited for its activities, other than vehicular passage, within the area of MLA 45, the following shall occur:
 - A permit holder shall give 21 days written notice to the Director-General of their intention to undertake the archaeological works referred to below, together with evidence of Barrick Australia Limited's consultation with the Aboriginal community about the proposed archaeological works and any compensatory measures proposed to be undertaken by Barrick Australia Limited; and
 - A permit holder and/or his instructed delegates shall carry out inspection, salvage and collection works at each site in accordance with the procedure contained in Special Condition 6.
9. Additional works on the Back Plain (as that term is described in the Research Design and Study Plan) - Areas outside of the sites on the Back Plain that are identified in the Application shall be inspected to identify, where possible, other concentrations of surface Aboriginal objects within the Permit Area. The Aboriginal Community shall be notified of the programme and a representative/s shall be invited to observe and where appropriate participate in inspection and recording works.
 - In relation to 15 concentrations of Aboriginal objects, artefact densities in those concentrations shall be measured across areas of approximately 10m x 10 m. Their position shall be recorded by a GPS and the concentrations of Aboriginal objects shall be individually measured and described to provide supplementary detail for subsequent spatial and technological analysis.
 - The Aboriginal objects shall be left where found to be collected with the soil during soil stripping operations and temporarily stored in soil stockpiles before being replaced during rehabilitation activities.
10. Additional works generally - where the Research Design and Study Plan provides for the inspection of land and the collection of Aboriginal objects prior to construction earthworks other than as referred to in Special Conditions 6, 7, 8 and 9, such inspection and collection shall be carried out in accordance with the procedure contained in Special Condition 6.
11. All areas where soil stripping occurs shall be further inspected following this operation in the event that datable materials might be revealed. Samples shall be obtained by a permit

holder and/or his instructed delegates and be submitted for chronological analysis. Costs for such analysis shall be borne by Barrick Australia Limited.

12. All Aboriginal objects subject to salvage and collection shall be dealt with in accordance with this special condition. Sufficient data will be taken from each Aboriginal object, including material type and size characteristics, to enable a technological analysis to be undertaken for report purposes provided always that numbers are large enough for meaningful analysis. This information shall form the basis of a master inventory which must be maintained at all times. After collected items have been closely examined and classified by a permit holder and/or his instructed delegates who must be qualified archaeologists, each collected item that has been classified as an Aboriginal object shall be separately tagged and labelled duplicating the above information and placed in a clearly labelled box detailing the specific area of collection. They shall be dealt with in accordance with Special Condition 13.
13. All collected Aboriginal objects shall be retained in the existing temporary Keeping Place within the Barrick Cowal Gold Project Compound. Keys shall be held by the Cowal Gold Project Site Coordinator and access shall be limited to Aboriginal Community representatives, the permit holders and/or their instructed delegates, the Land, Environment and Wiradjuri Heritage Officer and for audit purposes, Department of Environment and Conservation, Cultural Heritage Branch staff. Note that these are temporary facilities and a more permanent on site Keeping Place may be required in the future for Aboriginal objects removed from the mine footprint area in the event that this area remains a water filled void.
14. Unless otherwise directed by the special conditions, any Aboriginal objects recovered being the property of the Crown shall be deposited at the Australian Museum, in accordance with the adopted procedures for the deposition of objects as prescribed by The Australian Museum, at or before a period of 2 years from the date of expiration of the permit or any renewal whichever occurs first. Information about deposition requirements can be obtained from the Aboriginal Collections Manager, Division of Anthropology, the Australian Museum.
15. The holder/s of the permit shall furnish the Department of Environment and Conservation, Cultural Heritage Branch with a final report detailing the results of investigations within 9 months of the completion of the excavations and field investigations. Said report will be expected to address matters relating to the spatial distribution of sites, technological and chronological considerations, and inferences of land use histories related to palaeo- environments. A separate plain English report shall also be produced for the Aboriginal community within the same time frame.
16. When the archaeological works authorised by this permit for a particular area have been completed, a permit holder will certify that fact in writing to Barrick Australia Limited. Such certification may be given before the examination and classification of collected items pursuant to Special Condition 12. A copy of that certification shall be provided to the Director-General.
17. Where the Research Design and Study Plan refers to the Land, Environment and Wiradjuri Heritage Officer, it shall be read as referring to a cultural heritage officer retained by Barrick (and approved by the West Wyalong Local Aboriginal Land Council).
18. Where the Research design and Study Plan provides in relation to each zone that "works will stop in the relevant location when Barrick become aware of Aboriginal objects not previously identified during earthworks, construction or operation of the project, individual Aboriginal objects will be collected. Necessary permits or consents already in place shall be complied with prior to resumption of work in the relevant area" the following shall occur instead:
 - A Cultural Heritage Officer retained by Barrick (and approved by the West Wyalong Local Aboriginal Land Council) shall monitor construction earthworks;

- If an Aboriginal object (other than human skeletal remains) of a type that has not been previously identified during the archaeological works referred to in the Research Design and Study Plans and Special Conditions 3-10 of this permit, is identified, the Aboriginal object shall be collected and its position recorded by GPS. The collected Aboriginal object shall then be bagged and temporarily stored in accordance with Special condition 13 until it is dealt with in accordance with Special Condition 12.

GENERAL TERMS AND CONDITIONS

1. Permits and Consents are not transferable.
2. A Permit covers only that area stated in the Permit.
3. Consent covers only that area stated in the instrument of Consent and in any Schedules thereto.
4. Terms and conditions of Permits may be varied at any time at the discretion of the Director-General.
5. The Person to whom the Permit is issued or the Consent granted shall be responsible for the manner in which the work covered by the Permit or Consent is performed.
6. An officer of the, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Permit or Consent.
7. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.
8. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the Department of Environment and Conservation against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.
9. All reports received in connection with work carried out under a Permit or Consent shall be treated as confidential but the Department of Environment and Conservation shall have the right to copy all such reports, to allow consideration thereof by qualified referees.
10. For a period of five years from the date of issue of the Permit or Consent, the holder of the Permit or Consent may refuse to allow the Department of Environment and Conservation and The Australian Museum, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 2 (specific Conditions) above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Permit or Consent, the Service and The Australian Museum shall have the right to use and authorise the use of information contained in all reports submitted under the Permit or Consent, except where specifically requested by the holder of the Permit or Consent.
11. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the Department of Environment and Conservation, The Australian Museum, Sydney, and the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra, unless permission to do otherwise has been obtained from the Service.

12. The holder of the Permit or Consent shall consult with the local Aboriginal community regarding the work covered by the Permit or Consent and shall respond to any reasonable request to involve the Aboriginal community in the work.
13. The Department of Environment and Conservation and The Australian Museum may supply copies of relevant reports as furnished by the holder of the Permit or Consent to local Aboriginal communities.
14. The holder of the Permit or Consent shall keep field records and a copy of all such records shall be lodged with the Department of Environment and Conservation at the termination of each field work period.
15. The holder of the Permit or Consent shall notify the Dubbo office of the Department of Environment and Conservation at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.

Appendix 2

Consent 1467



CONSENT: 1467
(HO use only)

**NATIONAL PARKS AND WILDLIFE ACT 1974
SECTION 90**

CONSENT

**CONSENT TO CARRY OUT THE DESTRUCTION OF AN
ABORIGINAL OBJECT/PLACE**

WHEREAS the Aboriginal objects described in Schedule "A" are situated upon the land described in Schedule "B", and which constitute Aboriginal objects within the meaning of Sections 5(1) and 90 of the National Parks and Wildlife Act 1974 ("Aboriginal objects"), and WHEREAS application has been made by:

Barrick Australia Limited
10th Floor, 2 Mill Street,
Perth. WA. 6000

Postal Address:
Locked Bag 12
Cloisters Square
Perth WA 6850

FOR CONSENT to destroy those objects identified in Schedule A and situated in the lands described in Schedule B of the proposed new open cut gold mine at Lake Cowal.

NOW I, Brian Gilligan, Director-General of National Parks and Wildlife, in pursuance of Section 90 of the said Act, and subject to the Conditions hereunder set out DO HEREBY CONSENT to the destruction of the said objects by the said applicant.

TERMS AND CONDITIONS OF THIS CONSENT

This Consent is issued subject to General Terms and Conditions covering all archaeological Permits and Consents, as well as the Special and Specific Terms and Conditions pertaining to Consents to Destroy Aboriginal objects all of which conditions are detailed in the attached pages.

DATED at *Darwin* 27 day of *November* 2002

Tony Kern

for Director-General of
National Parks and Wildlife



112069981

SCHEDULE A:

All Aboriginal objects situated within the boundaries of the lands described in schedule B, unless excluded in the Special and Specific conditions.

SCHEDULE B:

- The area of Mining Lease Application 45 under the *Mining Act* 1992 (NSW) lodged by Barrick Australia Limited ("MLA 45") (as shown on the map in Schedule C to this Consent);
- The area of the following proposed bores (as shown on the map in Schedule D of this Consent) as follows:
 - the proposed bore within the road reserve to the west of Portion 69, Parish of Gibrigal, County of Gipps;
 - the proposed bore within Travelling Stock Reserve 84719 to the south of Portion 19, Parish of Gibrigal, County of Gipps;
 - the proposed bore within the road reserve to the north of Portion 105, Parish of Cadalgulee, County of Gipps; and
 - the proposed bore within the road reserve to the west of Portion 104, Parish of Cadalgulee, County of Gipps.
- The area of the proposed water pipeline (and its 40 metre wide corridor) which runs from the borefield to MLA45 within the following land (as shown on the map in Schedule C, D and E of this Consent):
 - the road reserve that runs to the west of Portions 69 and 19, Parish of Gibrigal, County of Gipps;
 - the road reserve (part of Burcher Road) and part of Travelling Stock Reserve 84719 that runs to the south of Portion 19, Parish of Gibrigal, County of Gipps;
 - the road reserve that runs to the east of Portion 66, Parish of Cadalgulee, County of Gipps;
 - the road reserve that runs to the north of Portion 105, Parish of Cadalgulee, County of Gipps, until it reaches the proposed bore;
 - the road reserve (part of Webster's Road) that runs in a south westerly direction adjacent to Portions 104 and 102, Parish of Cadalgulee, County of Gipps until it reaches the north west corner of Portion 93, Parish of Cadalgulee, County of Gipps;
 - the road reserve that runs to the west of Portion 93, Parish of Cadalgulee, County of Gipps for approximately 1 kilometre;
 - Lots 44, 45 and 46 on DP42918 - in an east/west direction parallel to, and approximately 175 metres from, the northern boundary of Lots 44, 45 and 46, for approximately 2 kilometres; and
 - Lots 46 and 47 on DP 42918 and Lots 18, 23 and 24 on DP753097 - in a south westerly direction for approximately 7 kilometres until it reaches MLA 45.

SPECIAL and SPECIFIC CONDITIONS

1. The Consent does not cover human skeletal remains. Should human remains be discovered all work at the particular location shall cease and the NPWS archaeologist at Dubbo shall be notified immediately.
2. The Consent covers only those objects described in the instrument of Consent and in any Schedules thereto.
3. This Consent operates in respect of the land covered by MLA 45 only for the period that the following approvals remain in force:
 - Exploration Licence 2864 and Exploration Licence 4510 or any renewals of the same; or
 - the development consent granted for the Cowal Gold Mine by the Minister for Urban Affairs and Planning on 26 February 1999 or a modification of the same or any new development consent which authorises the Cowal Gold Mine.



112069981

4. This Consent operates as follows:
- 4.1 Subject to paragraph 4.3, 4.4 and 4.5 below, this Consent does not operate in relation to a specific area until a holder of Permit # 1468 has certified in writing, in accordance with Special Condition 16 of that permit, that the archaeological works authorised by Permit # 1468 for that specific area have been completed;
- 4.2 Subject to the Special and Specific Conditions of this Instrument of Consent, once that certification has been given in relation to a specific area, this Consent authorises the destruction of Aboriginal objects in the area specified in the certification by Barrick Australia Limited, its employees and contractors and the employees and contractors of its parent company Barrick Gold of Australia Limited in the course of their lawful activities in that area. In particular:
- Where Permit # 1468 authorises the collection of a representative sample of Aboriginal objects from the surface of land, this Consent authorises the destruction of surface and sub-surface Aboriginal objects that remain after the representative sample (as determined by the permit holder and/or his instructed delegates) has been collected;
 - where Permit # 1468 authorises the collection of a representative sample of Aboriginal objects after excavation, this Consent authorises the destruction of Aboriginal objects that remain after excavated Aboriginal objects identified by the permit holder and/or his instructed delegates have been collected;
 - where Special Condition 9 of Permit # 1468 authorises the identification of concentrations of Aboriginal objects on the back plain, this Consent authorises the destruction of Aboriginal objects on the back plain after the permit holder and/or his instructed delegates have undertaken the measuring and recording activities authorised by Special Condition 9.
- 4.3 If Permit # 1468 does not authorise any archaeological works within a specific area, this Consent authorises the destruction of all Aboriginal objects within that specific area.
- 4.4 This Consent may operate within the footprint of the proposed open cut pit and site P1 (NPWS#43-4-7) before the test pit excavations and extended excavations authorised by Special Condition 3 of Permit # 1468 have been carried out, provided that a permit holder has certified pursuant to Special Condition 16 of Permit # 1468 that the salvage and collection activities in relation to surface Aboriginal objects in that area have been completed.
- 4.5 Nothing in this Consent or Permit # 1468 should be interpreted to mean that all surface and/or sub-surface Aboriginal objects must be collected from any specific area before a holder of Permit # 1468 may certify that the collection activities for that specific area have been completed and this Consent may operate in relation to the relevant area.
5. This consent shall lapse when the Minister for Mineral Resources acknowledges that satisfactory rehabilitation work has been completed under a mining lease granted in respect of MLA 45 or eighteen (18) years after the completion of construction works, which ever occurs first. For the purpose of this condition, construction works are the earthworks, engineering and building works which are required to be completed before mining operations commence.
6. Should any Aboriginal objects listed in Schedule 'A' above remain in existence/in situ at the date of the lapse of this Consent, any destruction of the Aboriginal objects will be unlawful unless authorised by a new consent granted under section 90 of the *National Parks and Wildlife Act 1974*.
7. During the term of this Consent, Barrick Australia Limited shall furnish the National Parks and Wildlife Service with a report on the activities carried out under the Consent, if required by the Director General.
8. A copy of this consent and the Permit # 1468 shall be available for inspection as per General Condition 6 (see below) at the Cowal Gold Project Office at all times during the period of the consent.



