

# Stratford Mining Complex Statement of Environmental Effects

## APPENDIX D

### ABORIGINAL CULTURAL HERITAGE ASSESSMENT



# Stratford Mining Complex Modification 1

## Aboriginal Cultural Heritage Assessment

Prepared for Yancoal Australia Ltd

July 2016

Stratford

Mid-Coast Council Local Government Area

## Document control

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*Cover photograph: ML 1733 (Niche 2016)*

## Executive Summary

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The Stratford Mining Complex is located in the rural locality of Stratford, approximately 10 kilometres (km) south of Gloucester, New South Wales (NSW) in the Mid-Coast Council (formerly the Gloucester Shire Council) Local Government Area. It is operated by Stratford Coal Pty Ltd (SCPL), a wholly owned subsidiary of Yancoal Australia Limited, under a State Significant Development Approval (SSD-4966).

SCPL is preparing a Statement of Environmental Effects to facilitate the modification of the Stratford Mining Complex (SSD-4966) under Section 96(2) of the NSW *Environmental Planning and Assessment Act, 1979* (the Modification). The Modification relates to proposed interactions between the Stratford Mining Complex and the Rocky Hill Coal Project (SSD-5156), a proposed open cut mining operation owned by Gloucester Resources Ltd, located approximately 5 km north of the Stratford Mining Complex. This integration would require the development of a private haul road between the Stratford Mining Complex and the Rocky Hill Coal Project. The portion of the haul road relevant to SCPL would be located within SCPL's mining tenements.

Niche Environment and Heritage was commissioned to undertake an Aboriginal Cultural Heritage Assessment (ACHA) to inform the Statement of Environmental Effects of the proposed Modification. The ACHA for the Modification specifically assessed those components of the Modification that fell within the mining tenements of the Stratford Mining Complex, but outside of areas already approved for disturbance.

The assessment followed current best practice guidelines and included consultation with the Aboriginal community and a survey of the Subject Area. The survey area also included a substantial buffer of the proposed haul road alignment to provide flexibility in design and ancillary infrastructure placement.

No Aboriginal heritage objects or heritage values were identified in the Subject Area or immediate surrounds. However, a portion of the haul road alignment was identified as having a high likelihood of containing sub-surface archaeological deposits and Aboriginal objects.

The Registered Aboriginal Parties (RAPs) for the Modification have identified a general community (social and cultural) value that erosion, sedimentation and waterways (e.g. Dog Trap Creek) should be managed sustainably.

The desktop assessment indicated that landforms associated with Dog Trap Creek have the potential to contain a diverse range of resources that would have been exploited by Aboriginal people in the past. Alluvial plains, terraces and transitional zones between lower slopes are present within the Subject Area. These landforms have the potential for aggrading geomorphology within which there is the potential for past land surfaces and Aboriginal objects to be buried and preserved. The assessment has noted that due to an absence of archaeological test excavation in the region, there is a lack of certainty regarding the value of any potential sub-surface deposits and Aboriginal objects. Aboriginal objects and their associated heritage values could be present in relatively unmodified sections of the Craven and Craven Variant A soil landscapes below 0.3 m within the proposed haul road alignment.

The recommended approach is to retain the existing haul road alignment and undertake a series of sub-surface test excavations within portions of the Subject Area (i.e. within the Craven and Craven Variant A soil landscapes) to increase the knowledge of the local archaeological resource and therefore contribute to a further understanding of historic Aboriginal settlement of the region.

The following management and mitigation measures are recommended to manage and mitigate the potential harm and risks associated with the Modification:

- Continue community consultation and engagement with relevant RAPs in relation to the Modification, in accordance with the Conditions of Consent for the Stratford Mining Complex and the *Aboriginal cultural heritage consultation requirements for proponents 2010*.
- Communicate to the RAPs any management and mitigation measures within the Statement of Environmental Effects and/or management plans for erosion and sediment control for Dog Trap Creek.
- Prior to construction of the private haul road and in accordance with the Conditions of Consent, revise the existing Heritage Management Plan in consultation with the NSW Office of Environment and Heritage (OEH) and relevant RAPs (in relation to the management of Aboriginal heritage values) to the satisfaction of the NSW Department of Environment and Planning to:
  - Undertake test excavation (using the methods outlined in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* as a guide to best practice) to identify and characterise the potential sub-surface archaeological deposits in the Subject Area (within the Craven and Craven Variant A soil landscapes). A methodology for undertaking these test excavation is provided in Appendix 5.
  - Manage residual risks via emergency response protocols (in the unlikely event that human skeletal material is identified during the course of works, all work should stop and the NSW Police and the OEH Environmental Line [131 555] notified).
- The Heritage Management Plan should also include protocols for:
  - If any sites or deposits of moderate or high scientific significance are identified during the test excavations, then a focused salvage excavation should be undertaken.
  - The notification Aboriginal Heritage Information Management System of any Aboriginal objects identified within a reasonable timeframe as per Section 89A of the *National Parks and Wildlife Act 1974*. It is recommended that this could be undertaken as part of the annual review/reporting requirements at the Stratford Mining Complex.
  - A plan for the short term and long term management of recovered Aboriginal objects, if any, in accordance with Section 85 of the *National Parks and Wildlife Act 1974* (Appendix 5).

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# 1. Introduction

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## 1.1 Background and Scope

The existing and approved operations at the Stratford Mining Complex incorporates the approved Stratford Extension Project (SSD-4966). The Stratford Mining Complex is located in the rural locality of Stratford, approximately 10 kilometres (km) south of Gloucester, New South Wales (NSW) in the Mid-Coast Council (formerly the Gloucester Shire Council) Local Government Area (Figure 1). It is operated by Stratford Coal Pty Ltd (SCPL), a wholly owned subsidiary of Yancoal Australia Ltd, under the State Significant Development Approval (SSD-4966).

SCPL is preparing a Statement of Environmental Effects to facilitate the modification of the Stratford Mining Complex (SSD-4966) under Section 96(2) of the NSW *Environmental Planning and Assessment Act, 1979* (EP&A Act) (the Modification).

The Modification relates to proposed interactions between the Stratford Mining Complex and the Rocky Hill Coal Project (SSD-5156), a proposed open cut mining operation owned by Gloucester Resources Ltd, located approximately 5 km north of the Stratford Mining Complex.

The proposed interactions relate to the transportation and processing of Rocky Hill Coal Project run-of-mine (ROM) coal using SCPL infrastructure. This integration would require the development of a dedicated private haul road between the Stratford Mining Complex and the Rocky Hill Coal Project. The portion of the haul road relevant to the Stratford Mining Complex would be located within the north-eastern portion of SCPL's mining tenements, from which point haul trucks would use existing SMC haul roads to allow transport of coal to the ROM pad (Figure 2).

Niche Environment and Heritage (Niche) has been commissioned to undertake an Aboriginal Cultural Heritage Assessment (ACHA) to inform the Statement of Environmental Effects for the Modification. The ACHA for the Modification will specifically assess those components of the Modification that fall within the mining tenements of the Stratford Mining Complex but outside of areas already approved for disturbance (Figure 2). The ACHA, in particular, will assess the components of the Modification that fall within Mining Lease (ML) 1733 as this component has not previously been assessed for disturbance.

The objective of the ACHA is to provide an assessment of the potential for the Modification to harm Aboriginal objects and values, in accordance with current best practice and informed by the Aboriginal community. The ACHA has been prepared in accordance with the following regulations and guidelines:

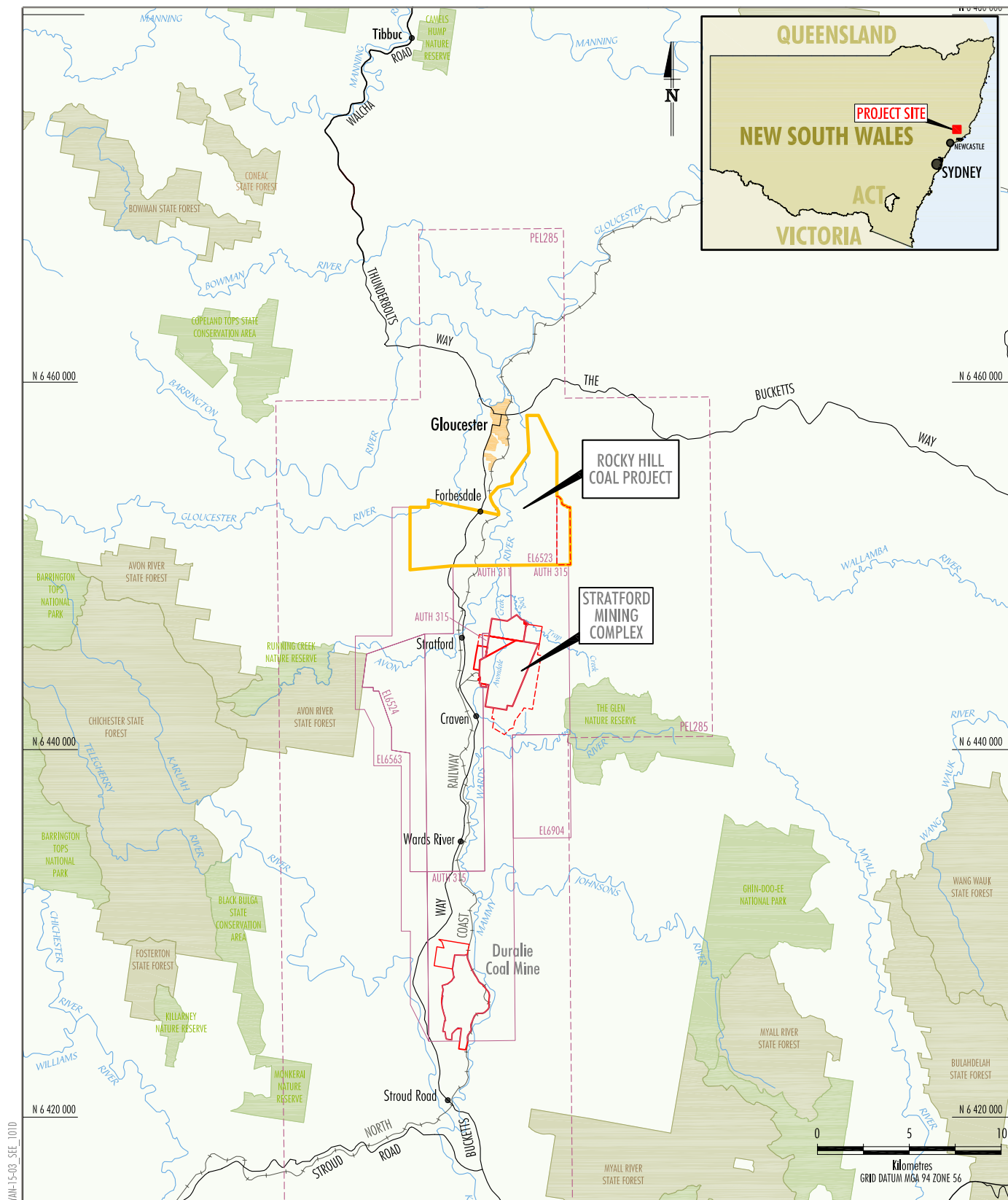
- *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (NSW Department of Environment and Conservation [DEC], 2005);
- *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs) (NSW Department of Environment, Climate Change and Water [DECCW], 2010a);
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b);
- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, 2010c);
- *Guide to Investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (NSW Office of Environment and Heritage [OEH], 2011);

- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS, 2013);
- *Aboriginal Cultural Heritage Standards and Guidelines Kit* (National Parks and Wildlife Service, 1997);
- *Ask First: A guide to respecting Indigenous heritage places and values* (Australian Heritage Commission, 2002); and
- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (NSW Minerals Council, 2010).

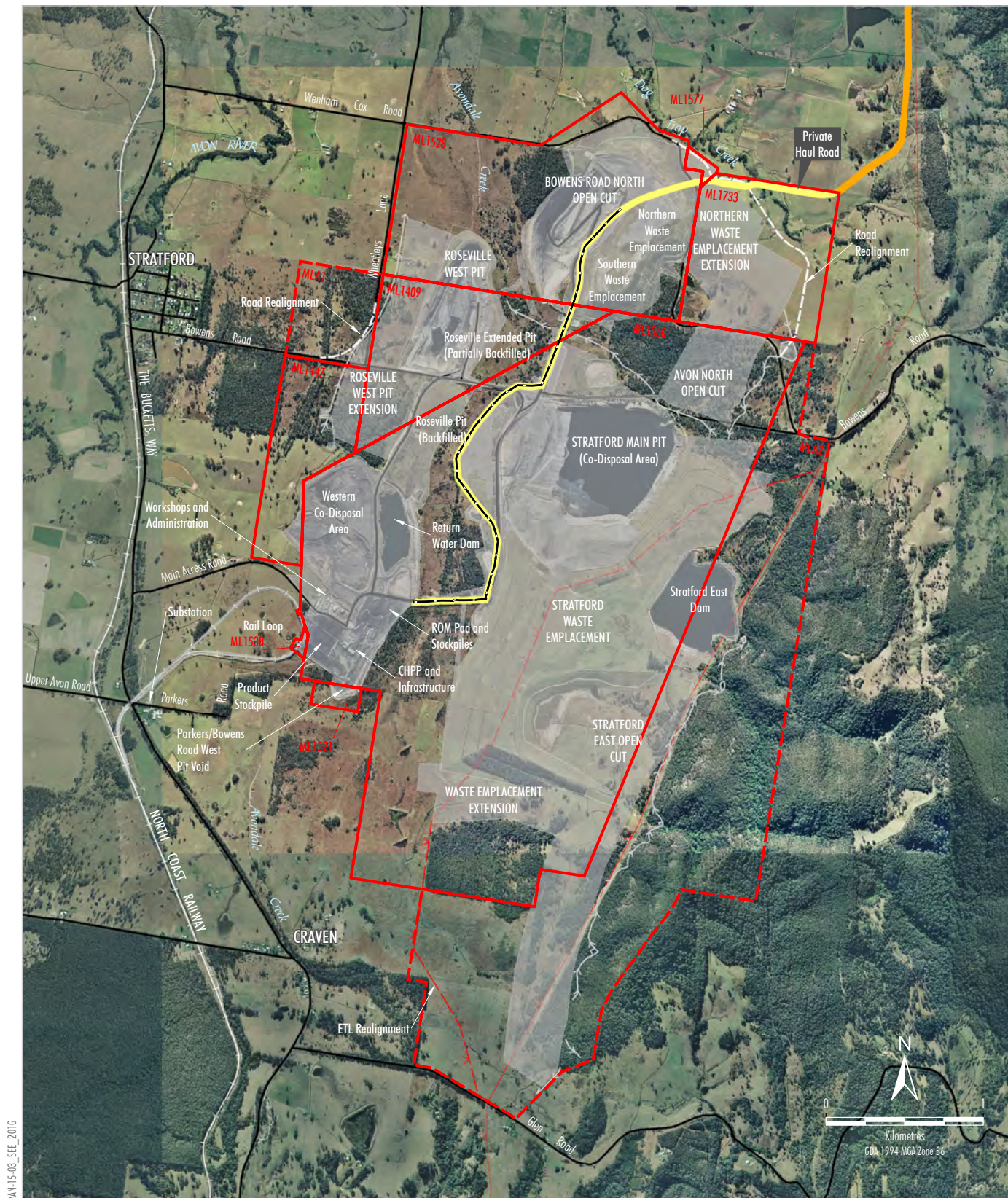
## **1.2 Site Location and Investigation Area**

The Stratford Mining Complex is situated within the rural localities of Stratford and Craven, 10 km south of Gloucester in the Gloucester Basin of NSW, in the Parish of Avon and in the County of Gloucester in the Mid-Coast Council Local Government Area (Figure 1).

The Subject Area for the purposes of this assessment is defined as the proposed activity area within ML 1733 and is depicted in Figure 2.







Source: LPI (2016); Geoscience Australia (2006); NSW Department of Industry (2016); SCPL (2016)

Figure 2



## 2. Description of the Development Proposal

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### 2.1 The Proposed Activity

As described in Section 1.1, the Modification relates to proposed interactions between the Stratford Mining Complex and the Rocky Hill Coal Project (SSD-5156). The main changes to the operations of the approved Stratford Mining Complex associated with the Modification include:

- transport of sized ROM coal from the Rocky Hill Coal Project to the Stratford Mining Complex during daytime hours only (7.00 am to 6.00 pm);
- extension of the Stratford Mining Complex ROM pad to accommodate Rocky Hill Coal Project sized ROM coal;
- extension of Stratford Mining Complex heavy vehicle parking areas;
- processing of Rocky Hill Coal Project coal at the Stratford Mining Complex and transportation of the resulting product coal from the Stratford Mining Complex to the Port of Newcastle;
- extension of on-site haul roads to accommodate Rocky Hill Coal Project haul trucks; and
- an at-grade level crossing (and associated controls) constructed at the intersection of Wenham Cox Road and the private haul road.

For the purpose of this assessment, it is assumed that the proposed haul road will have an impact footprint that includes earthworks for the proposed haul road corridor and the Dog Trap Creek crossing, and ancillary infrastructure or activities such as (but not limited to) stockpiles, geotechnical works, access tracks and fencing to service the road construction.

As a result, a corridor of 60 metres (m) wide has been assessed and surveyed for Aboriginal heritage values. The assessment has taken a conservative and precautionary approach and assumed direct and total harm to any areas within the impact footprint.

### 2.2 Modification Phasing

The approved Stratford Extension Project is assumed to commence in 2018 (i.e. Year 1 is 2018) and Rocky Hill Coal Project commencement is in 2019 (i.e. Year 2). The addition of processing ROM coal from the Rocky Hill Coal Project at the Stratford Mining Complex would extend the life of the coal handling and preparation plant/train loading operations within the approved Stratford Extension Project by 6 to 10 years.

### 3. Statutory Framework and Other Approvals

#### 3.1 Approval Path and Existing Development Consents

The proposed activity requires the modification of a State Significant Development Approval (SSD-4966) under Section 96(2) of the EP&A Act.

Two core pieces of legislation guide the management of Aboriginal heritage, based on the chosen approval path: the NSW *National Parks and Wildlife Act, 1974* (NPW Act) and the EP&A Act. The current Conditions of Consent for the Stratford Mining Complex also contain a number of conditions relevant to the management of Aboriginal heritage in proximity to the Subject Area.

#### 3.2 The NSW Environmental Planning and Assessment Act 1974 and NSW National Parks and Wildlife Act 1974

The NPW Act, administered by the NSW Office of Environment and Heritage (OEH), provides statutory protection for Aboriginal objects by making it illegal to harm Aboriginal objects and Aboriginal places, by providing two tiers of offence against which individuals or corporations who harm Aboriginal objects or Aboriginal places can be prosecuted. The NPW Act defines Aboriginal objects and Aboriginal places:

*Aboriginal object means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.*

*Aboriginal place means any place declared to be an Aboriginal place under section 84.*

The highest tier offences under the NPW Act are reserved for knowledgeable harm of Aboriginal objects or knowledgeable desecration of Aboriginal places. Second tier offences are strict liability offences—that is, offences regardless of whether or not the offender knows they are harming an Aboriginal object or desecrating an Aboriginal place—against which defences may be established under the NSW *National Parks and Wildlife Regulation, 2009* (the NPW Regulation).

Section 87 of the NPW Act establishes defences against prosecution under section 86 (1), (2) or (4). The defences are as follows:

- An Aboriginal Heritage Impact Permit (AHIP) authorising the harm (section 87[1]).
- Exercising due diligence to establish Aboriginal objects will not be harmed (section 87[2])  
Due diligence may be achieved by compliance with requirements set out in the NPW Regulation or a code of practice adopted or prescribed by the NPW Regulation (section 87[3]).
- Undertaking “low impact” activities (section 87[4]).

Where Approval or Development Consent is granted for a project or modification, Section 89J of the NSW EP&A Act provides that an AHIP under the NPW Act may not be required unless stipulated by the Conditions of Consent. In these circumstances, Aboriginal heritage within the Subject Area would be managed in accordance with the Conditions of Consent stipulated by the modified Project Approval. Furthermore, by undertaking this assessment, Stratford Mining Complex is exercising due diligence by completing an ACHA under relevant codes of practice set out, adopted or prescribed in NPW Regulation.

Other aspects of the NPW Act are still enforced, irrespective of a modification approval. For example:

- Under Section 89A of the NPW Act, a person who is aware of the location of an Aboriginal object that is the property of the Crown or, not being the property of the Crown, is real property, and does not, in the prescribed manner, notify the Secretary thereof within a reasonable time after the person first becomes aware of that location is guilty of an offence against this Act unless the person believes on reasonable grounds that the Secretary is aware of the location of that Aboriginal object.
- Under section 85 of the NPW Act, the Chief Executive of the OEH (as the delegate of the Secretary of the Department of Premier and Cabinet) is the authority for the proper care, preservation and protection of Aboriginal objects and Aboriginal places in NSW. This legislative responsibility applies to Aboriginal objects and Aboriginal places as defined under the NPW Act. The NPW Act allows the transfer of Aboriginal objects to an Aboriginal person or Aboriginal organisation for safekeeping. The person or organisation must enter into a care agreement with OEH.

### 3.3 Relevant Conditions of Consent

As noted above, the current Conditions of Consent for the Stratford Mining Complex also contain a number of conditions relevant to the management of Aboriginal heritage in the vicinity of the Subject Area.

#### Protection of Aboriginal Sites

Condition 42. The Applicant shall ensure that the development does not cause any direct or indirect impact on identified Aboriginal sites located outside the approved disturbance area of the development on the site.

#### Heritage Management Plan

Condition 43. The Applicant shall prepare and implement a Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:

- a) be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary
- b) be prepared in consultation with OEH and local Aboriginal stakeholders (in relation to the management of Aboriginal heritage values);
- c) be submitted to the Secretary for approval prior to 31 December 2015, unless the Secretary agrees otherwise;
- d) include the following:
  - detailed archaeological salvage program for Aboriginal sites/objects within the approved disturbance area, including methodology and procedures/protocols for:
    - staged salvage, based on anticipated mine planning (sites OS-3, OS-4, OS-5, IF-1, IF-2, IF-3, IF-4 shown on the figure in Appendix 7);
    - salvage of scarred trees (sites ST-2; ST-4 shown on the figure in Appendix 7);
    - monitoring of topsoil stripping during construction associated with the Wenham Cox / Bowens Road realignment in the vicinity of Dog Trap Creek;
    - site assessment and reporting;
    - protection, storage, management and long-term protection of salvaged Aboriginal objects; and
    - addressing relevant statutory requirements under the NPW Act; and



- e) a description of the measures that would be implemented for:
- protecting, monitoring and managing Aboriginal sites outside the approved disturbance area (including sites OS-1, OS-2, ST-1, ST-3, IF-5, PAD-1, PAD-2, CTS-1 shown on the figure in Appendix 7);
  - maintaining and managing reasonable access for Aboriginal stakeholders to cultural heritage items on site and in the Biodiversity Offset Area;
  - managing the discovery of any human remains or previously unidentified Aboriginal objects on site, including (in the case of human remains) stop work provisions and notification protocols;
  - ongoing consultation with local Aboriginal stakeholders in the conservation and management of Aboriginal cultural heritage both on-site and in the Biodiversity Offset Area; and
  - ensuring any workers on site receive suitable heritage inductions prior to carrying out any activities which may disturb Aboriginal sites, and that suitable records are kept of these inductions.

At the time of this assessment, a Heritage Management Plan (HMP) was not approved for the Stratford Mining Complex. Accordingly, this assessment has considered alternative instruments to manage Aboriginal heritage values such as the NPW Act, NPW Regulations and supporting guidelines in the development of the assessment methodology and management and mitigation measures.

## 4. Consultation with the Aboriginal Community

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, in accordance with Clause 80C of the *NSW National Parks and Wildlife Regulation, 2009* and the ACHCRs (DECCW, 2010a). Although State Significant Development that is authorised by a development consent granted under Division 4.1 of Part 4 of the EP&A Act is exempt from requiring an AHIP under section 90 of the *NSW National Parks and Wildlife Act, 1974* and accordingly, from compliance with the consultation process in clause 80C of the *NSW National Parks and Wildlife Regulation, 2009*, consultation with the Aboriginal community for this ACHA has nonetheless been undertaken in compliance with the requirements of these legislative instruments and the guidelines described in Section 1.1.

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 used 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 then DECCW (now OEH) has prepared the ACHCRs. The ACHCRs meet current industry standards for community consultation. Consultation in the form outlined in the ACHCRs is a formal requirement where a proponent is aware that their development activity has the potential to harm Aboriginal objects and/or places. The OEH also recommends that these requirements be used when the certainty of harm is not yet established but a proponent has, through some formal development mechanism, been required to undertake a cultural heritage assessment to establish the potential harm their proposal may have on Aboriginal objects and places. The ACHCRs meet the fundamental tenants of the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC, 2005).