9. Offset Conditions

9.1 The obligations contained in this condition are subject to the following:

- (a) subject to subparagraph (b) below, the details and scope of each of the matters referred to in this condition are to be agreed in writing with the registered native title claimants for the area of MLA45 and the West Wyalong Local Aboriginal Land Council (hereafter, the "Aboriginal Community"), unless such agreement is not reached before the commencement of construction, when they will be determined by the Director-General;
- (b) if the Aboriginal Community advises Barrick Australia Limited and the Director-General in writing that they do not want Barrick Australia Limited to fund one of the obligations referred to in paragraphs 9.2 to 9.5, the obligation contained in the relevant condition immediately ceases;
- (c) the total amount of funds dedicated to complying with the obligations referred to in paragraphs 9.2 to 9.5 need not exceed \$250,000; and
- (d) the deadline for completion of any of the obligations referred to in paragraphs 9.2 to 9.5 may be extended by the Director-General if he considers that it is reasonable in the circumstances to do so.

9.2 Barrick Australia Limited must fund the design and construction of a keeping place for Aboriginal objects collected pursuant to Permit # 1468, at a location to be agreed with the Aboriginal Community. The keeping place must be constructed within 12 months of the commencement of mining operations.

9.3 Barrick Australia Limited must fund a regional cultural heritage study and the associated research and publication of a booklet about Wiradjuri cultural heritage and associations with land. The study and booklet must be centred on Lake Cowal and the area between Lake Cowal and the Lachlan River. The scope and methodology of the study shall be agreed with the Director-General. The regional study shall identify areas of cultural significance to Aboriginal people including areas within Barrick Australia Limited's land holdings which may be considered for future conservation. The study must be completed and the booklet published within 3 years of the commencement of construction, subject to any requests for extensions of time by the Aboriginal Community to allow additional study to be carried out. 1000 copies of the booklet must be produced. The booklet must be distributed to the Wiradjuri Council of Elders, the West Wyalong Local Aboriginal Land Council, the Condobolin Local Aboriginal Land Council, the Mooka Traditional Owners Council, the Wiradjuri Regional Aboriginal Land Council, the New South Wales Aboriginal Land Council, NPWS, the Australian Museum, NSW Heritage Office, local public libraries, local councils, local schools, the Mitchell Library and other bodies nominated by the Aboriginal Community.

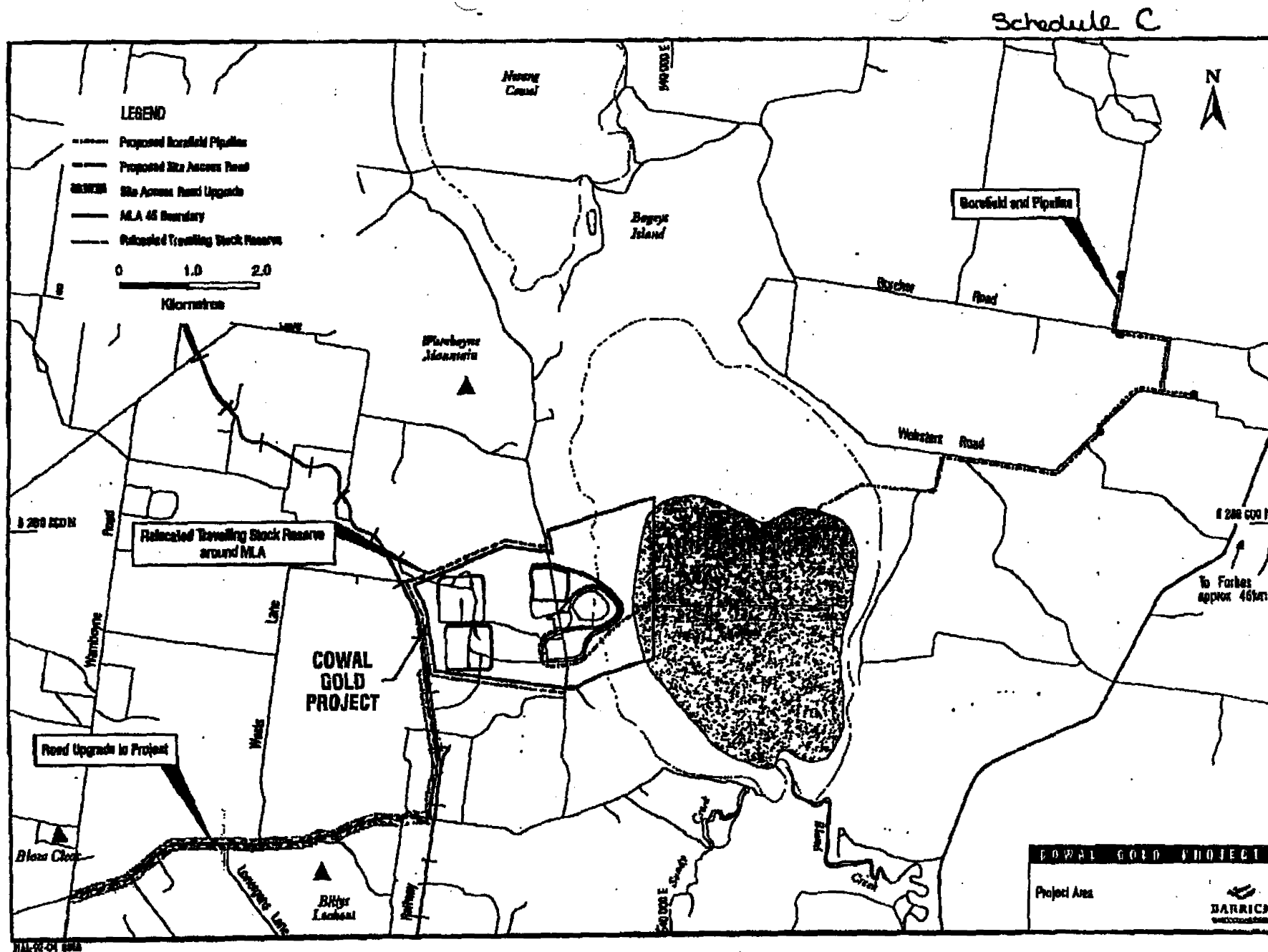
9.4 Barrick Australia Limited must fund the creation of a transportable display consisting of information and material on the Wiradjuri people in the context of Lake Cowal and the region generally, to be available for educational purposes at schools, public libraries, council offices, public buildings and other places nominated by the Aboriginal Community. This display must be completed within 6 months of publication of the booklet referred to in paragraph 9.3 above.

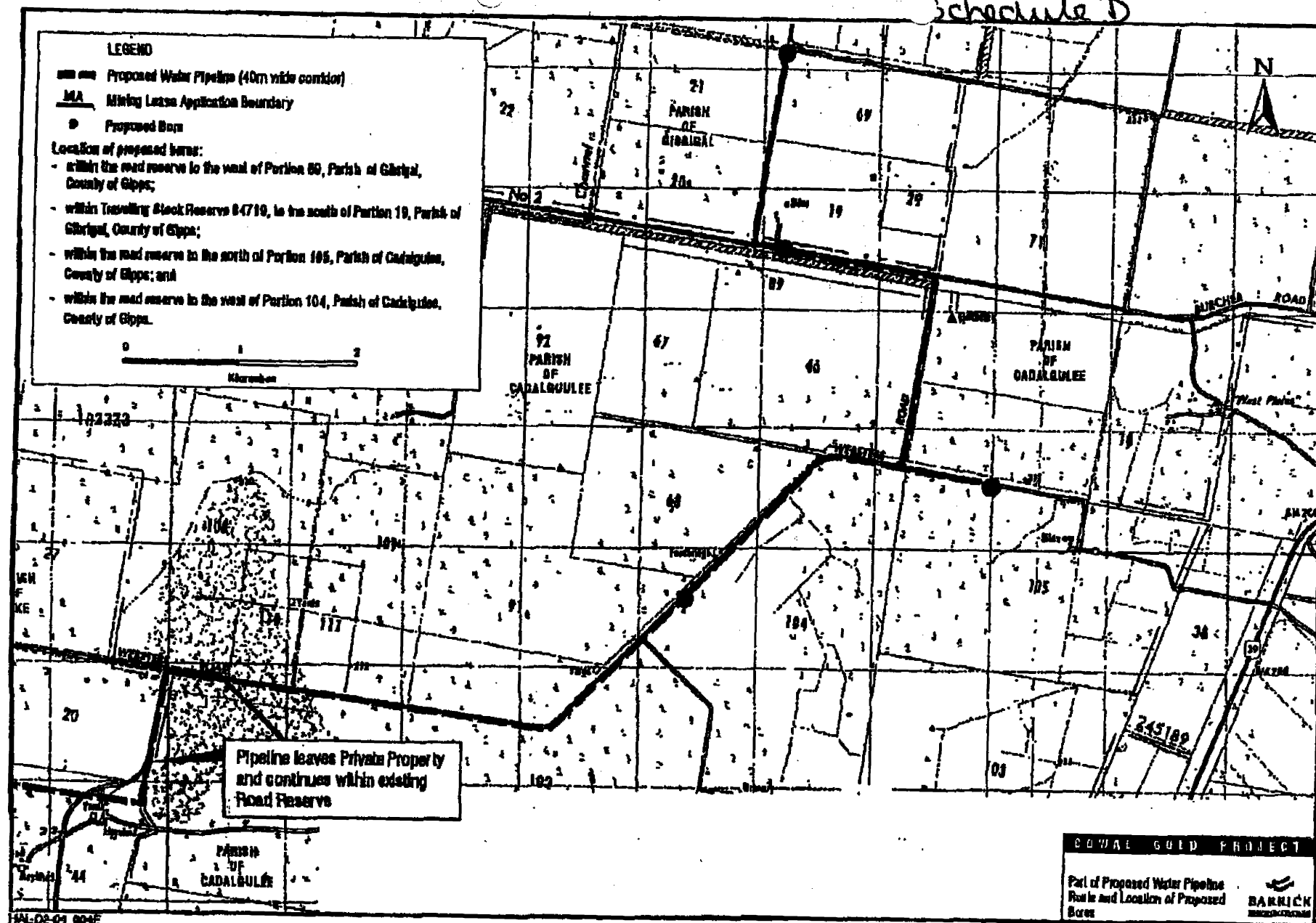
9.5 Barrick Australia Limited must fund a survey to document the whereabouts of Aboriginal objects taken from Wiradjuri land and held in public and private collections around Australia, and support (by financial and other means) any submission by the Aboriginal Community for the return of that material to the Wiradjuri people. The survey must be completed within 12 months from the commencement of construction.

10. This Consent authorises any destruction of Aboriginal objects which may occur at Sites B, C, D, E and H as a result of vehicular movements following completion of the conservation works required by special condition 8 of Permit # 1468 at any such site.

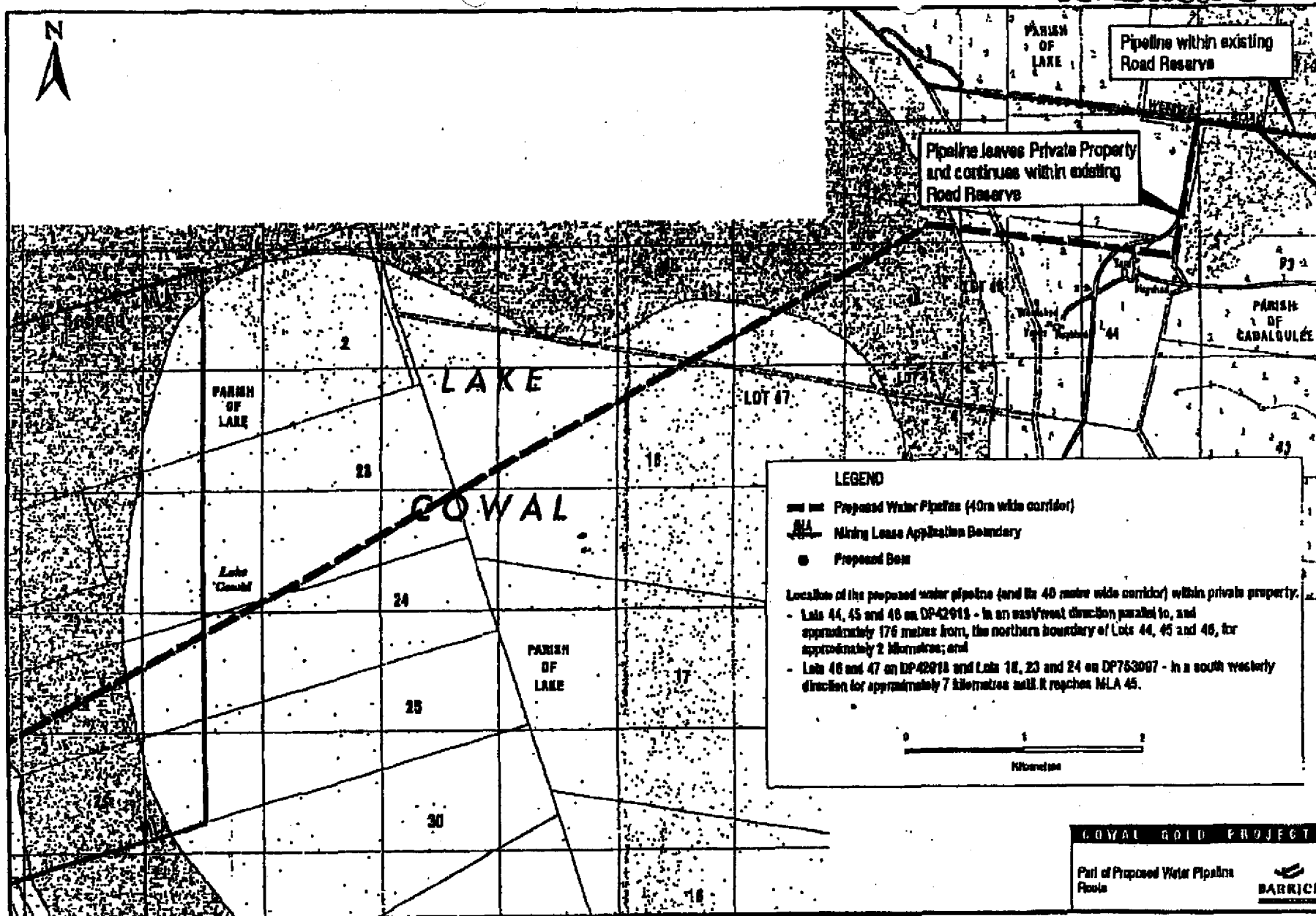
11. Whenever the word "destroy" is used in this consent it includes destroy, deface, damage or desecrate. Whenever the word "destruction" is used in this consent it includes destruction, defacement, damage or desecration.







Schedule E



GENERAL TERMS AND CONDITIONS

1. Permits and Consents are not transferable.
2. A Permit covers only that area stated in the Permit.
3. A Consent covers only that area stated in the instrument of Consent and in any Schedules thereto.
4. Terms and conditions of Permits may be varied at any time at the discretion of the Director-General.
5. The Person to whom the Permit is issued or the Consent granted shall be responsible for the manner in which the work covered by the Permit or Consent is performed.
6. An officer of the National Parks and Wildlife Service, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Permit or Consent.
7. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.
8. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the National Parks and Wildlife Service against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.
9. All reports received in connection with work carried out under a Permit or Consent shall be treated as confidential but the National Parks and Wildlife Service shall have the right to copy all such reports, to allow consideration thereof by qualified referees.
10. For a period of five years from the date of issue of the Permit or Consent, the holder of the Permit or Consent may refuse to allow the National Parks and Wildlife Service and The Australian Museum, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 9 above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Permit or Consent, the Service and The Australian Museum shall have the right to use and authorise the use of information contained in all reports submitted under the Permit or Consent, except where specifically requested by the holder of the Permit or Consent.
11. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the National Parks and Wildlife Service, The Australian Museum, Sydney, and the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra, unless permission to do otherwise has been obtained from the Service.
12. The holder of the Permit or Consent shall consult with the local Aboriginal community regarding the work covered by the Permit or Consent and shall respond to any reasonable request to involve the Aboriginal community in the work.
13. The National Parks and Wildlife Service and The Australian Museum may supply copies of relevant reports as furnished by the holder of the permit or Consent to local Aboriginal communities. Upon request by the Service, the holder of the Permit or Consent shall supply a



112069981

summary of his/her findings with photographs, diagrams, etc., as required, to local Aboriginal communities or other interest local groups.

14. The holder of the Permit or Consent shall keep field records and a copy of all such records shall be lodged with the National Parks and Wildlife Service at the termination of each field work period. A copy of all field records shall be lodged with The Australian Museum at the time the archaeological materials are deposited with the Museum.
15. The holder of the Permit or Consent shall notify the Dubbo office of the National Parks and Wildlife Service at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.



112069981

Appendix 3

Permit 1681



PERMIT #: 1681

**NATIONAL PARKS AND WILDLIFE ACT 1974
SECTION 87 (1)**

PERMIT

PERMIT TO SALVAGE and COLLECT

PERMIT ISSUED TO:

- | | |
|---|---|
| 1 Dr Colin Pardoe
Bio-anthropology and Archaeology
3 Rose Street
Gilberton
Sth Australia, 5081 | 2 Dr Johan Kamminga
National Heritage Consultants
34 Simpson Street
Watson
ACT, 2602 |
|---|---|

Postal Address:
As Above

AUTHORITY is hereby given for the person/s named above to:

- disturb or excavate any land, or cause any land to be disturbed or excavated, for the purpose of discovering an Aboriginal object within the meaning of that term in section 5(1) of the *National Parks and Wildlife Act 1974* (NSW) ("Aboriginal object"); and
- to disturb or move on any land an Aboriginal object that is the property of the Crown, in the course of undertaking salvage, collection and storage/curation of Aboriginal objects as described in the Research Design and Study Plan for the Barrick Australia Limited Cowal Gold Project which was Attachment 5 to the application for this permit dated 15 August 2002 (the "Application"), as modified by the special and specific conditions contained in this permit.

AREA COVERED by Permit for purpose as named above: as described in Schedule B of Consent # 1680 issued in conjunction within this permit.

TERM OF PERMIT: As specified in Special Condition 3 and 5 of Consent #1680 issued in conjunction with this permit.

TERMS AND CONDITIONS OF THIS PERMIT

This permit is issued subject to the General Terms and Conditions covering archaeological permits and consents, as well as those Specific and Special Terms and Conditions pertaining to each type of permit as determined by the Director, which may appear hereunder: See attached page.

DATED at *Dubbo* this *Twenty Eighth* day of, *July* 2003
Terry Kinn
Director General of National Parks and Wildlife

SPECIAL and SPECIFIC CONDITIONS

1. The permit does not cover human skeletal remains. Should human remains be uncovered all work at the particular location shall cease and the NPWS archaeologist at Dubbo shall be notified immediately.
2. All work shall be carried out in accordance with the Research Design and Study Plan that is Attachment 5 to the Application (the "**Research Design and Study Plan**") as modified by the Special and Specific Conditions applying to the permit.
3. Although no sites are known to occur in the Permit Area a permit holder and/or his instructed delegates shall inspect the land in the Permit Area which is proposed to be disturbed by construction work in connection with the development consent granted for the Cowal Gold Mine by the Minister for Urban Affairs and Planning on 26 February 1999 and the approval granted for the Cowal Gold Project Access Road Upgrade by the Bland Shire Council on 21 April 1999 pursuant to Part 5 of the *Environmental Planning and Assessment Act 1979*. Should surface Aboriginal objects be identified, a representative sample of Aboriginal objects shall be taken. Their position shall be recorded by GPS and they shall be bagged and temporarily stored according to Special Condition 5 until they are dealt with in accordance with the procedures outlined in Special Condition 4.
4. All Aboriginal objects subject to salvage and collection shall be dealt with in accordance with this Special Condition. Sufficient data will be taken from each Aboriginal object, including material type and size characteristics, to enable a technological analysis to be undertaken for report purposes provided always that numbers are large enough for meaningful analysis. This information shall form the basis of a master inventory which must be maintained at all times. After collected items have been closely examined and classified by a permit holder and/or his instructed delegates who must be qualified archaeologists, each collected item that has been classified as an Aboriginal object shall be separately bagged and labelled duplicating the above information and placed in a clearly labelled box detailing the specific area of collection. Examination and classification shall follow collection as expediently as possible so that development of the master inventory does not significantly lag behind collection works.
5. All collected Aboriginal objects shall be retained in the existing temporary Keeping Place within the Barrick Cowal Gold Project Compound. Keys shall be held by the General Manager Cowal Gold Project or his delegate, the Cowal Gold Project Site Coordinator, and access shall be limited to Aboriginal Community representatives, the permit holders and/or their instructed delegates, a cultural heritage officer retained by Barrick and for audit purposes, NPWS staff. Note that these are temporary facilities and a more permanent Keeping Place is required as a condition of Consent # 1467 for Aboriginal objects removed from the mine footprint area in the event that this area remains a water filled void.
6. Unless otherwise directed by the special conditions, any Aboriginal objects recovered, being the property of the Crown shall be deposited at the Australian Museum, in accordance with the adopted procedures for the deposition of objects as prescribed by The Australian Museum, at or before a period of 2 years from the date of expiration of the permit or any renewal whichever occurs first. Information about deposition requirements can be obtained from the Aboriginal Collections Manager, Division of Anthropology, the Australian Museum.
7. The holder/s of the permit shall furnish the National Parks and Wildlife Service with a final report detailing the results of investigations within 9 months of the completion of the excavations and field investigations. Said report will be expected to address matters relating to the spatial distribution of sites, technological and chronological considerations, and inferences of land use histories related to palaeo- environments. A separate plain

English report shall also be produced for the Aboriginal community within the same time frame.

8. When the archaeological works authorised by this permit for a particular area have been completed, a permit holder or his delegate, emeritus Professor Frederick James Allen, will certify that fact in writing to Barrick Australia Limited. Such certification may be given before the examination and classification of collected items pursuant to Special Condition 4. A copy of that certification shall be provided to the Director-General.
9. The inspecting, measuring and recording activities (for concentrations of surface Aboriginal objects) proposed in the Research Design and Study Plan for the back plain zone shall not be read as applying to the Permit Area.
10. Where the Research Design and Study Plan refers to the "*Land, Environment and Wiradjuri Heritage Officer*" in relation to the back plain zone, for the purposes of this permit, it shall instead be read as referring to a cultural heritage officer retained by Barrick (and approved by the West Wyalong Local Aboriginal Land Council).
11. Where the Research Design and Study Plan provides in relation to the back plain zone that "*works will stop in the relevant location when Barrick become aware of Aboriginal relics not previously identified during earthworks, construction or operation of the project. Individual Aboriginal objects will be collected. Necessary permits or consents already in place shall be complied with prior to the recommencement of work in the relevant area*" the following shall occur in the Permit Area instead:
 - A cultural heritage officer retained by Barrick (and approved by the West Wyalong Local Aboriginal Land Council) shall monitor construction earthworks;
 - If an Aboriginal object (other than human skeletal remains) of a type that has not been previously identified during the archaeological works referred to in Special Condition 3 of this permit, is identified, the Aboriginal object shall be collected and its position recorded by a GPS. The collected Aboriginal object shall then be bagged and temporarily stored in accordance with Special Condition 5 until it is dealt with in accordance with Special Condition 4.

GENERAL TERMS AND CONDITIONS

1. Permits and Consents are not transferable.
2. A Permit covers only that area stated in the Permit.
3. Consent covers only that area stated in the instrument of Consent and in any Schedules thereto.
4. Terms and conditions of Permits may be varied at any time at the discretion of the Director-General.
5. The Person to whom the Permit is issued or the Consent granted shall be responsible for the manner in which the work covered by the Permit or Consent is performed.
6. An officer of the National Parks and Wildlife Service, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Permit or Consent.
7. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.

8. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the National Parks and Wildlife Service against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.
9. All reports received in connection with work carried out under a Permit or Consent shall be treated as confidential but the National Parks and Wildlife Service shall have the right to copy all such reports, to allow consideration thereof by qualified referees.
10. For a period of five years from the date of issue of the Permit or Consent, the holder of the Permit or Consent may refuse to allow the National Parks and Wildlife Service and The Australian Museum, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 2 (specific Conditions) above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Permit or Consent, the Service and The Australian Museum shall have the right to use and authorise the use of information contained in all reports submitted under the Permit or Consent, except where specifically requested by the holder of the Permit or Consent.
11. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the National Parks and Wildlife Service, The Australian Museum, Sydney, and the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra, unless permission to do otherwise has been obtained from the Service.
12. The holder of the Permit or Consent shall consult with the local Aboriginal community regarding the work covered by the Permit or Consent and shall respond to any reasonable request to involve the Aboriginal community in the work.
13. The National Parks and Wildlife Service and The Australian Museum may supply copies of relevant reports as furnished by the holder of the Permit or Consent to local Aboriginal communities.
14. The holder of the Permit or Consent shall keep field records and a copy of all such records shall be lodged with the National Parks and Wildlife Service at the termination of each field work period.
15. The holder of the Permit or Consent shall notify the Dubbo office of the National Parks and Wildlife Service at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.

Appendix 4

Consent 1680



CONSENT : 1680

**NATIONAL PARKS AND WILDLIFE ACT 1974
SECTION 90**

CONSENT

**CONSENT TO CARRY OUT THE DESTRUCTION OF AN
ABORIGINAL OBJECT/PLACE**

WHEREAS the Aboriginal objects described in Schedule "A" are situated upon the land described in Schedule "B", and which constitute Aboriginal objects within the meaning of Sections 5(1) and 90 of the National Parks and Wildlife Act 1974 ("Aboriginal objects"), and WHEREAS application has been made by:

Barrick Australia Limited
10th Floor, 2 Mill Street,
Perth. WA. 6000

Postal Address:
Locked Bag 12
Cloisters Square
Perth WA 6850

FOR CONSENT to destroy those objects identified in Schedule A and situated in the lands described in Schedule B of the proposed road upgrade and relocated travelling stock route at Lake Cowal.

NOW I, Brian Gilligan, Director-General of National Parks and Wildlife, in pursuance of Section 90 of the said Act, and subject to the Conditions hereunder set out DO HEREBY CONSENT to the destruction of the said objects by the said applicant.

TERMS AND CONDITIONS OF THIS CONSENT

This Consent is issued subject to General Terms and Conditions covering all archaeological Permits and Consents, as well as the Special and Specific Terms and Conditions pertaining to Consents to Destroy Aboriginal objects all of which conditions are detailed in the attached pages.

DATED at *Dubbo* this *Twenty Eighth* day of, *July* 2003

for Director-General of
National Parks and Wildlife

SCHEDULE A:

All Aboriginal objects situated within the boundaries of the lands described in schedule B, unless excluded in the Special and Specific conditions.