Section 1.3 of the ACHCRs describes the guiding principles of the document. The principles have been derived directly from the Australian Heritage Commission's *Ask First: A guide to respecting Indigenous heritage places and values* (Australian Heritage Commission, 2002). Both documents share the aim of creating a system where free prior informed advice can be sought from the Aboriginal community.

The ACHCRs outline a four stage consultation process that includes detailed step by step guidance as to the aim of each stage, how it is to proceed and what actions are necessary for it to be successfully completed. The four stages are:

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

The document also outlines the roles and responsibilities of the OEH, Aboriginal parties including Local and State Aboriginal Land Councils, and proponents throughout the consultation process. To meet the requirements of consultation it is expected that proponents will (DECCW, 2010a):

- bring the Registered Aboriginal Parties (RAPs) 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 RAPs involved in the consultation process in assessing cultural significance and developing any heritage management outcomes for Aboriginal objects and/or places;
- provide evidence to the OEH of consultation by including information relevant to the cultural perspectives, views, knowledge and advice provided by the RAPs;
- accurately record and clearly articulate all consultation findings in the final cultural heritage assessment report; and
- provide copies of the cultural heritage assessment report to the RAPs who have been consulted.

The following sections outline the process and results of the consultation conducted during the preparation of this ACHA to ascertain and manage the Aboriginal cultural heritage values of the Subject Area.

## 4.1 The Consultation Process

### 4.1.1 Stage 1 - Notifications

This stage of the consultation process is used to identify, notify and register any Aboriginal people or groups who may have a cultural interest in and/or possess cultural knowledge relevant to determining the cultural significance of Aboriginal objects or places in the Subject Area.

Aboriginal stakeholder groups had been previously identified as having an interest in the management of Aboriginal heritage at the Stratford Mining Complex (in compliance with the ACHCRs). These stakeholder groups included those parties and individuals who registered an interest in the consultation process associated with the Stratford Extension Project (Table 1).

All existing RAPs for the Stratford Mining Complex were automatically registered for the consultation process associated with the Modification.

As previously noted, SCPL and the Rocky Hill Coal Project are seeking separate approvals for separate components of the same proposed haul road on their respective mining tenements. As such, all Aboriginal stakeholder groups who registered an interest in the consultation process associated with the Rocky Hill Coal Project (undertaken in accordance with the ACHCRs [Archaeological Surveys and Reports, 2016]) were also automatically registered for the consultation process associated with the Modification.

In this regard, all individuals and groups registered for the Stratford Extension Project and the Rocky Hill Coal Project (i.e. Tables 1 and 2, respectively) are considered to be RAPs for the purposes of this Modification.

A full record of all correspondence received from and sent to the Aboriginal community for the Modification is provided in Appendix 2.

**Table 1: Summary of Registered Aboriginal Parties Identified through the Stratford Extension Project**

Registered Aboriginal Party	Contact Name
Cultural Consulting Services	Robert Yettica
Forster Local Aboriginal Land Council	Jim Currie
Glouster Worimi First People	Ken Everleigh
Karuah Local Aboriginal Land Council	Fiona Manton
Maaiangal Group, Worimi Nation	Di "Nurpula" Stephenson
Mookibakh Traditional Owners Inc.	Aunty Norma Fisher
Doo-wa-kee Cultural & Heritage Surveys	Mick Leon

**Table 2: Summary of Registered Aboriginal Parties Identified through the Rocky Hill Coal Project**

Registered Aboriginal Party	Contact Name	Registered Aboriginal Party	Contact Name
A1 Indigenous Services	Carolyn Hickey	Lower Hunter Wonnarua Cultural Services	Lea-Anne Ball and Uncle Tommy Miller
Aboriginal Native Title Elders Consultants	Margaret Matthews	Lower Wonnarua Tribal Consultancy Pty Ltd	Barry Anderson
Aliera French Trading	Aliera French	Maaiangal Aboriginal Heritage	Carol Ridgeway-Bissett
Alison Sampson		Michelle Saunders	
Amanda Hickey Cultural Services	Fiona Ryan	Mindaribba Local Aboriginal Land Council	
Bindi Aboriginal Heritage and Cultural Centre Inc.		Minnga Consultants	Clifford Matthews
Birpai Local Aboriginal Land Council	Nathan Moran	Mooki Plains Management	Stephen Matthews
Black Creek Aboriginal Corporation	Tracey White	Mooki Plains Management	Les Field
Bullen Bullen	Lloyd Mathews	Moreeites	Susan Cutmore
Cacatua Culture Consultants	Donna & George Sampson	Murrawan Cultural Consultants Pty Ltd	Robert Smith
Carrawonga Consultants	Cheryl Moodie & Justin Matthews	Mur-Roo-Ma Inc.	Anthony Anderson
Culturally Aware	Tracey Skene	Muswellbrook Cultural Consultants	Brian & Gay Horton
D F T V Enterprises	Derrick Vale Snr	Myland Culture & Heritage Group	Warren Schillings
Deslee Talbott Consultants	Deslee Matthews	Ngarramang-Kuri Aboriginal Culture & Heritage Group	Abie Wright
Devine Diggers Aboriginal Cultural Consultants	Deidre Perkins	Nur-Run-Gee Pty Ltd	Lea Anderson
DRM Cultural Heritage Management	Helen Faulkner	Rebecca Lester	
Esther Tighe		Robert Syron	
Gangga Marrang	Kellie Syron	Roger Noel Matthews Consultancy	Roger Matthews
Garrigal Aboriginal Community Inc.	Del Arnold	Ron Smith	

Registered Aboriginal Party	Contact Name	Registered Aboriginal Party	Contact Name
Ghinni Ghinni Youth and Culture Aboriginal Corporation		Roslyn Sampson	
Gidawaa Walang Cultural Heritage Consultancy	Debbie Dacey-Sullivan and Ann Hickey	Saltwater Tribal Council	
Gimbay Gatigaan Aboriginal Corporation	Candy Lee Towers	Scott Franks & Anor on behalf of the Plains Clans of the Wonnarua People	Robert Lester and Scott Franks
Giwiirr Consultants	Michele Stair	Scott Smith	
Gomeroi-Namoi	Kelly Horner	Smith Dhagaans Cultural Group	Timothy Smith
Griffiths Group	Priscilla Priestley	St Clair Singleton Aboriginal Corporation	Cultural Heritage Officer
Gringai Clan Worimi Nation	Bob Syron	Stephen Talbot	
Gringai Traditional Owners	Eliza Munro	Steven Saunders	
HECMO Consultants	Kerren Boyd	Sunrise Guiwan Biripi Elders Corporation	Warner Saunders
Heilamon Cultural Consultants	Clifford Johnson	T & G Culture Consultants	
HSB Heritage Consultants	Patricia Hampton	Thawan Heritage Consultant	Jennifer Hampton
Hunter Traditional Owner	Paulette Ryan	Tocomwall Pty Ltd	Scott Franks
Hunter Valley Aboriginal Corporation	Rhonda Griffiths	Trevor Robinson	
Hunter Valley Cultural Consultants	Christine Matthews	Ungooroo Aboriginal Corporation	Alan Paget & Sarah Hall
Hunter Valley Cultural Surveying	Luke Hickey	Ungooroo Cultural & Community Services	Rhonda Ward
Hunter Valley Natural & Cultural Resources	David French	Upper Hunter Heritage Consultants	Melissa & Darrel Matthews
Hunters & Collectors	Tania Matthews	Upper Hunter Wonnarua Council Inc.	Rhoda Perry & Georgina Berry
I & E Aboriginal Culture and Heritage	Ivy Jaeger	Valley Culture	Larry Van Vliet
J & A Leonardi		Waabi Gabinya Cultural Consultancy	Elizabeth Howard
Jarban & Mugrebea	Les Atkinson	Wallagan Cultural Services	Maree Waugh
Jeff Matthews		Wanaruah Custodians	David Foot
JLC Cultural Services	Jenny-Lee Chambers	Wanaruah Local Aboriginal Land Council	
Jumbunna Traffic Management Group Pty Ltd	Norm Archibald	Warrigal Cultural Services	Aaron Slater
Karuah Indigenous Corporation	David Feeney	Wattaka Wonnarua Cultural Consultancy Services	Des Hickey
Kauma Pondee Inc.	Jill Green	Widescope Indigenous Group Pty Ltd	Steven Hickey
Kauwul t/a Wonn1	Arthur Fletcher	Wonn1 Contracting	Arthur Fletcher
Kawul Cultural Services	Vicky Slater	Wonnarua Culture Heritage	Gordon Griffiths
KL KG Saunders Trading services	Krystal & Kylie Saunders	Wonnarua Nation Aboriginal Corporation	Laurie Perry

Registered Aboriginal Party	Contact Name	Registered Aboriginal Party	Contact Name
Lakkari NTCG	Mick Leon	Wonnarua Traditional Custodians NTAC	Des Hickey
Lorraine Towney		Wonnaruah Elders Council	Uncle Tommy Miller
Lower Hunter Aboriginal Incorporated	David Ahoy	Worimi Aboriginal Community Co-operative	Cheryl Hendry
Lower Hunter Aboriginal Incorporated	Les Ahoy	Wurrumay Consultants	Kerrie Slater
-	-	Yinarr Cultural Services	Kathleen Steward Kinchela

#### 4.1.2 Stages 2 and 3 – Presentation of Project Information and Gathering Information about cultural significance

##### 4.1.2.1 Proposed Methodology

The RAPs were provided with a letter outlining information about the Modification and a copy of the Proposed Methodology (Appendix 3) for the ACHA for review and comment on 24 March 2016, in accordance with the ACHCRs (DECCW, 2010a). A minimum of 28 days was allowed for RAPs to provide input in regards to the following aspects:

- the nature of the Proposed Methodology;
- any Aboriginal objects or places of cultural value within the Modification Area, or issues of cultural significance;
- any restrictions or protocols considered necessary in relation to any information of sensitivity that may be provided; and
- any other factors considered to be relevant to the ACHA to be adopted into the information gathering process and assessment methodology.

The period for commenting on the Proposed Methodology was open between 24 March 2016 and 28 April 2016. Comments on the Proposed Methodology were received from the following RAPs:

- Gimbay Gatigaan Aboriginal Corporation – Candy Lee Towers.
- Maaiangal Group, Worimi Nation – Di “Nurpurla” Stephenson.
- Glouster Worimi First People - Ken Everleigh.

Copies of the submissions are included in Appendix 2. Responses to each submission are provided in Section 4.4.2.2 below.

#### 4.1.2.2 Responses to Comments Received on Proposed Methodology

Responses to each submission received by the RAPs on the Proposed Methodology are provided in Table 3 below.

**Table 3: Responses to Submissions from RAPs on Proposed Methodology**

Date, Registered Aboriginal Party	Comment on Proposed Methodology	Response
13 April 2016 - Gimbay Gatigaan Aboriginal Corporation – Candy Towers	<i>“On behalf of Gimbay Gatigaan organisation I do agree with the Proposed Methodology for the Stratford Mining Complex Modification 1 Aboriginal Cultural Heritage Assessment”</i>	Noted.
24 April 2016 – Maaingal Group, Worimi Nation - Di “Nurpurla” Stephenson	<i>“As previously stated the Maaingal Group is against all mining of land near or surroundings [sic] of rivers as this is folly, knowing the potential of pollution, erosion and depletion of the soil. We will participate hoping (SCPL) will stay true to taking into account what the Aboriginal people of the area say”</i>	SCPL would continue to engage in consultation and meaningful dialogue with the RAPs in accordance with the Stratford Mining Complex Conditions of Consent, the ACHRs and the NPW Regulation.  An assessment of the potential impacts of the Modification on surface water resources has been undertaken for the Modification, and will be included in the Statement of Environmental Effects.
28 April 2016 – Ken Everleigh	Ken Everleigh provided some comments about a survey undertaken for another project but provided the following general advice regarding the local area: <i>“Aboriginal oral history, is the land was used for birth place and ceremonies. Knowledge of the mountain range significant to women, rivers and water ways need to be protected, Women should still be able to have access to parts or the area for Aboriginal cultural values”</i>	ML 1733 has previously been assessed for Aboriginal heritage values as part of the Stratford Extension Project. During this time, no oral histories or records of birth places or ceremonial places were identified in the Subject Area by the RAPs. Niche has followed up on Ken Everleigh’s comments and no specific information was provided that would indicate that ceremonial, birth or women’s areas are present in the Subject Area or immediate surrounds.  The Subject Area is not located on or near the mountain ranges.  An assessment of the potential impacts of the Modification on surface water resources has been undertaken for the Modification, and will be included in the Statement of Environmental Effects.

#### 4.1.2.3 Aboriginal Cultural Heritage Assessment Surveys

##### **Survey Engagement Process**

As the Subject Area required a limited amount of manpower to effectively survey the proposed haul road corridor (approximately 800 m in length and less than 100 m wide), SCPL invited the seven RAPs who had been registered through the previous Stratford Extension Project consultation process to participate in an Aboriginal cultural heritage survey with archaeologists from Niche and representatives from the Stratford Mining Complex.

##### **Aboriginal Heritage Surveys**

The Aboriginal cultural heritage survey was conducted on Thursday 5 May 2016.

Further details regarding the survey and the survey coverage are provided in Sections 9, 10 and 11. Table 4 summarises the representatives of the RAPs who attended the surveys.



**Table 4: Aboriginal Cultural Heritage Survey Attendance**

Representative	Registered Aboriginal Party
Rob Paulson	Cultural Consulting Services
Robert Yettica	Forster Local Aboriginal Land Council
Vanessa Saunders	Karuah Local Aboriginal land Council
Ron Tisdell	

### 4.1.3 Stage 4 – Review of Draft Report

#### 4.1.3.1 Provision of Draft ACHA and Review Period

A draft of this report (i.e. the draft ACHA) was provided to all RAPs for their review and comment in accordance with Sections 4.3 and 4.4 of the ACHCRs (DECCW, 2010a). Responses received will be included in the consultation log in Appendix 2, and will be considered during finalisation of the ACHA.

In accordance with Sections 4.3 and 4.4 of the ACHCRs (DECCW, 2010a), a draft of this ACHA was provided to all RAPs listed in Tables 1 and 2 for review and comment on 9 June 2016, with feedback requested by 12 July 2016. Responses received are recorded in the consultation log in Appendix 2.

#### 4.1.3.2 Consideration of Comments Received on Draft ACHA

Comments on the draft ACHA received during review period (Section 5.6.1) included the following:

- Karuah Indigenous Corporation (21 June 2016).
- Gimbay Gatigaan Aboriginal Corporation (4 July 2016 and 12 July 2016).
- Kauwul Wonn1 (11 July 2016).

These submissions are recorded in Appendix 2. Responses to each submission received by the RAPs on the draft ACHA are provided below.

#### Comments Received from Karuah Indigenous Corporation

On 21 June 2016, the Karuah Indigenous Corporation provided written comments relating to another project (i.e. the Rocky Hill Coal Project), however the following general comments in relation to the local area were also provided:

***Comment: The Aboriginal or cultural significance of Aboriginal relics and sites can only be assessed by the Aboriginal community, and in particular, the Elders. It is the responsibility of the archaeologist to ensure that the Elders or elected representatives of the Aboriginal community are advised of the survey results, and are consulted as to their knowledge and opinion of the significance of the area, and to transcribe and present those expressions in report form.***

***Response:*** Although this comment was made in relation to another Project, it is noted that the purpose of the draft ACHA review period is to allow RAPs and other community members the opportunity to review the report (including the survey findings, archaeological significance assessment and management recommendations) and provide comment. All comments received during the draft ACHA review period are included in full in Appendix 2 and have been considered in this report.

### **Comments Received from Gimbay Gatigaan Aboriginal Corporation**

On 4 July 2016, Gimbay Gatigaan Aboriginal Corporation provided the following written comments:

**Comment:** *I was calling you in regards to the Aboriginal heritage survey which was conducted on the 5th May 2016, I was wanting to know why Gimbay Gatigaan was not invited to participate in the survey?*

**Response:** As described in Section 4.4.2.3 of the ACHA report, and as the survey was only for one day (i.e. 5 May), SCPL invited the RAPs that were involved in previous surveys at the Stratford Mining Complex to attend. Therefore, as described in Table 4, representatives from Cultural Consulting Services, Forster Local Aboriginal Land Council and Karuah Local Aboriginal Land Council attended the survey.

On 12 July 2016, Gimbay Gatigaan Aboriginal Corporation provided the following written comments:

**Comment:** *I would like to express concerns about the amount of RAP's. I am a Worimi woman been reared up on country and have never known most of these RAP's to have any kind of association or understanding of Worimi/Biripai cultural knowledge. More than half of these RAP's are associated or registered in the current Gomeroi and Wonnarua Native Title claim which would confirm their knowledge would be very limited of Worimi country... Regarding the survey that took place on 5th May 2016 no comments were received. I am concerned that persons who took part in the survey on 5th May did not have any cultural knowledge to that particular area.*

**Response:** SCPL acknowledges that it is only Aboriginal people who can determine who is accepted by their community as being authorised to speak for Country and its associated cultural heritage (DECCW, 2010a). It is further noted that SCPL is required to comply with the ACHCRs (DECCW, 2010a), and hence SCPL is required to consult with all RAPs for the Modification.

SCPL considers that the consultation process undertaken for the ACHA associated with the Modification is in compliance with the requirements of the NSW *National Parks and Wildlife Regulation, 2009* and the ACHCRs (DECCW, 2010a).

Regardless of participation in the field surveys, all RAPs have been consulted with throughout the preparation of this assessment, including the opportunity to review and provide comment on the Proposed Methodology and the draft ACHA, as well as the opportunity to provide comments and feedback at any point during the preparation of the assessment and at the information session.

### **Comments Received from Kauwul Wonn1**

On 11 July 2016, Kauwul Wonn1 provided the following written comments:

**Comment:** *We agree with the recommendations provided in the draft report and are satisfied with the - 100% coverage of the impact area. It appears that the archaeologist has consulted well with the survey team to establish the need for test excavations within the Craven variant soil horizons within the proximity of Dog Trap Creek.*

**Response:** Noted.

**Comment: Because of the non-potential for visual sighting of artefacts during the survey, the proposed test excavation methodology (Appendix 5) appears to be sufficient for the total area of the proposed impact area. It is appreciated that there is the opportunity to expand these pits should significant numbers of artefacts be found, however more than 30 artefacts per m<sup>2</sup> is considered to be too high for reasonable expansion of pits. I suggest that 5 to 10 artefacts would be preferable as there may be a chance of overlooking a significant artefact site considering the distance proposed between each test pit ("20m apart on a grid (but a minimum of 5m apart").**

**Response:** The purpose of the proposed test excavation within portions of the Subject Area is to increase the knowledge of the local archaeological resources and therefore contribute to a further understanding of historic Aboriginal settlement of the region.

The proposed test excavation methodology is outlined in Appendix 5 and is consistent with the requirements of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010b). As described in the methodology, test excavation pits would be expanded to document archaeological features or areas of relatively high artefact density (>30 artefacts per m<sup>3</sup> or to be defined by the archaeologist on the basis of a literature review of archaeological excavations in the region).

**Comment: It is presumed that following approval of the extension project, the work on this road will commence before 2018? If environmental changes within the impact area occur prior to the test excavation period, there is a potential for artefacts to become exposed through vegetation thinning, if this is the case, a further walk-over and salvage will need to be undertaken at the same time as the test excavation program.**

**Response:** As described in Section 13, an updated HMP would be prepared prior to construction of the private haul road. This HMP would include a protocol for the management of any previously unrecorded Aboriginal heritage sites (in the event that they are identified) as well as a plan for the short and long term management of recorded Aboriginal objects (if any), in accordance with Section 85 of the NPW Act.

#### **4.1.4 Review of Final Report**

A copy of the final ACHA report will be made available by the DP&E to all RAPs during the public exhibition period for the Stratford Mining Complex Modification. During this exhibition period all RAPs will have the opportunity to review and provide additional comment on the final ACHA report as well as any other part of the Statement of Environmental Effects (e.g. including the ecological and water assessments).

## 5. Investigators and Contributors

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This investigation was conducted by Clare Anderson (BA Hons), who has 8 years of experience as a professional archaeologist and heritage consultant in NSW.

Consultation pursuant to the ACHCRs (DECCW 2010a) was managed by Yancoal Australia Ltd.

In addition to the individuals noted in Table 4, fieldwork was conducted by Balazs Hansel (MA Arch) and Renee Regal (BA Hons) who have 14 years and 10 years experience respectively as professional archaeologists and heritage managers. GIS and mapping and cartography was undertaken by Dr. Ross Jenkins.

## 6. Landscape Context

### 6.1 Overview and Topography

Consideration of the landscape is essential to the definition and interpretation of past Aboriginal land use across a landscape and is a requirement of any Aboriginal archaeological and cultural heritage investigation (DECCW, 2010a: 8). The landscape may provide clues as to those areas of land that may have been more intensively used by Aboriginal people in the past due to the presence of resources such as water, stone, plants and animals and other raw materials or landscape features associated with sustenance, shelter, tool manufacture and cultural activities. The landscape provides the context within which the material remains of past Aboriginal occupation may be preserved, and detectable due to the movement of soil through geomorphic processes such as erosion or its removal from the landscape through past land use and disturbance (DECCW, 2010a: 8). By considering these factors, an Aboriginal cultural heritage investigation may develop a sampling strategy for identifying any tangible Aboriginal heritage values within the Subject Area.

The Stratford Mining Complex is situated within the Gloucester sub-bioregion in the Avon River valley lowlands, which extend from Craven to Gloucester. The Gloucester sub-bioregion consists of broad alluvial plains, undulating rises and low hills, with elevation ranging from 650 m to 900 m Above Sea Level (ASL). The proposed private haul road traverses lower slopes down to the alluvial plains and terraces associated with Dog Trap Creek (Plates 1 and 2).

This area is located in Australia's mild temperate climatic zone, which is characterised by the typical four distinct seasons (summer, autumn, winter and spring), mild to cool winters with low humidity and hot to very hot summers with moderate humidity. Only during the most extreme weather of winter and summer are weather conditions likely to be uncomfortable for people living in the area (Australian Bureau of Statistics, 2016). At the nearby Chichester Dam weather station (approximately 27 km southwest of Stratford) twentieth century weather records show the highest monthly mean temperatures to range between 26.6 degrees Celsius (°C) in December and 12.7 °C in July, while the mean temperature minimums range between 6.2 °C in July and 17.2 °C in December. Average annual rainfall at Chichester Dam is 1316 millimetres, with the highest rainfall occurring in the summer and early autumn months (Australian Bureau of Meteorology, 2016). Such a temperate climate is typical of the coastal and hinterland regions of eastern Australia, and would have presented no constraints to year round settlement of the area by Aboriginal people in the past.



**Plate1: The lower slope landform in the Subject Area**



**Plate 2: The alluvial plains and terraces associated with Dog Trap Creek**

## 6.2 Geology and Potential Stone Sources

The underlying geology in the Subject Area and surrounds consists of the Permian Coal Measures that developed in the axis of the Stroud-Gloucester Syncline. The Stroud-Gloucester Syncline is a long shallow formation flanked on both sides by rugged outcropping of erosion-resistant early Permian Alum Mountain Volcanics, comprising tuffs, mudstones and acid volcanics. To the east of the Alum Mountain Volcanics, the dominant rocks of the Karuah Mountains are carboniferous sediments including lithic sandstone, conglomerates and mudstone, and some porphyritic rhyolites and volcanic breccias (Henderson, 2000).

The ranges slope downwards towards Avondale Creek and Dog Trap Creek. The underlying geology then transitions to quaternary alluvium associated with the alluvial plains of Dog Trap Creek. Rock outcrops are not present in the Subject Area. It has been suggested that cobbles within Dog Trap Creek may have been available for artefact manufacture (Kayandel, 2012).

## 6.3 Soils

Soils can help provide an indication of the available stone, soil, water and plant resources that might have been available in the past. Some soils can be dated to provide a chronology of the past, as well as preserve past climate indicators such as charcoal and pollen. In the case of Aboriginal objects such as stone tools, soils can provide an indication of the likely preservation of Aboriginal objects, the depth of any Aboriginal objects and the likelihood that any Aboriginal objects have moved since they were deposited or discarded.

Henderson (2000) conducted a Soil Landscapes study across the region, using soil profile data available from the NSW Government Soil Profile Attribute Data Environment (SPADE) Website (part of the NSW Natural Resource Atlas). Soil at the site of the existing Stratford Mining Complex was assessed by McKenzie Soil Management (2012). The proposed haul road alignment is situated within quaternary alluviums of sand, silt, clay and gravel, and intersects three soil landscapes (Figure 3):

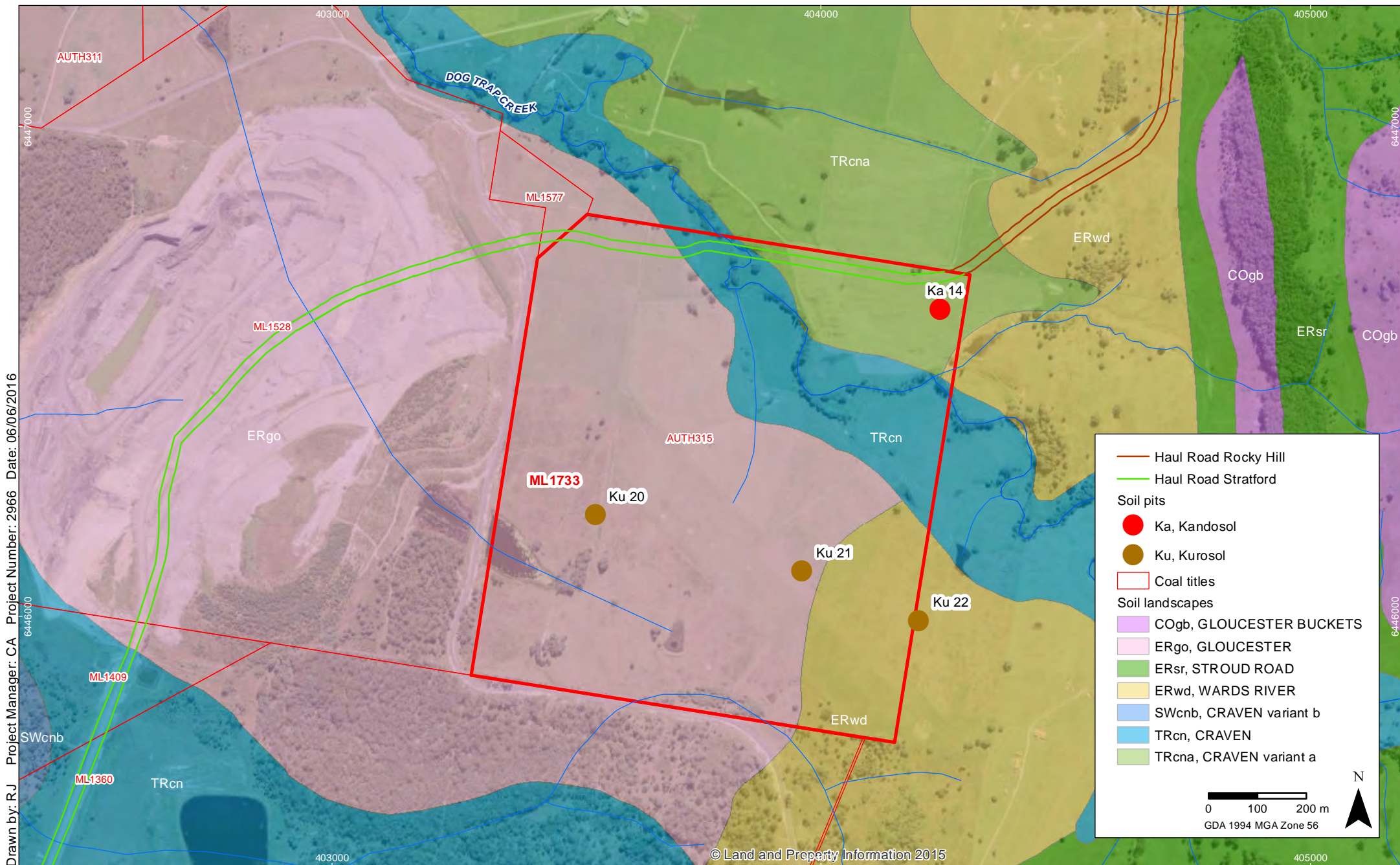
- Craven.
- Craven Variant A.
- Gloucester.

Four soil test pits were excavated to between 0.5 m and 1.4 m in ML 1733 within 1 km of the Subject Area by McKenzie Soil Management (2012) during preparation of the Agricultural Assessment for the Stratford Extension Project Environmental Impact Assessment.

Soil test pits 20, 21 and 22 are located on the lower slopes to the south of the proposed haul road within the Gloucester soil landscape, and indicate that the depth to the clay B horizon is less than 30 centimetres (cm) depth. When coupled with the record of past and current land use in the Subject Area (See Section 6.6), it is probable that any Aboriginal objects that remain on the lower slope landforms in the Subject Area would have been subject to a high degree of disturbance and movement. As a result, they are unlikely to be able to provide archaeological information about past Aboriginal land use.

Soil test pit 14 is located on the alluvial terrace within the Craven Variant A soil landscape to the north and east of Dog Trap Creek, in the north-eastern corner of ML 1733. The A horizon transitions from a silty clay loam topsoil to a sandy clay loam by 0.55 m depth. A light clay B horizon is reached by 0.75 m depth. When considered with the record of past and current land use in the Subject Area (See section 6.6), it is possible for relatively intact soil profiles – and hence any Aboriginal objects associated with them – to be present below 0.3 m.





Soil Landscapes

Stratford Mining Complex Modification 1 ACHA

**FIGURE 3**



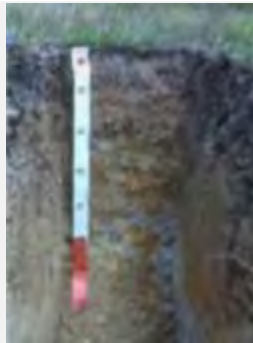
Imagery: (c) LPI 24/03/2012



Eleven soil test pits have also been excavated for the Rocky Hill Coal Project, in proximity to the Modification. Of these eleven pits, two (Pit J and Pit K) fall within or in very close proximity to the Subject Area. Pit J is located to the north of Dog Trap Creek, on a raised area coincident with the Craven Variant A soil landscape. In Pit J the depth to the Clay B horizon is 85 cm, with sandy clay and clay loam above. Pit K is located on the mapped boundary of the Craven and Gloucester soil landscapes, again on a raised area overlooking the lower alluvial flats of Dog Trap Creek. In Pit K the B horizon was encountered at 80 cm depth, and above this were fine sandy clay loams and topsoil. Again it is possible for relatively intact soil profiles – and hence any Aboriginal objects associated with them – to be present below 0.3 m, based on these soil test pit results.

A summary of the characteristics of these soil landscapes and their likely archaeological potential is provided in Table 5.

**Table 5: Summary of Soil Landscapes and their archaeological potential in the Subject Area**

Soil Landscape	Landform	Soils	Example Soil Profile from Soil Sample Locations	Archaeological Potential
Craven Transferral	Low wide drainage depressions and swamps on Quaternary alluvium	Imperfectly drained Natric Yellow Kurosols (duplex). Highly erodible sodic/dispersive soils, strongly acidic, seasonal waterlogging, dryland salinity. These soils may predominately receive sediments from adjacent slopes and are not thought to be alluvial soils derived from water borne sediments.		<p>Generally, the Craven soil landscape in the Subject Area has low archaeological potential due to the scouring effects of water courses and the likely impact of past land use disturbance on the shallower, clayey kurosol duplex soils. There is however some potential for aggrading, buried soil horizons associated with adjacent low slopes and interfaces with past alluvial fans, terraces and alluvial conditions of Dog Trap Creek (eg. Craven Variant A and below approximately 0.3 m in the Craven soil landscape).</p> <p>Plate 3: 1Yellow Kurosol Pit K.</p>
Craven Transferral Variant A	Low gradient alluvial fans	Imperfectly drained Natric Yellow Kurosols (duplex) and Kandasols. Highly erodible sodic/dispersive soils, strongly acidic, seasonal waterlogging, dryland salinity.		<p>Alluvial terraces and areas where soils may have been deposited that have not been subject to high levels of earthworks in the Craven Variant A soil landscape, offer a high likelihood of archaeological potential in the Subject Area between 0.3 m and the clay B horizon. This landform and soil landscape have the potential for buried and intact soil horizons below past land use disturbance.</p> <p>Plate 4: Grey Kandasol Pit 14, from McKenzie Soil Management (2012)</p>
Gloucester Erosional	Undulating low hills on Permian sediments (sandstone, siltstone, shale, coal and conglomerate); relief <50 m; slopes <10%	Brown Sodosols and Grey Kurosols on imperfectly to moderately well-drained sideslopes and (duplex) crests. Shallow Tenosols on crests and steeper sideslopes. Highly erodible sodic/dispersive soils, strongly acidic, seasonal waterlogging (lower slopes).		<p>The Gloucester soil landscape has low archaeological potential within the Subject Area due to the likely impact of past land use disturbance and sheet-wash and erosion on the shallow soils.</p> <p>Plate 5: Yellow Kurosol Pit 20, taken from McKenzie Soil Management (2012)</p>

## 6.4 Hydrology

Water is one of the most important resources to human occupation in a landscape and is considered the primary factor in the prediction of Aboriginal sites in the landscape. Across NSW, there is a strong correlation to the presence, frequency and density of Aboriginal objects with the abundance and permanency of water sources. Areas within 200 m of water are identified by the NSW Mineral Council's (2010) *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* as being frequently associated with the presence of Aboriginal objects.

The Subject Area contains land within 200 m of water and is intersected by the ephemeral Dog Trap Creek which originates from the ranges to the east of the Subject Area and flows into the perennial Avon River approximately 1.7 km north-east of the Subject Area (Figure 4). During normal flow conditions, the stream is fast flowing with a coarse sand and gravel substrate on a clay base (frc environmental, 2012: ES-2). The creek has been modified through agricultural uses in the region and the stream banks and bed are impacted by cattle activity, with areas of bank erosion.

## 6.5 Ecology

The Subject Area and immediate surrounds has been subject to extensive clearance of native vegetation and currently consists of pasture improved open grasslands with revegetated mine workings and small pockets of River Oak riparian woodland along Dog Trap Creek.

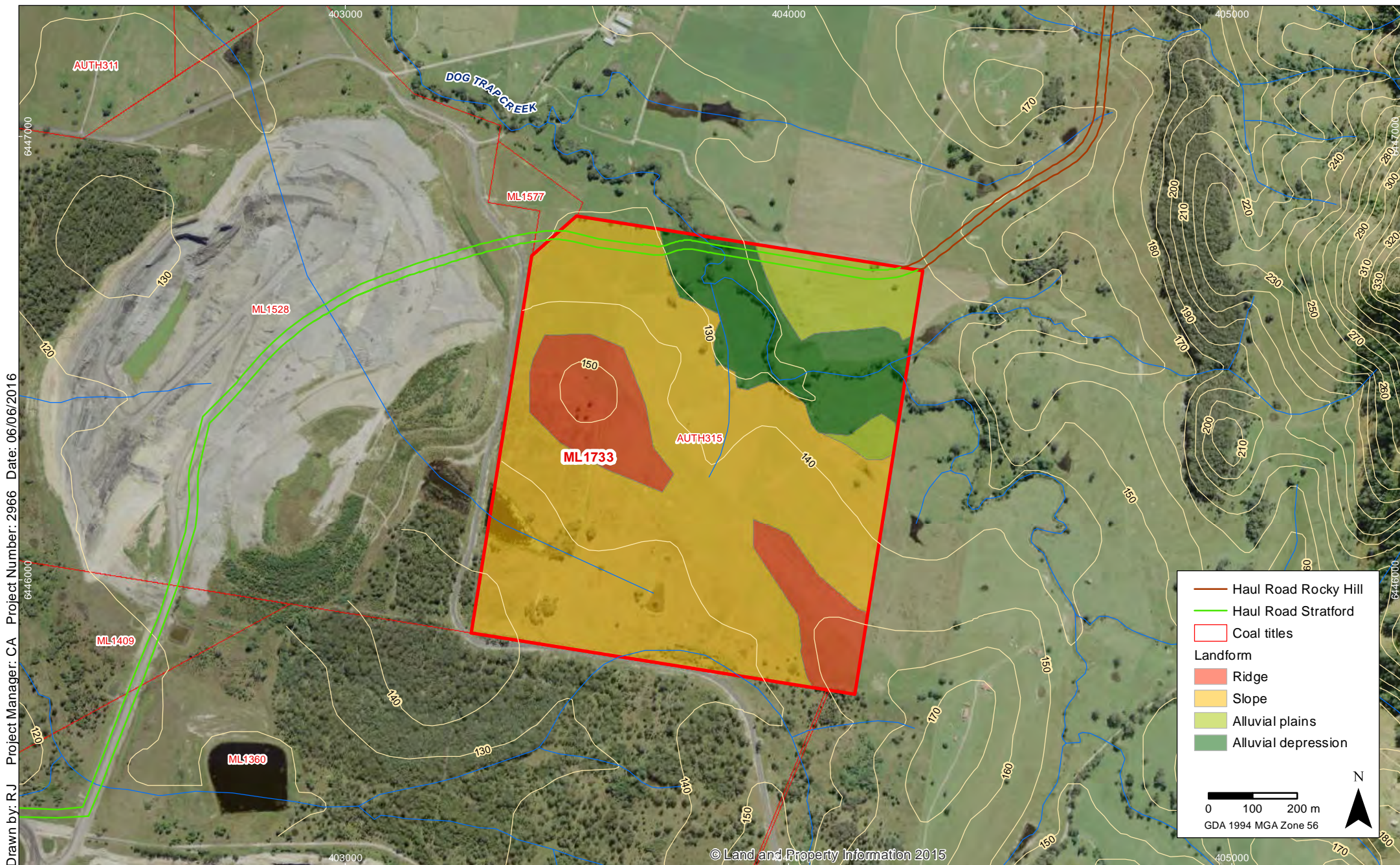
Pre-European vegetation is likely to have followed overall patterns of native vegetation based on landscape position within the local area. Riparian forests occur on the major watercourses, Red Gum-paperbark forests occur on flat areas of the valley floor with impeded drainage, while wet sclerophyll forests occur on foothills and steeper slopes (Flora Search, 2012: ES-1).

Terrestrial faunal assessments and an aquatic ecological assessments prepared for SCPL as part of the Environmental Assessment for the Stratford Extension Project indicate around 290 animal species, including 20 species of frog, 31 species of reptile, 9 species of fish, 179 species of bird and 46 species of mammal, were available in modern times within the wider Stratford Mining Complex (AMBS, 2012; frc environmental, 2012). A broad range of these species are known to have been exploited by Aboriginal people in the region and the consultation process has indicated that waterways (such as Dog Trap Creek) are an important resource to contemporary Aboriginal communities (Table 3).

## 6.6 Past Land Use and Disturbance

McKenzie Soil Management (2012) describes that the Stratford Mining Complex is located in a rural area characterised by vegetated areas, cattle grazing for beef and dairy products on native and improved pastures and the existing/approved Stratford Mining Complex and Bowens Road North Open Cut Coal Mine.





Landforms and Hydrology  
Stratford Mining Complex Modification 1 ACHA

**FIGURE 4**

Imagery: (c) LPI 24/03/2012



To assess the degree of past land use and disturbance within ML 1733, the following sources were reviewed:

- Historical aerial photography (1952, 1964, 1971, 1983, 1996, 2011).
- Non-Aboriginal Heritage Assessment (Heritage Management Consultants, 2012).
- Land Contamination Assessment (Ardill Payne and Partners, 2012).
- Agricultural Resource Assessment (McKenzie Soil Management, 2012).
- Agricultural Assessment (Stratford Coal, 2012).
- Flora Assessment (FloraSearch, 2012).
- Aquatic Ecology Assessment (frc environmental, 2012).

Historical aerial photography indicates that the area within ML 1733 was already subject to land clearing and agricultural practice by 1952 (Figure 5). A planted line of trees intersecting the proposed haul road along the lower slopes in the western portion of the Subject Area is visible in 1952. This stand of trees was removed by 1964. The 1952 aerial imagery also indicates earthworks approximately 250 m east of the western ML 1733 boundary and immediately adjacent Dog Trap Creek. The disturbance appears to have been subsequently rehabilitated by 1971. Agricultural and grazing uses, including pasture improvement, across the remainder of proposed haul road alignment appear to be consistent between 1971 and 2011, though further land clearance, re-contouring, creek modifications, agriculture and grazing are visible across other sections of ML 1733 (Plate 6). The Aquatic Ecology Assessment prepared for the Stratford Extension Project demonstrates stream bank erosion from cattle grazing (frc environmental, 2012: 25). Imported fill has been added to Dog Trap Creek to provide creek crossings in some locations (Plate 7).

Grazing and agricultural past land uses are likely to have disturbed or removed soils to depths between 0.3 m and 0.5 m. This is likely to have diminished the potential for Aboriginal objects to be present and for Aboriginal objects to be *in situ* in the top 0.3 m to 0.5m. Earthworks, contouring and creek remediation works are likely to have substantially removed and reduced the potential for Aboriginal objects to be present in some locations, though some intact soil profiles may still be present.

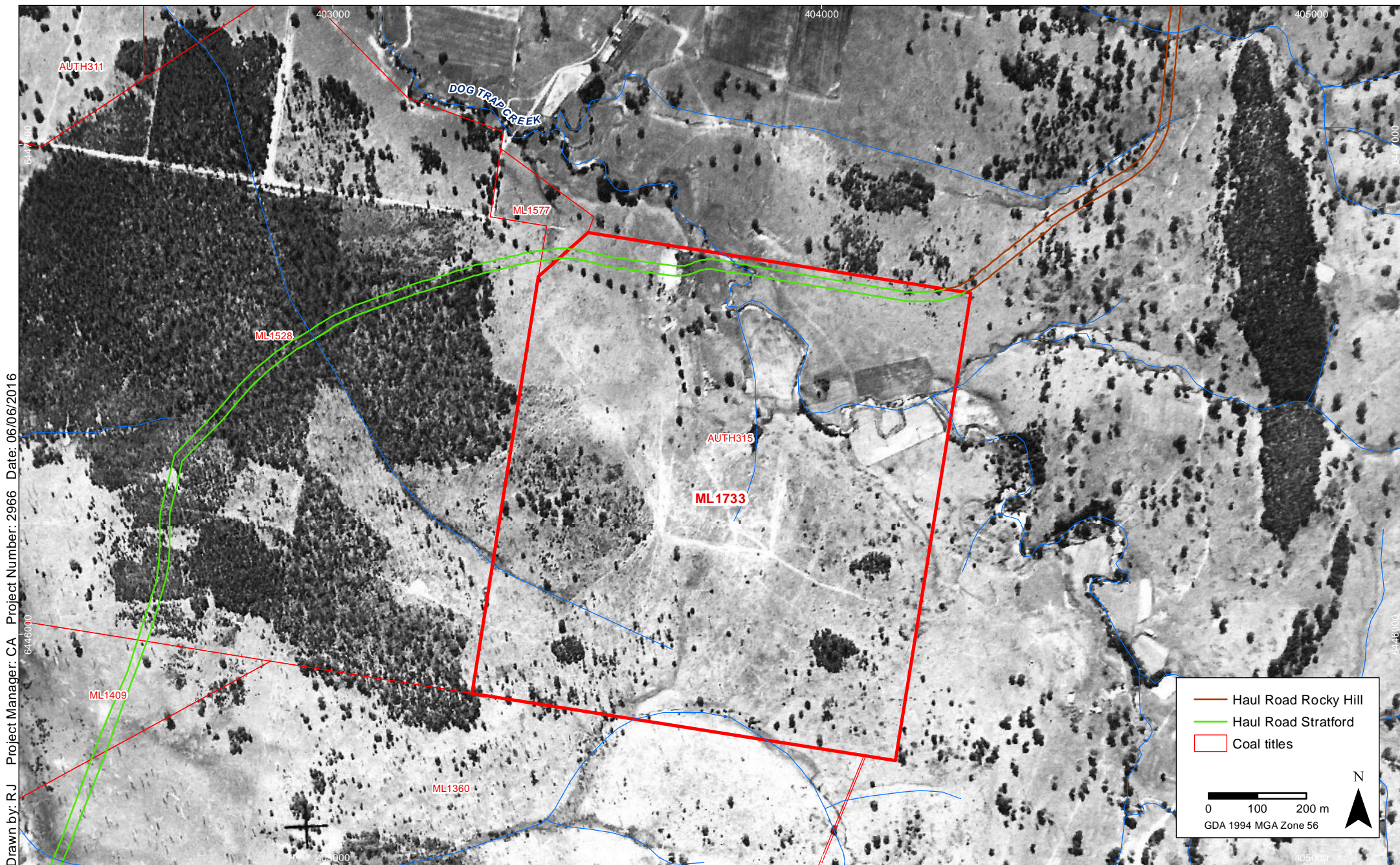


**Plate 6: Example of a cut into the natural slope profile within the Subject Area**



**Plate 7: Artificial creek crossing on Dog Trap Creek and non-native grass species**





Past Land Use and Disturbance (Imagery 1952)  
Stratford Mining Complex Modification 1 ACHA

**FIGURE 5**



## 6.7 Summary

The above landscape context demonstrates that the broader area contained a range of resources, including water, flora and faunal resources capable of supporting a range of past Aboriginal land use, with no climatic or seasonal constraints. The RAPs have stated that water ways have contemporary cultural values (Section 4). The proximity of the Subject Area to alter Dog Trap Creek and its location on alluvial plains and terraces would typically indicate a higher potential for Aboriginal objects and sites to be present and to be preserved.

Preservation conditions for Aboriginal objects and sites in the wider surrounding area are however considered to be generally poor. This is due to the dominance of shallow, clayey and erosional soils on the lower slopes of the Gloucester and Craven transferral soil landscapes, and the depth and extent of past land use and disturbances from vegetation clearance, re-contouring, creek modifications, agriculture and grazing, and some earthworks. Culturally modified trees are unlikely to be present due to vegetation clearance, while stone artefact sites are unlikely to be visible due to the level of grass cover and disturbance from pasture improvement. Stone artefact sites that are present are likely to be heavily disturbed in the top 0.3 m to 0.5 m of soil.

The alluvial plains and terraces associated with the Craven Variant A soil landscape and portions of the Craven soil landscape where it interfaces with previous alluvial channels and the Craven Variant A soil landscape and low slopes, offer the best potential for sub-surface archaeological potential below 0.3 m. These landforms and soil landscapes have the potential for buried and intact soil horizons below past land use disturbance. Such buried and intact soil horizons have the potential to contain Aboriginal objects.



## 7. Aboriginal Archaeological Context

### 7.1 Ethnography and History

Linguistic maps of the region (Tindale, 1974; Horton, 1996) derived from historical and ethnographic records suggest that the Stratford Mining Complex and surrounds was associated with the border of the Birpai (or Birripai) group and the Worimi group.

The Birpai group occupied the area from the mouth of the Manning River at Taree and inland to near Gloucester (South Australian Museum, undated). They were principally on the south side of the river and also on the Forbes, Upper Hastings and Wilson rivers. The Worimi group were located from the Hunter River to Forster near Cape Hawke along the coast, at Port Stephens and inland to near Gresford (South Australian Museum, undated). They also occupied territory around Glendon Brook, Dungog, the head of Myall Creek and south to Maitland. The Worimi and Biripi tribes both spoke dialects of the Kattang language (Corporate Culcha, 2014). Neighbouring groups include the Wonnarua, Awabakal, and Kamilaroi.

The Worimi group were divided into a number of smaller family groups with associations with specific territories. European settlement in the region and the establishment of cedar logging in the area, saw the Worimi and Biripi people moved from their lands onto missions (Corporate Culcha, 2014).

People of the Biripi and Worimi language groups led a lifestyle which took them at different times of year into every part of their Country. This included the rugged foothills of what we now call the Great Dividing Range, the lower bush covered hills, and the open woodland of the Gloucester Valley. It also included the bands of rainforest (or 'brush') on the alluvial soils along the Manning River, its major creeks and the large flat islands in the estuary. The rainforests contained huge fig, tamarind and cedar trees with vines, ferns and shrubs. There were also the great and small swamps near the river and coast, and the long sandy beaches with their dunes and rocky headlands (Byrne and Nugent, 2004).

The Worimi people also attended various locations for ceremonial purposes. Natural stone material used for manufacturing tools was obtained within the Worimi group's area and also through trade with neighbouring tribal groups (Leon and Feeney, 1998). Detailed cultural assessments have been completed for the Worimi group as part of the DEC's "Mapping Attachment" project (Byrne and Nugent, 2004).

The total Indigenous population of the Gloucester region (including surrounding regions) is 4,319 (or 4.5% of the total population of the region), with 229 Indigenous people residing in the Mid-Coast Council Local Government Area, and a further 263 residing in the Dungog Local Government Area, which covers the southern part of the subregion (Corporate Culcha, 2014). Worimi and Birpai descendents continue to live in the local and wider region and maintain a strong interest in managing cultural resources, evidenced by the number of RAPs for the Modification.