SCHEDULE B:

- The area of the proposed road upgrade as follows (and as shown on the maps attached as schedule C and D)
 - The road reserve that runs from the south west corner on Mining Lease 1535, parallel to the western side of the West Wyalong-Burcher Railway, for a distance of approximately 3.3 kilometres until its intersection with Lake Cowal/Blow Clear Road.
 - The road reserve that runs west from this point for a distance of approximately 10.5 kilometres (Blow Clear/Lake Cowal Road) to its intersection with Wamboyne Road at Blow Clear.
- The area of the proposed relocated Travelling Stock Route as follows (and as shown on the maps attached as schedule C):
 - From Lake Cowal Road on the northern side of Mining Lease 1535 westwards to the north west corner of Mining Lease 1535 (which is a corridor approximately 290 metres wide until it meets Lot 57 where it narrow to approximately 200 metres wide);
 - South from this point along the western boundary of Mining Lease 1535 to the south west corner of Mining Lease 1535 (which is a corridor approximately 200 metres wide);
 - Then east from this point along the southern boundary of Mining Lease 1535 until again intersecting the Lake Cowal Road (which is a corridor approximately 200 metres wide).

SPECIAL and SPECIFIC CONDITIONS

1. The Consent does not cover human skeletal remains. Should human remains be discovered all work at the particular location shall cease and the NPWS archaeologist at Dubbo shall be notified immediately.
2. The Consent covers only those objects described in the instrument of Consent and in any Schedules thereto.
3. This Consent operates in respect of the land nominated above only for the period that the following approvals remain in force:
 - the development consent granted for the Cowal Gold Mine by the Minister for Urban Affairs and Planning on 26 February 1999 or a modification of the same or any new development consent which authorises the Cowal Gold Mine; or
 - the approval granted for the Cowal Gold Project Access Road Upgrade by the Bland Shire Council on 21 April 1999 pursuant to Part 5 of the *Environmental Planning and Assessment Act 1979* (NSW), or a modification of the same or any new approval which authorises the Cowal Gold Project Access Road Upgrade.
4. This Consent operates as follows:
 - 4.1 Subject to paragraph 4.3 below, this Consent does not operate in relation to a specific area until it has been certified in writing, in accordance with Special Condition 8 of Permit # 1681, that the archaeological works authorised by Special Condition 3 of Permit # 1681 for that specific area have been completed;
 - 4.2 Subject to the Special and Specific Conditions of this Instrument of Consent and the obligation to comply with Special Condition 11 of Permit #1681, once that certification has been given in relation to a specific area, this Consent authorises the

destruction of Aboriginal objects in the area specified in the certification by Barrick Australia Limited, its employees and contractors and the employees and contractors of its parent company Barrick Gold of Australia Limited in the course of their lawful activities in that area. In particular, where Permit # 1681 authorises the collection of a representative sample of Aboriginal objects from the surface of land, this Consent authorises the destruction of surface and sub-surface Aboriginal objects that remain after the representative sample (as determined by the permit holder and/or his instructed delegates) has been collected.

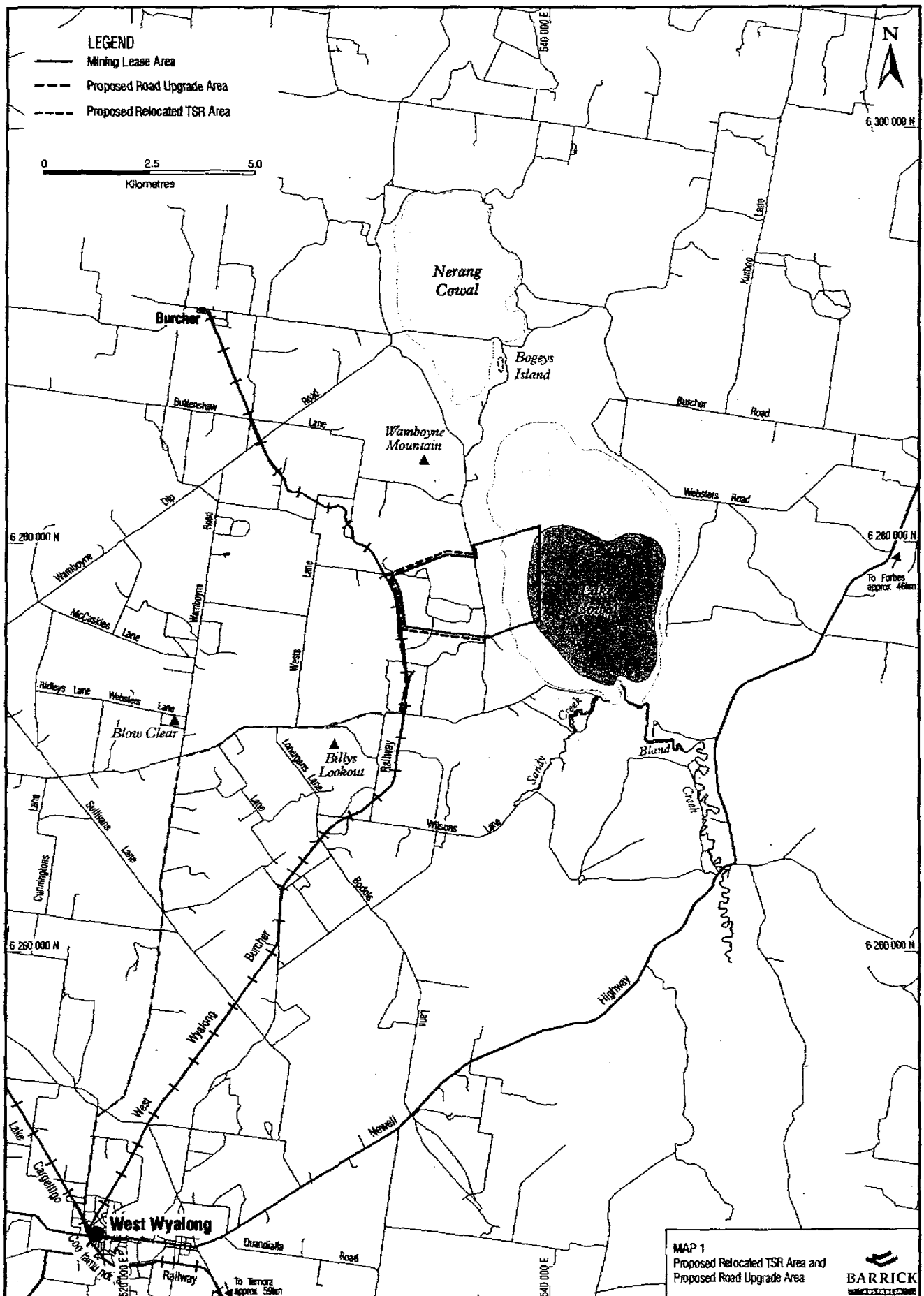
- 4.3 Nothing in this Consent or Permit # 1681 should be interpreted to mean that all surface and/or sub-surface Aboriginal objects must be collected from any specific area before it may be certified pursuant to Permit # 1681 that the collection activities for that specific area have been completed and this Consent may operate in relation to the relevant area.
5. This consent shall lapse when the Minister for Mineral Resources acknowledges that satisfactory rehabilitation work has been completed under Mining Lease 1535 or eighteen (18) years after the completion of construction works, whichever occurs first. For the purpose of this condition, construction works are the earthworks, engineering and building works which are required to be completed before mining operations commence.
6. Should any Aboriginal objects listed in Schedule 'A' above remain in existence/insitu at the date of the lapse of this Consent, any destruction of the Aboriginal objects will be unlawful unless authorised by a new consent granted under section 90 of the *National Parks and Wildlife Act 1974*.
7. During the term of this Consent, Barrick Australia Limited shall furnish the National Parks and Wildlife Service with a report on the activities carried out under the Consent, if required by the Director General.
8. A copy of this consent and the Permit # 1681 shall be available for inspection as per General Condition 6 (see below) at the Cowal Gold Project Office at all times during the period of the consent.
9. Wherever the word "destroy" is used in this consent it includes destroy, deface, damage or desecrate. Wherever the word "destruction" is used in this consent it includes destruction, defacement, damage or desecration.

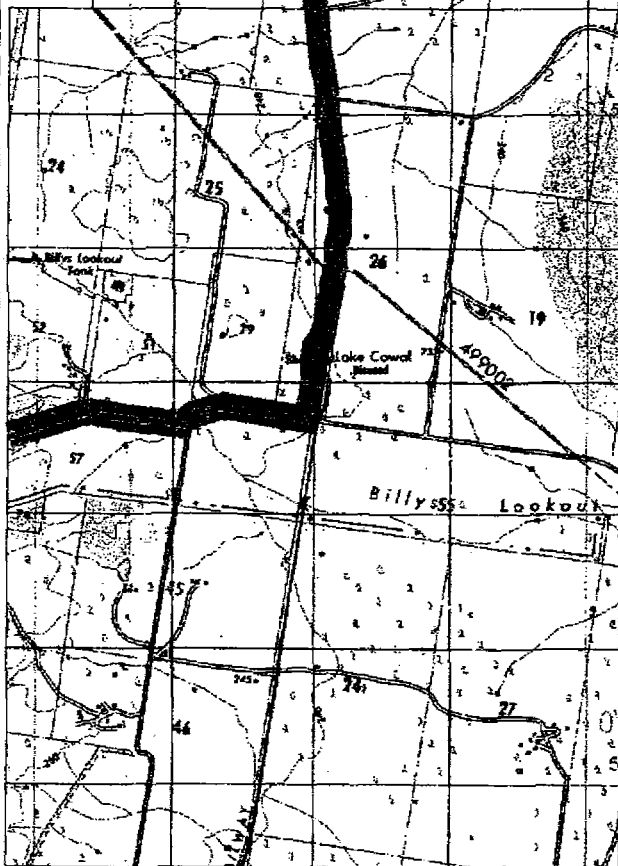
GENERAL TERMS AND CONDITIONS

1. Permits and Consents are not transferable.
2. A Permit covers only that area stated in the Permit.
3. A Consent covers only that area stated in the instrument of Consent and in any Schedules thereto.
4. Terms and conditions of Permits may be varied at any time at the discretion of the Director-General.
5. The Person to whom the Permit is issued or the Consent granted shall be responsible for the manner in which the work covered by the Permit or Consent is performed.
6. An officer of the National Parks and Wildlife Service, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Permit or Consent.

7. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.
8. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the National Parks and Wildlife Service against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.
9. All reports received in connection with work carried out under a Permit or Consent shall be treated as confidential but the National Parks and Wildlife Service shall have the right to copy all such reports, to allow consideration thereof by qualified referees.
10. For a period of five years from the date of issue of the Permit or Consent, the holder of the Permit or Consent may refuse to allow the National Parks and Wildlife Service and The Australian Museum, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 9 above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Permit or Consent, the Service and The Australian Museum shall have the right to use and authorise the use of information contained in all reports submitted under the Permit or Consent, except where specifically requested by the holder of the Permit or Consent.
11. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the National Parks and Wildlife Service, The Australian Museum, Sydney, and the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra, unless permission to do otherwise has been obtained from the Service.
12. The holder of the Permit or Consent shall consult with the local Aboriginal community regarding the work covered by the Permit or Consent and shall respond to any reasonable request to involve the Aboriginal community in the work.
13. The National Parks and Wildlife Service and The Australian Museum may supply copies of relevant reports as furnished by the holder of the permit or Consent to local Aboriginal communities. Upon request by the Service, the holder of the Permit or Consent shall supply a summary of his/her findings with photographs, diagrams, etc., as required, to local Aboriginal communities or other interest local groups.
14. The holder of the Permit or Consent shall keep field records and a copy of all such records shall be lodged with the National Parks and Wildlife Service at the termination of each field work period. A copy of all field records shall be lodged with The Australian Museum at the time the archaeological materials are deposited with the Museum.
15. The holder of the Permit or Consent shall notify the Dubbo office of the National Parks and Wildlife Service at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.

SCHEDULE C







Appendix 5

Research Design and Study Plan

Attachment 5

Cowal Gold Project – Aboriginal Heritage Section 90 Consent & Section 87 Permit Applications Research Design & Study Plan

The following research design / study plan is based on:

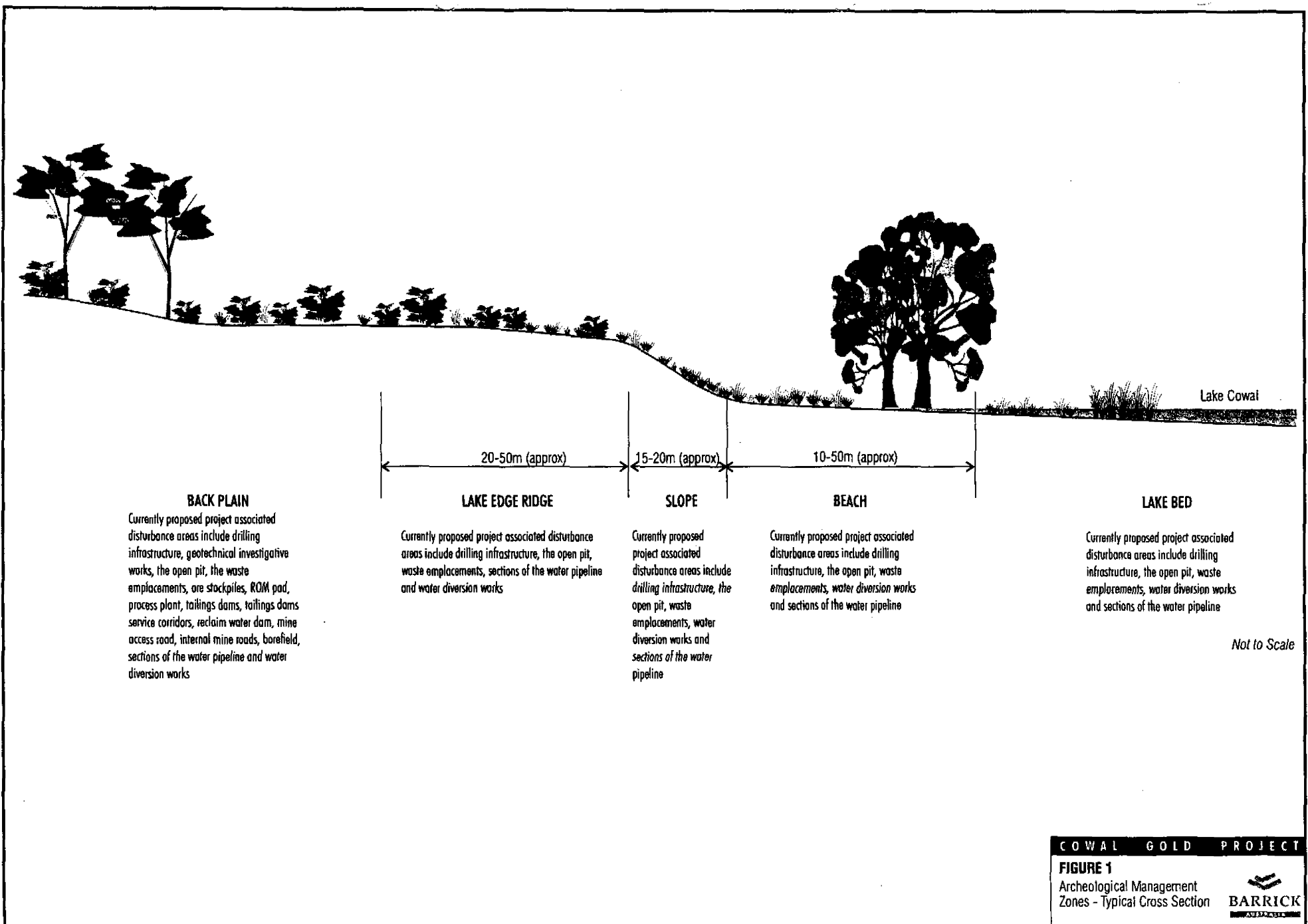
- the findings and recommendations of the archaeological surveys and assessments conducted for the Cowal Gold Project since 1995;
- the 1998 recommendations to North Limited made by the West Wyalong Local Aboriginal Land Council and the NSW Aboriginal Land Council; and
- the consultation programme conducted in association with the 2002 Section 90 and Section 87 applications.

This research design provides for the collection, salvage, excavation, curation and/or replacement of relics from within the Application Area (including the NPWS registered sites) as well as the addition of information to the archaeological database for the Lake Cowal region. The research design includes the following general works:

- collection;
- recording;
- excavation;
- storage in Keeping Places; and
- replacement.

The above general works will be undertaken within zones of management at Lake Cowal (Figure 1). These zones are delineated by their local environment, including soils, potential erosion impact, observed archaeological record and potential for subsurface sites/features/relics. The zones are also practical landform units useful for both management purposes (similar to the Site Designation Units used by NPWS in the western region of NSW) and archaeological investigation. The management zones are as follows:

- Lake bed zone.
- Beach zone.
- Slope zone.
- Lake edge ridge zone.
- Back plain zone.



COWAL GOLD PROJECT

FIGURE 1
 Archeological Management
 Zones - Typical Cross Section

BARRICK
MINERALS

The location of the NPWS registered sites within the above zones is detailed in the table below.

Management Zone	NPWS Registered Site (and Site Name)	Sites Pending NPWS Registration
Lake Bed	No registered sites occur in this zone	
Beach	43-4-8 (P2)	
Slope	No registered sites occur in this zone	
Lake Edge Ridge	43-3-21 (LC1) 43-3-22 (LC2) 43-3-23 (LC3) 43-3-24 (LC4) 43-4-7 (P1)	
Backplain	43-4-20 (A) 43-4-21 (B) 43-4-22 (C) 43-4-23 (D) 43-4-24 (E) 43-4-25 (F) 43-4-26 (G) 43-4-27 (H) 43-4-28 (I) 43-4-29 (J) 43-4-30 (K) 43-4-31 (L) 43-4-32 (M) 43-4-33 (N)	LCB9 LCB14

Lake Bed Zone

There are no known NPWS registered sites within this zone.

No specific management measures are proposed for this zone due to the low likelihood of the occurrence of relics in this zone and the low interpretation potential for relics if relics were to be identified in this zone. If relics were to be located, it is expected that they would have been transported from sites outside this zone (eg through erosion processes). For relics that might be found within this zone, none are expected to be *in situ*. They would have been relocated constantly by water movement within the lake. General archaeological works within this zone include:

- Co-ordination and management of Project works by a Land, Environment and Wiradjuri Heritage Officer and assistance of conduct of Project works by Wiradjuri Heritage Field Assistants. The Land, Environment and Wiradjuri Heritage Officer and/or Wiradjuri Heritage Field Assistant will be a representative of the Wiradjuri Council of Elders (Registered Native Title Claimants). In accordance with the Development Consent, works will stop in the relevant location when Barrick become aware of Aboriginal relics not previously identified during earthworks, construction or operation of the project. Individual relics will be collected. Necessary permits or consents already in place shall be complied with prior to the recommencement of work in the relevant area.

Beach Zone

Site P2 is the known NPWS registered site located within this zone. Site P2 is a scarred tree.

Proposed archaeological work at site P2 will be carried out in the following manner:

1. Removal of the scarred section of the tree under supervision of Dr Pardoe or another qualified archaeologist and a Wiradjuri representative.
2. Treatment of the removed section to preserve the scarred section to prevent its deterioration (the tree has suffered from termite damage). Treatment would be undertaken by a suitably qualified curator.

3. Storage within a "Keeping Place" at Lake Cowal.
4. Relocation to a position as close as possible to its original location away from potential harm. When relocated, the scarred tree section would be sheltered to further protect it from weathering and damage.

Additional proposed archaeological work would be conducted on the alluvial fans which occur within the footprints of Project disturbance areas in this zone. Proposed archaeological work would be carried out in the following manner:

1. Dr Pardoe, or another qualified archaeologist, will inspect the land in the beach zone and identify surface relics within the proposed project disturbance areas. A representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC will be consulted on the programme and will be invited to observe and, where appropriate, participate in (eg recording and storage) works.
2. In relation an identified relic, Dr Pardoe or another qualified archaeologist will record its position with a GPS and/or map, measure and describe it, separately bag and label it and store it according to its zone location in a Keeping Place at Lake Cowal.
3. For the purpose of adding to the archaeological and Aboriginal heritage database for the Lake Cowal region, excavation at three separate alluvial fans are proposed.
4. Test excavations will be carried out on the fans in order to determine the integrity of the sediments. If archaeological relics or features were found in these test excavations, then a larger scale excavation would be carried out.
5. An area approximately 10m x 10m at each alluvial fan would be excavated to a depth of 0.3m or the extent of sediment deposition (which would be determined by the supervising archaeologist, but in any event the alluvial fans are not deeper than 0.3m) whichever comes first. Any identified relics would be dealt with in accordance with Step 2.
6. Excavations would be mapped with section diagrams and point-plotting of individual relics and features, if found. Standard excavation procedures would be followed, including sieving of all excavated soils, photographic record, plan and section drawings. Relics would be measured and analyzed.
7. Following the test excavations, and the larger excavations if warranted, the alluvial fans would be scraped with an earth mover in 5cm thick strips in order to verify that no human or dog burials are to be found within the fan deposits.
8. The earth moving of the upper soil layers of the alluvial fans would be monitored by Dr Pardoe, or another qualified archaeologist, and a representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC.

General archaeological works within this zone include:

- Co-ordination and management of Project works by a Land, Environment and Wiradjuri Heritage Officer and assistance of conduct of Project works by Wiradjuri Heritage Field Assistants. The Land, Environment and Wiradjuri Heritage Officer and/or Wiradjuri Heritage Field Assistant will be a representative of the Wiradjuri Council of Elders (Registered Native Title Claimants). In accordance with the Development Consent, works will stop in the relevant location when Barrick become aware of Aboriginal relics not previously identified during earthworks, construction or operation of the project. Individual relics will be collected. Necessary permits or consents already in place shall be complied with prior to the recommencement of work in the relevant area.

Slope Zone

There are no known NPWS registered sites within this zone.

No specific management measures are proposed for this zone due to the low interpretation potential for these relics if relics were to be located in this zone. If relics were located, it is expected that they would have been transported by erosion and bioturbation from sites upslope of this zone. General archaeological works within this zone include:

- Co-ordination and management of Project works by a Land, Environment and Wiradjuri Heritage Officer and assistance of conduct of Project works by Wiradjuri Heritage Field Assistants. The Land, Environment and Wiradjuri Heritage Officer and/or Wiradjuri Heritage Field Assistant will be a representative of the Wiradjuri Council of Elders (Registered Native Title Claimants). In accordance with the Development Consent, works will stop in the relevant location when Barrick become aware of Aboriginal relics not previously identified during earthworks, construction or operation of the project. Individual relics will be collected. Necessary permits or consents already in place shall be complied with prior to the recommencement of work in the relevant area.

Lake Edge Ridge Zone

Sites LC1, LC2, LC3, LC4 and P1 are the NPWS registered sites located within this zone. Sites P1, LC3 and LC4 are artefact scatters. Site LC1 is referred to as a "Men's site". Site LC2 is referred to as a "Base camp".

Proposed archaeological work at sites P1, LC3 and LC4 will be carried out in the following manner:

1. Dr Pardoe, or another qualified archaeologist, will inspect the land in the locations of these sites and identify surface relics. A representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC will be consulted on the programme and will be invited to observe and, where appropriate, participate in (eg recording and storage) works.
2. In relation to an identified relic, Dr Pardoe or another qualified archaeologist will record its position with a GPS and/or map, measure and describe it, separately bag and label it and store it according to its zone location in a Keeping Place at Lake Cowal.
3. These relics will be replaced in a location as close as possible to their original location at a time when works within the specific area do not pose a threat to the relics when they are to be replaced (eg during the rehabilitation programme). A representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC will be consulted on the programme and will be invited to observe and, where appropriate, participate in replacement works.

Proposed archaeological works at Site LC1 will be carried out in the following manner:

1. Dr Pardoe, or another qualified archaeologist, will inspect the land in the location of this site and identify surface relics. A representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC will be consulted on the programme and will be invited to observe and, where appropriate, participate in (eg recording and storage) works.
2. In relation to identified relics, Dr Pardoe or another qualified archaeologist will record its position with a GPS and/or map, measure and describe it, separately bag and label it and store it according to its zone location in a Keeping Place at Lake Cowal.
3. An open area excavation will also be conducted for this site. The excavation will be sponsored by Barrick and undertaken by representatives of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC with a specialist archaeologist recommended by the Wiradjuri Council of Elders. The purpose of the excavation would be to determine the extent, chronology and function of the site with a view to understanding its purpose in the context of the Lake Cowal region.
4. The extent of the site would be determined by test excavations in some of the less eroded sediments. These are small hillocks less than 50cm in height. Scalds appear throughout the site.
5. The open area excavation would be set up adjacent to one of the scalds and extending away from the minor drainage gully. The excavation would proceed in an area approximately 5m x 10m to a depth of 0.5m or the extent of sediment deposition (which would be determined by the supervising archaeologist, but in any event the relatively less eroded sediments are not deeper than 0.5m) whichever comes first.
6. Excavations would be mapped with section diagrams and point plotting of individual relics and features. Standard excavation procedures would be followed, including sieving of all excavated soils, photographic record, plan and section drawings. Relics would be measured and analyzed.

7. Relics will be kept at the Keeping Place until such time as representatives of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC decide on future storage or rehabilitation.
8. If found, samples of organic material (charcoal or residues on grinding pieces) will be submitted for radiocarbon dating. Other dating techniques will be examined and might be used, however these would not be destructive.

Site LC2 is located close to the proposed location of the currently proposed northern waste emplacement. The predominant strategy for this site will be to avoid damage to this site. Avoidance works will be carried out in the following manner:

1. The area of the main artefact scatter concentration will be fenced and sign-posted. Sign-posting will be general in nature indicating the presence of "cultural materials" and placed so as not to draw attention to key components of the site. Fencing and sign-posting will be carried out by representatives of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC.

Should mine works proceed too close to this site to avoid damage, archaeological works will be carried out as for works outlined for Sites P1, LC3 and LC4 (above).

In addition to the works associated with the lake edge ridge zone NPWS registered sites, further archaeological works will be carried out in the following manner:

1. Dr Pardoe, or another qualified archaeologist, will inspect the land in the lake edge ridge zone and identify surface relics within the proposed project disturbance areas. A representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC will be consulted on the programme and will be invited to observe and, where appropriate, participate in (eg recording and storage) works.
2. In relation to each identified relic, Dr Pardoe or another qualified archaeologist will record its position with a GPS and/or map, measure and describe it, separately bag and label it and store it according to its zone location in a Keeping Place at Lake Cowal.
3. These relics will be replaced in a location as close as possible to their original location at a time when works within the specific area do not pose a threat to the relics when they are to be replaced (eg during the rehabilitation programme). Relic replacement will be supervised by Dr Pardoe, or another qualified archaeologist. A representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC will be consulted on the programme and will be invited to observe and, where appropriate, participate in replacement works.

General archaeological works within this zone include:

- Co-ordination and management of Project works by a Land, Environment and Wiradjuri Heritage Officer and assistance of conduct of Project works by Wiradjuri Heritage Field Assistants. The Land, Environment and Wiradjuri Heritage Officer and/or Wiradjuri Heritage Field Assistant will be a representative of the Wiradjuri Council of Elders (Registered Native Title Claimants). In accordance with the Development Consent, works will stop in the relevant location when Barrick become aware of Aboriginal relics not previously identified during earthworks, construction or operation of the project. Individual relics will be collected. Necessary permits or consents already in place shall be complied with prior to the recommencement of work in the relevant area.
- Collection of relics as described in s87 permit # 1361 'permit to carry out collection and excavate'.

Back-Plain Zone

Sites A, B, C, D, E, F, F, G, H, I, J, K, L, M and N are the NPWS registered sites located within this zone. Two sites are currently pending NPWS registration (LCB9 and LCB14). These sites are artefact scatters on a denuded plain. The plain has been subject to widespread erosion, leaving a lag surface of small (pea-sized) gravel. Artefacts are to be found throughout this area at different densities. The registered sites are concentrations of relics that probably relate to the ephemeral water sources of the gilgai depressions. Relics are to be found only rarely dispersed through this region away from the concentrations.