Consultation records from the Stratford Mining Complex Extension Project indicate that contemporary Aboriginal people associate the ridgelines to the south and east of the Stratford Mining Complex as pathways and that there may be a cultural site in the ranges (Kayandel, 2012). This area will not be impacted by the proposed Modification.

## 7.2 Heritage Registers

### 7.2.1 National Parks and Wildlife Act Registers (AHIMS)

An extensive Aboriginal Heritage Information Management System (AHIMS) search was conducted on 24 March 2016 (AHIMS Client ID 217647) for a 62 km x 62 km area centred on the Subject Area (Figure 6, Appendix 4). The search returned 102 records, including one restricted site (38-1-0028). Site 38-1-0028 was confirmed by AHIMS not to occur within 2 km of the Subject Area.

There are no previously recorded Aboriginal sites in the AHIMS register within the Subject Area. Seven previously recorded Aboriginal sites are located within 1 km of the Subject Area. These sites have been recorded during previous archaeological assessments for the Stratford Mining Complex, but will not be impacted by the Modification. The sites are summarised in Table 6.

**Table 6: Previously recorded AHIMS sites within 1 km of the Subject Area**

AHIMS No.	Site Features	Distance from Subject Area (m)
38-1-0031	PAD	972
38-3-0077	Artefacts	920
38-3-0081	Scarred Tree	883
38-3-0083	Isolated Artefact	904
38-3-0084	Isolated Artefact	905
38-3-0089	Artefacts	928
38-1-0101	Isolated Artefact (Destroyed - AHIPs 1374,2857,2858)	662

The sites located within 1 km of the Subject Area are all open sites, and with the exception of the scarred tree are, or in the case of the Potential Archaeological Deposits (PADs) are predicted to be, stone artefact sites containing one or more artefacts. The sites are all within 100 m of ephemeral drainage lines (Figure 6), which is probably both a result of the sporadic presence of water and increased ground exposures near the drainage lines.

Table 7 provides a summary of the AHIMS search results and a copy of the search is provided in Appendix 4. Of the 102 previously recorded Aboriginal heritage sites within the search area sites containing surface stone artefacts with or without PADs were the most commonly recorded site features, followed by PADs, culturally modified trees, ceremonial sites (such as ceremonial rings or dreaming sites), burials, grinding groove sites and stone arrangements.

The AHIMS data reflects a pattern of intense archaeological assessment associated with major projects and developments such as mines and linear infrastructure, surrounded by large areas with an absence of systematic Aboriginal heritage survey and assessment, and hence a lack of known and recorded sites in primarily rural and undeveloped areas (Figure 6). The greater frequency of open sites containing stone artefacts and PADs (areas presumed by archaeologists to be open sites with buried stone artefacts) is typical of sites in the pastoral plains and hills of coastal and hinterland eastern NSW.





Previously Identified Aboriginal Sites in AHIMS  
Stratford Mining Complex Modification 1 ACHA

**FIGURE 6**

Imagery: (c) LPI 24/03/2012



**Table 7: Summary of AHIMS search results within a 62 km x 62 km search radius of the Subject Area**

Aboriginal Site Features	Count of Aboriginal Sites	Percentage of Aboriginal Sites
Artefacts with/without PADs	59	58 %
PADs	14	14 %
Culturally Modified Tree	14	14 %
Ceremonial Ring / Aboriginal Ceremony and Dreaming Site	6	6 %
Ceremonial Ring (Stone or Earth) with Culturally Modified Tree	1	<1 %
Burial	3	3 %
Grinding Groove	2	2 %
Stone Arrangement	2	2 %
Restricted	1	<1 %
<b>Grand Total</b>	<b>102</b>	<b>100 %</b>

### 7.2.2 State Heritage Inventory

A search of the State Heritage Inventory, including the Gloucester Local Environmental Plan, was completed on 20 April 2016 for the Mid-Coast Council Local Government Area. No heritage items were recorded in or immediately adjacent to the Subject Area.

## 7.3 Local Archaeological Studies

Archaeological studies document material evidence of Aboriginal use of the landscape at times both before and after written history, and complement the oral histories and cultural knowledge held by the Aboriginal community.

A brief summary of key Aboriginal archaeological assessments within 30 km of the Subject Area is presented below. A synthesis of these studies as they relate to the Subject Area and the wider region is presented in Section 7.4.

### 7.3.3 Stratford Coal Mine (Brayshaw, 1984; Brayshaw McDonald Pty Ltd, 1994; Kayandel, 2012)

The Stratford Mining Complex has previously been assessed for Aboriginal heritage values as part of the Stratford Coal Environmental Impact Statement and the Stratford Coal Extension Project (Brayshaw, 1984; Brayshaw McDonald Pty Ltd, 1994; Kayandel, 2012). Portions of ML 1733 have been surveyed for Aboriginal objects, however the Subject Area for this Modification has not previously been surveyed.

Fifteen sites comprising open scatters, isolated finds, scarred trees, PADs and a potential cultural site have been identified within the Stratford Coal Mining Complex.

Previously recorded artefact sites were generally isolated stone artefact sites or low density artefact scatters (consisting of less than ten artefacts) located in shallow soils on the lower slopes/plains landforms in the Gloucester soil landscape and upper slopes. The site records for the Stratford Mining Complex indicate that stone tools were typically manufactured from a grey silicified or indurated mudstone, chert and silcrete. Stone artefact types included complete and broken flakes, cores, blades and backed blades.

The archaeological resource within the Stratford Mining Complex was assessed to be consistent with the archaeology of the wider region.

The archaeological model for the Stratford Mining Complex states that archaeological evidence within the Stratford Mining Complex may be expected to occur (Kayandel, 2012):

- on ridge-tops, the saddle and upper slopes which were possible vantage points for the landscape below and travelling routes;
- near permanent and ephemeral streams and creeks, especially if swamps or billabongs are or used to be present;
- scarred trees could occur where mature trees have survived bushfires, land clearing and forestry harvesting; and
- site types such as shelters with art and/or deposit, axe grinding grooves, and engravings are possible where granitic and sandstone outcrops are present.

#### **7.3.4 Bowens Road North Project (Heritage Search, 2000)**

Heritage Search conducted an archaeological survey in November 2000 of the proposed Bowens Road North Project, which forms part of the Stratford Coal Mining Complex (Heritage Search, 2000). One stone artefact (a broken flake) was located during the survey along a short ephemeral watercourse and was subsequently salvaged prior to disturbance. A PAD was recorded on Dog Trap Creek due to low visibility and the presence of alluvial plain landforms in association with water, however excavation was not considered warranted due to the level of disturbance from pastoral and agricultural activity and the expectation of low archaeological density.

#### **7.3.5 Duralie Coal Mine and Duralie Extension Project (Brayshaw, 1981; ERM Mitchell McCotter, 1995; McCardle, 2008; Kayandel, 2009; Duralie Coal Pty Ltd, 2013)**

Aboriginal heritage assessments have been completed for the Duralie Coal Mine and Duralie Extension Project, located approximately 20 km south of the Stratford Mining Complex (Duralie Coal Pty Ltd, 2013; Kayandel, 2009; ERM Mitchell McCotter Pty Ltd, 1995; Brayshaw, 1981).

A total of 13 Aboriginal heritage sites were identified by the Duralie Extension Project ACHA within ML 1646, ML 1427 and surrounds. These sites included four isolated artefacts, three open artefact scatters, one burial site, four scarred trees of yellow box and one scarred ironbark honey tree. Sites were located on gentle to moderately inclined slopes, spurs, gentle crests, ridgelines in view of or in association with tributaries draining towards Mammy Johnson River.

Stone artefact sites were generally isolated stone artefacts and low density artefact scatters with less than 25 artefacts and manufactured from a range of raw materials including basalt, quartzite, grey fine grained siliceous material, red silcrete and jasper. Artefact types included complete and broken flakes, cores and suspected river cobble hammerstones.

Statements of significance for the Duralie Coal Mine demonstrate the cultural importance of the general landscape of the Duralie Coal mine and its surrounds, the importance of the burial site and river associated with the historical figure of Mammy Johnson and the river as a natural landscape of cultural significance (Duralie Coal Pty Ltd, 2013).



### **7.3.6 Fibre Optic Cable between Wyong and Gloucester and Stratford and Gloucester (Kuskie, 1993a; Kuskie, 1993b)**

Kuskie (1993a) conducted a survey for the proposed route of a fibre optic cable between Wyong and Gloucester. The survey identified one artefact scatter and one isolated artefact located along the proposed cable route. The recommendations from the Kuskie report indicated that the proposed fibre optic cable route would not affect the recorded sites.

### **7.3.7 Gloucester Tops Quarry Site (Leon, 1998; Dallas, 1998)**

An archaeological survey was conducted at a gravel quarry within the Gloucester Tops (Dallas, 1998). The results of the survey revealed no Aboriginal artefacts although an unregistered isolated artefact (comprised of a mudstone core) was discovered outside of the quarry area.

### **7.3.8 Gloucester Coal Seam Gas Project (ENSR, 2008; McCardle, 2009)**

A field survey of Lucas Energy's Gloucester Coal Seam Gas Project area and pipeline corridor from Stratford to Hexham was conducted by ENSR Australia Pty Ltd (2008). Nine Aboriginal heritage sites (two possible scarred trees, four artefact scatters and three isolated finds), and 14 PADs were discovered during the survey of the Project area.

### **7.3.9 Optic Fibre Cables Gloucester to Barrington, Stratford to Gloucester (Griffith, 1992a; 1992b)**

Preliminary inspections for Aboriginal sites and archaeological material were undertaken in 1992 along proposed optic fibre cable routes from Gloucester to Barrington (Griffith, 1992a) and Stratford to Gloucester (Griffith, 1992b). No Aboriginal heritage sites were recorded during the inspections (Griffith, 1992a; 1992b).

### **7.3.10 Rocky Hill Project (Yettica, 2010; Appleton, 2013; Archaeological Surveys and Reports, 2016)**

A number of Aboriginal heritage assessments have been completed for the Rocky Hill Coal Project located 5 km to the north of the Subject Area (Yettica, 2010; Appleton, 2013; Archaeological Surveys and Reports, 2016). At the time of drafting this assessment, an additional Aboriginal heritage assessment was being undertaken for the Rocky Hill portion of the proposed haul road (Archaeological Surveys and Reports, 2016).

Nine Aboriginal sites were identified as a result of assessments for the Rocky Hill Coal Project including a modified tree, isolated stone artefacts and a PAD. Sites were noted to occur on pale clays associated within creek banks, on gentle footslopes, in an actively eroding gully adjacent to a dam in a flat to very gently inclined landform and on moderate and steep slopes with a maximum of two artefacts per square metre.

A total of 23 stone artefacts were recorded as a result of the project. Artefacts included a ground edged axe, a number of cobbles, angular fragments and flakes (Appleton, 2013: 11-21). Stone artefacts were recorded as being manufactured from siltstone, mudstone and granite or basalt. Appleton expressed a low level of confidence in the original site recordings for the project (Appleton, 2013: 11-21). A range of factors were considered by Appleton as potential causes for the low frequency of identified artefacts, such as a lack of visibility, a lack of suitable stone artefact making raw material in the region, a lack of archaeological investigation in the region, professional bias from the surveyors, poor preservation conditions or a reflection of past Aboriginal land use.

Archaeological Surveys and Reports (2016) conducted an assessment supported by a survey for the proposed private haul road within the Rocky Hill Coal Project (this is the continuation of the private haul road assessed by this report, as described in Section 1.1). This section of the private haul road traverses country that is higher and hillier than the section discussed in this report. Archaeological Surveys and Reports (2016) reported finding two Aboriginal archaeological sites comprising two isolated stone artefacts (Archaeological Surveys and Reports, 2016: 38). The two isolated stone artefact sites were assessed to be directly impacted by the private haul road. It was recommended that the identified sites be salvaged prior to construction of the haul road, and that monitoring of grader scrapes be conducted as a remedy to the poor visibility in other areas deemed to be archaeologically sensitive (Archaeological Surveys and Reports, 2016: 38).

## 7.4 Regional Character

The Subject Area is situated within the land associated with the Biripi and Worimi groups (Section 7.1).

The regional character for the Gloucester sub-bioregion is, archaeologically speaking, relatively understudied. Material evidence of Aboriginal occupation in the region has not been dated and a search of the AHIMS register suggests that there have been no archaeological excavations within a 60 km radius of the Subject Area, with the nearest detailed archaeological investigations occurring over 70 km away as part of assessments for the Bulahdelah area and the Mount Arthur Coal Mine.

The most frequently found Aboriginal sites located in the region are isolated stone artefacts and low density stone artefact scatters followed by culturally modified trees of yellow box and ironbark. Culturally significant sites such as ceremonial rings and stone arrangements are known to occur in the region but are generally rare. Burials are also known to occur, but rarely, and it is hypothesised that this is a factor of either the acidic nature of the soils in the region or an absence of archaeological visibility (Appleton, 2013; Heritage Search, 2000).

Many of the Aboriginal sites previously recorded in the region have been identified on the surface of highly disturbed areas: road corridors, quarry sites, dams, erosional scars from downslope erosion (Kayandel, 2012; Appleton, 2013). The literature review indicates that stone artefact sites could occur on any landform or slope class but were observed to be of greatest density and frequency eroding from creek banks and erosion scars associated with drainage lines, creeks and gentle lower slopes (Appleton, 2013).

An Aboriginal Cultural Values Assessment of waterways within the Gloucester bioregion has been completed by Corporate Culcha (2014) as part of the government's bioregional assessment program and detailed cultural assessments have been completed for the Biripi and Worimi as part of the DEC's "Mapping Attachment" project (Byrne and Nugent, 2004). In addition, extensive archaeological and cultural heritage assessments have been completed for the Mount Arthur Coal Mine and for the Bulahdelah area.

The area's temperate climate and abundant mosaic of resources; including plentiful freshwater sources and a diverse range of flora and fauna species, indicates that the Gloucester region had the potential for all year round settlement by Aboriginal people in the past. The low frequency of Aboriginal sites on the surface is probably the result of low archaeological visibility and exposure rather than an actual absence of sites, however there has been no previous sub-surface excavations conducted within 50 km of the Subject Area to test this probability. Taking into consideration the suitability for the area to be a focus of past Aboriginal land use, and the presence of slowly aggraded alluvial soils suggests there is a high likelihood of buried, well preserved archaeological deposits being present in close proximity to ephemeral and permanent water sources.

## 8. Synthesis and Predictive Model

On the basis of the above landscape and Aboriginal archaeological context, the following predictive statements for the Subject Area are made:

- Where archaeological or ground surface visibility is present and past land use disturbance is relatively less, open stone artefacts and isolated stone artefact sites will be the most common site types within the Subject Area and may occur in any landform:
  - Stone artefact sites in the Subject Area, a resource rich zone due to the presence of Dog Trap Creek, will have moderately higher counts and densities of artefacts than other sites recorded in the local area and reflect a number of activity areas. A relatively broad range of raw materials and artefact types are predicted to be present as opposed to less rich resource zones.
  - The frequency of open stone artefact sites and the density of artefacts will decrease with distance from temporary and permanent water sources and outside relatively richer resource zones within the wider Modification Area.
  - Grey fine-grained siliceous material (identified variably by archaeologists in the background review as chert, mudstone and fine grained siliceous) will be the most commonly utilised stone for the manufacture of stone artefacts but artefacts, may also be manufactured from silcrete, chert, quartzite, basalt and jasper.
  - Artefact assemblages will mostly be comprised of complete and broken flakes and cores. A smaller percentage of the assemblage may comprise evidence of bipolar flaking or backed artefact manufacture.
  - Stone axes and hammerstones, although rare, may be present in the Subject Area.
- There is a knowledge gap in the recording of sub-surface archaeological potential in the region but PADs containing Aboriginal objects in open contexts (i.e. not rock shelters) may be present in the Subject Area below 0.3 m and most likely be preserved in association with lower slopes, drainage depressions, flats and terraces in proximity to water sources:
  - The transferral Craven and Craven Variant A soil landscapes will most likely contain these characteristics.
- Closed sites (such as rock shelters with art, artefacts and/or PADs) do not occur in the Subject Area due to an absence of suitable rock outcrops.
- Culturally modified trees may occur anywhere mature age trees are present; but are unlikely to occur in the Subject Area due to the levels of past vegetation clearance.
- Grinding grooves are typically found on sedimentary rock surfaces such as sandstone. It is unlikely given the geology of the Subject Area that grinding grooves may be present.
- Stone arrangements are rare but do occur in the region. There is a limited chance of these occurring in the Subject Area due to the level of surface disturbance from past land use.

- Burials are rare but do occur in the region and are associated with sandy soils and rockshelters, but are unlikely to be preserved in the Subject Area due to the acidity of the soils.
- There are no known ceremonial sites in the Subject Area and they are unlikely to occur in the Subject Area as they have not previously been identified during previous Aboriginal community consultation for the Stratford Mining Complex.
- Archaeological visibility and exposure within the Subject Area is likely to be low due to the cover of native and improved grasslands. Visibility and exposure will most likely occur as a result of grazing practices and erosion and surface wash around drainage lines and on slopes.

## 9. Assessment and Aboriginal Heritage Survey Methodology

A Proposed Methodology was provided to the RAPs on 24 March 2016. A copy is provided in Appendix 3. The methodology for the Aboriginal heritage survey is documented in more detail in the following section.

### 9.1 Survey Sampling Strategy

The *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b) requires a stratified and weighted sample of the landscapes to be assessed based on their occurrence in an impact or disturbance footprint, and the anticipated Aboriginal cultural heritage potential within those landforms.

As the Subject Area for the Modification is quite small, the survey methodology involved traversing the entirety of the impact footprint within ML 1733, and sampling 100% of landforms in the impact footprint.

#### 9.1.1 Survey Methods

The Aboriginal heritage survey was conducted on 5 May 2016.

Survey teams walked a single transect along the proposed haul road alignment within ML 1733, running east-west and intersecting Dog Trap Creek. All survey transects were conducted on foot. A total of six individuals completed the survey transect. Survey participants were generally spaced 10 m apart and features or exposures of interest were opportunistically investigated in more detail (Plate 8).

Survey transects were recorded on handheld non-differential GPS units with an average accuracy of  $\pm 5$  m. Environmental variables such as overall landform, slope, distance from water, visibility, soils and the presence of stone outcrops were recorded, and representative photographs were taken. Survey data was then post-processed in a GIS system and divided into survey units based on soil landscape and landform.

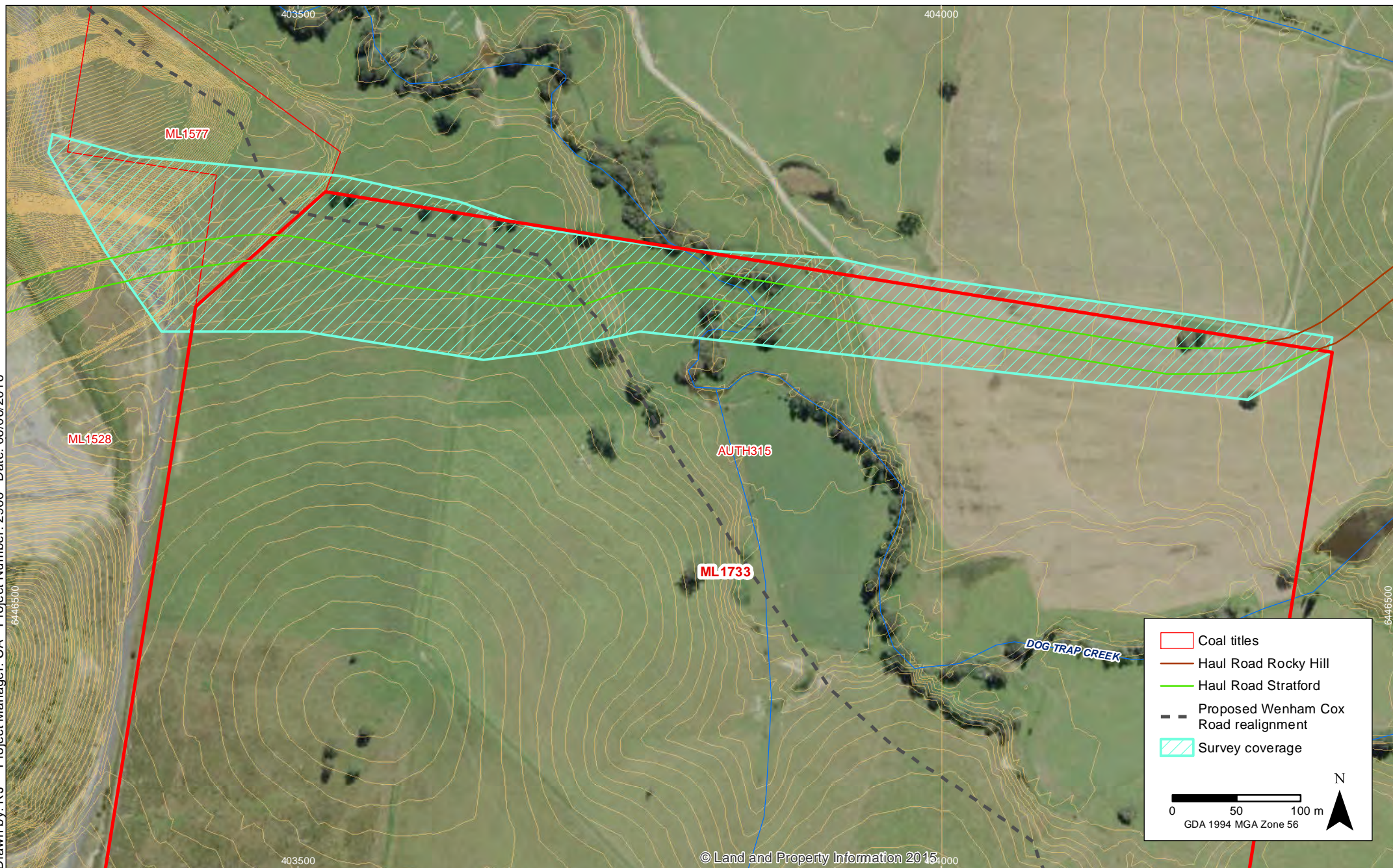
A comments and suggestion log was also maintained during the survey allowing for the RAPs present to provide any comments regarding cultural values of the survey area or management recommendations to be documented. No comments were received.

Survey coverage of the Subject Area is presented in Figure 7.



**Plate8:** Example of survey participant spacing.





Survey Coverage

Stratford Mining Complex Modification 1 ACHA

**FIGURE 7**

Imagery: (c) LPI 24/03/2012



## 10. Survey Results and Discussion

A total of three person days of Aboriginal heritage survey was conducted within the Subject Area. Conditions for the survey were excellent with a warm, sunny day.

An 800 m by 60 m corridor was surveyed in a single transect along the central alignment of the proposed haul road within ML 1733, representing 100 % survey coverage of the Subject Area and all its landforms and soil landscapes. The corridor also included a substantial buffer of the proposed haul road alignment to provide flexibility in design and ancillary infrastructure placement (Figure 7).

Visibility across the surveyed area was generally poor (less than 1 %) due to grass cover with the exception of exposures from vehicles and animal tracks, earthworks and surface wash and erosion in drainage lines (Plate 9Plate ). Effective survey coverage was less than 1 % due to the thick grass cover meaning there were very few areas of visibility and exposure, and when these few locations were present they were small in area. While the survey was ineffective from a discovery of open sites on the ground surface perspective, it nevertheless provided an opportunity to inspect the landforms and topography and hence confirm and refine the landform and soils information considered in Section 6. This provides a good basis on which to construct a sufficient assessment framework.

Because the Subject Area such a small area and the survey provided 100% sampling of the Subject Area, the survey coverage results are summarised in a single table (rather than separate tables for survey coverage and landform coverage as per the Code of Practice). A summary of survey and landform coverage is provided in Table 8.

**Table 8: Summary of survey coverage and landform unit area**

Landform / Survey Unit	Survey and Landform Unit Area (m <sup>2</sup> )	Visibility (%)	Exposure (%)	Effective Coverage (m <sup>2</sup> )	Effective Coverage (%)	Number of Sites	Number of Features
Alluvial Plains / Terraces	26,924	1	1	2.69	0.01	0	PAD
Drainage depression / Dog Trap Creek	12,128	1	1	1.21	0.01	0	PAD
Lower slopes	45,145	1	1	4.51	0.01	0	0
Total	84,197	-	-	8.4197	-	0	0

The survey confirmed the degree of past land use and disturbance—vegetation clearing and improved pastures— identified from the desktop assessment. The Subject Area is generally flat to very slightly undulating, with the only significant change in elevation and slope occurring where elevated terraces and transitional zones between these and the alluvial plains fringing Dog Trap Creek. These transitional zones are interpreted to represent the boundary between the Craven and the Craven Variant A soil landscapes described in Section 6.3. Terraces, drainage lines and associated depressions are landforms that are usually associated with a focus of past Aboriginal land use and therefore the presence of Aboriginal objects. Where soils were observed in surface exposures and areas of disturbance (Plates 11 and 13) the soils were noted to be grey coloured loams consistent with those described for the Craven and Craven Variant A soil landscapes, which are predicted to be of archaeological potential (Section 6.3).

The predictive model (Section 8) indicating that there would be a high likelihood of Aboriginal objects being present in association with depressions, flats and terraces in proximity to water sources.

While the survey did not find any Aboriginal objects, the presence of these landform characteristics has been confirmed and the survey results are therefore considered to be consistent with the expectations of the predictive model. Plates 9 to 14, photographed progressively west to east along the surveyed area, depict the range of landforms and occurrences of ground surface visibility across the surveyed area.

No Aboriginal heritage objects were identified during the field survey, and no cultural heritage values were identified by the survey participants.

Although no Aboriginal sites or objects were discovered during the survey (due to the constraints of visibility and exposure), it confirms the presence of landform features such as drainage depressions, terraces and alluvial flats. The survey supported the conclusions from the desktop assessment that:

- the lower slopes landform with the Gloucester soil landscape may contain occasional isolated stone artefacts or low density artefact scatters in a disturbed context
- the Gloucester soil landscape has little to no sub-surface archaeological potential because it is an originally shallow soil that has been heavily eroded;
- there is high potential for sub-surface archaeological deposits and Aboriginal objects below 0.3 m in the Craven and Craven Variant A soil landscape, which are slowly aggraded alluvial soils that will preserve Aboriginal objects (stone artefacts); and
- in the Craven and Craven Variant A soil landscapes the potential for sub-surface Aboriginal objects is particularly high in association with terraces, alluvial plains and transitional zones between these landforms and the lower slopes, and these landforms have been confirmed to occur in the Subject Area.



**Plate 9: The lower slopes within the Gloucester soil landscape**



**Plate 10: The transitional zone between the lower slopes Gloucester soil landscape and the alluvial plain within the Craven soil landscape**



**Plate 11: An example of exposure within the Subject Area**



**Plate 12: The alluvial depression and plain associated with Dog Trap Creek in the Craven soil landscape**



**Plate 13: Example of earthworks cut provided an exposure within the Subject Area**



**Plate 14: Looking east towards Dog Trap Creek across the Craven Variant A soil landscape**

Previous studies have also identified the alluvial soils around Dog Trap Creek as having potential to contain buried archaeological deposits. Heritage Search (2000: 18) concluded that the area within close proximity to Dog Trap Creek had “moderate potential to contain archaeological deposits”, but that the “number and density of buried artefacts is likely to be low. The scientific and social significance of this material would also be low”. This assessment was supported by Kayandel (2012: 55) in their assessment of the Stratford Extension Project, who stated that “the probability of sub-surface Aboriginal objects being present with conservation value was insufficient to warrant test excavation”. Despite this Kayandel (2012: 67) went on to recommend “Consideration...of inspecting topsoil stripping activities (for archaeological material) undertaken as part of the construction of the new road realignment adjacent to Dog Trap Creek.”

The Archaeological Code of Practice provides guidance on how to approach the assessment and management of sub-surface Aboriginal archaeological deposits in NSW. The purpose of the test excavation is (DECCW 2010: 24):

“To collect information about the nature and extent of sub-surface Aboriginal objects, based on a sample derived from sub-surface investigations. Test excavations contribute to the understanding of site characteristics and local and regional prehistory and they can be used to inform conservation goals and harm mitigation measures for the proposed activity.”

The alluvial plains and terraces associated with the Craven Variant A soil landscapes and portions of the Craven soil landscape where it interfaces with previous alluvial channels and the Craven Variant A soil landscape and foot slopes present high potential for sub-surface Aboriginal objects below current land use and disturbance levels. The Craven and Craven Variant A landscapes occur in close proximity to resource areas (Dog Trap Creek and associated landforms) that may have been a focus for past Aboriginal land use.

These aggraded soils also have the potential to preserve past land surfaces and Aboriginal objects, between depths of approximately 0.3 m and 0.8 m. As an area of past land use focus, the area around Dog Trap Creek may contain deposits and Aboriginal objects (regardless of frequency and density) that are of some interest, and may indeed preserve features that could provide dating samples and a chronology of Aboriginal settlement in the region (including the preservation of archaeological materials dating to the Holocene period [i.e. the last 10,000 years]). However, there has been a lack of previous archaeological excavation in the region to test the model. The significance of any sub-surface archaeological material (should it be present) is predicted to be moderate because it will contribute to a further understanding and information about the Aboriginal settlement of the area. However, even if sub-surface material were present it would not warrant relocating the proposed haul road. As a mitigation measure for the potential impact, further investigation is recommended to be undertaken post-approval but prior to the commencement of construction, to determine and record the presence of any sub-surface archaeological deposits.



## 11. Cultural Heritage Values and Significance Assessment

### 11.1 Assessment Framework

The Burra Charter (Australia ICOMOS, 2013) defines the basic principles and procedures to be observed in the conservation of important places. It provides the primary framework within which decisions about the management of heritage sites in Australia should be made. The Burra Charter defines cultural significance as being derived from the following criteria presented in Table 9.

**Table 9: Definition of Heritage Values from the Burra Charter**

Cultural Significance Criteria	Definition
<i>Aesthetic value</i>	Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; the smells and sounds associated with the place and its use.
<i>Historic value</i>	Historic value encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all of the terms set out in this section. A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.
<i>Scientific value</i>	The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information.
<i>Social value</i>	Social value embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group.

#### 11.1.1 Other approaches: scientific significance

The categorisation into aesthetic, historic, scientific and social values is one approach to understanding the concept of cultural significance. However, more precise categories may be developed as understanding of a particular place increases.

The NSW DECCW guidelines for the significance assessment of Aboriginal archaeological sites are contained within the Aboriginal Cultural Heritage Standards and Guidelines Kit (National Parks and Wildlife Service, 1997). The Kit identifies with two main streams in the overall significance assessment process: the assessment of cultural/social significance to Aboriginal people and the assessment of scientific significance to archaeologists. This approach encapsulates those aspects of the Burra Charter that are relevant to Aboriginal archaeological sites. The guidelines specify the following criteria for archaeological significance, as paraphrased in Table 10.

**Table 10: Criteria for assessing archaeological / scientific significance**

Significance Criteria	Definition
<i>Research Potential</i>	It is the potential to elucidate past behaviour which gives significance under this criterion rather than the potential to yield collections of artefacts. Matters considered under this criterion include – the intactness of a site, the potential for the site to build a chronology and the connectedness of the site to other sites in the archaeological landscape.
<i>Representativeness</i>	As a criterion, representativeness is only meaningful in relation to a conservation objective. Presumably all sites are representative of those in their class or they would not be in that class. What is at issue is the extent to which a class of sites is conserved and whether the particular site being assessed should be conserved in order to ensure that we retain a representative sample of the archaeological record as a whole. The conservation objective which underwrites the 'representativeness' criteria is that such a sample should be conserved.
<i>Rarity</i>	This criterion cannot easily be separated from that of representativeness. If a site is 'distinctive' then it will, by definition, be part of the variability which a representative sample would represent. The criteria might best be approached as one which exists within the criteria of representativeness, giving a particular weighting to certain classes of site. The main requirement for being able to assess rarity will be to know what is common and what is unusual in the site record but also the way that archaeology confers prestige on certain sites because of their ability to provide certain information. The criterion of rarity may be assessed at a range of levels: local, regional, state, national, and global.
<i>Educational Potential</i>	Heritage sites and areas should be conserved and managed in relation to their value to people. It is assumed that archaeologists have the ability to speak of the value of sites to members of their own profession. Where archaeologists or others carrying out assessments are speaking for the educational value of sites to the public, the onus is on them to go to the public for an assessment of this value, or to reputable studies which have canvassed public demand for education. The danger, otherwise, is that archaeologists would be projecting their values onto a public which is itself given no voice on the matter.
<i>Aesthetics</i>	Archaeologists are not expected to include an assessment of aesthetic significance along with their assessment of scientific significance. In relation to heritage places, aesthetic significance is generally taken to mean the visual beauty of the place. Aesthetic value is not inherent in a place, but arises in the sensory response people have to it.

### 11.1.2 Grading values and significance

The following gradations, where a site or zone satisfies at least one criterion, have been applied to provide a measure of the values/significance for Aboriginal objects identified within the Study area, and to provide an overall assessment of the significance of each of the zones used that define the Study area.

**Low:** The site or object contains only a single or limited number of features, and has no potential to meaningfully inform our understanding of the past beyond what it contributes through its current recording (i.e. no or low research potential). The site or object is a representative but unexceptional example of the most common class of sites or objects in the region. Many more similar examples can be confidently predicted to occur within the Subject Area, and in the region.

**Moderate:** The site or object derives value because it contains features, both archaeological and contextual, which through further investigation may contribute to our understanding of the local past. These features include, but are not limited to: the relationship with landscape features or other Aboriginal archaeological sites or areas of identified heritage importance; diagnostic archaeological or landscape features that inform a chronology; and a relatively large assemblage of stone artefacts. The presence of a diverse artefact and feature assemblage, and connectedness with landscape features and other notable sites provide relatively higher representative and rarity values than sites of low significance.

**High:** The site or object has value because it contains archaeological and/or contextual features which through further investigation may significantly contribute to our understanding of the past, both locally and on a regional scale. These features include, but are not limited to: Aboriginal ancestral remains; the site's relationship with landscape features or other Aboriginal archaeological sites or areas of identified heritage importance; diagnostic archaeological or landscape features that inform a chronology; and a very large assemblage of stone artefacts associated with other features such as oven remains or shell middens. Such sites will be relatively rare, and will be representative of a limited number of similar sites that make up this class; hence they derive high representative and rarity values.

## **11.2 Statements of Significance for the Subject Area**

The Subject Area is situated in the Gloucester bioregion within the wider landscape of the Avon River valley lowlands. Archaeological evidence of Aboriginal occupation in the Avon River valley lowlands is relatively sparse due to low ground surface visibility, an absence of regional archaeological excavation data and the degree of past land use and disturbance.

### **11.2.3 Social Value**

The Subject Area is situated in a disturbed agricultural and grazing property and no Aboriginal heritage items have been identified within it or in the immediate vicinity. General social values regarding maintenance for waterways and minimisation of erosion and sedimentation have been identified by RAPs, in association with Dog Trap Creek. These values are not specific to any persons, events, activities or oral history accounts but relate to general principles of ecologically sustainable development (ESD).

### **11.2.4 Aesthetic Value**

The Subject Area is situated in a disturbed agricultural and grazing property and no Aboriginal heritage items have been identified within it or in the immediate vicinity. The RAPs have not made comment on the aesthetic values of the Subject Area.

### **11.2.5 Historic Value**

Consultation with the RAPs, desktop investigations and background literature review identified no direct historical figures, events, phases or activities within the historical or oral history records relevant to the Subject Area.

### **11.2.6 Scientific (Archaeological) Value**

The alluvial plains and terraces associated with the Craven Variant A soil landscapes and portions of the Craven soil landscape where it interfaces with previous alluvial channels and the Craven Variant A soil landscape and foot slopes present high potential for sub-surface Aboriginal objects below current land use and disturbance levels. These landforms and soil landscapes have the potential for buried and intact soil horizons below past land use disturbance and are likely to provide evidence of Aboriginal occupation, including material that may be dated to provide a chronology of Aboriginal occupation in the local area.

The model presented above suggests the Subject Area contains aggraded landscapes that have the potential to preserve evidence of past Aboriginal land use, however there has been a lack of previous archaeological excavation in the region to test the model. The significance of any sub-surface archaeological material (should it be present) is predicted to be moderate because it will contribute to a further understanding and information about the Aboriginal settlement of the area. However even if sub-surface material were present it would not warrant relocating the proposed haul road. As a mitigation measure for the potential impact, further investigation is recommended to be undertaken post-approval but prior to the commencement of construction, to determine and record the presence of any sub-surface archaeological deposits.



## 12. Impact Assessment

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The *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011) requires that both direct and indirect harm to Aboriginal objects and Aboriginal places be considered. Generally, direct harm refers to occasions where an activity physically impacts a site or objects and therefore affects the heritage values of the site or objects. Indirect harm is usually taken to mean harm stemming from secondary consequences of the activity, and may affect sites or objects as an indirect consequence of the activity. Examples of such indirect harm are increased visitors to a site, or increased erosion in an area as a result of an activity.

### 12.1 Assessment of Potential Risks, Impacts and Direct and Indirect Harm to Aboriginal Heritage Sites and Values

#### ***Direct Harm***

Activities associated with the Modification that may cause direct harm to Aboriginal objects or areas of cultural value in the Subject Area (if they were to occur) would include:

- Disturbance of the ground surface or soil units (e.g. vegetation clearance and topsoil stripping, soil removal and excavations) in areas that require further investigation to confirm the presence or absence of Aboriginal objects or cultural value.
- Changes to a site or place's context that has secondary impacts to the site or place, resulting in the loss of cultural values. However, these impacts are mitigated due to the proposed disturbance associated with the Modification being located in within SCPL's existing mining leases and in proximity to existing approved surface disturbance.

#### ***Indirect Harm***

Activities associated with the Modification that may cause indirect harm to Aboriginal objects or areas of cultural value in the Subject Area (if they were to occur) may include potential erosion-related impacts in the vicinity of Dog Trap Creek.

#### ***Potential Impacts Associated with the Modification***

The development of the proposed private haul road would be wholly within the area surveyed for this Modification, and would be of a nature that would cause direct harm to any Aboriginal objects or areas of cultural value within the proposed alignment.

No Aboriginal heritage objects have been identified in the Subject Area or immediate surrounds. However, a portion of the Subject Area (i.e. within the Craven and Craven Variant A soil landscapes [Figure 3]) has been assessed to have a high likelihood of containing sub-surface Aboriginal objects. While the Modification would have no impact on known Aboriginal cultural heritage values within the Subject Area or immediate surrounds, the potential for sub-surface Aboriginal objects—and hence Aboriginal cultural heritage values—should be managed accordingly.

Although the Modification would have a direct impact on the portions of the Craven and Craven Variant A soil landscapes present within the Subject Area, the significance of any sub-surface archaeological material (should it be present) is predicted to be moderate and would not be restricted to within the haul road alignment (i.e. the material would also be expected to occur outside of the Subject Area). For these reasons, even if sub-surface archaeological material were present within the Subject Area, it would not warrant relocating the proposed haul road.

It is therefore considered that no further investigation is required to inform the impact assessment. However, should sub-surface deposits be present they will potentially be of moderate scientific value and undertaking salvage activities on any sub-surface archaeological material present would be a warranted management response and appropriate mitigation measure. The purpose of test excavation and salvage works would be to potentially (in the event that archaeological material is identified) increase the knowledge of the local archaeological resource and therefore contribute to a further understanding of Aboriginal settlement of the region in the past.

General Aboriginal heritage values regarding the mitigation of potential impacts on Dog Trap Creek and the minimisation of erosion and sedimentation have been identified by the RAPs. The Modification has the potential to directly and indirectly impact these values, however this harm can be avoided or minimised through management and mitigation measures recommended in Section 14.

## 12.2 Consideration of Cumulative Impacts

Cumulative impacts are the successive, incremental and combined impacts of one or more activities on the environment, including cultural heritage values. Taken in context with pre-existing development and conservation in the region, it is considered that the Modification:

- Would occur predominately within existing haul roads that already been approved for disturbance, and in those areas will have no additional cumulative impact to that already approved.
- May result in some additional cumulative impact (less than 600 m x 60 m) to potential sub-surface archaeological deposits in the Craven and Craven Variant A soil landscapes. The value of these deposits is currently not known, however many more of these potential sub-surface archaeological deposits are reasonably predicted to occur within the wider region (e.g. as the relevant soil landscapes are extensive in the wider area).

As no Aboriginal heritage objects have been identified in the Subject Area or immediate surrounds, the Modification is not expected to cause a loss of heritage resources that could be viewed as being very rare or unique or unlikely to exist elsewhere. Therefore the Modification would not result in any significant cumulative impact on Aboriginal heritage in the region.

Notwithstanding, sub-surface investigation is proposed to be undertaken prior to construction of the proposed private haul road, and a representative sample selection of archaeological material be salvaged, if present.

## 12.3 Consideration of Ecologically Sustainable Development

Section 5(vii) of the EP&A Act requires proponents to consider the key principles of ESD in the design of their projects. The principles of ESD are defined within the NSW *Protection of the Environment Administration Act, 1991*. This Act defines the precautionary principle and the principles of inter-generational equity, conservation of biological diversity and ecological integrity. The precautionary principle is defined as:

*"if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation".*

Table 11 considers the key principles of ESD with respect to the results of the literature review, Aboriginal heritage survey results, significance assessment contained within this report.

**Table 11: Consideration of the EIA and ESD Guidelines**

Principles of the EIA and ESD Guidelines	ESD Assessment for the Modification
A fundamental consideration for conservation of biological diversity and ecological integrity.	The proponent has undertaken an Aboriginal Cultural Heritage Assessment in consultation with the RAPs. No Aboriginal heritage objects have been identified within the Subject Area or immediate surrounds.
Careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment.	The RAPs have identified that for waterways (such as Dog Trap Creek), erosion and sedimentation should be managed. A Statement of Environmental Effects being prepared for the Modification will include erosion and sediment control measures for any potential impacts on Dog Trap Creek.
Consideration of intergenerational equity.	This assessment has noted that sub-surface archaeological deposits are likely to be present within portions of the Subject Area (i.e. within the Craven and Craven Variant A soil landscapes). The proposed activity may therefore have the potential to result in harm if sub-surface Aboriginal objects are present. The significance of Aboriginal objects, if present, is assessed as moderate.
Where risk of serious or irreversible harm and lack of scientific knowledge of the nature of environmental harm combine, the precautionary principle applies.	Management and mitigation measures in Section 13 therefore include recommendations for test excavations and the salvage of a representative sample selection of archaeological material, if present.
Where there is risk of serious or irreversible harm, it is necessary to establish whether there is adequate scientific knowledge of the subject to evaluate the perceived threat.	
An assessment of the risk-weighted consequences of various options.	

## 13. Management and Mitigation Measures

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The proposed Modification is required to transport sized ROM coal from the Rocky Hill Coal Project to the Stratford Mining Complex. The location of the haul road is constrained by geological, engineering, operational and economic constraints (i.e. it must link the Stratford Mining Complex and the Rocky Hill Coal Project in the shortest and most practical way).

The current proposed alignment has been selected on the basis of engineering requirements and efficiencies, and there is no feasible or reasonable alternative that avoids the Craven and Craven Variant A soil landscapes. There are currently no known Aboriginal objects or Aboriginal heritage values within the Subject Area and immediate surrounds. The significance of any sub-surface archaeological material (should it be present) is predicted to be moderate because it will contribute to a further understanding and information about the Aboriginal settlement of the area. However, even if sub-surface material were present it would not warrant relocating the proposed haul road.

In summary, the recommended approach is to retain the existing haul road alignment and undertake a series of sub-surface test excavations within portions of the Subject Area (i.e. within the Craven and Craven Variant A soil landscapes) to increase the knowledge of the local archaeological resource and therefore contribute to a further understanding of historic Aboriginal settlement of the region.

On the basis of the impact assessment (Section 12), the following management and mitigation measures would manage and mitigate the identified potential harm and risks associated with the Modification:

- Continue community consultation and engagement with relevant RAPs in relation to the Modification, in accordance with the Conditions of Consent for the Stratford Mining Complex and the ACHCRs.
- Communicate to the RAPs any management and mitigation measures within the Statement of Environmental Effects and/or management plans for erosion and sediment control for Dog Trap Creek.
- As part of an updated HMP, and prior to construction of the private haul road, undertake sub-surface test excavation (using the methods outlined in the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales [DECCW, 2010b] as a guide to best practice) to identify and characterise the potential sub-surface archaeological deposits in the Subject Area (within the Craven and Craven Variant A soil landscapes). A methodology for undertaking these test excavation is provided in Appendix 5.
- If any sites or deposits of moderate or high scientific significance are identified during the test excavations, then a focused salvage excavation should be undertaken.



## 14. Conclusions and Recommendations

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The purpose this assessment was to undertake an ACHA to inform a Statement of Environmental Effects for a Modification to the existing Stratford Mining Complex approval, and to exercise due diligence as defined by the NPW regulation. The proponent has undertaken an ACHA in consultation with the RAPs.

No Aboriginal heritage objects or values have been identified within the Subject Area or immediate surrounds. However, the desktop assessment indicated that landforms associated with Dog Trap Creek have the potential to contain a diverse range of resources exploited by Aboriginal people in the past.

Alluvial plains and terraces and transitional zones between lower slopes are present within the Subject Area. These landforms have the potential for aggrading geomorphology within which there is the potential for past land surfaces and Aboriginal objects to be buried and preserved. The assessment has noted that due to an absence of archaeological test excavation in the region, there is a lack of certainty regarding the value of any potential sub-surface deposits and Aboriginal objects. Aboriginal objects and their associated heritage values could be present in relatively unmodified sections of the Craven and Craven Variant A soil landscapes below 0.3 m within the proposed haul road alignment. The proposed activity therefore has the potential to result in harm if sub-surface archaeological material is present within the proposed haul road alignment.

In summary, the recommended approach is to retain the existing haul road alignment and undertake a series of sub-surface test excavations within portions of the Subject Area (i.e. within the Craven and Craven Variant A soil landscapes) to increase the knowledge of the local archaeological resource and therefore contribute to a further understanding of historic Aboriginal settlement of the region.

Where the management and mitigation measures are implemented, the proposed Modification has been assessed to have negligible cumulative impact outcomes.

### 14.1 Recommendations

The following management and mitigation measures are recommended to manage and mitigate the identified potential harm and risks associated with the Modification:

- Continue community consultation and engagement with relevant RAPs in relation to the Modification, in accordance with the Conditions of Consent for the Stratford Mining Complex and the ACHCRs.
- Communicate to the RAPs any management and mitigation measures within the Statement of Environmental Effects and/or management plans for erosion and sediment control for Dog Trap Creek.
- Prior to construction of the private haul road and in accordance with the Conditions of Consent, revise the existing HMP in consultation with the OEH and relevant RAPs (in relation to the management of Aboriginal heritage values) to the satisfaction of the NSW Department of Environment and Planning to:
  - Undertake test excavation (using the methods outlined in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* [DECCW, 2010b] as a guide to best practice) to identify and characterise the potential sub-surface archaeological deposits in the Subject Area (within the Craven and Craven Variant A soil landscapes). A methodology for undertaking these test excavation is provided in Appendix 5.

- Manage residual risks via emergency response protocols (in the unlikely event that human skeletal material is identified during the course of works, all work should stop and the NSW Police and the OEH Environmental Line [131 555] notified).
- The HMP should also include protocols for:
  - If any sites or deposits of moderate or high scientific significance are identified during the test excavations, then a focused salvage excavation should be undertaken.
  - The notification AHIMS of any Aboriginal objects identified within a reasonable timeframe as per Section 89A of the *National Parks and Wildlife Act 1974* (the NPW Act). It is recommended that this could be undertaken as part of the annual review/reporting requirements at the Stratford Mining Complex.
  - A plan for the short term and long term management of recovered Aboriginal objects, if any, in accordance with Section 85 of the NPW Act (Appendix 5).