The predominant strategy for sites B, C, D, E, H and N will be to avoid damage to these sites. Avoidance works will be carried out in the following manner:

1. The area of the main artefact scatter concentrations will be fenced and sign-posted. Sign-posting will be general in nature indicating the presence of "cultural materials" and placed so as not to draw attention to key components of the site. Fencing and sign-posting will be carried out by representatives of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC.

Should mine works proceed too close to these sites to avoid damage, archaeological works will be carried out in the following manner:

1. Dr Pardoe, or another qualified archaeologist, will inspect the land in the location of these sites and identify surface relics. A representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC will be consulted on the programme and will be invited to observe and, where appropriate, participate in (eg recording and collection) works.
2. In relation to relics which are representative of each of these sites, Dr Pardoe or another qualified archaeologist will record their position with a GPS and/or map, measure and describe them, separately bag and label them and store them according to their zone location in a Keeping Place at Lake Cowal.
3. These relics will be replaced in a location as close as possible to their original location at a time when works within the specific area do not pose a threat to the relics when they are to be replaced (eg during the rehabilitation programme). Relic replacement will be supervised by Dr Pardoe, or another qualified archaeologist. A representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC will be consulted on the programme and will be invited to observe and, where appropriate, participate in replacement works.
4. Remaining relics will be collected with soil during soil stripping operations and stored temporarily in soil stockpiles before being replaced during rehabilitation activities (ie. when soil is replaced on mine landforms as a component of the revegetation programme).

Proposed archaeological works at sites A, F, G, I, J, K, L and M will be carried out in the following manner:

1. Dr Pardoe, or another qualified archaeologist, will inspect the land in the location of these sites and identify surface relics. A representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC will be consulted on the programme and will be invited to observe and, where appropriate, participate in (eg recording and collection) works.
2. In relation to relics which are representative of each of these sites, Dr Pardoe or another qualified archaeologist will record their position with a GPS and/or map, measure and describe them, separately bag and label them and store them according to their zone location in a Keeping Place at Lake Cowal.
3. These relics will be replaced in a location as close as possible to their original location at a time when works within the specific area do not pose a threat to the relics when they are to be replaced (eg during the rehabilitation programme). Relic replacement will be supervised by Dr Pardoe, or another qualified archaeologist. A representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC will be consulted on the programme and will be invited to observe and, where appropriate, participate in replacement works.
4. Remaining relics will be collected with soil during soil stripping operations and stored temporarily in soil stockpiles before being replaced during rehabilitation activities (ie. when soil is replaced on mine landforms as a component of the revegetation programme).

In addition to the works associated with the back-plain zone NPWS registered sites, further archaeological works will be carried out in the following manner:

1. Dr Pardoe, or another qualified archaeologist, will inspect the land in the back-plain zone and identify all concentrations of surface relics within the proposed project disturbance areas. A representative of the Wiradjuri Council of Elders (the Registered Native Title Claimants) and/or the West Wyalong LALC will be consulted on the programme and will be invited to observe and, where appropriate, participate in (eg recording and storage) works.

2. Artefact densities across this zone will be measured in approximately 15 places. Areas of approximately 10m x 10m will be inspected for relics. This information will provide a better indicator of the nature of the distribution and density of relics (almost exclusively flaked stone pieces) across the landscape.
3. Relics located in this zone are not expected to contribute to the diversity or interpretation values of the Lake Cowal regional archaeology. In relation to each identified concentration of relics, Dr Pardoe or another qualified archaeologist will record its position with a GPS and/or map, measure and describe it. The relics will be left *in situ* to be collected with soil during soil stripping operations and stored temporarily in soil stockpiles before being replaced during rehabilitation activities (ie. when soil is replaced on mine landforms as a component of the revegetation programme).

General archaeological works within this zone include:

- Co-ordination and management of Project works by a Land, Environment and Wiradjuri Heritage Officer and assistance of conduct of Project works by Wiradjuri Heritage Field Assistants. The Land, Environment and Wiradjuri Heritage Officer and/or Wiradjuri Heritage Field Assistant will be a representative of the Wiradjuri Council of Elders (Registered Native Title Claimants). In accordance with the Development Consent, works will stop in the relevant location when Barrick become aware of Aboriginal relics not previously identified during earthworks, construction or operation of the project. Individual relics will be collected. Necessary permits or consents already in place shall be complied with prior to the recommencement of work in the relevant area.

APPENDIX 2
CONSULTATION LOG

OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 – Cowal Gold Mine Extension Modification: Aboriginal Cultural Heritage Assessment Consultation Database

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
05/02/2013	The Registrar	Office of the Registrar, Aboriginal Land Rights Act 1983	Letter	Shane Goodwin	Barrick	Request to notify of Aboriginal stakeholders that may wish to register an interest as per OEH 2010 consultation guideline by 19 February 2013.
05/02/2013	CEO	Condobolin Local Aboriginal Land Council (LALC)	Letter	Shane Goodwin	Barrick	Request to notify of Aboriginal stakeholders that may wish to register an interest as per OEH 2010 consultation guideline by 19 February 2013.
05/02/2013	NSW & ACT Registry	National Native Title Tribunal	Letter	Shane Goodwin	Barrick	Request to notify of Aboriginal stakeholders that may wish to register an interest as per OEH 2010 consultation guideline by 19 February 2013.
05/02/2013	General Manager (Acting)	Lachlan Catchment Management Authority	Letter	Shane Goodwin	Barrick	Request to notify of Aboriginal stakeholders that may wish to register an interest as per OEH 2010 consultation guideline by 19 February 2013.
05/02/2013	General Manager	Bland Shire Council	Letter	Shane Goodwin	Barrick	Request to notify of Aboriginal stakeholders that may wish to register an interest as per OEH 2010 consultation guideline by 19 February 2013.
05/02/2013	Manager	Native Title Services Corporation Limited	Letter	Shane Goodwin	Barrick	Request to notify of Aboriginal stakeholders that may wish to register an interest as per OEH 2010 consultation guideline by 19 February 2013.
05/02/2013	Dubbo Branch	NSW Office of Environment and Heritage (OEH)	Letter	Shane Goodwin	Barrick	Request to notify of Aboriginal stakeholders that may wish to register an interest as per OEH 2010 consultation guideline by 19 February 2013.
05/02/2013	General Manager	Forbes Shire Council	Letter	Shane Goodwin	Barrick	Request to notify of Aboriginal stakeholders that may wish to register an interest as per OEH 2010 consultation guideline by 19 February 2013.
05/02/2013	Manager	West Wyalong LALC	Letter	Shane Goodwin	Barrick	Request to notify of Aboriginal stakeholders that may wish to register an interest as per OEH 2010 consultation guideline by 19 February 2013.
06/02/2013	Shane Goodwin	Barrick	Letter	George Tonna	Native Title Services Corporation Limited	Responded to Barrick's request of 05/02/2013 by advising that privacy restrictions prevent provision of any details but the letter has been forwarded to relevant individuals/organisations with a request to register an interest as soon as possible.
11/02/2013	Shane Goodwin	Barrick	Email	Leeanne Hampton	West Wyalong LALC	Registered an interest in the Project.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
14/02/2013	Shane Goodwin	Barrick	Letter	Shannon Williams	Office of the Registrar, Aboriginal Land Rights Act 1983	Responded to Barrick's request of 05/02/2013 by advising that there are no Registered Aboriginal Owners for this area by that the West Wyalong LALC should be contacted.
15/02/2013	Shane Goodwin	Barrick	Email	Rebecca Shepherd	Condobolin LALC	Registered an interest in the Project. Requested an estimate on timing and advised the applicable participation rates.
18/02/2013	Shane Goodwin	Barrick	Telephone	Neville Williams	N/A	Neville advised that he would be submitting an expression of interest for the Project and confirmed the correct email address.
18/02/2013	Shane Goodwin	Barrick	Email	Neville Williams	N/A	Registered an interest in the Project and provided additional registrations of interest for Shawn Williams, Sharon Williams, Wayne Williams and Stuart Cutmore.
19/02/2013	Shane Goodwin	Barrick	Letter	Sylvia Jagtman	National Native Title Tribunal	Provided Native Title search results of West Wyalong within the Bland Shire Council LGA.
19/02/2013	Rebecca Shepherd	Condobolin LALC	Email	Shane Goodwin	Barrick	Confirming receipt of registration of interest to participate in the consultation process.
25/02/2013	Acting Area Manager NPWS Lachlan Area	Peak Hill Bogan River Traditional Owner	Letter	Shane Goodwin	Barrick	Official request to notify of Aboriginal stakeholders/register interest as per OEH 2010 consultation guidelines.
25/02/2013	Beverley Johnson c/- Peter Gerarde-Smith	c/- Cater and Bulmer Solicitors	Letter	Shane Goodwin	Barrick	Official request to notify of Aboriginal stakeholders/register interest as per OEH 2010 consultation guidelines.
25/02/2013	Percy Knight	Wiradjuri Condobolin Corporation	Letter	Shane Goodwin	Barrick	Official request to notify of Aboriginal stakeholders/register interest as per OEH 2010 consultation guidelines.
25/02/2013	Percy Knight	Wiradjuri Condobolin Cultural Heritage Corporation Pty Ltd	Letter	Shane Goodwin	Barrick	Official request to notify of Aboriginal stakeholders/register interest as per OEH 2010 consultation guidelines.
25/02/2013	Flo Grant	Wiradjuri Council of Elders	Letter	Shane Goodwin	Barrick	Official request to notify of Aboriginal stakeholders/register interest as per OEH 2010 consultation guidelines.
25/02/2013	Donna Bliss	Yorana Gunya Aboriginal Corporation	Letter	Shane Goodwin	Barrick	Official request to notify of Aboriginal stakeholders/register interest as per OEH 2010 consultation guidelines.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
05/03/2013	Karen Worthington	Barrick	Telephone	Percy Knight	Wiradjuri Condobolin Corporation	Verbally registered an interest in the Project. Advised that Ally Coe and Eugene Coe would be the representatives.
11/03/2013	Percy Knight	Wiradjuri Condobolin Corporation	Email	Shane Goodwin	Barrick	Email to clarify representatives for the Wiradjuri Condobolin Corporation and to confirm whether a registration would be submitted for the Wiradjuri Condobolin Cultural Heritage Corporation Pty Ltd. Confirmed close of registration date.
12/03/2013	Shane Goodwin	Barrick	Letter	N/A	Cater & Bulmer Solicitors	Letter advising that Beverley Johnson no longer provides instructions to Cater & Bulmer, and that she should be contacted directly.
13/03/2013	Beverley Johnson	N/A	Letter via post and email	Shane Goodwin	Barrick	Official request to notify of Aboriginal stakeholders/register interest as per OEH 2010 consultation guidelines..
13/03/2013	Shane Goodwin	Barrick	Telephone	Tony Amatto	Wiradjuri Interim Working Party	Called to confirm receipt of registration via fax. No fax yet received and no contact details provided other than via the Dubbo Aboriginal Legal Service.
13/03/2013	Tony Amatto	Wiradjuri Interim Working Party	Telephone	Shane Goodwin	Barrick	Telephoned Mr Amatto to request contact details. Left a message for Mr Amatto to return phone call.
13/03/2013	Shane Goodwin	Barrick	Telephone	Tony Amatto	Wiradjuri Interim Working Party	Called to return phone call. Mr Amatto provided new contact details: PO Box 73, Peak Hill, NSW, 2869; however did not provide a contact telephone number.
14/03/2013	Shane Goodwin	Barrick	Meeting/Face-to-face	Percy Knight	Wiradjuri Condobolin Corporation	Confirmed that only the Wiradjuri Condobolin Corporation would be registering an interest in the Project and that the representatives would be Ally Coe and Eugene Coe.
14/03/2013	N/A	Peak Hill LALC	Telephone	Danielle Wallace	Resource Strategies	Called to advise of Project and to seek registrations of interest in consultation process for the Project. Phoned twice however no response and no voicemail to leave a message.
18/03/2013	Shane Goodwin	Barrick	Telephone	Beverly Johnson	N/A	Verbally registered an interest in the Project. Confirmation in writing requested.
19/03/2013	Shane Goodwin	Barrick	Facsimile	Isabelle Collins nee Johnson	N/A	Registered an interest in participating in the community consultation process.
19/03/2013	Shane Goodwin	Barrick	Email	Beverley Johnson	N/A	Registered an interest in participating in the community consultation process.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
19/03/2013	Shane Goodwin	Barrick	Facsimile	Ernie Johnson	N/A	Registered an interest in participating in the community consultation process.
21/03/2013	Tony Amatto	Wiradjuri Interim Working Party	Letter	Shane Goodwin	Barrick	Acknowledged receipt of registration as interested party on behalf of the Wiradjuri Interim working Party. Noted that only cover page of registration letter was received but no other information, as indicated on the cover page was received.
22/03/2013	Leeanne Hampton, Neville Williams, Shawn Williams, Sharon Williams, Wayne Williams, Stuart Cutmore, Tony Amatto, Rebecca Shepherd, Beverly Johnson, Isabelle Collins nee Johnson, Ernie Johnson, Ally Coe and Eugene Coe	West Wyalong LALC, Wiradjuri Interim Working Party, Condobolin LALC, Wiradjuri Condobolin Corporation	Letter	Shane Goodwin	Barrick	Providing a copy of the Proposed Methodology for the Aboriginal Cultural Heritage Assessment for the Cowal Gold Mine Extension Modification. Addressee was invited to provide feedback on the Proposed Methodology and to attend a project information session on 8 April 2013.
28/03/2013	Leeanne Hampton, Neville Williams, Shawn Williams, Sharon Williams, Wayne Williams, Stuart Cutmore, Tony Amatto, Rebecca Shepherd, Beverly Johnson, Isabelle Collins nee Johnson, Ernie Johnson, Ally Coe and Eugene Coe	West Wyalong LALC, Wiradjuri Interim Working Party, Condobolin LALC, Wiradjuri Condobolin Corporation	Letter	Shane Goodwin	Barrick	Provided further information regarding upcoming project information session and how to claim relevant travel costs and book accommodation if required.
02/04/2013	Shane Goodwin	Barrick	Email	Neville Williams (also on behalf of Shawn Williams, Sharon Williams, Wayne Williams, and Stuart Cutmore)	N/A	Advising registered parties' intention to attend the upcoming project information session and requesting information regarding payment for travel and accommodation costs. Also requested copies of certain additional documents.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
02/04/2013	Sarah Gillett	Barrick	Email	Enid Clarke	N/A	Enquiring as to the progress of her registration of interest in the community consultation process.
02/04/2013	Enid Clarke	N/A	Telephone	Danielle Wallace	Resource Strategies	Calling to confirm receipt of letter regarding project information session, Proposed Methodology, and contact details for herself and the Freemans. Phone rang out.
03/04/2013	Enid Clarke	N/A	Telephone	Danielle Wallace	Resource Strategies	Calling to confirm receipt of letter regarding project information session, Proposed Methodology, and contact details for herself and the Freemans. Message left for Enid to call back.
03/04/2013	Enid Clarke, Keith Freeman and Norma Freeman	N/A	Letter	Shane Goodwin	Barrick	Providing a copy of the Proposed Methodology for the Aboriginal Cultural Heritage Assessment for the Cowal Gold Mine Extension Modification. Addressee was invited to provide feedback on the Proposed Methodology and to attend a project information session on 8 April 2013.
03/04/2013	Enid Clarke, Keith Freeman and Norma Freeman	N/A	Letter	Shane Goodwin	Barrick	Provided further information regarding upcoming project information session and how to claim relevant travel costs and book accommodation if required.
03/04/2013	Shane Goodwin	Barrick	Telephone	Stuart Cutmore		Confirming intention to attend the upcoming project information session. Also advised that his Uncle Neville Williams would be attending.
03/04/2013	Shane Goodwin	Barrick	Email	Rebecca Shepherd	Condobolin LALC	Seeking to confirm the details of the upcoming project information session.
03/04/2013	Enid Clarke	N/A	Email	Shane Goodwin	Barrick	Confirming receipt of email registering interest in the community consultation process and registration on behalf of other interested parties. Attached correspondence regarding Proposed Methodology for cultural heritage assessment and details of upcoming project information session.
03/04/2013	Rebecca Shepherd	Condobolin LALC	Email	Shane Goodwin	Barrick	Acknowledging email and attaching a copy of letter posted on 28 March 2013 with details of upcoming project information session.
03/04/2013	Leeanne Hampton	West Wyalong LALC	Telephone	Danielle Wallace	Resource Strategies	Spoke with Leeanne. Leeanne advised that she had received the letter and wanted to confirm what time the information session began. Advised the session started at 1pm on Wednesday 8 May 2013 and went over the details again. She advised that four