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## Appendix 1 – Glossary

Term	Definition
Aboriginal cultural heritage	The tangible (objects) and intangible (dreaming stories, legends and places) cultural practices and traditions associated with past and present day Aboriginal communities.
Aboriginal object(s)	The legal definition for material Aboriginal cultural heritage under the NSW <i>National Parks and Wildlife Act 1974</i> .
Aboriginal stakeholders	Members of a local Aboriginal land council, registered holders of Native Title, Aboriginal groups or other Aboriginal people who may have an interest in the Modification.
Archaeology	The scientific study of human history, particularly the relics and cultural remains of the distant past.
Archaeological deposit	A layer of soil material containing archaeological remains.
Archaeological investigation	The process of assessing the archaeological potential of an impact area by a qualified archaeologist.
Archaeological site	A site with material evidence of past Aboriginal or non-Aboriginal activity in which material evidence (artefacts) of past activity is preserved.
Artefact	An object made by human agency (e.g. stone artefacts).
Assemblage	A group of stone artefacts found in close association with one another. Any group of items designated for analysis - without any assumptions of chronological or spatial relatedness.
Avoidance	A management strategy which protects Aboriginal sites within an impact area by avoiding them totally in development.
Cumulative impacts	Combination of individual effects of the same kind due to multiple actions from various sources over time.
Development	The operations involved in preparing a mine for extraction, including cutting roadways and headings. Also includes tunnelling, sinking, crosscutting, drifting, and raising.
Drainage	Natural or artificial means for the interception and removal of surface or sub-surface water.
Flake	A piece of stone detached from a core, displaying a bulb of percussion and striking platform.
Harm	With regard to Aboriginal objects this has the same meaning as the NSW <i>National Parks and Wildlife Act 1974</i> .
Holocene	The current geological epoch, encompassing the time from approximately 10,000 years ago when climate stabilised after the glacial period.
Impact	Influence or effect exerted by a project or other activity on the natural, built and community environment.
Impact area	An area that requires archaeological investigation and management assessment.
<i>In situ</i>	Latin words meaning 'on the spot, undisturbed'.
Isolated find	A single artefact found in an isolated context.
Landform	Any one of the various features that make up the surface of the earth.
Management plans	Conservation plans which identify short and long term management strategies for all known sites recorded within a (usually approved) Subject Area.
Methodology	The procedures used to undertake an archaeological investigation.
Mitigation	To address the problem of conflict between land use and site conservation.
PAD	Potential archaeological deposit. A location considered to have a potential for sub-surface archaeological material.
Site recording	The systematic process of collecting archaeological data for an archaeological investigation.
Site	A place where past human activity is identifiable.

Term	Definition
Survey coverage	A graphic and statistical representation of how much of an impact area was actually surveyed and therefore assessed.

## Appendix 2 – Aboriginal Community Consultation Records



## **CONSULTATION LOG**

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION
24/03/2016	Registered Aboriginal Parties	Registered Aboriginal Parties	Post	Mark Jacobs	Yancoal Australia Limited	A copy of the Proposed Methodology was provided to all Registered Aboriginal Parties for their review and comment. Feedback on the Proposed Methodology was requested by COB Thursday 28 April 2016.
1/04/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Glouster Worimi First People (a copy of a Proposed Methodology). The correspondence was marked "not at this address". It is noted however that a copy of the correspondence has also been provided to this group at a separate address.
1/04/2016	Uncle Jim Clarke	Glouster Worimi First People	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Called Uncle Jim to confirm correct postal address. Telephone number disconnected.
4/04/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Hunters & Collectors (a copy of a Proposed Methodology). The correspondence was marked "left address".
4/04/2016	Tania Matthews	Hunters & Collectors	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Called Tania to confirm correct postal address. Postal address was updated in database.
4/04/2016	Tania Matthews	Hunters & Collectors	Post	Mark Jacobs	Yancoal Australia Limited	A copy of the Proposed Methodology was reposted to Tania Matthews review and comment.
8/04/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Hunter Traditional Owner (a copy of a Proposed Methodology). The correspondence was marked "not at this address".
8/04/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Rebecca Lester (a copy of a Proposed Methodology). The correspondence was marked "no mail box".
8/04/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Lower Hunter Aboriginal Incorporated (via Les Ahoy) (a copy of a Proposed Methodology). The correspondence was marked "unknown at this address". It is noted however that a copy of the correspondence has also been provided to this group at a separate address (via David Ahoy).
8/04/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Wurrumay Consultants (a copy of a Proposed Methodology). The correspondence was marked "return to sender - box closed".
11/04/2016	Kerrie Slater	Wurrumay Consultants	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Called to confirm correct postal address. Automated phone message stating that the number was "not accepting incoming calls".
11/04/2016	Les Ahoy	Lower Hunter Aboriginal Incorporated	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Called to confirm correct postal address. Phone number disconnected.
11/04/2016	Rebecca Lester	Rebecca Lester	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Called to confirm correct postal address. Phone rang out, no answer.
11/04/2016	Paulette Ryan	Hunter Traditional Owner	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Called to confirm correct postal address. Left message regarding returned mail and requesting call back to confirm correct postal address.
13/04/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Bindi Aboriginal Heritage and Cultural Centre Inc (a copy of a Proposed Methodology). The correspondence was marked "return to sender - left address".
13/04/2016	Michael Plain	Stratford Coal Pty Ltd	Email	Candy Towers	Gimbay Gatigaan Aboriginal Co-Corporation	Emailed to confirm agreement with Proposed Methodology.
14/04/2016	Bindi Aboriginal Heritage and Cultural Centre Inc	Bindi Aboriginal Heritage and Cultural Centre Inc	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Called to confirm correct postal address. Phone number disconnected. No other contact details on file.
14/04/2016	Paulette Ryan	Hunter Traditional Owner	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Called to confirm correct postal address. Left message regarding returned mail and requesting call back to confirm correct postal address.
15/04/2016	Michael Plain	Stratford Coal Pty Ltd	Telephone	Jay (?)	Forster Local Aboriginal Land Council	Query regarding Proposed Methodology and request to take part in survey. MP advised a letter would be provided to invite a representative to take part in the surveys.
16/04/2016	Michael Plain	Stratford Coal Pty Ltd	Email	David Ahoy	Lower Hunter Aboriginal Incorporated	Emailed to confirm agreeance with Proposed Methodology.
18/04/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Birpi Local Aboriginal Land Council (a copy of a Proposed Methodology). The correspondence was marked "return to sender - no longer at this address".
18/04/2016	Nathan Moran	Birpi Local Aboriginal Land Council	Post	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Re-posted copy of returned mail (Proposed Methodology) to alternative postal address.

28/04/2016	Michael Plain	Stratford Coal Pty Ltd	Email	Di Stephenson (Sharon Edgar-Jones)	Maaiangal Group, Worimi Nation	Confirmed attendance at field surveys and provided additional comments.
28/04/2016	Michael Plain	Stratford Coal Pty Ltd	Email	Ken Everleigh	Worimi Elder, GWFP	Provided comments in response to Proposed Methodology documentation.
2/05/2016	Michael Plain	Stratford Coal Pty Ltd	Telephone	Rob Yettica	Cultural Consulting Services	Confirmation to attend ACHA survey
2/05/2016	Michael Plain	Stratford Coal Pty Ltd	Email	Jay Currie	Forster Local Aboriginal Land Council	Confirmation to attend ACHA survey
4/05/2016	Jay Currie	Forster Local Aboriginal Land Council	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Forster LALC representative advised that they would email through their insurances this afternoon.
4/05/2016	Robert Yettica	Cultural Consulting Services	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Robert advised that he would bring a copy of his insurances with him to the surveys.
4/05/2016	Ken Everleigh	Glouster Worimi First People	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Ken advised that he would not be attending the surveys. Clarification was provided to Ken that the Stratford Modification was a separate modification to the Rocky Hill Project.
4/05/2016	Fiona Manton	Karuah Local Aboriginal Land Council	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Karuah LALC representative confirmed sites officer would be attending the surveys and would bring a copy of their insurances with them to the surveys.
4/05/2016	Di "Nurpula" Stephenson	Maaiangal Group, Worimi Nation	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Left voice message confirming attendance at surveys tomorrow and requesting a copy of current insurances.
4/05/2016	Aunty Norma Fisher	Mookibakh Traditional Owners Inc	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Left voice message confirming attendance at surveys tomorrow and requesting a copy of current insurances.
4/05/2016	Mick Leon	Doo-Wa-Kee Cultural & Heritage Surveys	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Mick advised that he would not be attending the surveys.
6/05/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Telephone	Aunty Norma Fisher	Mookibakh Traditional Owners Inc	Called to confirm updated postal address.
12/05/2016	Michael Plain	Yancoal	Letter	Di Stephenson (Nurpula)	Maaiangal Group, Worimi Nation	Request to remain as stakeholder for purposes of consultation on the Modification.
						A copy of the draft ACHA was provided to all Registered Aboriginal Parties for their review and comment. Feedback on the draft ACHA was requested by COB Tuesday 12 July 2016. Note: - a copy of the draft ACHA was not provided to the Bindi Aboriginal Heritage and Cultural Centre Inc. Previous correspondence marked return to sender, no alternative contact details on file. - a copy of the draft ACHA was not provided to Hunter Traditional Owner. Previous correspondence marked return to sender, voice messages left to confirm postal address however no contact has been made. - a copy of the draft ACHA was not provided to Les Ahoy (Lower Hunter Aboriginal Incorporated). Previous correspondence marked return to sender, no alternative contact details on file and phone numbers disconnected. It is noted however that a copy of the correspondence has also been provided to this group at a separate address (via David Ahoy). - a copy of the draft ACHA was not provided to Rebecca Lester. Previous correspondence marked return to sender, calls made to confirm correct postal address however phone rang out. No contact made.
9/06/2016	Registered Aboriginal Parties	Registered Aboriginal Parties	Post	Mark Jacobs	Yancoal Australia Limited	
20/06/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Trevor Robinson (a copy of the draft ACHA). The correspondence was marked "return to sender - left address". No alternative contact details on file.
20/06/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Margaret Matthews (a copy of the draft ACHA). The correspondence was marked "return to sender - left address".
20/06/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Sunrise Guivan Biripi Elders Corporation (a copy of the draft ACHA). The correspondence was marked "return to sender - left address".
20/06/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Carrawonga Consultants (a copy of the draft ACHA). The correspondence was marked "return to sender - left address".
20/06/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Wanaruah Custodians (a copy of the draft ACHA). The correspondence was marked "return to sender - box closed".

20/06/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Lakkari NTCG (Victoria Street address) (a copy of the draft ACHA). The correspondence was marked "return to sender - closed down". It is noted however that a copy of the correspondence has also been provided to this group at a separate address.
20/06/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Upper Hunter Heritage Consultants (a copy of the draft ACHA). The correspondence was marked "return to sender - left address".
20/06/2016	Margaret Matthews	Aboriginal Native Title Elders Consultants	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Called to confirm correct postal address. Also advised that the correspondence sent to Carrawonga Consultants and Upper Hunter Heritage Consultants could also be sent to this updated address.
20/06/2016	Margaret Matthews	Aboriginal Native Title Elders Consultants	Post	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Re-posted a copy of returned mail (draft ACHA) to updated postal address.
20/06/2016	Warner Saunders	Sunrise Guiwan Biripi Elders Corporation	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Called to confirm correct postal address. Phone disconnected.
20/06/2016	David Foot	Wanaruah Custodians	Telephone	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Called to confirm correct postal address. Phone switched off, unable to leave a message. Landline disconnected. No other alternative contact details on file.
20/06/2016	Warner Saunders	Sunrise Guiwan Biripi Elders Corporation	Email	Michael Plain	Stratford Coal Pty Ltd	Email a copy of returned mail (draft ACHA) to email address. Requested updated contact details.
21/06/2016	Michael Plain	Stratford Coal Pty Ltd	Email	Dave Feeney	Karuah Indigenous Corporation	Provided comments in response to Draft ACHA.
23/06/2016	Stratford Coal Pty Ltd	Stratford Coal Pty Ltd	Post	Australia Post	Australia Post	Returned mail received from Worimi Aboriginal Community Co-operative (a copy of the draft ACHA). The correspondence was marked "return to sender - not at this address". No other contact details on file.
28/06/2016	Stephen Talbott	Stephen Talbott	Post	Michael Plain	Stratford Coal Pty Ltd	Posted an additional copy of the draft ACHA. Australia Post were unable to confirm if the original document had been delivered.
4/07/2016	Michael Plain	Stratford Coal Pty Ltd	Email	Candy Towers	Gimbay Gatigaan Aboriginal Co-Corporation	Provided comments in response to Draft ACHA.
11/07/2016	Michael Plain	Stratford Coal Pty Ltd	Email	Arthur Fletcher	Kauwul Wonn1	Provided comments in response to Draft ACHA.
12/07/2016	Michael Plain	Stratford Coal Pty Ltd	Email	Candy Towers	Gimbay Gatigaan Aboriginal Co-Corporation	Provided comments in response to Draft ACHA.



## **PROPOSED METHODOLOGY CORRESPONDENCE**

POSTAL: PO Box 168  
Gloucester NSW 2422  
PHONE: +61 2 6538 4200  
WEBSITE: [www.stratfordcoal.com.au](http://www.stratfordcoal.com.au)  
ABN 26 064 016 164

24 March 2016

Dear

**RE: STRATFORD COAL MINE MODIFICATION 1 – ABORIGINAL CULTURAL HERITAGE ASSESSMENT PROPOSED METHODOLOGY**

The Stratford Extension Project (Application Number SSD-4966) provides for the continuation and extension of open cut coal mining and processing at the Stratford Coal Mine and was approved by the NSW Planning and Assessment Commission in May 2015. Stratford Coal Pty Ltd (SCPL) is the owner and operator of the Stratford Coal Mine.

A Statement of Environmental Effects is being prepared to facilitate the modification of the Stratford Extension Project under Section 96(2) of the *NSW Environmental Planning and Assessment Act, 1979* (the Modification). As a component of the Statement of Environmental Effects an Aboriginal Cultural Heritage Assessment is required.

The Modification relates to proposed interactions between the Stratford Extension Project and the Rocky Hill Coal Project (SSD-5156), a proposed open cut mining operation owned by Gloucester Resources Ltd, located approximately 5 km north of the Stratford Coal Mine. The proposed interactions principally relate to the transportation and processing of Rocky Hill Coal Project run-of-mine (ROM) coal using existing Stratford Coal Mine infrastructure. This integration would require the development of a haul road between the Stratford Coal Mine and the Rocky Hill Coal Project. The portion of the haul road relevant to Stratford would be the portion of haul road located within Stratford's mining tenements.

**Registration**

Due to your previous involvement in Aboriginal Cultural Heritage Assessments at the Stratford Coal Mine, you have been automatically registered for the consultation process associated with the Modification. **You do NOT need to contact SCPL to re-register for the Modification.**

SCPL advises that as a Registered Aboriginal Party, your details will be forwarded to the NSW Office of Environment and Heritage (OEH), the Forster Local Aboriginal Land Council in accordance with Section 4.1.5 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* (New South Wales [NSW] Department of Environment, Climate Change and Water [DECCW], 2010), unless you specify that you do not want your details released.

## Proposed Methodology

As a Registered Aboriginal Party, please find enclosed for your review, a copy of the Proposed Methodology for the Modification Aboriginal Cultural Heritage Assessment. In accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010) issued by the OEH, we have provided the Proposed Methodology for your review and feedback. Your feedback may include the identification of issues or areas of cultural significance that may be used to affect, inform or refine the Proposed Methodology.

If you wish to provide input on the following, please make a submission to SCPL (via the contact details provided at the end of this letter) by **5.00pm Thursday 28 April 2016**:

- The nature of the Proposed Methodology.
- Any Aboriginal objects or places of cultural value within the investigation area, or issues of cultural significance, that you are aware of.
- Any restrictions or protocols you may consider necessary in relation to any information of sensitivity that you may provide.
- Any other factors you consider to be relevant to the Aboriginal Cultural Heritage Assessment.

All comments received will be taken into consideration as the Methodology is finalised.

## Contact Details

Any feedback with respect to the Proposed Methodology can be provided to SCPL via the following contact details:

Yancoal Australia Limited  
C/- Michael Plain  
Environment & Community Co-ordinator  
Post: PO Box 168, Gloucester NSW 2422  
Phone: (02) 4999 5152  
Email [Michael.Plain@yancoal.com.au](mailto:Michael.Plain@yancoal.com.au)

Yours sincerely

**Yancoal Australia Limited**



**Mark Jacobs**  
General Manager – Environment & Community



POSTAL: PO Box 168  
Gloucester NSW 2422  
PHONE: +61 2 6538 4200  
WEBSITE: [www.stratfordcoal.com.au](http://www.stratfordcoal.com.au)  
ABN 26 064 016 164

24 March 2016

Dear

**RE: STRATFORD COAL MINE MODIFICATION 1 – ABORIGINAL CULTURAL HERITAGE ASSESSMENT PROPOSED METHODOLOGY**

The Stratford Extension Project (Application Number SSD-4966) provides for the continuation and extension of open cut coal mining and processing at the Stratford Coal Mine and was approved by the NSW Planning and Assessment Commission in May 2015. Stratford Coal Pty Ltd (SCPL) is the owner and operator of the Stratford Coal Mine.

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The Modification relates to proposed interactions between the Stratford Extension Project and the Rocky Hill Coal Project (SSD-5156), a proposed open cut mining operation owned by Gloucester Resources Ltd, located approximately 5 km north of the Stratford Coal Mine. The proposed interactions principally relate to the transportation and processing of Rocky Hill Coal Project run-of-mine (ROM) coal using existing Stratford Coal Mine infrastructure. This integration would require the development of a haul road between the Stratford Coal Mine and the Rocky Hill Coal Project. The portion of the haul road relevant to Stratford would be the portion of haul road located within Stratford's mining tenements.

**Registration**

Due to your involvement in the Aboriginal Cultural Heritage Assessment for the Rocky Hill Coal Project, you have been automatically registered for the consultation process associated with the Modification. **You do NOT need to contact SCPL to register for the Modification.**

SCPL advises that as a Registered Aboriginal Party, your details will be forwarded to the NSW Office of Environment and Heritage (OEH), the Forster Local Aboriginal Land Council in accordance with Section 4.1.5 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* (New South Wales [NSW] Department of Environment, Climate Change and Water [DECCW], 2010), unless you specify that you do not want your details released.

## Proposed Methodology

As a Registered Aboriginal Party, please find enclosed for your review, a copy of the Proposed Methodology for the Modification Aboriginal Cultural Heritage Assessment. In accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010) issued by the OEH, we have provided the Proposed Methodology for your review and feedback. Your feedback may include the identification of issues or areas of cultural significance that may be used to affect, inform or refine the Proposed Methodology.

If you wish to provide input on the following, please make a submission to SCPL (via the contact details provided at the end of this letter) by **5.00pm Thursday 28 April 2016**:

- The nature of the Proposed Methodology.
- Any Aboriginal objects or places of cultural value within the investigation area, or issues of cultural significance, that you are aware of.
- Any restrictions or protocols you may consider necessary in relation to any information of sensitivity that you may provide.
- Any other factors you consider to be relevant to the Aboriginal Cultural Heritage Assessment.

All comments received will be taken into consideration as the Methodology is finalised.

## Contact Details

Any feedback with respect to the Proposed Methodology can be provided to SCPL via the following contact details:

Yancoal Australia Limited  
C/- Michael Plain  
Environment & Community Co-ordinator  
Post: PO Box 168, Gloucester NSW 2422  
Phone: (02) 4999 5152  
Email [Michael.Plain@yancoal.com.au](mailto:Michael.Plain@yancoal.com.au)

Yours sincerely

**Yancoal Australia Limited**



**Mark Jacobs**

General Manager – Environment & Community



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**From:** GIMBAY GATIGAAN ABORIGINAL CORPORATION [gimbaygatigaan@hotmail.com]  
**Sent:** Wednesday, 13 April 2016 2:52 PM  
**To:** Michael Plain  
**Subject:** PROPOSED METHODOLOGY FOR THE STRATFORD COAL MINE MODIFICATION 1  
ABORIGINAL CULTURAL HERITAGE ASSESSMENT

Guudji Yiigu Michael,

On behalf of Gimbay Gatigaan organisation I do agree with the Proposed Methodology for the Stratford Coal Mine Modification 1 Aboriginal Cultural Heritage Assessment.

Thank you for consulting with us !

Regards

Candy Towers  
0412 475 362

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24 / 4 / 16

ATTENTION: ENVIRONMENT + COMMUNITY CO-ORDINATOR.

PROJECT EXTENSION: STRATFORD COAL PROPRIETARY LIMITED (SCPL)

ENVIRONMENTAL OFFICER.

Dear Sir / Madam

Thankyou for your invitation to contribute to the Aboriginal Cultural Assessment. As previously stated the Madiangal Group is against all mining of land near or surroundings of rivers, as this is folly, knowing the potential of pollution, erosion and depletion of the soil.

We will participate, Hoping (SCPL) will stay true to taking into account what the Aboriginal people of this area say.

Though I am unable to participate personally, another member of our group will take my place. That person is well qualified to attend, and has the required safety issue.

Any further correspondence will stay as is; returned to my address. Thankyou once again for our inclusion.

Yours in unity.

Ms. Di "Nurpula" Stephenson (MADIANGAL GROUP)

"RANNOCH" 498 Johnson Creek Road

Stroud Road. NSW. 2445.

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**From:** Ken Eveleigh [ken.eveleigh@hotmail.com]  
**Sent:** Thursday, 28 April 2016 4:15 PM  
**To:** Michael Plain  
**Cc:** japples@northnet.com.au  
**Subject:** GWFPC, Aboriginal Cultural Heritage Assessment

To whom I may concern, I received a letter to myself and Jim Clarke, Jim Clarke is deceased now.

On the day of the survey it was very difficult to look for Aboriginal Sites and Artefacts due to the high and thickness of the vegetation, one small stone artefacts was found in the garden around a home, I don't have a grid reference for it. Aboriginal oral history, is the land was used for birth place and ceremonies. Knowledge of the mountain range significant to women, rivers and water ways need to be protected, Women should still be able to have access to parts or the area for Aboriginal cultural values.

Thanking you for inviting me, I enjoyed the day.

Worimi Elder Uncle Ken Eveleigh

Sent from my iPad

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Yancoal Australia Limited - Stafford coal mine modification.  
 Michael Plain - Environment & Community Co-ordinator

Attention Michael,

As you would know the MAIANGAL GROUP was not able to attend the Aboriginal Cultural Heritage Assessment field surveys because of previous commitments. This however does not mean we do not wish to remain stakeholders in the project. We all agree that this is very important to the Aboriginal people, to stay involved all the time when our land is being affected.

I thank you once again for the invitation to participate in the Assessment, and look forward to any future project involvement.

Yours in Unity  
 W. Mupfala Stephenson  
 Maiangal Group.  
 "RANNOCH"

478 JOHNSON CREEK ROAD  
 STROUD ROAD N.S.W. 2315

RECEIVED  
 30 MAY 2016

BY: .....



## **DRAFT ACHA CORRESPONDENCE**

POSTAL: PO Box 168  
Gloucester NSW 2422  
PHONE: +61 2 6538 4200  
WEBSITE: [www.stratfordcoal.com.au](http://www.stratfordcoal.com.au)  
ABN 26 064 016 164

9 June 2016

Dear

**RE: STRATFORD MINING COMPLEX MODIFICATION 1 – DRAFT ABORIGINAL CULTURAL HERITAGE ASSESSMENT**

**Draft Aboriginal Cultural Heritage Assessment**

Please find enclosed for your review, a copy of the draft Aboriginal Cultural Heritage Assessment (ACHA) (including appendices) for the Stratford Mining Complex Modification 1 (the Modification).

In accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (New South Wales [NSW] Department of Environment, Climate Change and Water, 2010) issued by the NSW Office of Environment and Heritage, we have provided the draft ACHA for your review and feedback. In accordance with these guidelines, your feedback may include the identification of issues or areas of cultural significance that may be used to affect, inform or refine the draft ACHA.

If you wish to provide input, your response may include details on the following:

- Identification of issues.
- Any Aboriginal objects or places of cultural value within the investigation area, or issues of cultural significance, that you are aware of.
- Any restrictions or protocols you may consider necessary in relation to any information of sensitivity that you may provide.
- Any other factors you consider to be relevant to the ACHA.

All comments received will be taken into consideration as the ACHA is finalised. Any feedback with respect to the draft ACHA is to be provided to SCPL by **5.00pm Tuesday 12 July 2016** via the contact details provided below.

**Contact Details**

Yancoal Australia Limited  
C/- Michael Plain  
Environment & Community Co-ordinator  
Post: PO Box 168, Gloucester NSW 2422  
Phone: (02) 4999 5152  
Email [Michael.Plain@yancoal.com.au](mailto:Michael.Plain@yancoal.com.au)

Yours sincerely

**Yancoal Australia Limited**

A handwritten signature in black ink, appearing to read 'Mark Jacobs', written over a circular stamp or seal.

**Mark Jacobs**

General Manager – Environment & Community

---

**From:** Michael Plain [<mailto:Michael.Plain@yancoal.com.au>]  
**Sent:** Monday, 20 June 2016 2:36 PM  
**To:** [warner.saunders9@gmail.com](mailto:warner.saunders9@gmail.com)  
**Subject:** FW: Stratford Modification - Draft ACHA

Hi Warner,

Please find attached correspondence from Stratford Coal Pty Ltd in relation to the Aboriginal Cultural Heritage Assessment being prepared for the Stratford Coal Mine.

Please note that we tried to post a copy of the attached correspondence to the address we have on file for you (PO Box 129, Cundletown), however the mail was returned to sender. In this regard, could you please provide your updated contact details (telephone number and postal address) for our records?

Please don't hesitate to call should you wish to discuss.

Regards,

**Michael Plain** | ENVIRONMENT & COMMUNITY CO-ORDINATOR

**Duralie Coal Ltd**

SITE: 1164 Bucketts Way South, via Stroud Road NSW 2415  
POSTAL: PO Box 168, Gloucester NSW 2422 Australia  
PHONE: 0249995152  
FAX: 0249945775  
MOBILE: 0400 474 126  
EMAIL: [Michael.Plain@yancoal.com.au](mailto:Michael.Plain@yancoal.com.au)  
WEBSITE: [www.duraliecoal.com.au](http://www.duraliecoal.com.au)





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**Subject:** FW: Rocky Hill Project  
**Attachments:** Rocky Hill Projecy Servey March 16.docx

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**From:** Dave Feeney [<mailto:karuahindigenous@outlook.com>]

**Sent:** Tuesday, 21 June 2016 3:07 PM

**To:** Michael Plain

**Subject:** Rocky Hill Project

Hi Michael;

Please find attached the information I sent to  
John Appleton Archaeologist

Dave Feeney  
Chief Executive Officer  
Snr Cultural Officer  
Karuah Indigenous Corporation



# Karuah Indigenous Corporation

ABN: 74 238 624 267

1/7 Mustons Road, Karuah NSW 2324 \* Phone: (02) 49975952 \* Mobile: 0421114853

Email: [karuahindigenous@outlook.com](mailto:karuahindigenous@outlook.com)

## Cultural & Heritage Report

For

### **Invitation to participate in an Aboriginal Cultural Heritage site survey for the proposed Part 11B: Indigenous Archaeological Assessment – Private Haul Road**

The Karuah Indigenous Corporation Aboriginal Cultural Officer was invited to participate in a site survey of the Part 11B: Indigenous Archaeological Assessment – Private Haul Road. The group of Aboriginal Cultural Officers from Forster and Karuah LALC's and Traditional Custodians meet at 341 Waukivory Road, Gloucester NSW at 10:00am on the 17<sup>th</sup> March 2016.

#### **My Investigation:**

For the purposes of the survey for development consent and the assessment of cultural heritage, the area being considered for the development and operation of the proposed private haul road comprises a 50m wide corridor commencing in the north at Waukivory Creek and running almost due south and then southwest for approximately 4.5km to the northern boundary of the Stratford Mining Complex.

#### **Aboriginal Cultural Heritage Field Study Area**

**A, B, C Maps**







Mick Leon of Gangga Marrang performed a walk-over of the corridor when soil samples were taken, during which he recorded two isolated artefacts details of these artefacts are included in the results section of this report.

**No sites registered on the AHIMS database are located within the proposed private haul road corridor.**

On reaching the southern end of the corridor the surveyors returned to the GRL site office. Once everyone had returned Appleton discussed the results of the survey with all of the stakeholders and what he was proposing to recommend to resolve the problem of more than 95% of the corridor being densely grassed and archaeological visibility being zero.

**All of the stakeholders provisionally agreed to Appleton's proposal pending the stakeholders' review of the draft report of the survey.**

The proposed private haul road route will directly impact on two of the three sites recorded by Mick Leon. While this will mean that those two sites will be destroyed. Appleton's assessment is that while the two sites represent locations at which an Aboriginal person/or people utilised in the past prior to "European" settlement, they are of Aboriginal significance.

Given that the proposed development of the Rocky Hill Coal Mine is considered to be of "State Significance", if development consent is given the proposed private haul road will be constructed and the two sites destroyed thereby overriding any cultural assessment that might otherwise have protected the sites.

Notwithstanding, salvage of the artefacts will mean that they can be preserved, and this report and the listing of the sites on the AHIMS Site Register will be a permanent record that the sites existed.

The Aboriginal or cultural significance of Aboriginal relics and sites can only be assessed by the Aboriginal community, and in particular, the Elders. It is the responsibility of the archaeologist to ensure that the Elders or elected representatives of the Aboriginal community are advised of the survey results, and are consulted as to their knowledge and opinion of the significance of the area, and to transcribe and present those expressions in report form.

Given that of the 12 sites recorded during the investigations for the Rocky Hill Mine Area; Power Line corridors and the proposed private haul road comprised 10 isolated artefacts, a scatter of five artefacts, and a scatter of 10 artefacts, there is insufficient evidence that there is a viable research potential in the further investigation of the sites or their contents.



## **RECOMMENDATIONS**

While recognising that GRL are not obliged to commission any further investigation for archaeological sites should the Rocky Hill Coal Project be approved as “State Significant” development.

Appleton recommends that in the interests of the Worimi people and the Gloucester community generally, that turf stripping in the section of the corridor between Waukivory Creek and Fairbairn’s Road should be monitored by a representative from each of the registered stakeholders with connection to Worimi Country.

In addition, Appleton recommends that the two artefacts that will be impacted by construction of the haul road should be salvaged by a representative from each of the registered stakeholders with connection to Worimi Country.

Should any more works or excavation work or clearing works commence in any of the Project areas, you may need to contact the Aboriginal Culture Officers.

“Why”, because if excavation works turn over any Aboriginal artefact, within the first 1meter, then the Aboriginal Culture Officers can identify the significance of that site and make some recommendation right away for the next step.

**Dave Feeney**

Chief Executive Officer &  
Snr Cultural Officer

**Date:** 05<sup>th</sup> April 2016

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**Subject:** FW: STRATFORD MINING COMPLEX ABORIGINAL CULTURAL HERITAGE ASSESSMENT

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**From:** GIMBAY GATIGAAN ABORIGINAL CORPORATION [<mailto:gimbaygatigaan@hotmail.com>]

**Sent:** Monday, 4 July 2016 12:51 PM

**To:** Michael Plain

**Subject:** STRATFORD MINING COMPLEX ABORIGINAL CULTURAL HERITAGE ASSESSMENT

Hi Mark and Michael,

I have been calling the number 6538 4200 and have not been able to get a answer I am just left on hold.

I was calling you in regards to the Aboriginal heritage survey which was conduted on the 5th May 2016, I was wanting to know why Gimbay Gatigaan was not invited to participate in that survey ?

Can you please let me know ASAP.

Thanks

Candy Towers  
0412 475 362

---

**Subject:** FW: Comments on Draft ACHA - Stratford Mining Complex Mod 1  
**Attachments:** Stratford Mine Mod 1 ACHA Comment 110716.pdf

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**From:** Suzie Worth [<mailto:suzieworth17@bigpond.com>]  
**Sent:** Monday, 11 July 2016 1:56 PM  
**To:** Michael Plain  
**Cc:** Arthur Fletcher  
**Subject:** Comments on Draft ACHA - Stratford Mining Complex Mod 1

Hi Michael

Attached is a letter for your attention.

Kind regards  
Suzie Worth  
For Arthur Fletcher  
Kauwul Wonn1



Wonn1  
Entity of Kauwul Pty Ltd

619 Main Road Glendale, 2285

PHONE: 0249547751 Mobile: 0402146193

ABN: 27 153 953 363

11 July 2016

Mr M Plain  
Environment & Community Co-ordinator  
Yancoal Australia Limited  
PO Box 168  
GLOUCESTER NSW 2422  
Email: Michael.Plain@yancoal.com.au

Dear Michael

**RE: COMMENTS ON DRAFT ABORIGINAL CULTURAL HERITAGE ASSESSMENT –  
STRATFORD MINING COMPLEX MODIFICATION 1 (Haul Road)**

We have reviewed the above draft report and methodologies for the proposed test excavations (Appendix 5) dated June 2016 and wish to comment as follows:

- We agree with the recommendations provided in the draft report and are satisfied with the ~100% coverage of the impact area. It appears that the archaeologist has consulted well with the survey team to establish the need for test excavations within the Craven variant soil horizons within the proximity of Dog Trap Creek.
- Because of the non-potential for visual sighting of artefacts during the survey, the proposed test excavation methodology (Appendix 5) appears to be sufficient for the total area of the proposed impact area. It is appreciated that there is the opportunity to expand these pits should significant numbers of artefacts be found, however more than 30 artefacts per m<sup>2</sup> is considered to be too high for reasonable expansion of pits. I suggest that 5 to 10 artefacts would be preferable as there may be a chance of overlooking a significant artefact site considering the distance proposed between each test pit (*"20m apart on a grid (but a minimum of 5m apart)"*).
- It is presumed that following approval of the extension project, the work on this road will commence before 2018? If environmental changes within the impact area occur prior to the test excavation period, there is a potential for artefacts to become exposed through vegetation thinning, if this is the case, a further walk-over and salvage will need to be undertaken at the same time as the test excavation program.

We look forward to continuing the consultation process with you and look forward to be included in the future fieldwork.

Yours sincerely

Suzie Worth  
For Arthur C Fletcher, Kauwul Wonn1



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**Subject:** FW: STRATFORD MINING COMPLEX MODIFICATION ABORIGINAL CULTURAL HERITAGE ASSESSMENT

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**From:** GIMBAY GATIGAAN ABORIGINAL CORPORATION [<mailto:gimbaygatikaan@hotmail.com>]

**Sent:** Tuesday, 12 July 2016 1:13 PM

**To:** Michael Plain

**Subject:** STRATFORD MINING COMPLEX MODIFICATION ABORIGINAL CULTURAL HERITAGE ASSESSMENT

Guudji Yijju Mark,

I would like to comment on the draft ACHA for Stratford Mining Complex. Below are my comments:

- I would like to express concerns about the amount of RAP's. I am a Worimi woman been reared up on country and have never known most of these RAP's to have any kind of association or understanding of Worimi/Biripai cultural knowledge. More than half of these RAP's are associated or registered in the current Gomerioi and Wonnarua Native Title claim which would confirm their knowledge would be very limited of Worimi country.
- Regarding the survey that took place on 5th May 2016 no comments were received. I am concerned that persons who took part in the survey on 5th May did not have any cultural knowledge to that particular area.

Kind Regards

Candy Towers  
0412 475 362

## Appendix 3 – Proposed Methodology

**RE: PROPOSED METHODOLOGY FOR THE STRATFORD COAL MINE MODIFICATION  
1 ABORIGINAL CULTURAL HERITAGE ASSESSMENT**

Thank you for registering an interest in the Aboriginal community consultation process for the Stratford Coal Mine Modification 1 (the Modification). We are writing to you to provide you with project information and a Proposed Methodology in accordance with Stages 2 and 3 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* (NSW Department of Environment, Climate Change and Water [DECCW], 2010a).

In accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010a), it is requested that Registered Aboriginal Parties (RAPs) provide, where relevant, during the conduct of the Aboriginal Cultural Heritage Assessment (ACHA), cultural information regarding:

- whether there are any Aboriginal sites/objects of cultural value to Aboriginal people in the Modification Area or surrounds; and
- whether there are any places of cultural value to Aboriginal people in the Modification Area or surrounds.

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

**1.1 Proposed Activity and Project Information on the Modification**

Stratford Coal Pty Ltd (SCPL), a wholly owned subsidiary of Yancoal Australia Limited, is preparing a Statement of Environmental Effects to facilitate the modification of the Stratford Coal Mine (SSD-4966) under Section 96(2) of the NSW Environmental *Planning and Assessment Act, 1979* (the Modification). As a component of the Statement of Environmental Effects an ACHA is required. The Stratford Coal Mine is located approximately 10 kilometres (km) south of Gloucester, NSW (Figure 1).

The Modification relates to proposed interactions between the Stratford Coal Mine and the Rocky Hill Coal Project (SSD-5156), a proposed open cut mining operation owned by Gloucester Resources Ltd, located approximately 5 km north of the Stratford Coal Mine. The proposed interactions relate to the transportation and processing of Rocky Hill Coal Project run-of-mine (ROM) coal using Stratford Coal Mine infrastructure. This integration would require the development of a haul road between the Stratford Coal Mine and the Rocky Hill Coal Project. The portion of the haul road relevant to SCPL would be located within the southern portion within SCPL's mining tenements (Figure 2).

The main changes to the operations of the approved Stratford Coal Mine associated with the Modification include:

- receipt of sized ROM coal from the Rocky Hill Coal Project (and continued receipt of coal from the Duralie Coal Mine) – with Rocky Hill Coal Project trucks operating during daytime hours only (7.00 am to 6.00 pm);
- processing and transport of coal from the Stratford Coal Mine, Duralie Coal Mine and Rocky Hill Coal Project; and
- extension of on-site haul roads to accommodate Rocky Hill Coal Project road haulage trucks.

The ACHA for the Modification will specifically assess those components of the Modification that fall within the mining tenements (including Mining Lease Area [MLA] 466) of the Stratford Coal Mine but outside of areas already approved for disturbance (Figure 2).

## **1.2 Previous Archaeological Investigations in the Modification Area**

Much of the Modification Area has previously been assessed for Aboriginal cultural heritage values as part of the Stratford Extension Project Environmental Assessment (Kayandel, 2012). To avoid repeating previous work, as much information as possible from previous assessments for the Stratford Coal Mine and surrounds will be incorporated into this assessment.

## **1.3 Assessment Methodology**

The ACHA will follow the methods and guidelines set out in the:

- *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010a).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b).
- *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in New South Wales* (NSW Office of Environment and Heritage [OEH], 2011).
- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia International Council on Monuments and Sites [ICOMOS], 2013).

In accordance with the above guidelines, the ACHA will include:

- Aboriginal community consultation;
- a background literature review of relevant past archaeological assessments and heritage registers;
- review the environmental context;
- provision of an archaeological predictive model;
- an archaeological survey;
- an assessment significance of any identified Aboriginal objects, places or cultural values;



- an assessment of any potential impacts to the identified Aboriginal objects, places or cultural values; and
- recommendations for management and mitigation measures.

The Aboriginal community consultation process will be managed by Yancoal Australia Limited. The ACHA will be undertaken by Niche Environment and Heritage.

### **1.3.1 Aboriginal Community Consultation**

Aboriginal community consultation for the ACHA will be undertaken in accordance with the OEH policy *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010a). The objective of community consultation is for Aboriginal people to have the opportunity to improve assessment outcomes by providing input on the significance and management of Aboriginal objects, places and / or cultural values.

You may also wish to provide input on the following aspects:

- the Proposed Methodology and the methods of assessing the cultural and scientific significance of Aboriginal objects and or places;
- any Aboriginal objects or places of cultural value within the Modification Area, or any issues of cultural significance that you are aware of;
- the development and management of cultural heritage values in the Modification Area;
- any restrictions or protocols you may consider necessary in relation to any information of sensitivity you may provide; and
- any other factors you consider relevant to the heritage assessment.

#### ***Key Input Points***

The consultation requirements suggest several points of input for RAPs, including:

- during project information presentation for the Modification (i.e. now);
- during development of the Proposed Methodology (i.e. now);
- during the implementation of the methodology, including fieldwork; and
- in response to the draft ACHA which will be provided to all RAPs prior to its submission to the regulator, (a minimum 28 days will be allowed for the review of the draft report).

We welcome any input and suggestions regarding the heritage assessment at any stage of the consultation process up to the end date of the review period for the draft ACHA. We cannot guarantee being able to incorporate any information after this date.

### 1.3.2 Aboriginal Heritage Survey

An Aboriginal heritage survey will be conducted over the segment of the proposed haul road within MLA 466. The survey area is approximately 800 metres in length (Figure 2). The area will be surveyed in accordance with requirements the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales 2010* (DECCW, 2010b).

The Aboriginal heritage survey will be conducted by a qualified archaeologist and a selection of representatives of the RAPs.

The remainder of the haul road within Stratford's mining tenements comprises existing haul roads in an active mine site, have been approved for disturbance, have high levels of disturbance and /or have previously been assessed for Aboriginal heritage values as part of the ACHA for the Stratford Extension Project Environmental Assessment (Kayandel, 2012). As such, these areas will not be re-surveyed as part of the Modification.

### 1.3.3 Sensitive Cultural Information – Management Protocol

Please be aware that Yancoal representatives or Niche staff may seek cultural information and supporting evidence in regard to matters of cultural value.

In the event that a RAP has sensitive or restricted public access information it is proposed that Yancoal and Niche would manage this information (if provided by the Aboriginal community) in accordance with a sensitive cultural information management protocol. It is anticipated that the protocol will include making note of, and managing, the material in accordance with the following key limitations as advised by the relevant RAP at the time of the information being provided:

- Any restrictions on access to the material.
- Any restrictions on communication of the material (confidentiality).
- Any restrictions on the location/storage of the material.
- Any cultural recommendations on handling the material.
- Any names and contact details of persons authorised within the relevant Aboriginal stakeholder to make decisions concerning the Aboriginal material and the degree of authorisation.
- Any details of any consent given in accordance with customary law.
- Any access and use by the RAPs of the cultural information in the material.

All RAPs should be aware of the mandatory OEH requirement that all feedback provided must be documented in the final ACHA, including copies of any submissions received and the proponents response to the issues raised.

### 1.3.4 Methods of Assessing Heritage Significance

Heritage significance will be assessed by considering each cultural, or archaeological site, against the significance criteria set out in the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011).

In all cases the assessment of significance will be informed by the Aboriginal community, and this will be documented in the ACHA. If any culturally sensitive values were identified they would not be specifically included in the report, or made publicly available, but would be documented and lodged with the knowledge holder providing the information.

## **1.4 Critical Timelines**

Critical timelines for the ACHA of the Modification are outlined below.

Please note that these timelines are estimates at this stage and are provided to allow forward planning of personnel and resources.

- RAPs to provide comments on Proposed Methodology – 5 pm Thursday 28 April 2016.
- Aboriginal heritage survey – May 2016.
- Provision of a draft ACHA (including proposed management and mitigation measures) to RAPs for review (following survey) – May/June 2016.
- RAPs to provide comments on draft ACHA – May/June 2016.
- Finalisation of the ACHA in consideration of comments received from RAPs – June/July 2016.
- Collation of cultural significance information: ongoing throughout process until end of draft ACHA review period.

## **1.5 Who to contact**

If you would like to provide information for the cultural heritage assessment, or if you would like to discuss the Modification do not hesitate to contact:

Yancoal Australia Limited  
Michael Plain  
Environment and Community Co-ordinator  
PO Box 168, Gloucester NSW 2422  
Phone: 02 4999 5152  
Email: [michael.plain@yancoal.com.au](mailto:michael.plain@yancoal.com.au)

## 1.6 References

Department Environment, Climate Change and Water NSW 2010a. *Aboriginal cultural heritage consultation requirements for proponents 2010: Part 6 National Parks and Wildlife Act 1974*, Department of Environment, Climate Change and Water NSW.

Department Environment, Climate Change and Water NSW 2010b. *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales: Part 6 National Parks and Wildlife Act 1974*, Department of Environment, Climate Change and Water NSW.

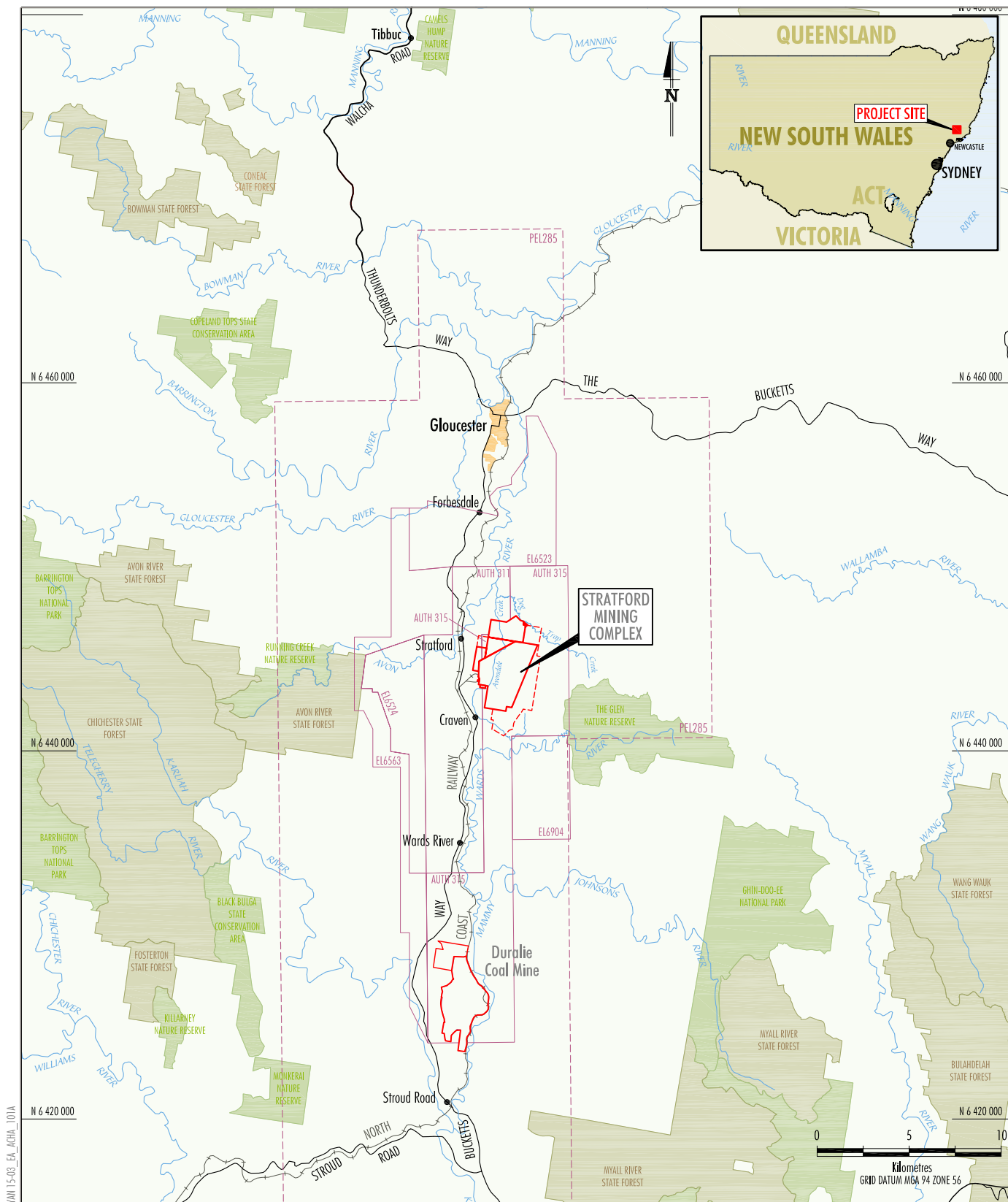
ICOMOS 2013. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* Australia International Council on Monuments and Sites [ICOMOS].

Kayandel Archaeological Services 2012. *Stratford Extension Project. Aboriginal Cultural Heritage Assessment*. Prepared for Stratford Coal.

NSW Office of Environment and Heritage 2011. *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in New South Wales*. NSW Office of Environment and Heritage.