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
						representatives would be attending the information session including herself, Louise Davis, Amy Davis and Linton Howards.
03/04/2013	Eugene Coe	Wiradjuri Condobolin Corporation	Telephone	Danielle Wallace	Resource Strategies	Called to confirm attendance at the information session. Spoke with Tracey. Tracey advised that Ally was not in today and that Eugene would be back soon. Message left for Eugene to call back.
03/04/2013	Rebecca Shepherd	Condobolin LALC	Telephone	Danielle Wallace	Resource Strategies	Called to confirm attendance at the information session. Landline rang out. Mobile phone switched off.
03/04/2013	Rebecca Shepherd	Condobolin LALC	Telephone	Danielle Wallace	Resource Strategies	Spoke with Rebecca and confirmed the time of the meeting. She advised that two representatives from the LALC would be attending, herself and another person, but was unable to confirm the name at this stage.
03/04/2013	Beverley Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Landline rang out. Spoke to Beverley on the mobile. She advised that she had received the letter regarding the information session but was unable to attend.
03/04/2013	Isabelle Collins nee Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Spoke to Isabelle. She advised that three people would be attending the meeting, herself, her daughter and her carer.
03/04/2013	Ernie Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Called to confirm attendance at the information session. No answer on mobile.
03/04/2013	Danielle Wallace	Resource Strategies	Telephone	Ernie Johnson	N/A	Ernie called and advised that he had received the letter and that he would be attending the meeting. He also noted that he would be making a booking at the Condobolin Motor Inn.
04/04/2013	Eugene Coe	Wiradjuri Condobolin Corporation	Telephone	Danielle Wallace	Resource Strategies	Spoke with Tracey. Both Eugene and Ally were unavailable and wouldn't be in today and possibly not tomorrow. I explained the nature of the call and the details of the Project Information Session to Tracey and she advised that she would get in touch with Eugene and call back to provide details on who would be attending the information session.
04/04/2013	Enid Clarke	N/A	Telephone	Danielle Wallace	Resource Strategies	Spoke with Enid. She explained that she had received our email and had replied to Shane and

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
						provided addresses for herself, Keith, Norma and Jirrah. She explained that she did not represent them and that we should contact them directly from now on, however she has passed on the information as per the email. She advised that she would not be attending the information session. She also advised that the other three would not be attending either. I advised that we would post copies of the letters to herself, Keith, Jirrah and Norma along with a copy of the Proposed Methodology.
04/04/2013	Danielle Wallace	Resource Strategies	Telephone	Tracey	Wiradjuri Condobolin Corporation	Tracey called and advised that one representative would be attending the meeting - Terry Williams.
04/04/2013	Enid Clarke	N/A	Telephone	Danielle Wallace	Resource Strategies	Spoke to Enid. She confirmed that the street addresses are postal address. She advised that we could just sent one copy of all correspondence to Norma, and address it to all three, as Norma is the main contact for the Freeman's. She also provided a home phone number for herself, and a mobile number for Norma and her work email and phone number (at the Young LALC).
04/04/2013	Shane Goodwin	N/A	Email	Enid Clarke	N/A	Providing additional contact details and advising that won't be attending upcoming project information session.
04/04/2013	Neville Williams	N/A	Email and post	Shane Goodwin	Barrick	Responding to Mr William's letter dated 30/03/2013. Provided additional details regarding the upcoming project information session and responded to request for additional documentation.
05/04/2013	Neville Williams	N/A	Telephone	Sarah Gillett	Barrick	Advising that correspondence had been posted and emailed on 04/04/2013.
05/04/2013	All registered interested parties and/or their nominated representative/s	N/A	Telephone	Danielle Wallace	Resource Strategies	Confirming details of upcoming project information session and seeking confirmation of attendance. NB: Tony Amatto was not able to be contacted via telephone as he has not provided telephone contact details.
05/04/2013	Rebecca Shepherd	Condobolin LALC	Letter	Shane Goodwin	Barrick	Providing a list of Aboriginal parties which registered an interest in the community consultation process, except where a party indicated that they did not wish for their information to be shared.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
05/04/2013	Leeanne Hampton	West Wyalong LALC	Letter	Shane Goodwin	Barrick	Providing a list of Aboriginal parties which registered an interest in the community consultation process, except where a party indicated that they did not wish for their information to be shared.
05/04/2013	N/A	OEH	Letter	Shane Goodwin	Barrick	Providing a list of Aboriginal parties which registered an interest in the community consultation process, except where a party indicated that they did not wish for their information to be shared.
08/04/2013	All registered interested parties and/or their nominated representative(s)	N/A	Meeting	Shane Goodwin	Barrick	Information session in Condobolin at the RSL Club. NB. Judy Johnson (interested stakeholder) provided with copy of the Proposed Methodology.
09/04/2013	Shane Goodwin	Barrick	Email	Leeanne Hampton	West Wyalong LALC	Thanked Shane for opportunity to attend the project information session. Indicating support for the Proposed Methodology for the cultural heritage assessment and requesting a meeting to discuss separate matters.
17/04/2013	Shane Goodwin	Barrick	Email	Neville Williams	N/A	Thanking for letter dated 03/04/2013 and requesting additional documents.
19/04/2013	Leeanne Hampton, Neville Williams, Shawn Williams, Sharon Williams, Wayne Williams, Stuart Cutmore, Tony Amatto, Rebecca Shepherd, Beverly Johnson, Isabelle Collins nee Johnson, Ernie Johnson, Ally Coe and Eugene Coe	West Wyalong LALC, Wiradjuri Interim Working Party, Condobolin LALC, Wiradjuri Condobolin Corporation	Letter	Shane Goodwin	Barrick	Letters sent inviting representatives for the registered Aboriginal parties to attend the field work.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
19/04/2013	Leeanne Hampton	West Wyalong LALC	Telephone	Danielle Wallace	Resource Strategies	Spoke to Leeanne Hampton. Advised that letters regarding the field work were being sent out to the groups, the field surveys would last 3 to 4 days and that they would commence on Tuesday 30 April.
19/04/2013	Terry Williams	Wiradjuri Condobolin Corporation	Telephone	Danielle Wallace	Resource Strategies	Spoke to Terry Williams. Advised that letters regarding the field work were being sent out to the groups, the field surveys would last 3 to 4 days and that they would commence on Tuesday 30 April. He requested that he become the main contact for the WCC, and advised that all correspondence should be directed to him.
19/04/2013	Isabelle Collins nee Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Spoke to Isabelle Collins. Advised that letters regarding the field work were being sent out to the groups, the field surveys would last 3 to 4 days and that they would commence on Tuesday 30 April.
19/04/2013	Ernie Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Spoke to Ernie Johnson. Advised that letters regarding the field work were being sent out to the groups, the field surveys would last 3 to 4 days and that they would commence on Tuesday 30 April.
19/04/2013	Judy Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Spoke to Judy Johnson. Advised that letters regarding the field work were being sent out to the groups, the field surveys would last 3 to 4 days and that they would commence on Tuesday 30 April. Judy advised that her email address was marament.1@gmail.com
19/04/2013	Rebecca Shepherd	Condobolin LALC	Telephone	Danielle Wallace	Resource Strategies	Spoke to Donna at the LALC. Advised that letters regarding the field work were being sent out to the groups, the field surveys would last 3 to 4 days and that they would commence on Tuesday 30 April.
19/04/2013	Neville Williams (also on behalf of Shawn Williams, Sharon Williams, Wayne Williams, and Stuart Cutmore)	N/A	Telephone	Danielle Wallace	Resource Strategies	Spoke to Neville Williams. Advised that letters regarding the field work were being sent out to the groups, the field surveys would last 3 to 4 days and that they would commence on Tuesday 30 April. He advised that he would notify Sharon, Shawn, Wayne and Stuart.
19/04/2013	Enid Clarke	N/A	Telephone	Danielle Wallace	Resource Strategies	Called both land line numbers to advise the field work letters were coming out and to provide a run-down of the key details. No answer on either line.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
19/04/2013	Norma Freeman	N/A	Telephone	Danielle Wallace	Resource Strategies	Called both the land line and mobile numbers with no answer. Left message on mobile regarding field survey letters and details.
19/04/2013	Beverley Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Called both the land line and mobile numbers with no answer. Left message on mobile regarding field survey letters and details.
22/04/2013	Rebecca Shepherd	Condobolin LALC	Telephone	Danielle Wallace	Resource Strategies	Spoke with Rebecca. She advised that the Condobolin LALC had no issues and that the Proposed Methodology was fine. She requested that we email a copy of the letter to her. I confirmed her email address.
22/04/2013	Terry Williams	Wiradjuri Condobolin Corporation	Telephone	Danielle Wallace	Resource Strategies	Spoke with Tracey. She advised that Terry had just stepped out but that she would get him to call me back. I confirmed our phone number. I also left a message with her that the Proposed Methodology comments are due today.
22/04/2013	Beverley Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Spoke with Beverley. Advised that letters regarding the field work were being sent out to the groups, the field surveys would last 3 to 4 days and that they would commence on Tuesday 30 April. Advised Beverley that today was the closing day for comments on the Proposed Methodology. She said that at this stage she had no comments, however, if she had any concerns that she would contact Shane directly.
22/04/2013	Enid Clarke	N/A	Telephone	Danielle Wallace	Resource Strategies	Called regarding Proposed Methodology. Rang both land lines, both rang out with no answer and no message bank.
22/04/2013	Norma Freeman	N/A	Telephone	Danielle Wallace	Resource Strategies	Called land line, no answer. Called mobile and left a message reminding that the period for comments on the Proposed Methodology closes today.
22/04/2013	Judy Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Called regarding Proposed Methodology. Rang out, no answer.
22/04/2013	Terry Williams	Wiradjuri Condobolin Corporation	Telephone	Danielle Wallace	Resource Strategies	Called regarding Proposed Methodology. Spoke with Joe. He advised that Terry had just stepped out but that she would get him to call me back.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
22/04/2013	Ernie Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Left a message on phone reminding that the period for comments on the Proposed Methodology closes today.
22/04/2013	Danielle Wallace	Resource Strategies	Telephone	Ernie Johnson	N/A	Called returning my call. Advised that he was generally happy with the Proposed Methodology.
22/04/2013	Neville Williams (also on behalf of Shawn Williams, Sharon Williams, Wayne Williams, and Stuart Cutmore)	N/A	Telephone	Danielle Wallace	Resource Strategies	Spoke with Neville. Reminded him that today was the closing date for comments on the Proposed Methodology. He advised that he would contact Shane directly with any concerns.
22/04/2013	Isabelle Collins nee Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Spoke with Isabelle. Reminded her that today was the closing date for comments on the Proposed Methodology. She advised that she would call Shane to discuss the Proposed Methodology with him.
22/04/2013	Danielle Wallace	Resource Strategies	Telephone	Terry Williams	Wiradjuri Condobolin Corporation	Spoke with Terry. He advised that his main concern from the information session was that existing sites would be covered by the soil stockpiles and destroyed. He advised that he hadn't actually read the Proposed Methodology yet (as it has been misplaced) and asked if we could email him a copy. I advised that we would send one through, but reminded him that the period for comments on the Proposed Methodology close today.
22/04/2013	Terry Williams	Wiradjuri Condobolin Corporation	Email	Danielle Wallace	Resource Strategies	Email providing copy of the Proposed Methodology as requested. Advising that period for comments on Proposed Methodology closes today, however general comments can be provided at any point during the consultation process.
22/04/2013	Shane Goodwin	Barrick	Email	Neville Williams	N/A	Letter outlining a number of issues associated with existing sites, survey coverage, burial sites, previous reports, consultation to date, the keeping place, agreements between Barrick and WCC, and attendees at future meetings and proposed surveys.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
23/04/2013	Isabelle Collins	N/A	Telephone	Josh Peters	Resource Strategies	Called to explain that the formal response period for comments on the Proposed Methodology closed on Monday 22 April. However, comments on the consultation, field surveys, cultural significance, cultural landscape, project description, proposed impacts and mitigation measures etc could be provided at any stage during the consultation process. Further explained that all comments received could be included in full in the report (unless the providing party did not want that to occur). Isabelle indicated that she had no further issues or concerns at this stage.
23/04/2013	Rebecca Shepherd	Condobolin LALC	Email	Shane Goodwin	Barrick	Email providing copy of field work invitation letter.
23/04/2013	Neville Williams	N/A	Telephone	Sarah Gillett	Barrick	Called Neville Williams. He advised that he will attending the surveys, and Sharon Williams, Stuart Cutmore and Wayne Williams will also be attending.
23/04/2013	Isabelle Collins	N/A	Telephone	Sarah Gillett	Barrick	Called Isabelle. She advised that she will be attending the surveys and that she will also be brining Janine Thomson and Cindy Fuller.
23/04/2013	Judy Johnson	N/A	Telephone	Sarah Gillett	Barrick	Called Judy Johnson. She advised that she will be attending the surveys and that she will be brining Ernie Johnson.
24/04/2013	Leeanne Hampton	West Wyalong LALC	Telephone	Danielle Wallace	Resource Strategies	Spoke with Amy. She advised that she would call Leeanne, check would the representatives would be for the field work and would call me back. I confirmed our office number.
24/04/2013	Terry Williams	Wiradjuri Condobolin Corporation	Telephone	Danielle Wallace	Resource Strategies	Spoke with Tracey. She advised that she would call Terry, check would the representative would be for the field work and would call me back. I confirmed our office number.
24/04/2013	Enid Clarke	N/A	Telephone	Danielle Wallace	Resource Strategies	Called regarding field survey attendance. Rang both land lines, both rang out with no answer and no message bank.
24/04/2013	Norma Freeman	N/A	Telephone	Danielle Wallace	Resource Strategies	Spoke to Norma. She advised that she hadn't been yet to collect her mail. I explained the details of the field work and she advised that Keith, Jirrah and herself would be tentatively attending. She advised that she would call me back this afternoon to confirm. I confirmed our office number.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
24/04/2013	Danielle Wallace	Resource Strategies	Telephone	Tracey	Wiradjuri Condobolin Corporation	Tracey called and advised that Terry Williams would be attending on the Tuesday, however Eugene Coe would attend for the remaining days.
24/04/2013	Beverley Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Called and left a message for Beverly requesting her to call me back regarding her attendance at the field surveys. I advised that we needed to confirm attendance as soon as possible and by this afternoon.
24/04/2013	Beverley Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Called and spoke to Beverley. She advised that she would be unable to attend the surveys, however, she would like to receive a copy of the draft report. I advised that it would be sent to all registered Aboriginal parties for comment.
24/04/2013	Danielle Wallace	Resource Strategies	Telephone	Norma Freeman	N/A	Called and advised that herself, Keith and Jirrah would all be attending. She also advised that she had spoken to Enid (who has been out of contact range for a few days) and she will also be attending.
24/04/2013	Danielle Wallace	Resource Strategies	Telephone	Amy Davis	West Wyalong LALC	Called and advised that Leeanne Hampton and Linton Howards would be attending for the first two days, and Louise Davis and Braydon Davis would be attending for the second two days.
24/04/2013	Danielle Wallace	Resource Strategies	Telephone	Amy Davis	West Wyalong LALC	Called and queried whether a second induction will be required as different people will be attending on different days. I advised that I would confirm arrangements and call her back this afternoon.
24/04/2013	Isabelle Collins nee Johnson	N/A	Telephone	Josh Peters	Resource Strategies	Called and spoke with Isabelle. Isabelle will be attending the surveys and is being driven by her daughter. Her and her daughter will alternate days on the survey so only one rep involved per day as per offer. Isabelle's sister is also coming but in the capacity of representing Beverly Johnson as Beverly cannot make it herself.
24/03/2013	Beverley Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Called and spoke to Beverley, returning her call. She advised that she would like nominate one of her family members to go on her behalf to the surveys and that she would confirm a name.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
24/04/2013	Isabelle Collins nee Johnson	N/A	Telephone	Sarah Gillett	Barrick	Called and spoke with Isabelle. Beverley Johnson has now changed her mind and may be sending another family member in her place. Isabelle confirmed that she and Janine (her daughter) were coming, and Cindy. I explained that only she was registered as an interested party, and she asked could Cindy complete the paperwork and I explained that the deadline for registering interest had passed.
26/04/2013	Leeanne Hampton	West Wyalong LALC	Telephone	Danielle Wallace	Resource Strategies	No answer on mobile, left message on land line (in regards to inductions being run each day the mine).
26/04/2013	Danielle Wallace	Resource Strategies	Telephone	Amy Davis	West Wyalong LALC	Spoke with Amy returning my call. I advised that Barrick would be running an induction each day as necessary.
30/04/2013 – 03/05/2013	Registered interested parties and/or their nominated representative/s	N/A	Meeting	Shane Goodwin, Elliot Willemssen-Bell	Barrick	Field surveys at the Cowal Gold Mine.
11/06/2013	Registered interested parties and/or their nominated representative/s	N/A	Letter	Shane Goodwin	Barrick	Draft ACHA provided to all registered Aboriginal parties for their review and comment.
18/06/2013	Registered interested parties and/or their nominated representative/s	N/A	Letter	Shane Goodwin	Barrick	Letters sent inviting all registered Aboriginal parties to attend a meeting to discuss the draft ACHA.
21/06/2013	Shane Goodwin	Barrick	Telephone	Isabelle Collins nee Johnson	N/A	Text message received from Isabelle at 11.53am confirming that herself, Cindy and Janine would be attending the draft ACHA meeting.
24/06/2013	Shane Goodwin	Barrick	Telephone	Judy Johnson	N/A	Judy called at 12.04pm to confirm that both herself and Ernie Johnson would be attending the draft ACHA meeting.
28/06/2013	Shane Goodwin	Barrick	Telephone	Neville Williams (also on behalf of Shawn Williams, Sharon Williams, Wayne Williams, and Stuart Cutmore)	N/A	Neville called to confirm that he would be attending the draft ACHA meeting, along with Stuart Cutmore and Sharon Williams.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
1/07/2013	Leeanne Hampton	West Wyalong LALC	Telephone	Danielle Wallace	Resource Strategies	Called at 9.30am and spoke with Amy to confirm attendance at draft ACHA meeting and to request any comments on the draft report. Left a message with Amy for Leeanne to return my call.
1/07/2013	Terry Williams	Wiradjuri Condobolin Corporation	Telephone	Danielle Wallace	Resource Strategies	Called at 9.36am and spoke to Tracey to confirm attendance at draft ACHA meeting and to request any comments on the draft report. Tracey advised that Terry would probably be attending, but that she would call back and confirm.
1/07/2013	Rebecca Shepherd	Condobolin LALC	Telephone	Danielle Wallace	Resource Strategies	Called at 9.38am to confirm attendance at draft ACHA meeting and to request any comments on the draft report. Phone rang out.
1/07/2013	Danielle Wallace	Resource Strategies	Telephone	Tracey Newman	Wiradjuri Condobolin Corporation	Tracey called at 9.52am to confirm that Eugene would be attending the draft ACHA meeting.
1/07/2013	Rebecca Shepherd	Condobolin LALC	Telephone	Danielle Wallace	Resource Strategies	Called at 10.03am to confirm attendance at draft ACHA meeting and to request any comments on the draft report. Spoke to Chris, he requested I call back later to talk to Rebecca.
1/07/2013	Enid Clarke	N/A	Telephone	Danielle Wallace	Resource Strategies	Called at 10.06am to confirm attendance at draft ACHA meeting and to request any comments on the draft report. No answer.
1/07/2013	Norma Freeman	N/A	Telephone	Danielle Wallace	Resource Strategies	Called at 10.07am to confirm attendance at draft ACHA meeting and to request any comments on the draft report. No answer.
1/07/2013	Rebecca Shepherd	Condobolin LALC	Telephone	Danielle Wallace	Resource Strategies	Called at 10.17am and spoke to Rebecca. She confirmed that she would be attending the draft ACHA meeting, along with Richard Coe and 3 other LALC members. Rebecca commented that massacres had previously occurred in the area.
1/07/2013	Beverley Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Called at 10.35am to confirm attendance at draft ACHA meeting and to request any comments on the draft report. Left message.
1/07/2013	Enid Clarke	N/A	Telephone	Danielle Wallace	Resource Strategies	Called at 12.39pm and spoke to Enid. She confirmed that she would be attending the draft ACHA meeting, and that she didn't have any

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
						comments on the draft ACHA at this stage, but that she would bring anything up at the meeting. She advised that Norma, Keith and Jirrah would not be attending the meeting.
1/07/2013	Beverley Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Called at 3.29pm on mobile to confirm attendance at draft ACHA meeting and to request any comments on the draft report. Left message.
2/07/2013	Leeanne Hampton	West Wyalong LALC	Telephone	Danielle Wallace	Resource Strategies	Called at 12.29pm and 12.52pm to confirm attendance at draft ACHA meeting and to request any comments on the draft report. Phone rang out.
3/07/2013	Danielle Wallace	Resource Strategies	Telephone	Beverley Johnson	N/A	Beverley called at 9.17am and advised that she hoped to attend the draft ACHA meeting but could not confirm at this stage. She did not have any comments on the draft report at this stage.
3/07/2013	Leeanne Hampton	West Wyalong LALC	Telephone	Danielle Wallace	Resource Strategies	Called at 9.22am and spoke to Amy. She confirmed that herself, Linton Howards and Leeanne Hampton would be attending the draft ACHA meeting on Monday.
8/07/2013	Condobolin LALC, Enid Clarke, Isabelle Collins nee Johnson, Judy Johnson, Janine Thompson, Cindy Fuller, Ernie Johnson, Wiradjuri Condobolin Corporation.	N/A	Meeting	Shane Goodwin	Resource Strategies	Meeting held at Condobolin RSL Club regarding the draft ACHA. The meeting provided an additional opportunity for verbal or written comments to be provided to ask questions. The following registered Aboriginal parties did not attend the meeting: West Wyalong LALC, Neville Williams, Shawn Williams, Sharon Williams, Stuart Cutmore, Tony Amatto, Beverley Johnson, Norma Freemna, Keith Freeman and Jirrah Freeman. Enid advised that Neville Williams was back from Tasmania, although he would not be attending the meeting.
8/07/2013	Enid Clarke	N/A	Meeting	Danielle Wallace	Resource Strategies	Enid provided verbal comments at the meeting, including the following: - Agreed with the recommendations in the draft report. - Supports the notion of a second archaeologist

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
						on the team. - Requested additional monitors during monitoring, including all stakeholders to be present. - Return artefacts to the rehabilitated landform upon completion of rehab.
9/07/2013	Norma Freeman	N/A	Telephone	Danielle Wallace	Resource Strategies	Called at 2.02pm to remind about the due date for comments and request any comments on the draft report. Left message.
9/07/2013	Leeanne Hampton	West Wyalong LALC	Telephone	Danielle Wallace	Resource Strategies	Called at 3.18pm and spoke to Leeanne. Confirmed that the due date for comments on the draft report was tomorrow, and requested any comments over the phone. Leeanne advised that she would provide comments via email tomorrow afternoon/evening after the land council board meeting.
9/07/2013	Neville Williams (also on behalf of Shawn Williams, Sharon Williams, Wayne Williams, and Stuart Cutmore)	N/A	Telephone	Danielle Wallace	Resource Strategies	Called at 3.56pm to remind about the due date for comments and request any comments on the draft report. Phone message indicated that the number was temporarily out of service.
10/07/2013	Beverley Johnson	N/A	Telephone	Danielle Wallace	Resource Strategies	Called at 9.22am to remind about the due date for comments and to request any comments on the draft report. Left message.
10/07/2013	Norma Freeman	N/A	Telephone	Danielle Wallace	Resource Strategies	Called at 9.23am to remind about the due date for comments and to request any comments on the draft report. Left message.
10/07/2013	Rebecca Shepherd	Condobolin LALC	Telephone	Danielle Wallace	Resource Strategies	Called at 2.25pm and spoke to Donna. Advised that the due date for comments on the draft report was today, however we hadn't received anything as of yet and that I understood Rebecca was going to send through some comments. Donna advised that she would look into it and call back.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
10/07/2013	Danielle Wallace	Resource Strategies	Telephone	Donna	Condobolin LALC	Called at 2.46pm and spoke to Donna. She advised that she had spoken to Rebecca and that Rebecca would either call me today or Richard would email through comments tonight.
16/07/2013	Registered interested parties and/or their nominated representative/s	N/A	Letter	Shane Goodwin	Barrick	Letters sent to all registered Aboriginal parties regarding the key discussion points at the draft ACHA meeting.
18/07/2013	Shane Goodwin	Barrick	Telephone	Neville Williams (also on behalf of Shawn Williams, Sharon Williams, Wayne Williams, and Stuart Cutmore)	N/A	Neville called at 9.48am. Shane confirmed that notes from the meeting had been provided to all groups on Tuesday 16 July 2013. Neville queried whether the rock displacement was still going ahead. Shane advised that all works proposed as part of the Modification were detailed in the draft report. Neville questioned if the Social Impact Assessment was going ahead. Shane advised that it was going ahead but noted that it was not part of the Modification.