## FIGURES

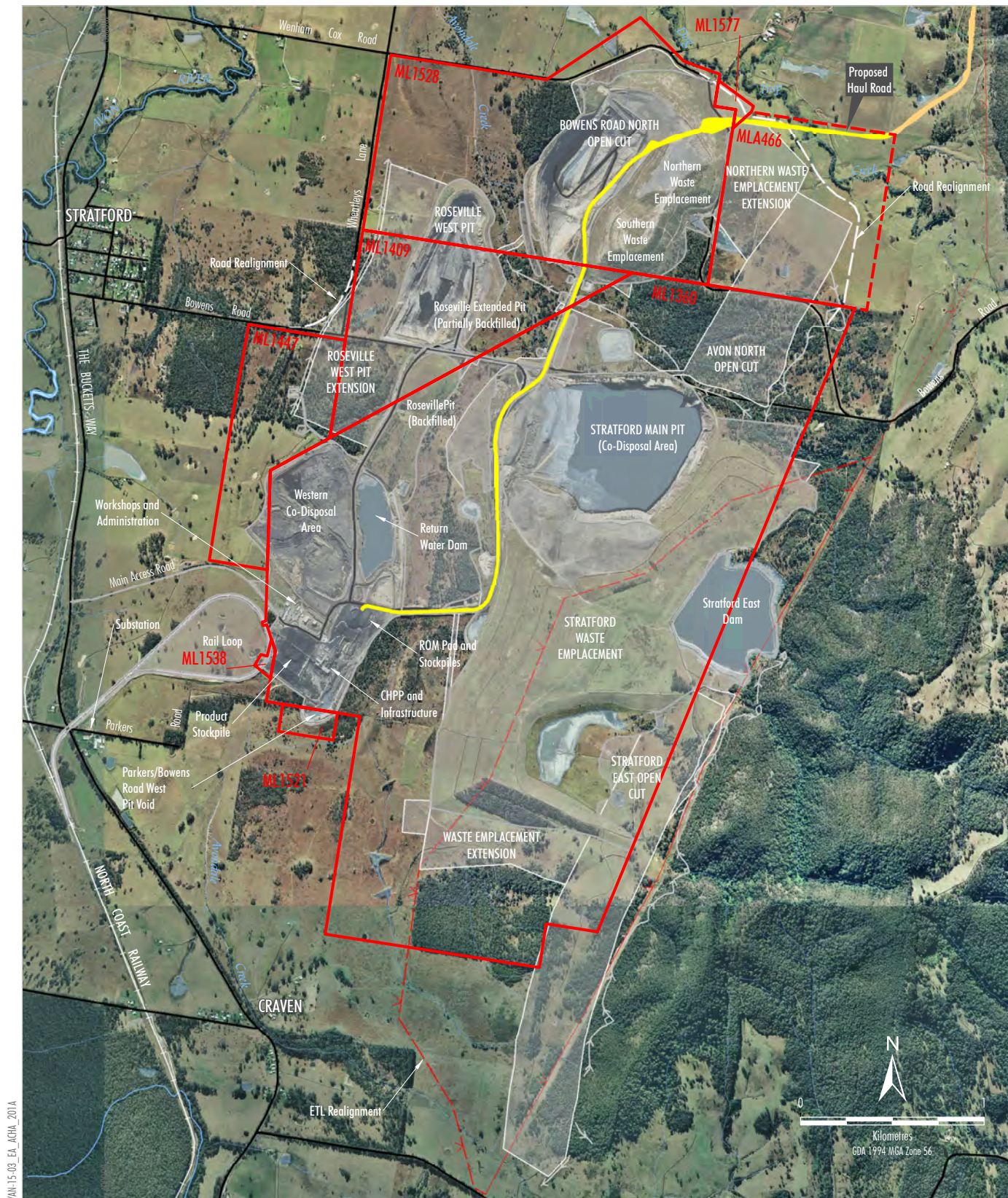




Source: Geoscience Australia (2009); SCPL (2012); DECC (2011); DFS-LPI (2012) and DPI-C&L (2012)

Figure 1





#### LEGEND

- Mining Lease Boundary
- Mining Lease Application Boundary
- Approximate Extent of Existing/Approved Surface Development
- Conceptual Up-Catchment Diversion
- Proposed Haul Road-Rocky Hill Portion
- Proposed Haul Road-Stratford Portion
- Electricity Transmission Line



### STRATFORD MODIFICATION Proposed Haul Road

## Appendix 4 – AHIMS Search Results



# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : 2966 Stratford

Client Service ID : 217647

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
30-4-0012	Cobark River Crossing;Cobark;	AGD	56	373850	6467050	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	<u>Contact</u>	<u>Recorders</u>	Mick Leon					<u>Permits</u>		
38-1-0024	Gloucester River 1 Gloucester River Camping Area	AGD	56	375605	6451780	Open site	Valid	Artefact : -	Open Camp Site	4344
	<u>Contact</u>	<u>Recorders</u>	Mick Leon,Mr.Stephen Mark Free					<u>Permits</u>		
30-4-0006	Barrington Burial Site; Barrington West	AGD	56	396200	6460000	Open site	Valid	Burial : -	Burial/s	
	<u>Contact</u>	<u>Recorders</u>	H Cooke,D.C Hardman,W Cook,Noma Naylor,Robert Cook					<u>Permits</u>		
30-4-0011	Cobark River Crossing;CRC;	AGD	56	373850	6467050	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	<u>Contact</u>	<u>Recorders</u>	Mick Leon					<u>Permits</u>		
30-5-0005	Tugrabakh;	AGD	56	406000	6463000	Open site	Valid	Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial	
	<u>Contact</u>	<u>Recorders</u>	E Nixon					<u>Permits</u>		
30-5-0007	Wirradgurie;	AGD	56	412200	6469400	Open site	Valid	Modified Tree (Carved or Scarred) : -, Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial,C arved Tree	
	<u>Contact</u>	<u>Recorders</u>	R Etheridge					<u>Permits</u>		
30-5-0008	Mt George;	AGD	56	421200	6472700	Open site	Valid	Stone Arrangement : -	Stone Arrangement	
	<u>Contact</u>	<u>Recorders</u>	W.J Enright,Enright					<u>Permits</u>		
30-5-0011	Bundook;Bakers Creek;	AGD	56	416700	6470700	Open site	Valid	Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial	
	<u>Contact</u>	<u>Recorders</u>	David Bell					<u>Permits</u>		
30-5-0024	Coocumbit Artefact;	AGD	56	432725	6476650	Open site	Valid	Artefact : -	Open Camp Site	2103
	<u>Contact</u>	<u>Recorders</u>	Mr.K Heffernan,Jan Klaver					<u>Permits</u>		
30-5-0027	Dingo Creek 1	AGD	56	433275	6477025	Open site	Valid	Artefact : -	Open Camp Site	2103
	<u>Contact</u>	<u>Recorders</u>	Mr.K Heffernan,Jan Klaver					<u>Permits</u>		
30-5-0030	Warroo Bora Ground;	AGD	56	433000	6476000	Open site	Valid	Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial	2103
	<u>Contact</u>	<u>Recorders</u>	Mr.K Heffernan,Jan Klaver					<u>Permits</u>		
37-2-0336	MAN 31;Mt Arthur North;	AGD	56	398700	6421900	Open site	Valid	Artefact : -	Open Camp Site	1203,1204,102 309
	<u>Contact</u>	<u>Recorders</u>	Margrit Koettig					<u>Permits</u>	147	
37-2-0337	MAN 32;Mt Arthur North;	AGD	56	398700	6421800	Open site	Valid	Artefact : -	Open Camp Site	1203,1204,102 309
	<u>Contact</u>	<u>Recorders</u>	Margrit Koettig					<u>Permits</u>	147	
37-2-0348	MAN 25;Mt Arthur North;	AGD	56	399900	6421200	Open site	Valid	Artefact : -	Open Camp Site	1203,1204,102 309

Report generated by AHIMS Web Service on 24/03/2016 for Clare Anderson for the following area at Datum :GDA, Zone : 56, Eastings : 372212 - 433912, Northings : 6415992 - 6477992 with a Buffer of 0 meters. Additional Info : To inform an ACHA. Number of Aboriginal sites and Aboriginal objects found is 102

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : 2966 Stratford

Client Service ID : 217647

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>	Margrit Koettig					<u>Permits</u>	147	
38-1-0033	Honey Tree (002)	AGD	56	401160	6426300	Open site	Valid	Modified Tree (Carved or Scarred) : 1		101742
	<u>Contact</u>	<u>Recorders</u>	Barry Cain					<u>Permits</u>		
38-1-0073	Gloucester Corroboree Ground	GDA	56	401917	6457955	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Ceremonial Ring (Stone or Earth) : -, Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Steve Brereton					<u>Permits</u>		
38-1-0068	Gloucester RY 1	GDA	56	405026	6452991	Open site	Valid	Artefact : 1		
	<u>Contact</u> Mr.Robert Yettica	<u>Recorders</u>	Mr.Robert Yettica					<u>Permits</u>		
38-1-0069	Gloucester RY 2	GDA	56	404672	6452597	Open site	Valid	Artefact : 1		
	<u>Contact</u> Mr.Robert Yettica	<u>Recorders</u>	Mr.Robert Yettica					<u>Permits</u>		
38-1-0100	WRS-1	GDA	56	400291	6438029	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Ryan Desic					<u>Permits</u>		
38-1-0097	WRS - 2 (reloaded)	GDA	56	400474	6437831	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Ryan Desic					<u>Permits</u>		
38-1-0098	WRS-4	GDA	56	400610	6437986	Open site	Partially Destroyed	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Ryan Desic,EMGA Mitchell McLennan					<u>Permits</u>		
38-1-0099	WRS-3	GDA	56	400234	6438025	Open site	Partially Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Ryan Desic					<u>Permits</u>		
38-1-0101	Stratford PAD 1	GDA	56	403154	6446170	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Ms.Caroline Hubschmann					<u>Permits</u>		
38-1-0028	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	<u>Contact</u>	<u>Recorders</u>	Mick Leon					<u>Permits</u>		
30-5-0014	Dingo Creek, Inglewood	AGD	56	432950	6476950	Open site	Valid	Burial : -	Burial/s	
	<u>Contact</u>	<u>Recorders</u>	Harry Creamer,Harry Creamer,Robert Walford,Robert Walford,John Saunders,Les I					<u>Permits</u>		
30-4-0002	Gloucester Ridgeview	AGD	56	404400	6459500	Open site	Valid	Stone Arrangement : -	Stone Arrangement	

Report generated by AHIMS Web Service on 24/03/2016 for Clare Anderson for the following area at Datum :GDA, Zone : 56, Eastings : 372212 - 433912, Northings : 6415992 - 6477992 with a Buffer of 0 meters. Additional Info : To inform an ACHA. Number of Aboriginal sites and Aboriginal objects found is 102

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : 2966 Stratford

Client Service ID : 217647

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-1-0034	Mammy Johnson's Grave	AGD	56	400912	6424723	Open site	Valid	Burial : -		
	<u>Contact</u> Ms.Dianne Stephenson	<u>Recorders</u> Mr.Steve Brereton	<u>Permits</u>							
38-2-0151	BPAD3 Bulahdelah	AGD	56	427070	6416130	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102424
	<u>Contact</u>	<u>Recorders</u> Navin Officer Heritage Consultants Pty Ltd	<u>Permits</u>							
38-2-0152	BPAD4 Bulahdelah	AGD	56	426900	6416360	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u> Navin Officer Heritage Consultants Pty Ltd	<u>Permits</u>							
38-2-0154	BPAD5 Bulahdelah	AGD	56	426860	6416250	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102424
	<u>Contact</u>	<u>Recorders</u> Navin Officer Heritage Consultants Pty Ltd	<u>Permits</u>							
38-1-0038	AGLG 1 (same as 38-1-0037)	GDA	56	397462	6439957	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u> MCH - McCardle Cultural Heritage Pty Ltd	<u>Permits</u>							
38-1-0077	SEP-OS-04	GDA	56	403821	6445789	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u> Kayandel Archaeological Services	<u>Permits</u>							
38-1-0078	SEP-PAD-02	GDA	56	403524	6442916	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u> UniQuest Pty Ltd	<u>Permits</u>							
38-1-0079	SEP-ST-01	GDA	56	402741	6441455	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u> Kayandel Archaeological Services	<u>Permits</u>							
38-1-0080	SEP-ST-02	GDA	56	403323	6443473	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u> Kayandel Archaeological Services	<u>Permits</u>							
38-1-0081	SEP-ST-03	GDA	56	404017	6445809	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u> Kayandel Archaeological Services	<u>Permits</u>							
38-1-0082	SEP-ST-04	GDA	56	403593	6445248	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u> Kayandel Archaeological Services	<u>Permits</u>							

Report generated by AHIMS Web Service on 24/03/2016 for Clare Anderson for the following area at Datum :GDA, Zone : 56, Eastings : 372212 - 433912, Northings : 6415992 - 6477992 with a Buffer of 0 meters. Additional Info : To inform an ACHA. Number of Aboriginal sites and Aboriginal objects found is 102

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : 2966 Stratford

Client Service ID : 217647

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-1-0083	SEP-IF-01	GDA	56	403527	6445850	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services					<a href="#">Permits</a>		
38-1-0084	SEP-IF-02	GDA	56	403669	6445834	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services					<a href="#">Permits</a>		
38-1-0085	SEP-IF-03	GDA	56	402711	6445473	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services					<a href="#">Permits</a>		
38-1-0086	SEP-IF-04	GDA	56	402743	6445647	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services					<a href="#">Permits</a>		
38-1-0087	SEP-OS-01	GDA	56	403167	6442596	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services					<a href="#">Permits</a>		
38-1-0088	SEP-OS-02	GDA	56	403922	6445592	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services					<a href="#">Permits</a>		
38-1-0089	SEP-OS-03	GDA	56	403751	6445788	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services					<a href="#">Permits</a>		
38-2-0167	Bulahdelah State Forest Comp. 141	GDA	56	424791	6425910	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Forestry Corporation of NSW, Miss. Deborah Kim Swan					<a href="#">Permits</a>		
38-2-0168	Bulahdelah State Forest	GDA	56	426789	6424918	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Forestry Corporation of NSW, Miss. Deborah Kim Swan					<a href="#">Permits</a>		
38-2-0171	Aquatic Road 1	AGD	56	406107	6448584	Open site	Valid	Artefact : -		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	MCH - McCardle Cultural Heritage Pty Ltd					<a href="#">Permits</a>		
38-1-0091	GL-IF-1	GDA	56	404736	6451041	Open site	Valid	Artefact : -		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Ms. Caroline Hubschmann					<a href="#">Permits</a>		
38-1-0092	GL-IF-2	GDA	56	400266	6451445	Open site	Valid	Artefact : -		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Ms. Caroline Hubschmann					<a href="#">Permits</a>		
38-1-0093	GL-IF-4	GDA	56	403507	6452357	Open site	Valid	Artefact : -		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Ms. Caroline Hubschmann					<a href="#">Permits</a>		
38-1-0094	GL-IF-5	GDA	56	403514	6452372	Open site	Valid	Artefact : -		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Ms. Caroline Hubschmann					<a href="#">Permits</a>		
38-1-0090	WR-2	GDA	56	400401	6437855	Open site	Valid	Artefact : -		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Mr. Ryan Desic					<a href="#">Permits</a>		
38-1-0095	GL-IF-7	GDA	56	403485	6452388	Open site	Valid	Artefact : -		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Ms. Caroline Hubschmann					<a href="#">Permits</a>		

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

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Client Service ID : 217647

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-1-0096	GL-IF-8	GDA	56	400401	6451541	Open site	Valid	Artefact : -		
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Ms.Caroline Hubschmann				<a href="#">Permits</a>		
38-2-0100	Mt Chapman 3	AGD	56	433698	6419940	Open site	Valid	Artefact : -	Isolated Find	
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Keith Gleeson				<a href="#">Permits</a>		
38-2-0101	Coaxial Cable trail 1	AGD	56	433003	6419498	Open site	Valid	Artefact : -	Isolated Find	
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Keith Gleeson				<a href="#">Permits</a>		
38-2-0094	KDG 1	AGD	56	432290	6432280	Open site	Valid	Artefact : -	Isolated Find	99964
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Keith Gleeson				<a href="#">Permits</a>		
38-2-0095	Winns Creek Trail 2	AGD	56	412130	6416560	Open site	Valid	Artefact : -	Isolated Find	99964
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Keith Gleeson				<a href="#">Permits</a>		
38-2-0096	KG 1	AGD	56	419677	6420156	Open site	Valid	Artefact : -	Isolated Find	99964
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Keith Gleeson				<a href="#">Permits</a>		
38-2-0092	Darren 1	AGD	56	412050	6424000	Open site	Valid	Artefact : -	Isolated Find	
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Keith Gleeson				<a href="#">Permits</a>		
38-2-0093	Darren 2	AGD	56	411220	6420200	Open site	Valid	Artefact : -	Isolated Find	99964
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Keith Gleeson				<a href="#">Permits</a>		
38-1-0027	Honey Scarred Tree	AGD	56	401200	6425800	Open site	Valid	Modified Tree (Carved or Scarred) : -	Open Camp Site,Scarred Tree	
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Michael Green				<a href="#">Permits</a>		
38-1-0001	Barrington Tops National Park Gloucester Creek	AGD	56	376084	6453001	Open site	Valid	Artefact : -	Open Camp Site	
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Unknown Author				<a href="#">Permits</a>		
38-1-0003	Gloucester	AGD	56	402054	6457596	Open site	Valid	Modified Tree (Carved or Scarred) : -	Carved Tree	
	<a href="#">Contact</a>	<a href="#">Recorders</a>		David Bell				<a href="#">Permits</a>		
38-1-0006	Washpool Bridge;	AGD	56	397660	6417050	Open site	Valid	Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial	
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Brian Wythes				<a href="#">Permits</a>		
38-1-0008	Craven Parkers Road	AGD	56	402890	6442590	Open site	Valid	Artefact : 4	Open Camp Site	835
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Helen Brayshaw				<a href="#">Permits</a>		
38-2-0070	Mountain View 2;	AGD	56	425210	6456290	Open site	Valid	Artefact : -	Isolated Find	2597
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Peter Kuskie				<a href="#">Permits</a>		
38-2-0071	Mountain View 1;	AGD	56	427630	6454920	Open site	Valid	Artefact : -	Open Camp Site	2597
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Peter Kuskie				<a href="#">Permits</a>		
38-2-0074	W1;	AGD	56	425850	6416500	Open site	Valid	Artefact : -	Isolated Find	102424

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : 2966 Stratford

Client Service ID : 217647

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>	Noeleen Curran					<u>Permits</u>	618	
38-2-0075	W1 (Duplicate copy see 38-2-0074)	AGD	56	425850	6416500	Open site	Valid	Artefact : -	Isolated Find	
	<u>Contact</u>	<u>Recorders</u>	Noeleen Curran					<u>Permits</u>		
38-2-0034	BC6;	AGD	56	430100	6416120	Open site	Valid	Artefact : -	Open Camp Site	1885
	<u>Contact</u>	<u>Recorders</u>	Elizabeth Rich					<u>Permits</u>		
38-2-0035	BC7;	AGD	56	429950	6416300	Open site	Valid	Artefact : -	Open Camp Site	1885
	<u>Contact</u>	<u>Recorders</u>	Elizabeth Rich					<u>Permits</u>		
38-2-0036	BC8;	AGD	56	429570	6416010	Open site	Valid	Artefact : -	Open Camp Site	1885,102424
	<u>Contact</u>	<u>Recorders</u>	Elizabeth Rich					<u>Permits</u>		
38-2-0037	BC9;	AGD	56	429180	6416090	Open site	Valid	Artefact : -	Open Camp Site	1885,102424
	<u>Contact</u>	<u>Recorders</u>	Elizabeth Rich					<u>Permits</u>		
38-2-0045	Boolambayte Creek;	AGD	56	430800	6417200	Open site	Valid	Artefact : -	Isolated Find	2046
	<u>Contact</u>	<u>Recorders</u>	S Davies,Davies Heritage Consultants Pty Ltd					<u>Permits</u>		
38-1-0031	Isolated find no1	AGD	56	402400	6446625	Open site	Destroyed	Artefact : -		98114
	<u>Contact</u>	<u>Recorders</u>	Ms.Louise Gay,Robert Paulson					<u>Permits</u>	1374,2857,2858	
30-4-0001	Coneac State Forest	AGD	56	388900	6472800	Open site	Valid	Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial	
	<u>Contact</u>	<u>Recorders</u>	Forests NSW-Northern Region (Grafton)					<u>Permits</u>		
38-1-0045	DM8 Duralie Mine 8	GDA	56	401206	6424225	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Lance Syme					<u>Permits</u>		
38-1-0046	DM9 Duralie Mine 9	GDA	56	398618	6428791	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Lance Syme					<u>Permits</u>		
38-1-0047	DM10 Duralie Mine 10	GDA	56	398559	6428770	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Lance Syme					<u>Permits</u>		
38-1-0056	PAD1 (Gloucester)	GDA	56	404041	6450702	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0057	PAD2 (Craven)	GDA	56	399018	6439629	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0058	PAD3 (Craven)	GDA	56	399052	6439671	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		

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## Extensive search - Site list report

Your Ref/PO Number : 2966 Stratford

Client Service ID : 217647

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0059	PAD4 (Craven)	GDA	56	399575	6436300	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0060	PAD5 (Craven)	GDA	56	399540	6434799	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0061	PAD6 (Dungog)	GDA	56	397686	6417213	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0062	PAD7 (Dungog)	GDA	56	396931	6417094	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102309
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0049	LEA1	GDA	56	402611	6452503	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0050	LEA2	GDA	56	402011	6449027	Open site	Valid	Artefact : 2		
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0051	LEA3	GDA	56	402096	6449859	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0052	LEA4	GDA	56	398996	6442117	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0053	LEA5	GDA	56	398904	6440693	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Rick Bullers					<u>Permits</u>		
38-1-0039	DM2 Duralie Mine 2	GDA	56	399031	6429240	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Lance Syme					<u>Permits</u>		
38-1-0040	DM3 Duralie Mine 3	GDA	56	400072	6429178	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Lance Syme					<u>Permits</u>		
38-1-0041	DM4 Duralie Mine 4	GDA	56	399903	6429400	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Lance Syme					<u>Permits</u>		

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-1-0042	DM5 Duralie Mine 5	GDA	56	399522	6427990	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Lance Syme					<u>Permits</u>		
38-1-0043	DM6 Duralie Mine 6	GDA	56	400187	6428274	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Lance Syme					<u>Permits</u>		
38-1-0044	DM7 Duralie Mine 7	GDA	56	401058	6424633	Open site	Valid	Artefact : 6		
	<u>Contact</u>	<u>Recorders</u>	Mr.Lance Syme					<u>Permits</u>		
38-1-0048	DM11 Duralie Mine 11	GDA	56	399039	6428901	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Kayandel Archaeological Services					<u>Permits</u>		
38-1-0035	AGL Gloucester PAD 1: Ward's River 2 (same as 38-1-0036)	AGD	56	399254	6436341	Open site	Valid	Potential Archaeological Deposit (PAD) : 0		
	<u>Contact</u>	<u>Recorders</u>	Ms.Penny McCardle					<u>Permits</u>	3166	
38-1-0036	PAD1: Wards River 2	AGD	56	399254	6436341	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Ms.Penny McCardle					<u>Permits</u>	3171	
38-1-0037	AGLG 1	AGD	56	397462	6439957	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Ms.Penny McCardle					<u>Permits</u>	3172	

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## Appendix 5 – Proposed Test Excavation Methodology

The archaeological test excavation should be undertaken in general accordance with Part 3.1 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales 2010*. The methodology for the test excavation is provided in Table 1 below.

**Table 1: Archaeological Test Excavation Methodology**

<b>Areas to be tested</b>	<p>The test excavation would be targeted on areas that are likely to be impacted by the Modification and that were identified as having potential for archaeological deposits during the Aboriginal heritage survey (i.e. the portions of the haul road alignment within the Craven and Craven Variant A soil landscape).</p> <p>Between 15 and 25 test pits (in total) would be positioned within the identified areas of archaeological potential.</p>
<b>Sampling strategy</b>	<p>A series of three to five initial test pits would be undertaken. These initial pits would inform the need to conduct additional excavation pits (i.e. based on the findings of the initial pits and advice from the archaeologist).</p> <p>The maximum estimated number of test excavation pits, excluding any additional expansion of excavation pits, is between 15 and 25 (in total).</p> <p>Test pits may be placed on one, or more, transects within the Subject Area.</p> <p>Test pits would be placed no more than 20 m apart on a grid (but a minimum of 5 m apart).</p>
<b>Excavation</b>	<p>The test pits would be excavated according to Requirements 16 and 17 of the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i>.</p> <p>Test excavation pits would measure 50cm x 50cm.</p> <p>The excavation pits would be hand excavated, with an initial 5cm spit at the start, proceeding to 10cm spits thereafter, if appropriate.</p> <p>Excavation would:</p> <ul style="list-style-type: none"> <li>• extend to the base of artefact bearing layers, which is expected to be the B horizon; or</li> <li>• to refusal at rock should this occur in the absence of B horizon or base of artefact layer; or</li> <li>• to groundwater, where present.</li> </ul> <p>Where necessary, test excavation pits would be expanded using 50cm x 50cm pits to document archaeological features, or areas of relatively high artefact density (&gt;30 artefacts m<sup>2</sup> or to be defined by the archaeologist on the basis of a literature review of archaeological excavations in the region). These areas would not exceed 3m<sup>2</sup> in surface area.</p>
<b>Sieving</b>	<p>All excavated material would be dry sieved through 5mm aperture wire mesh. Dry sieving would be conducted next to each pit, on a tarpaulin and the pits would be immediately backfilled upon completion. Wet sieving may be considered based on the advice of the archaeologist and depending on the nature of the soils.</p>
<b>Recording, Photography and storage</b>	<p>All sites would be recorded and photographed in accordance with the requirements of the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i>.</p> <p>The short, medium and long term deposition of artefacts would be determined in consultation with the RAPs and OEH.</p>

<b>Skeletal remains</b>	<p>No skeletal remains are anticipated or predicted in the Subject Area or surrounds. However, if skeletal remains were encountered during test excavation, all work would stop and the NSW Police, OEH and on-site personnel would be notified.</p> <p>Work would not re-commence in the immediate vicinity until permission is given by these authorities.</p>
<b>Team Composition</b>	<p>The team composition would be at the discretion of the proponent and in accordance with any requirements of the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i>.</p>

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## **Niche Environment and Heritage**

A specialist environmental and heritage consultancy.

### **Head Office**

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All mail correspondence should be through our Head Office